Dividend Practices in Corporate Sector of Bangladesh: A Study of the Companies Listed with Dhaka Stock Exchange

Submitted in accordance with the requirement for the degree of ***Doctor of Philosophy***

Under the Supervision of

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Department of Finance, University of Dhaka
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PhD Thesis

on

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Author's Declaration

I hereby declare that this thesis is composed of my original work, and contains no material previously published or written by another person except where due reference has been made in the text. The contents of the thesis are the result of work which I have carried out since the commencement of my research and do not include a substantial part of work that has been submitted to qualify for the award of any other degree or diploma in any university or other institutions. Any contribution made to the research by others, with whom I have worked at University of Dhaka or elsewhere, is explicitly acknowledged in the thesis.

I also declare that the intellectual contents of this thesis are the product of my own work, except to the extent that assistance from others in the project's design and conception or in style, presentation and linguistic expression is acknowledged. I acknowledge that a copy of this thesis must be lodged with the University Library and, subject to the policies and procedures of the University of Dhaka.

Signature.....

Date.....

Supervisors' Certificate

This is to certify that the work embodied in the accompanying thesis entitled "**Dividend Practices in Corporate Sector of Bangladesh: A Study of the Companies Listed with Dhaka Stock Exchange**" has been carried out entirely by **Mr. Mohammad Shahidul Islam** as a research scholar under our direct supervision and guidance and that the candidate has fulfilled the requirements of the regulations laid down for the Doctor of Philosophy Degree examination of the University of Dhaka.

We certify that the candidate presented at a Pre-completion Seminar, an overview and synthesis of major findings of the thesis, and that the research is of a standard and extent appropriate for submission as a thesis. We have gone through the candidate's thesis and its scope, format and editorial standard as are recognized by the department of Finance. The candidate's work, including the thesis, has been completed to our satisfaction. The study is expected to be contributory to the resolution of dividend related conflicts and practices, there of the listed companies in Bangladesh.

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Abbreviation

AR= Abnormal Return
AGE= Age of the firm
AGM=Annual General Meeting
BHAR= Buy and Hold abnormal return
CAR= Cumulative Abnormal Return
CAAR= Cumulative average Abnormal Return
CF= Cash flow per share
DSE= Dhaka Stock Exchange
DPS= Dividend per share
DPR= Dividend payout ratio
DY= Dividend yield
EPS= Earnings per share
FE= Fixed Effect model
GLS= Generalized Least Square
LIQ= Liquidity
LEV= Leverage
KMO=Kaiser- Meyer-Olkin measure of sample adequacy
MPS= Market price per share
OWN(Sponsor)=Sponsor Ownership
OWN(INST)=Institutional Ownership
OWN(INDV)=Individual Ownership
OLS= Ordinary least square
PE=Price earnings ratio
RE/TE=Retained Earnings to equity
RE= Random Effect
RELATAX= Relative Tax Rate
ROA= Return of Asset
SG= Sales Growth
VIF= Variance Inflation Factor

Notation

R^2 =Co-efficient of multiple determination
t= t- test
F=F test
e=Level of precision
$u_{it=}$ Errors term of panel data
α=intercept
β=Beta Coefficient
δ= Standard deviation
γ^2=Chi-square
γ=Target payout
λ=Speed of adjustment

Executive Summary

The dividend policy is a pivotal policy around which other financial policies rotate. Appropriate dividend distribution policy can not only set a good corporate image, but also to build the confidence of investors in the company's future prospects. A review of literature reveals that the studies investigating the dividend policies of companies abroad have been conducted. The research work in this field is not enough yet in Bangladeshi context. No comprehensive study in this area has so far been made in the corporate sector in Bangladesh. Against this backdrop, the present study has been undertaken to evaluate dividend policy practices of listed companies in Bangladesh. The objectives of this study are to analyze the impact of dividend policies on market prices of shares, to identify the determinants of dividend policies of corporate firms, to examine the dividend policies practiced in corporate firms, to examine the application of existing dividend models in the context of Bangladesh, to identify the Flaws with the Existing Dividend Practices of Corporate Firm, to provide the policy implications of dividend policy to strengthen the capital market of Bangladesh. The hypotheses have been drowning on the basis of existing wisdom as well as theoretical framework of the study. The research findings and inferences of this study are expected to be useful to practitioners, investors, policy makers, researchers, and academicians.

The sample includes listed financial and nonfinancial firms of DSE (Dhaka Stock Exchange). The size of population is 147 listed companies from where 22 companies from banking sectors and 86 companies from manufacturing sectors are taken as sample by applying stratified random sampling technique. The period of study is 20 years from 1994 to 2013. The secondary data have been collected by consulting available literatures and sources (companies' annual report, publications of DSE etc.). The data thus collected have been tabulated manually and electronically. It can be worth mentioning that the study has collected opinions and views of board of directors, CFO (Chief financial officer) on 5- point likert scale. The Cronbach α of the data is found 0.810. This has substantial reliability of data collected through enumerators. The data have been analyzed by applying financial techniques, statistical techniques and econometric techniques. The financial techniques are-financial ratios, market ratio, market model, BHAR (buy and hold abnormal return) and the statistical techniques are descriptive statistics (mean, minimum, maximum, etc.), ANOVA, correlation, and regression. The

pooled data OLS, GLS, panel data analysis (FE, RE), factor analysis, structural equation modeling have been used as econometrics techniques. The study has also used techniques like F test, Wald chi-square test, t test, chi-square test for testing hypotheses of the study. The study has been used the SPSS, STATA, EXCELL, AMOS for analysis of data. The study has been organized into eleven chapters.

The study has examined the impact of dividend policy on the firm value by applying panel data analysis techniques (fixed effect and random effect) and it has found that the dividend policy has significant impact on the firm value. The R^2 value of the models are 0.765 in FE and 0.69 in RE which signify the more accounting for higher variance of independent variables on the value of the firm. The outcome of this model has been line with the relevant theorem of dividend.

The announcement effects of dividend on share price are analyzed with event study (market model and BHAR) and it is found that the dividend initiation announcements react on the market price of share around the event dates in both financial and nonfinancial sector. The dividend omission announcements also have impact on market price before and after the event date in only nonfinancial sector. The study has found a common behavioral model (The abnormal returns start to decline from day_{-4} and reach to lowest at event day then further start to raise. The abnormal returns reach to peack at day_5). This finding has supported the wisdom of the signaling theory of dividend.

The study has identified the determinants of dividend policy by applying OLS, FE, GLS, structural equation modeling techniques. Among the determinants, the lagged dividend payout ratio, sponsor, risk, profitability and leverage are positively significant and liquidity, sales growths are negatively significant to the dividend payout ratio in nonfinancial sectors. The lagged DPR, size of the firm and leverage have positive impact on the dividend payout ratio and the retained earnings ratio has negative impact on DPR in financial sector at 5 percent level of significance. The R^2 of the models in nonfinancial sectors are 0.963 in OLS and 0.63 in FE and the R^2 of OLS , GLS are 0.582 , 0.592 respectively in financial sectors which indicate the more accounting for higher variance of independent variables on the dividend payout ratio. A structural equation model on dividend determinants has been developed in this study.

Factors Influencing Dividend Policy have been identified through survey from listed companies of DSE and analyzed with non parametric test and factor analysis. The study

has found that the Earnings and liquidity factor, Past dividend issue factor, market price related factor are the most significant determinants in dividend decision in nonfinancial sectors and the 'target payout and past dividend pattern factor', 'earnings and catering factor', 'liquidity and market reaction factor' are important determinants of dividend decision in financial sector. So, the companies mainly consider the current earnings, liquidity position and pattern of previous years' dividend payment of the company in the time of dividend payment. A theoretical model of dividend influencing factors has been developed from the findings.

This thesis presents the dividend practices and performance of listed companies of Bangladesh. In Non financial sectors: The miscellaneous sector provides the highest payout. The DPS, EPS, MPS of the large size firm is better than small and medium size firms. The payout of the older firms is more than the newly listed firms. The highest payouts are in medium leveraged firm, low risk's firm, medium PE ratio's firm. The survey results have revealed that the both the shareholders and the companies prefer the cash dividend most. The most of the companies pay cash dividend with stable payout. The most of the companies follow increasing trend in dividend payment but no satisfactory research is conducted to justify the investors' preference. In financial sector: The maximum payouts are in large size firm, earlier listed companies, low leveraged firm, and high risk's firm, medium PE ratio's firm. The survey results have revealed that the companies prefer both cash & stock dividend most but majority shareholders prefer stock dividend. The most of the companies follow stable payout with increasing trend in dividend payment but no satisfactory research is conducted to justify the investors' preference.

The study has examined the application of dividend models in Bangladesh by using factor analysis and parametric, nonparametric test and it is found that the catering theory, signaling theory, dividend relevance theory are the most important theories followed by the dividend decision makers in nonfinancial sectors. The dividend policy decisions are followed the signaling theory, bird- in-the hands policy, Lintner model, residual policy and life cycle theory in financial sector of Bangladesh.

The important problems in dividend practices are identified by parametric test, nonparametric test and descriptive statistics from survey opinion of board of directors and the problems are 'cash dividends affects on liquidity', higher expectation of

shareholders, imperfect capital market, regulatory changes, ambiguity of dividend, unanticipated economic change, insider trading. The other related problems are previous non- payment culture, lack of study on dividend policy, lack of dividend policy in firm, investors' attitude toward dividend.

On the basis of the findings and inferences, the study has suggested pragmatic policies and strategies for making appropriate dividend policies and finally making prudent dividend decision of corporate firm. The policy implications include corporate policy measures, strategic measures, model based suggestions and regulatory measures for optimum dividend policy decision. The important suggestions for dividend policy are regular dividend payment, maintain liquidity level, regularity measures for preventing information leakage and insider trading, enforcement of existing laws etc. This study represents the picture of the dividend performance and dividend policy in the corporate sectors in the Bangladesh. The developed models from this study will help the investors, policy makers, companies and related stakeholders. This research will explore the avenues of further research on dividend policy of an emerging market and act as a referred study.

Chapter One: Introduction

1.1 Background of the Study

Firms can use internal or external sources to finance their investments. Internal sources include retained earnings and depreciation, while external sources basically refer to new borrowings or the issue of stock. Thus the financing decision involves the appraisal of two choices. The first choice is the dividend choice- the fraction of retained earnings to be ploughed back and the fraction to be paid out as dividends. The second is the capital structure choice- the fraction of external finance to be borrowed and the fraction to be raised in the form of new equity. For a company, dividend policy is a pivotal policy around which other financial policies rotate. The value of the corporate securities depends to a great extent on dividend and therefore, in deciding upon the financial structure of a company.

Dividend policy is the trade-off between the magnitude of retained earnings and distributed cash or securities. Balancing between dividend and retained earnings is an important function of a finance manager. Appropriate dividend distribution policy can not only set a good corporate image, but also build the confidence of investors in the company's future prospects. The dividend distribution policy is to refer to steady growth in dividend policy, or residual dividend policy, or a fixed dividend policy. The forms of dividend payout policy are cash dividend, stock dividend, and share repurchase.

The corporate management is an elective management and the power of recommending dividend is vested with the board of directors. The board of directors therefore, decides the amount of dividend to be distributed by a company, and shareholders don't have any direct say in such a decision. The board of directors must make inter-alia the three decisions pertaining to investment, financing and dividends simultaneously as these three decisions are interrelated. The dividend policy of the firms has to be evolved within the legal frameworks and restrictions. Statutory restrictions have been imposed by the company act, 1994. The company act governs the declaration and payment of dividends. Dividend policy decision is affected by legal, tax and accounting factors of a country.

It was Lintner (1956), who laid the foundation of dividend theory. Using a survey of US Chief Finance Officers, he uncovered three main stylized facts that lead to a standard model of dividend payout: (i) firms have long term target dividend payout ratios; (ii) managers focus more on dividend changes than on absolute levels; (iii) dividends changes follow shifts in long-run, sustainable levels of earnings rather than short-run changes in earnings; and (iv) managers are reluctant to make dividend changes that might have to be reversed. This suggests that firms smooth their dividends. Consequently, the empirical evidence shows that dividends at particular year can be explained by current earnings and lagged dividends. Over the years, these two factors which constitute what is known as the Lintner's model, has become the gold standard of dividend theory, and has been developed and supported by a relatively very large number of subsequent studies (e.g.Fama and Babiak, 1968; Lasfer, 1996; Baker and Powell, 1999; Garrett, Priestley, 2000, 2012; Dhanani, 2005; Brav, Graham, Harvey, Michaely, 2005). The implications of this model is that dividends act as a signal of past as well as future firm's prospects.

The dividend policy is a vital issue but there is controversy regarding the impact of dividend payment. Because, argument on the issue 'the relevance of dividend to the value of the company or irrelevance to the value of the company still exists. On the relationship between dividend policy and market value of the firm, different theories have been advanced. Modigliani and Miller (1961) claimed that investment policy rather than dividend policy influences the value of firms under perfect capital market conditions, without taxation, transaction costs, agency conflicts, information asymmetry, or institutional constraints. They suggested that dividend policy is irrelevant for investors because any mix of dividends and retained earnings can be homemade in a perfect capital market freely. Many researchers evidenced the dividend irrelevance theory through their studies like Black & Scholes (1974), Chen, Firth, & Gao (2002), Adefila, Oladipo & Adeoti (2004), Uddin & Chowdhury (2005), Denis & Osobov (2008) and Adesola & Okwong (2009).

On the other hand, many researchers support dividend relevance theory. They said that the dividend policy affects the firm's value and market price of the shares. Gordon (1963) presented his view by supporting the dividend relevance theory. Studies conducted by Travlos, Trigeorgis, & Vafeas (2001), Baker, Powell & Veit (2002), Myers & Frank

(2004), Dong, Robinson & Veld (2005) and Maditinos, Sevic, Theriou, & Tsinani (2007) support dividend relevance theory. Dividend Policy is one of the tantalizing puzzles in finance. Brealey and Myers (2002) have listed dividend policy as one of the top ten puzzles in finance.

So, it is observed that the financial economists have come to different conclusion about factors determining dividend policy and effect of dividend policies on common stock price. A general question may arise in the mind of the shareholders i.e. the corporate dividend policy affects the value of their stocks or not. So, in addition to the theory of dividend policy, it is necessary to discuss the empirical evidences on the dividend payment practices of the corporations and their possible impacts on common stock prices. Empirical testing of dividend policy may focus on whether the determinants carry information in pricing the common stocks and whether the dividends are the determinants serving as signals in conveying information about the current and future earnings of the corporation.

1.2 Statement of the Problem

A review of literature reveals that the studies investigating the dividend policies of companies abroad have been conducted. But, a few studies on dividend policy of corporate sectors in Bangladesh have been made. Different authors have used different combinations of variables for explaining the dividend behavior. Moreover, factors influencing the corporate dividend policy may substantially vary from country to country because of inconsistency or variation in legal, tax and accounting policy between countries.

There is different opinion between relevance and irrelevance of dividend on market value of the company. The relevance theory tells that the dividend payment has significant effect on the stock price (Gordon, 1959). The irrelevance theory argues that the dividend has no impact on the share price. They demonstrate that under the condition of perfect capital market and zero taxes, dividends do not affect the value of the firm and as such the shareholders are indifferent as to the payment of dividend and retention of profits. The value of the firm depends only on the income produced by its assets, not on how this income is divided between dividends and retained earnings (Miller & Modigliani, 1961). One of the aims of research is to identify the impact of dividend on the market price of share in the context of Bangladesh.

The academician developed various models for dividend policy, i.e bird- in-the hand theory (Gordon, 1963), signaling theory (Stephen Ross, 1977), Agency theory (Jensen and Meckling, 1976) Irrelevance theory (Miller & Modigliani, 1961). But these are hardly followed by the companies. The theories of dividend are not justified in the context of capital market of Bangladesh due to some draw backs. Since, the drawbacks of the market and lack of practices of the standard dividend policies, this study is undertaken. The lack of uniform dividend policy and dividend practices exists in the capital market of Bangladesh. The research scope is to identify the reasons and to provide the policy formulations for improvement. From the literature view, it is seen that there are some works on dividend determinants and impacts of dividend on stock price but very few on the dividend theories implication in the capital market. There is scope of research in this area. So, the research objective is to apply these theories in the context of capital market of Bangladesh and to develop a suitable dividend model for our capital market.

In the foreign context, the dividend policy related studies are based on secondary information and primary survey based information. The secondary data based study is based on market information and company information such as earnings, liquidity, leverage, tax rate, retained earnings etc. These factors determine the dividend decision. The primary survey based study is based on the opinion from the top management on different issues to dividend decision. In our country, some papers are found on secondary data based research but very few on primary survey based research. I have used both secondary data and primary data to reveal the intensive scenario of dividend policy in the capital market of Bangladesh. I have tried to reveal the present scenario of dividend practices in Bangladesh with the help of company data, market data and the opinion of the dividend decision makers. This study has justified the impact of dividend on market price for relevancy of dividend in financial decision. I have also identified the influential determinants among various determinants which have impact on dividend decision in the context of capital market in Bangladesh. This study is conducted separately on financial sector and nonfinancial sector for getting the clear picture of dividend policy.

Finally, the research work in this field is not enough yet in Bangladeshi context. 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 and to provide the policy implications of dividend policy to strengthen the capital market of Bangladesh.

1.3 Objectives of the Study

The Principal objective of the study is to evaluate dividend policy practices of listed companies in Bangladesh. To accomplish this principal objective, following specific objectives are covered:

a) To analyze the impact of dividend policies on market prices of shares.
b) To identify the determinants of dividend policies of corporate firms.
c) To examine the dividend policies practiced in corporate firms.
d) To examine the application of existing dividend models in the context of Bangladesh.
e) To identify the flaws with the existing dividend practices of corporate firm.
f) To suggest a comprehensive dividend policy framework for improving the existing dividend policies.

1.4 Hypotheses of the Study

Following hypotheses are tested against the objectives set forth as above:

Hypothesis 1: H_0: There is no association between shareholders' wealth and dividend policy.

Hypothesis 2: H_0: Dividend payout is influenced by the factors: lagged dividend payout ratio, earnings per share, cash flow, sales growth, liquidity, institutional ownership, sponsor ownership, individual ownership, leverage, risk, age, size, relative tax, return on assets, investment opportunity, retained earnings to equity.

Hypothesis 3: Ho: Existing dividend models are not effective in guiding dividend policy practices of corporate firms.

1.5 Scope of the Study

In the field of finance, there are lots of scopes for research. The dividend decision is one of the important functions of finance. But, the lack of uniform dividend policy and dividend practices exists in the capital market of Bangladesh. There is lot of research scope in this field. The research outcomes will be used by various parities-practitioners, investors, policy makers, researchers, and academicians. The capital market of Bangladesh will be developed by this research by providing the policy guidelines.

1.6 Organization of the Study

The thesis is written with chapter wise to cover each objective. The chapter one is for introduction which is covered the background of the study, rationale of the study, objectives and hypothesis. The literature review of the dividend policies is described in chapter two. The literature is mentioned with all areas of contribution in dividend policies. In the chapter 3, the research methodology is clearly explained. The sample size, sample criteria, sample design, and the models, methods, variables used in study are mentioned in this chapter. For attaining the objective 'no. a', the chapter four and chapter five are presented. In the chapter 4, the impact of dividend on the market price of shares is shown with the regression model by using related variables. The chapter five is deeply analyzed the announcement effects of dividend on market price of share with various aspects (initiation-omission, increasing-decreasing- unchanged trend, cash-stock-both) by using event study methodology. The chapter six and chapter seven are mentioned for fulfillment of objective 'number b'. The determinants of dividend policy is analyzed with regression model and mentioned in chapter six with variables by using secondary data. In the chapter seven, the dividend decision makers' opinions about the dividend influencing factors are analyzed with parametric, non parametric test and factor analysis. The chapter eight is described the dividend policies practices in corporate firms to attain the objective 'number c' with parametric and nonparametric test by using both secondary data and primary data. The chapter nine is about the application of dividend theories in the capital market of Bangladesh which is for objective 'number d'. The parametric and non parametric tests along with factor analysis are used to justify the dividend model in the capital market in Bangladesh. The chapter ten is related to the problems about dividend decision .This chapter is for fulfillment of objective 'number e'. The problems are identified with survey and analyzed with parametric and non parametric tests. Finally the chapter eleven is about the summary, policy implications and conclusion. In this chapter, the dividend policies are recommended to develop the capital market of Bangladesh which has attained the objective 'number f'.

1.7 Limitations of the Study

The respondents group of questionnaire survey is the top management of the companies. It was difficult to get the response from them. For long sample period, I faced problem to get the company data and market data which are before the year 2000. The Dividend policy is a vital issue around which the other financial decisions rotate. Moreover, there is lack of research in the company on the suitable dividend decision. So, it was the problem for the respondents to give their opinion clearly. Some respondents have not enough theoretical knowledge about the dividend policy which makes them non responses. The dividend policy is a controversial issue in academic world which is a major problem for study in this field.

Chapter Two: Review of Literature

2.1 Literature on Dividend Theories

Lintner (1956) interviewed managers from 28 selected companies. He found a number of important stylized facts underlying the decision to pay dividends, which can be summarized as follows:

a) Firms have long-term target ratios of dividend payout.

b) Managers focus more on dividend changes than on absolute levels.

c) Dividend changes follow shifts in long run, sustainable levels of earnings rather than short-run changes in earnings.

d) Managers are reluctant to make dividend changes that might have to be reversed.

He further built up a theoretical model of corporate dividend behavior that embodies these findings.

$$DPS^* = \gamma \times EPS \text{----------(1)}$$

$$DPS_t - DPS_{t-1} = (DPS^* - DPS_{t-1}) \text{--------(2)}$$

$$DPS_t = \alpha + (\lambda\gamma EPS) + (1 - \lambda)DPS_{t-1} \text{----------(3)}$$

Where γ is the target payout ratio, λ is the speed of adjustment towards the target payout ratio, α is a constant expected to be positive to reflect the propensity of firms not to cut their dividends. DPS and EPS are for dividend per share and earnings per share, respectively. Equation (1) indicates that the target dividend is a function of the target payout ratio, as indicated in the survey results. Equation (2) states that changes in dividends should reflect the difference between the target dividends and the actual dividends that firm paid in the previous period. The target payout ratio is the long-term desired ratio of dividends to earnings. However, since firms adjust to their target through time, this difference is multiplied by λ, the speed of adjustment, which measures how quickly managers adjust dividends to close the gap in their dividend towards their target. From rearrange Equation (2), it is obtained Equation (3), which states that dividend at time t is a function of two main variables: earnings at time t and lagged dividends, and by two firm-specific parameters: target payout ratio and speed-of-adjustment.

Gordon (1959) studied on Dividends, Earnings, and Stock to evaluate the hypotheses by deriving the relation among the variables that follows from each hypothesis and then testing theories with cross-section sample data and to test the relation among the variables predicted by each hypothesis. The variation in price among common stocks is of considerable interest for the discovery of profitable investment opportunities, for the

guidance of corporate financial policy, and for the understanding of the psychology of investment behavior using values of certain attributes such as the dividend yield, growth in sales, and management ability are obtained and compared for two or more stocks. The model and its coefficients thereby shed light on what investors consider and the weight they give these variables in buying common stocks. Auto-correlation in the time series would impair the significance of the regression coefficients for many of the variables. Possibly even more important, the use of time series assumes that the coefficient of a variable is constant over time but different among stocks.

Merton, H. Miller and Franco Modigliani (1961) studied on Dividend Policy, Growth, and the Valuation of Shares. They attempted to fill the existing gap in the theoretical literature on valuation by examining the effects of differences in dividend policy on the current price of shares in an ideal economy characterized by perfect capital markets, rational behavior, and perfect certainty.MM (1961) are the first to challenge the belief that a higher dividend payout translates into higher firm value. They concluded that only investment policy rather than dividend policy determines firm value in an ideal economy. Dividend policy merely establishes a tradeoff between dividends at one date and dividends at another date because both the corporations and the individual investors can create any cash inflow stream by making homemade dividends. It means that any desired stream of payments can be replicated by appropriate purchases and sales of equity. Thus, investors will not pay a premium for any particular dividend policy. The net payout can be considered as the difference between the wealth generated from preceding investment and the amount of capital required by the future opportunity of growth, and is simply a residual. Dividend irrelevancy proposition has the implication that firms should never give up a positive NPV project to increase a dividend since the investment policy of the firm is set ahead of time, and firm value is not changed by changes in dividend policy. In order to grasp the spirit of MM's (1961) dividend irrelevancy proposition it is necessary to understand correctly the basic assumptions of perfect capital markets, rational behavior, and perfect certainty. Dividend policy does not affect firm's value, but it could matter when one of these assumptions is violated. In perfect capital markets, no participant (buyer, seller or issuer) of trading transaction has the power to control completely stock prices. There is no asymmetrical information on the traded stocks among the participants of stock trading. There are no transaction costs in any forms such as brokerage fees and transfer tax. There are no tax differentials between dividends and capital gains. The

assumption of rational behaviour means that investors pursue wealth maximization all the time and view income in the form of dividend payment and capital gains as equivalents. The assumption of perfect certainty implies the analysis disregard the difference between stocks and bonds as financial sources.

Black's (1976) Dividend Puzzle: In the post MM (1961) period, a large number of studies focus on how dividends in the real world behave when the conditions underlying the MM (1961) are relaxed. The major controversy emanates from the contradictory implications of these assumptions. While the information asymmetry and the agency costs will make dividends increase the value of the firm, the existence of the tax differential between dividends and capital gains will result in firms destroying value when they pay dividends. This controversy led Black (1976) to discuss primarily two questions on dividend policy: Why do firms pay dividends? Why do investors buy stocks paying dividends? Miller-Modigliani irrelevance theorem suggests that a firm without dividend payments has the same value as it would have if it paid dividends under the conditions of frictionless world. However, this conclusion contradicts the fact we can observe in real world that firms pay many dividends. Why are announcements of dividend increases typically followed by stock price increases (Miller, 1986)? Moreover, why are dividend cuts or eliminations often followed by price falls? Early studies of this phenomenon include Pettit (1972), Aharony and Swary (1980), and Asquith and Mullins (1983). The puzzle for MM's (1961) dividend irrelevance theorem is obvious: Why would stock prices react to dividend changes if payout policy is truly irrelevant? With tax, the dividend picture appears to be more complicated since once one introduces payout taxes into an otherwise frictionless model in which payout policy is irrelevant, investors are always better off under a low or no dividends. Feldstein and Green (1983) echoed that it is questionable that companies pay dividends on condition that dividends are taxed more heavily than retained earnings. The transaction costs of selling shares cannot explain why dividends exist as the corporations can avoid such costs by buying back stocks. The dividend changes do not necessarily convey the forecasts of company's prospect. For example, the dividend cut does not indicate the future performance will degenerate, favors tax saving for stockholders instead. If a corporation omits its dividends, it has less needs of relatively more expensive external capital when high quality projects turn up. The assumption that increase in dividends hurts creditors is not reliable either because the negotiation mechanism between the corporation and creditors can help relief the potential conflict. In

conclusion, Black (1976) argues that the corporate policy of paying substantial dividends seems like a puzzle. The existing literature advances several explanations for this puzzle. Various theories stipulate that factors such as taxes, information asymmetries, and contract incompleteness determine a firm's payout decision. The practice of distributing dividends may demonstrate that corporate payout policies do matter if the assumptions of perfect capital markets are relaxed.

Bhattacharya (1979) studied on 'Imperfect Information, Dividend Policy, and The Bird- in -the Hand' which assumed that outside investors have imperfect information about firms' profitability and that cash dividends are taxed at a higher rate than capital gains. It is shown that under these conditions, such dividends function as a signal of expected cash flows. By structuring the model so that finite-lived investors turn over continuing projects to succeeding generations of investors, they derived a comparative static result that relates the equilibrium level of dividend payout to the length of investors' planning horizons.

Allen and Michaely (1995) studied to survey the literature on payout policy with a description of the Miller- Modigliani payout irrelevance proposition, and then considered the effect of relaxing the assumptions on which it is based. They considered the role of taxes, asymmetric information, incomplete contracting possibilities, and transaction costs and accumulated evidence indicates that changes in payout policies are not motivated by firms. Both dividends and repurchases seem to be paid to reduce potential overinvestment by management reviewing the issue of the form of payout and the increased tendency to use open market share repurchases. This paper suggests that the rise in the popularity of repurchases increased overall payout and increased firm's financial flexibility.

Kinkki(1995) studied on 'Dividend Puzzle – A Review of Dividend Theories' to analyze the Dividend policy as one of the areas of corporate finance to analyze with a rigorous model. There are a number of theories of dividend behavior, and empirical studies provide little evidence for one over the other concerning corporate dividend theories is different. The paper discusses the evaluation of financial research, because at all times researchers have tried to solve the dividend puzzle by using new theories and insights.

Manos (2002) studied on dividend policy and agency theory: evidence on Indian firms to investigate the agency theory of dividend policy in the context of an emerging economy. The results suggest that group affiliation has an important impact on the transaction cost structure as well as agency conflicts faced by Indian companies. In general, the findings support the cost minimization model and the agency theory rationale for dividend policy.

DeAngelo, DeAngelo, and Skinner (2002) studied on 'Are Dividends Disappearing Dividend Concentration and the Consolidation of Earnings' to analyze the number of dividend paying industrials. Dividends increase despite a precipitous decline in the number of payers because (i) the reduction in payers occurs almost entirely among firms that pay very small dividends, and (ii) increased real dividends from the top payers swamp the modest dividend reduction associated with the loss of many small payers. These secular changes reflect high and increasing concentration in the supply of dividends which, in turn, reflect high and increasing earnings concentration.

Ganguli and Chaturvedi(2003) studied on Announcement Effect of Cash Dividend in Presence of Firm Level Tax – An Agency Theory Based Explanation to investigate the announcement effect of dividend in the light of -a) firm level dividend tax at the time of distribution with specific legislative intent that discourages payout, b) using data set of large profitable firms in a common law country with fairly high disclosure standard hardly requiring dividend to signal future prospects and c) announcements covering both pre and post meltdown period. The empirical results show association of increased stock price with dividend increase and decreased stock price with dividend decrease despite being tax-disadvantaged- indicating its value relevance. The findings are consistent with and an extension of international evidence of life cycle theory's prediction that primary determinant of dividend policy is- to addresses agency problem of free cash flow.

Frankfurter and Wood (2003) studied the Dividend Policy Theories and Their Empirical Tests published in the International Review of Financial Analysis to examine whether the differing results in findings from previous empirical studies are study specific (e.g., to study period and method of analysis) and determine that no dividend model is fully supported. The dividend question, therefore, continues to be unresolved.

DeAngelo, DeAngelo, and Stulz (2004) studied on Dividend Policy and the Earned/Contributed Capital Mix: A Test of the Lifecycle Theory to observe a highly significant relation between the decision to pay dividends and the earned/contributed capital mix, controlling for profitability, growth, firm size, leverage, cash balances, and dividend history, a relation that also holds for dividend initiations and omissions having the mix of earned/contributed capital has a quantitatively greater impact than measures of profitability and growth opportunities and document a massive increase in firms with negative retained earnings. Controlling for the earned/contributed capital mix, firms with negative retained earnings show virtually no change in their propensity to pay dividends

from the mid-1970s to 2002; while those whose earned equity makes them reasonable candidates to pay dividends have a propensity reduction that is twice the overall reduction in Fama and French (2001) which supports the lifecycle theory of dividends, in which a firm's stage in that cycle is well-proxied by its mix of internal and external capital.

Baker and Wurgler (2004) studied on A Catering Theory of Dividends to show that the decision to pay dividends is driven by prevailing investor demand for dividend payers. Managers cater to investors by paying dividends when investors put a stock price premium on payers, and by not paying when investors prefer non payers. To test this prediction, they constructed four stock price-based measures of investor demand for dividend payers. By each measure, non payers tend to initiate dividends when demand is high. By some measures, payers tend to omit dividends when demand is low. Further analysis confirms that these results are better explained by catering than other theories of dividends.

Graham and Kumar (2006) studied on Do Dividend Clienteles Exist Evidence on Dividend Preferences of Retail Investors to study stock holdings and trading behavior of more than 60,000 households and find evidence consistent with dividend clienteles. Retail investor stock holdings indicate a preference for dividend yield that increases with age and decreases with income, consistent with age and tax clienteles, respectively. Trading patterns reinforce this evidence: Older, low-income investors disproportionally purchase stocks before the ex dividend day. Furthermore, among small stocks, the ex-day prices drop decreases with age and increases with income, consistent with clientele effects. Finally, consistent with the behavioral "attention" hypothesis, they documented that older and low-income investors purchase stocks following dividend announcements.

Desai Li Jin (2007) studied on institutional tax clienteles and payout policy published in national bureau of economic research to employ heterogeneity in institutional shareholder tax characteristics to identify the relationship between firm payout policy and tax incentives. Analysis of a panel of firms matched with the tax characteristics of the clients of their institutional shareholders indicates that "dividend-averse" institutions are significantly less likely to hold shares in firms with larger dividend payouts. This relationship between the tax preferences of institutional shareholders and firm payout policy could reflect dividend-averse institutions gravitating to low dividend paying firms or managers adapting their payout policies to the interests of their institutional shareholders. Evidence is provided that both effects are operative. Instrumental variables analysis indicates that plausibly exogenous changes in payout policy result in shifting

institutional ownership patterns. Similarly, exogenous changes in the tax code indicate that as the tax cost of paying dividends changes, managers alter their dividend policy to serve their institutional shareholders.

Jain (2007) studied on the Institutional and individual investor preferences for dividends and share repurchase to show individual investors prefer to invest in high dividend yield stocks and in dividend paying firms whereas relatively lower-taxed institutional investors tend to prefer low dividend yield stocks and non-paying firms using adverse selection model, informational superior institutional investors are shown to prefer firms that engage in larger share repurchases whereas individual investors do not prefer share repurchases.

Ivkovi and Weisbenner (2009) studied on local dividend clienteles to exploit demographic variation to identify the effect of dividend demand on corporate payout policy. Retail investors tend to hold local stocks and older investors prefer dividend-paying stocks. Together, these tendencies generate geographically-varying demand for dividends. This paper provides indirect evidence as to why managers may respond to the demand for dividends from local seniors. Overall, these results are consistent with the notion that the investor base affects corporate policy choices.

Baker and Wurgler (2010) studied to propose a signaling model in which agents value dividends relative to a reference point of prior dividends and exhibit loss aversion, as in a prospect theory value function. Two versions of the model are developed, one in which the manager's utility suffers if the dividend falls below an endogenous prior dividend, and another in which investors sell if this occurs. Managers of firms with strong earnings separate themselves by paying high dividends and still retaining enough earnings to be likely to pay the same dividend next period. Equilibrium dividend policies follow a Lintner partial-adjustment model. They argued that the model accounts for major patterns in dividend policy better than signaling models based on public destruction of value, and found empirical support for some of its novel predictions.

Aldin, Al-Malkawi, Rafferty, and Pillai (2010) studied on Dividend Policy: A Review of Theories and Empirical Evidence for providing a comprehensive understanding of dividends and dividend policy by reviewing the main theories and explanations of dividend policy including dividend irrelevance hypothesis of Miller and Modigliani, bird-in-the-hand, tax-preference, clientele effects, signalling, and agency costs hypotheses. The paper also attempts to present the main empirical studies on corporate dividend policy. However, due to the enduring nature and extensive range of the debate about dividend

policy which has spawned a vast amount of literature that grows by the day, a full review of all debates is not feasible. The paper reaches at a conclusion that the famous statement of Fisher Black about dividend policy "the harder we look at the dividends picture, the more it seems like a puzzle, with pieces that just do not fit together is still valid".

Lambrecht and Myers (2010) studied on a lintner model of dividends and managerial rents to develop a model where dividend payout, investment and financing decisions are made by managers who attempt to maximize the rents they take from the firm. But the threat of intervention by outside shareholders constrains rents and forces rents and dividends to move in lockstep. Managers are risk-averse, and their utility function allows for habit formation. They showed that dividends follow Lintner's (1956) target-adjustment model with closed-form, structural expressions for the payout target and the partial adjustment coefficient. Risk aversion causes managers to under invest, but habit formation mitigates the degree of underinvestment. Changes in corporate borrowing absorb fluctuations in earnings and investment.

Becker, Ivkovic and Weisbenner (2011) studied on local dividend clienteles to exploit demographic variation to identify the effect of dividend demand on corporate payout policy. Retail investors tend to hold local stocks and older investors prefer dividend-paying stocks. Together, these tendencies generate geographically varying demand for dividends. Firms headquartered in areas in which seniors constitute a large fraction of the population are more likely to pay dividends, initiate dividends, and have higher dividend yields. This paper provides indirect evidence as to why managers may respond to the demand for dividends from local seniors. Overall, these results are consistent with the notion that the investor base affects corporate policy choices.

Mori (2012) studied on Median-Voter Model of Payout Policy to present an alternative theory of payout policy explaining why firms do no perfectly substitute share repurchases for dividends. Existing empirical findings have shown that individual investors tend to prefer high dividends, whereas institutional investors appear to prefer low dividends and found that when consumption-clientele effects dominate or accord with tax-clientele effects, the dividend pattern is expected to be consistent with the median shareholder's inter temporal consumption allocation. Under these circumstances, if the free cash flow outweighs the dividend payment, then the firm uses "residual" share repurchases to reduce agency costs unless the firm's stock is overvalued.

Bauer and Bhattacharyya (2013) studied on rethinking Lintner an Alternative Dynamic Model of Dividends to explore the possibility of an alternative dynamic empirical model of dividends. In time series testing, also found that one of models fits the empirical reality at least 75% of the time.

2.2 Literature on Dividend Impact on Firm's Wealth

Chandra, Mishra, Vunyale (1996) studied on Dividend Policy of SOEs in India. This paper is an attempt to analyze the dividend behaviour of a cross-section of SOEs in India by taking the dividend theories in general and Lintner's model in particular and also various guidelines issued by the Government from time to time which shows that not all the profit-making SOEs have adhered to the guidelines.

Allen and Michaely (2002) studied to evaluate the observed dividend policy .This study reveals that the traditional factors are significant in explaining and predicting their dividend decision within the period under review and provides strong support for the explanatory or predictive power of Lintner's model which confirms that share market price is a representation of market valuation of dividends.

Grullon and Michaely (2002) found that young firms have a higher propensity to pay cash through repurchases than they did in the past and that repurchases have become the preferred form of initiating a cash payout and also established firms have generally not cut their dividends, they also showed a higher propensity to pay out cash through repurchases indicate that firms have gradually substituted repurchases for dividends.

Green (1979) studied to explain why firms that maximize the value of their shares pay dividends even though the funds could instead be retained and subsequently distributed to shareholders in a way that would allow them to be taxed more favorable as capital gains. This study shows that companies will pay a positive fraction of earnings in dividends by providing some comparative static analysis of dividend behavior with respect to tax parameters and to the conditions determining the riskiness of the securities and each firm can in general maximize its share price by attracting both types of investors that this dividend policy of distributing some fraction of earnings as dividends.

Malla(2002) studied on dividend policy and its impact on share price. The empirical testing has been proved that ex-day stock price tend to fall by significantly less than the dividend. It is also seen that there is the low degree of positive correlation between the total number of listed companies and the number of cash dividend paying listed

companies. Most of the finance company is not being capable of declaring cash dividend to their shareholders. This study also wrap up that there is no significant difference between the average MPS before and after the cash dividend payment of commercial banks, development banks and finance company.

Tyler Hull(2005)studied to examine dividend reduction timing at the industry level, asking what firm types choose to reduce their dividends earlier in a dividend reducing cycle than others which suggests that higher quality firms will reduce dividends sooner to start rebuilding the firm's profitability, while lower quality firms delay reducing their dividends until they must by providing a new theoretical model that suggests dividend reduction timing can be an indicator of firm or management quality by taking to quarterly dividend paying firm level data where the proposed theoretical predictions are empirically tested which shows that early dividend reducers are higher quality firms in that they have higher future returns, a greater increase in total asset growth and higher levels of future profitability.

Werner and Murhadi (2008) studied On Dividend Policy Antecedent and Its Impact on Share Price to test dividend signaling theory in an Indonesian capital market. The finding indicates that signaling theory still relevant in influencing movement of share price. Besides, research finding also supports agency theory told by Jensen in seeing influence of free cash flow to share price. For the influence of structure of ownership to share price, the result supports entrenchment argument. While influence of structure of ownership to dividend policy found by result which do not support agency theory. Life Cycle theory in this research is obtained by result which is research confirmation before all, where there are influences of cycle step of company life to dividend policy.

Azhagaiah and Sabari (2008) studied on The Impact of Dividend Policy on Shareholders' Wealth to analyze the impact of dividend policy of shareholders' wealth in Organic and Inorganic Chemical Companies in India during 1996– 1997 to 2005-2006 using multiple regression method and stepwise regression models. The study proves that the wealth of the shareholders is greatly influenced mainly by five variables viz., Growth in sales, Improvement of Profit Margin, Capital Investment Decisions (both working capital and fixed capital), Capital Structure Decisions, Cost of Capital (Dividend on Equity, Interest on Debt) etc. There is a significant impact of dividend policy on shareholders' wealth in Organic Chemical Companies while the shareholders' wealth is not influenced by dividend payout as far as Inorganic Chemical Companies are concerned.

Landesbank and Hannover (2009) studied to examine the relationship between dividends and inflation in Australia by testing for co-integration between these two variables which indicates that inflation is contributing to dividend growth which shows that there is a desirable level of real dividend income to be paid out to their investors and that inflation simply increases the nominal volume of corporate earnings and thereby leads to higher dividend payments.

Itzhak ben, David (2010) studied on dividend policy decisions to examine the behavioral theories. The empirical evidence is consistent with a departure from rational behavior on the part of investors or managers.

Baker (2010) studied to explain dividend policy by listing the known empirical facts about dividends that research has discovered over the years which includes explanations that are descriptive in nature and combine the stylized facts into a description of corporate policy and investor behavior and offers motivations as to why investors seek dividends and why managers pay them.

Asghar, and Hamid (2011) studied on impact of dividend policy on stock Price Risk: Empirical Evidence from Equity Market of Pakistan to find out impact of dividend policy on stock price risk in Pakistan. The price volatility has negative correlation to the growth in assets. It is also inferred from the study that all the Variables are linked to the price Volatility; however, second model justifies the relational impact of some variables on the price volatility.

Asif, Rasool and Kamal (2011) studied on impact of financial leverage on dividend policy: Empirical evidence from Karachi Stock Exchange-listed companies to examine the relationship between dividend policy and financial leverage of 403 companies, listed with Karachi Stock Exchange during the period 2002 to 2008. The financial leverage was found to have a negative impact on dividend payout, indicating less dividend payments by high-debt firms. The findings also revealed confirmed that change in earnings has no significant impact on dividend policy in case of Pakistani firms while the dividend yield has positive impact and vice versa. Fixed effect model, applied for the study, supports only the significant effect of dividend yield on dividend per share.

Mardan et.al. (2012) studied on the relationship between Dividend Policy and Shareholder's Wealth Evidence from Pakistan to examine the influence of dividend policy on shareholder's wealth of 75 companies listed in "Karachi Stock Exchange", for duration of six years from 2005 to 2010 using multiple regression and stepwise regression by using

shareholder's wealth as a dependent variable which is measured as market price per share. There is significant influence of dividend policy on wealth of shareholder's, as far as the dividend paying companies are concerned. Lagged Price earnings ratio did not appear to have any significant influence on dependent variable, whereas lagged market value of equity has a significant impact on market price per share.

Michaely and Roberts (2012) studied on Corporate Dividend Policies from Private Firms to compare the dividend policies of publicly and privately held firms in order to identify the forces shaping corporate dividends, and shed light on the behavior of privately held companies. They showed that private firms smooth dividends significantly less than their public counterparts, suggesting that the scrutiny of public capital markets plays a central role in the propensity of firms to smooth dividends over time. Public firms pay relatively higher dividends that tend to be more sensitive to changes in investment opportunities than otherwise similar private firms.

Sarwar (2013) studied on Effect of Dividend Policy on Share Holder's Wealth: A Study of Sugar Industry in Pakistan to focus on the impact of dividend policy on shareholder's wealth in sugar industries of Pakistan. For this study descriptive statistics and multiple regression analysis is used by taking dividend per share (DPS), earnings per share (EPS), Lagged Market Price Ratio (LMPR), Lagged Price Earnings Ratio (LPER) Price, Earnings Ratio (PER) Retained Earnings Ratio (RER) as independent variables and market price per share (MPS) as dependent variable. The R^2 shows that 99% variations in MPS are due to the explanatory variables.

Mokaya , Chuka, James (2013) studied on The Effect of Dividend Policy on Market Share Value in the Banking Industry: the Case of National Bank of Kenya to analyze how much a company should pay its stockholders as dividend is been of concern to managers. The study established a strong and positive correlation (0.850) between dividend payout and market share value, with a P-value of 0.000. There was a positive correlation (0.299) between dividend growth rate and market value of shares with a p-value is 0.013; hence establishing a significant relationship between variables. Dividend policy had a significant effect on the market share value. The study recommends that management in banks and specifically National Bank Kenya must adjust the dividend policy in tandem with interests and requirements of shareholders to improve the market share value.

Sumninder, Bawa and Kaur (2013) studied to analyze the impact of dividend policy on shareholders .The results show that in the long run wealth of shareholders of dividend

paying IT companies has increased significantly as compared to non-dividend paying IT companies.

Iqbal, Arfaq, Waseem, and Asad (2014) studied on Impact of Dividend Policy on Shareholders' Wealth: A Study of Selected Manufacturing Industries of Pakistan to examine the impact of dividend policy on shareholders' wealth in context of Pakistan. Simple OLS technique for analysis is used to derive the results of the study. The findings showed that dividend policy of the firm has significant positive impact on shareholders wealth. Similarly firm growth rate also has significant positive impact on shareholders' wealth. Firm size has significant positive impact on shareholders wealth; indicating that large domain of operations of a business make it more capable to exploit maximum opportunities and in position to earn greater amount of return due to greater growth prospects so it ultimately place greater value to shares of large size companies. The results of study help the corporate management to better decide the level of dividend to be distributed so that shareholders wealth could be maximized.

Tahir, Tara, and Raja (2014) studied on Impact of Dividend Policy on Shareholder Wealth to analyze the impact of dividend policy on shareholder wealth of oil and gas exploration companies of Pakistan during the years from 1999 to 2006 using Statistical tools including regression and correlation methods to ascertain best fitted model for predicting the dividend policy impact on shareholders wealth, by taking dividend payout ratio, P/E ratio and BV/MV equity ratio as independent variables and holding period yield as dependent variable. To determine the proportion of explained variation in dependent variable, the coefficient of determination has been tested with the help of F-test. The result indicates based on historical data and statistical analysis that correlation between independent variables and depended variable is very low for all companies showing insignificant relationship between them.

2.3 Literature on Dividend Announcement Effects

Aharony & Swary(1980) studied on Quarterly Dividend and Earnings Announcements and Stockholders' Returns: an Empirical Analysis. In this paper assuming that managers possess inside information about their firms' future prospects, they may use various signaling devices to convey this information to the public. Two of the most important signaling devices available are earnings and dividend figures. The "information content of dividends" hypothesis asserts that managers use cash dividend announcements to signal changes in their expectations about future prospects of the firm. Since dividend decisions are almost solely at management's discretion, announcements of dividend changes should provide less ambiguous information signals than earnings numbers. Furthermore, given the discrete nature of dividend adjustments, signals transmitted by these changes may even provide information beyond that conveyed by the corresponding earnings numbers. If dividends, then, do convey useful information, in an efficient capital market this will be reflected in stock price changes immediately following a public announcement. It is, therefore, an empirical question whether dividend information content is useful to capital market participants.

Brown & Warner (1980) examined properties of daily stock returns and how the particular characteristics of these data affect event study methodologies. Daily data generally present few difficulties for event studies. Standard procedures are typically well-specified even when special daily data characteristics are ignored. However, recognition of autocorrelation in daily excess returns and changes in their variance conditional on an event can sometimes be advantageous. In addition, tests ignoring cross-sectional dependence can be well-specified and have higher power than tests which account for potential dependence.

Asquith and Mullins (1983) investigated the impact of dividends on stockholders' wealth by analyzing 168 firms that either pay the first dividend in their corporate history or initiate dividends after a 10-year hiatus. The empirical results exhibit larger positive excess returns than any previous study on dividends. This result does not depend on any other events (such as earnings announcements) and the excess return is positively related to the size of the initial payment. Subsequent dividend increases for the same sample of firms are also investigated. Compared with the initiation of dividends, the results suggest that subsequent in-creases may produce a larger positive impact on shareholders' wealth. The results also indicate that other studies may have underestimated the effect of dividend

increases. The findings for both initial and sub-sequent dividends are consistent with the view that dividends convey unique, valuable information to investors.

Shefrin and Statman (1984) conducted study on explaining investor performance for cash dividends. The well-known tendency of investors to favor cash dividends emerges quite naturally in two new theories of choice behavior the theory of self-control due.

Miller & Rock (1985) showed that an informationally consistent signalling equilibrium exists under asymmetric information and the trading of shares that restores the time consistency of investment policy, but leads in general to lower levels of investment than the optimum achievable under full information and/or no trading. Contractual provisions that change the information asymmetry or the possibility of profiting from it could eliminate both the time inconsistency and the inefficiency in investment policies, but these contractual provisions too are likely to involve dead-weight costs. Establishing which route or combination of routes serves in practice to maintain consistency remains for future research.

Kai Li and Xinlei Zhao (1987) studied on Asymmetric Information and Dividend Policy. This paper examines how informational asymmetries affect firms' dividend policies. Researchers find that firms that are more subject to information asymmetry are less likely to pay, initiate, or increase dividends, and disburse smaller amounts & also show that their main results are not driven by their sample and that results persist after accounting for the changing composition of payout over the sample period, the increasing importance of institutional shareholdings, and catering incentives. They conclude that there is a negative relation between asymmetric information and dividend policy. Their results do not support the signaling theory of dividends.

Williams (1988) conducted research on Efficient Signalling with Dividends. In the efficient signalling equilibrium, the representative firm optimally distributes dividends. This firm finances its value-maximizing investment first from internal funds and second from stock sold to new investors.

Sant and Cowan (1994) found that dividend omissions precede increases in return variance, beta and the dispersion of analyst forecasts of earnings. The report shows a negative association between stock price reactions to omission announcements and changes in beta, but not changes in total return variance or earnings variance, consistent with increases in priced estimation risk.

Below and Johnson (1996) examined the differential share price reaction to dividend increase and decrease announcements with respect to market phase. They found that market phase has a significant impact on abnormal returns around the announcement, and it appears that more information is conveyed by dividend change announcements which run counter to market phase. The results are robust in that the conclusions are the same for both an analysis of the raw abnormal returns data, and for the GLS regressions which control for possible confounding factors. These results are consistent with the information content of dividends hypothesis, and have important implications for event studies where clustering is problematic.

Hcaly & Krishna (1997) examined earnings changes surrounding firms' decisions to initiate or omit dividend payments. Firms that initiate (omit) dividend payments have positive (negative) earnings changes both before and after the dividend policy change. The subsequent earnings changes arc positively related to the dividend announcement return.

Dewenter and Warther (1998) studied on Dividends, Asymmetric Information, and Agency Conflicts: Evidence from a Comparison of the Dividend Policies of Japanese and U.S. Firms. In this study, the empirical evidence shows that corporate managers are reluctant to change dividends and that stock prices move following dividend announcements. One theory to explain this pattern is information asymmetry, which argues that because managers know their firms better than investors, any dividend change reveals new information to the market. To test this theory, the authors analyze the dividend policies of Japanese and U.S. firms because these firms have different degrees of information asymmetry. The results support the hypothesis that the differences in Japanese and U.S. dividend policies are the result of Japanese firms having less information asymmetry than U.S. firms.

Ian Garrett and Priestley (2000) analyzed the dividend behavior of the aggregate stock market. Researcher proposes a model that assumes managers minimize the costs of adjustment associated with being away from their target dividend payout. The target is expressed as a function of lagged stock prices and permanent earnings, generalizing previous models of dividend behavior. They present a new method for measuring unobserved permanent earnings based on the Kalman filter. Their specification of dividend behavior is strongly supported by the data relative to both alternative models and over time. They find significant evidence of dividend smoothing and dividends conveying information regarding unexpected positive changes in current permanent earnings and also

find that both the speed of adjustment of dividends to target dividends and tests of signaling are sensitive to the specification of the model.

DeAngelo, Linda DeAngelo and Skinner (2000) studied on Special dividends and the evolution of dividend signaling. They found that (1) special dividends were once commonly paid by NYSE firms, but are now rarely paid; (2) firms typically paid specials almost as predictably as they paid regular dividends; (3) despite the dramatic overall decline in specials, the incidence of very large specials increased in recent years; and (4) special dividends were not displaced by stock repurchases. Most plausibly, small specials disappeared because their predictability made them close substitutes for regular dividend signals, while large specials survived because their sheer size automatically differentiates them from regulars.

Balachandran & Tanner (2001) studied to examine share price reaction to announcement of bonus share issues of Australian companies. Price reaction to bonus issue announcements from the day of the announcements to the day after the announcements (day 0 to day 1) is statistically significant and positive of average 2.37% for uncontaminated events and 2.11% for contaminated events employing the market model. They do not find any statistically significant difference of price reaction between these two groups. However, price reaction to bonus issue announcements is statistically significantly stronger for industrial non-financial companies and mining companies than financial companies. Pre-announcement effect was found only for industrial non-financial companies and financial companies that announced bonus issues simultaneously with other market sensitive information such as interim or final results. The magnitude of price reactions to bonus issue announcements is statistically related to the size of the bonus issues and the pre-announcement effect.

Travlos, Trigeorgis and Vafeas (2001) examined the stock market reaction to announcements of cash dividend increases and bonus issues (stock dividends) in the emerging stock market of Cyprus. Both events elicit significantly positive abnormal returns, in line with evidence from developed stock markets. This study contends that special characteristics of the Cyprus stock market delimit applicability of most traditional explanations for cash and stock dividends in favor of an information signaling explanation.

Nissim and Ziv (2001) studied to investigate the relation between dividend changes and future profitability, measured in terms of either future earnings or future abnormal earnings. They found that dividend changes provide information about the level of

profitability in subsequent years, incremental to market and accounting data and documented that dividend changes are positively related to earnings changes in each of the two years after the dividend change.

Bernhardt, Douglas, Robertson (2002) studied on Testing Dividend Signaling Models. Since signaling theory predicts that a monotonic relationship should obtain at all stratifications, this is significant evidence against the signaling explanation for the existence of dividends.

Grullon, Michaely & Swaminathan(2002) found that the dividend increases may be an important element of a firm's long-term transition from growth phase to a more mature phase. The long-term price drift suggests that the market reaction to dividend changes may not incorporate the full extent of the decline in the cost of capital associated with dividend changes.

Fuller and Goldstein (2003) studied on Dividend Policy and Market Movements. Using S&P 500 monthly returns as a proxy for market conditions, they investigate whether investors prefer dividend-paying stocks to non-dividend-paying stocks in declining markets. These researchers found that dividend-paying firms have higher returns than non-dividend-paying firms, especially in declining markets. These results are robust for adjustments for risk using CAPM adjusted deciles, CAPM excess returns, the Fama-French three-factor model, and dividing the sample into size and book-to-market quartiles.

Lonkani & Ratchusanti (2003) studied on Complete Dividend Signal. In this study, the Dividend theory suggests that dividend is sticky and it can be used to signal quality of the firms. However, empirical evidences do not strongly support the signaling efficiency of dividend to future firms' performance. Specifically, when dividend surprise is measured in terms of differences from past dividend, empirical research cannot find strong relationship between dividend surprise in current period and future firm performance.

Khan & Khan(2005) attempted to explain the effect of Dividend Policy on the Stock Prices by taking a sample of 131 companies listed at Karachi Stock Exchange for a period of 10 years from 2001to 2010. Various theories & articles are reviewed, written in Pakistan and abroad to see the significance of dividend policy on the stock prices and to compare the results of this research with those conducted earlier. Sample size is large i.e. almost one fourth of the total listed companies of Karachi Stock Exchange. Panel data approach is used to explain the relationship between dividends and stock prices after

controlling the variables like Profit after Tax, Earnings per Share and Return on Equity. Results indicate that Stock Dividend, Dividend Policy and Stock Prices Profit after Tax, Earnings per Share and Return on Equity have positive relation with Stock Prices and significantly explain the variations in the market prices of shares, while Retention Ratio has negative, insignificant relation with stock prices. Overall model is significant. Results of Fixed and Random Effect Models further validate these results. Overall results of this study indicate that Dividend Policy has significant positive effect on Stock Prices.

Doron Nissim (2005) studied on the Information Content of Dividend Decreases: Earnings or Risk News to demonstrate that dividend cut announcements convey new information regarding earnings in the current and subsequent year. The paper shows that the abnormal stock return during the three-day dividend cut announcement window is approximately equal to the present value of unexpected current and next year's earnings.

Vieira and Raposo (2005) found no support for a positive relation between dividend change announcements and the market reaction for French firms, and only a weak support for the Portuguese and the UK firms. After accounting for non-linearity in the mean reversion process, the global results do not give support to the assumption that dividend change announcements are positively related with future earnings changes. They formulated two hypotheses in order to explore the *window dressing* phenomenon and the maturity hypothesis, finding some evidence, especially in the UK market, for both of the phenomenon.

Kostyuk (2006) conducted a study on Dividend payout: Its impact on firm value. This paper considers corporate finance as a major source for company's welfare. They reckon dividend policy as a crucial factor in formation of corporate value. Different dividend payout strategies employed by various enterprises across three countries (Ukraine, Russia, Croatia) lead to various performances & regard the effects spurred by paid dividend as a core of their study. Researchers model the profitability of the firm and endeavor to relate it to dividend policy, relying on ideas suggested by Fama and French (1995) & find a statistical evidence of positive dependence between portfolio return and income distributed among shareholders.

Ping Zhou and Ruland (2006) explored that high-dividend-payout companies tend to experience strong, not weak, future earnings growth. These results show alternative measures of payout and earnings, sample composition, mean reversion in earnings, the effects of particular industries, time periods, and share repurchases.

Chen et.al (2007) studied on The Announcement Effect of Cash Dividend Changes on Share Prices: An Empirical Analysis of China. This paper adopts the sample of cash dividend changes from all listed A-share firms in China over the period 2000 to 2004 and applies an event study in order to investigate the announcement effect of cash dividend changes and to examine simultaneously if the dividend signaling hypothesis holds in China's stock markets. Empirical results indicate that the announcement of cash dividend changes has a positive influence on share prices, but such results only partly support the dividend signaling hypothesis. They also find that there is no great dissimilarity between the announcement effects of cash dividend changes for different stock markets in China. However, the announcement effect of cash dividend changes for different sample periods exhibits distinct differences which may have a close connection with the promulgation and execution of two administrative rules. The cross sectional analysis also shows that both cash dividend yield and the ratio of non-floating shares have explanatory power on the announcement effect of cash dividend changes.

Fracassi(2008) examined the stock price sensitivity to dividend changes. The Dividend Signaling, the Free-Cash-Flow, the Maturity and the Catering Hypotheses all predict an average positive (negative) reaction to announcement of a dividend increase (decrease). However, these hypotheses have different cross-sectional predictions. This paper documents that the positive stock price response to dividend increases is due primarily to the signaling of higher future earnings, to the managers catering to the time-varying premium assigned by the market to dividend paying stocks, and partially to the reduction of agency problems. On the contrary, the negative price response to dividend decreases is mainly due to the transition from a mature life-cycle stage to a decline stage with higher systematic risk, as maintained by the Maturity Hypothesis.

Kadioglu (2008) studied the announcement effect of cash dividend evidence from Turkish capital market to analyze the announcement effect of cash dividends on share prices in the Turkish capital markets and to investigate whether cash dividend announcements result in an abnormal return around the announcement day in Istanbul Stock Exchange. The study shows that there is a significant negative relationship between cash dividends and abnormal returns after the announcement. The announcement of a higher cash dividend per share results in significant a higher negative abnormal return and the announcement of a lower cash dividend per share results in significant a lower negative abnormal return.

Nobanee, Ayman, Wasim & Husni (2009) studied to investigate the market reaction to dividend change announcements for the period 1996 to 2002 at Amman Stock Exchange. The results show that the market reacts negatively to dividend change announcements and no pre-event information leakage for the samples studied.

Yip Peng Poi (2009) studied on dividend Announcements: an Empirical Study of Security Prices Reaction in the KLSE to examine the security prices reaction to dividend announcements from the period of January 2004 until December 2008 in Kuala Lumpur Stock Exchange. The market inefficiency also supported by some evidences of information leakage prior to announcement day. Besides, the direction of reaction is upward trend regardless type of information conveyed to the market.

Adelegan (2009) studied Price Reactions to Dividend Announcements on the Nigerian Stock Market to investigate whether the Nigerian stock market reacts efficiently to dividend announcements in terms of price adjustments. The study finds that the cumulative excess returns (CERs) for dividend paying firms are positive and significant for 30 days from the day of the announcement, while the CERs for dividend omitting firms for the same period are significant and negative. The CERs for the subsamples are statistically significant around the event window. The paper shows that the Nigerian stock market is not semi–strong efficient, that dividend policy matters and that share prices do react to dividend announcements.

Pruksananonda & Xia (2009) studied on Joint Announcement Effect on Stock Price – A Study on Nordic Stock Exchanges. The objective of this thesis is to investigate to what extent the information content in the joint dividend and earnings announcement affect share price reactions in the NASDAQ OMX Nordic Stock Exchange. Further, this study examines the financial performance of the companies in subsequent period to the announcement. OLS regression models from market-based and accounting data combined with analyzing of financial figures is used to arrive at the result. The study concludes that the joint dividend and earnings announcement has diminutive effect on the share price.

Joshi(2009) studied on Effects of Dividends on Stock Prices in Nepal to examine the impact of dividends on stock price in the context of Nepal and examine whether this is consistent in the context of Nepal (or not) and the implication particularly to the banking and non-banking sector using a descriptive and analytical research design with a multivariate linear regression analysis and also to test the dividends retained earning hypothesis and to examine the estimated relationship over the period of time. This study

reveals that the impact of dividends is more pronounced than that of retained earnings in the context of Nepal. Dividend has a significant effect on market stock price in both banking and non-banking sector.

Al-Yahyaee, M. Pham, Walter (2010) studied on the information content of cash dividend announcements in a unique environment. Due to its distinctive institutional background, Oman offers a valuable opportunity to examine stock price reactions to dividend announcements. In Oman, (1) there are no taxes on dividends and capital gains, (2) there is a high concentration of share ownership, (3) there is low corporate transparency, and (4) firms frequently change their dividends. The results show that announcements of dividend increases are associated with increased stock prices, while announcements of dividend decreases cause decreases in stock prices. Firms that do not change their dividends experience insignificant negative returns. These results contradict tax-based signaling models, which argue that higher taxes on dividends relative to capital gains are a necessary condition for dividends to be informative.

Liljeblom, Mollah and Rotter(2010) found evidence on dividend signaling as well as the stickiness of dividends. However, they also find heterogeneity in the relationship between dividends and earnings on markets similar in many respects, suggesting that even small variations in the institutional surroundings may be important for the results.

Laarni T. Bulan, (2010) studied on 'to Cut or Not to Cut a Dividend'. He used a propensity score matching methodology to differentiate firms according to their likelihood of cutting a dividend where the likelihood is a function of observable firm characteristics. He has three main findings: First, the market reaction to dividend cut announcements is proportional to the element of surprise. Specifically, for a given magnitude of the dividend cut, he finds that the three-day cumulative abnormal return around the dividend cut announcement is more negative for firms with less visible signs of poor performance compared to those that have experienced a more prolonged period of poor performance. Second, while on average firms cut their dividend as a *last resort* response to poor performance as suggested by prior studies, a significant number of firms cut their dividend *pro-actively* even without such visible signs of poor performance. The preservation of a low leverage ratio appears to be of first-order importance to these "pro-active" firms. Third, large firms use their poor performance to justify a dividend cut. Moreover, the absence of *concurrent* poor performance seems to preclude the option of cutting the dividend. Instead, firms may resort to cut back on capital expenditures.

Hussainey et al. (2010) studied to examine the relationship between dividend policy and share price changes in the UK stock market. These researchers find 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.

Bhatia (2010) used event study with constant mean return model to find out impact on daily data. The reactions on abnormal returns for dividend announcements are further empirically investigated with statistical tests. This is observed if randomly check the trading frequency of these stocks at stock exchanges. The reactions on daily, monthly, quarterly and yearly basis are the expected outcomes in stock prices when announcements are floated on the trading floor. However, the magnitude of variation may vary with the type of news, company, industry, stock etc.

Singh & Kumari (2011) examined the stock return behaviour around dividend announcements in India during the period 2006-07 to 2009-10. The results indicate that AARs are not found significant on event day during any period of dividend announcements. The results of paired t-test for means have shown that there are significant differences in average number of transactions before and after announcement from 2006-07 to 2009-10. On the other hand, the results of the paired t-test for means have shown mixed results for turnover and average traded quantity during the period under study.

Bawa & Kaur (2012) conducted their study on Empirical validity of dividend policy models in the Indian manufacturing SMEs. The results disclosed that Lintner's model and Dobrovolsky's model have best fit in the present scenario in case of Indian Manufacturing SMEs as per cross-sectional regression results. As per the results of fixed effect firm model of Panel regression analysis, Lintner's model, Britain's first model and Darling's model hold good in case of Indian manufacturing SME's.

Khan et.al (2011) studied to explain the effect of dividend policy on Stock Prices after controlling the variables like Earnings per Share, Profit after Tax and Return on Equity using sample of 55 companies listed at KSE-100 Index for the period of 2001- 2010. Fixed and random effect models are applied on panel data to determine the relation

between dividend policy and stock prices. Results indicate that Earnings per Share, Return on Equity and Profit after Tax are positively related to stock prices while Retention Ratio have negative relation with Stock Prices and significantly explains the variations in the stock market prices.

Mahmood, Fayyaz & Ghaffari (2011) studied on Dividend Announcements and Stock Returns: An event study on Karachi stock exchange. The purpose of this study is to explore the effect of cash paid as dividend on share prices. Value relevance of cash dividend announcement is tested on a sample of around 100 corporate dividend announcements in Karachi Stock Exchange (KSE), during the period of 2005 to 2009. Market model with top three basic extensions i.e., Market, Mean, and Risk adjusted return models are used with the application of event study methodology on daily stock returns. Although there is a marginal bias, the results of all three methods are almost similar. The observed results advocated that dividend announcements are positively value relevant and rejected dividend irrelevance hypothesis in KSE. Strong preference for dividend supports the evidence of agency cost. Results also show the signs of insider traders in the market in the form of market activism in pre event window.

Kale, Kini , and Payne(2011) studied on The Dividend Initiation Decision of Newly Public Firms: Some Evidence on Signaling with Dividends. In this study Researchers track the dividend initiation decisions of a sample of 6,588 firms that went public during the period 1979-2005 and find that 873 of them initiated dividends. Their primary objective is to determine whether information signaling can explain the dividend initiation (DI) decision & find that variables suggested by the dividend-signaling models of John and Williams (1985) and Allen, Bernardo, and Welch (2000) are significant determinants of the DI decision and the associated announcement-period stock price effect. They also find support for the residual, agency, tax, clientele, transactions costs, catering, and life cycle explanations of dividend policy.

Cindy M. Vojtech (2012) studied on The Relationship between Information Asymmetry and Dividend Policy. This paper examines how the quality of firm information disclosure affects shareholders' use of dividends to mitigate agency problems. Managerial compensation is linked to firm value. However, because the manager and shareholders are asymmetrically informed, the manager can manipulate the firm's accounting information to increase perceived firm value. Dividends can limit such practices by adding to the cost faced by manager manipulating earnings. Empirical tests match model predictions.

Dividend-paying firms show less evidence of earnings management. Furthermore, non dividend payers changed earnings announcement behavior more than dividend payers.

Irum, Rafique & Hassan(2012) studied on Effect of Dividend Announcement on Share Prices of Petroleum to focus on the impact of dividend announcement on share prices of four different sectors i.e. refineries, fertilizer, oil and gas exploration and oil and gas marketing sectors of Karachi Stock Exchange. This study reveals that the dividend announcements have no significant impact on share prices of either of the sectors under investigation. Hence, Karachi Stock Exchange has been proven to be in efficient in the light of this study.

Hashemijoo, Ardekani, and Younesi, (2012) studied to examine the relationship between dividend policy and share price volatility with a focus on consumer product companies listed in Malaysian stock market. The primarily regression model was expanded by adding control variables including size, earning volatility, leverage, debt and growth. This study showed significant negative relationship between share price volatility with two main measurements of dividend policy which are dividend yield and dividend payout and a significant negative relationship between share price volatility and size is found.

Tsuji (2012) studied on a Discussion on the Signaling Hypothesis of Dividend Policy. Researchers consider that their many-sided discussions on the dividend-signaling hypothesis with reviewing both classic and newest literature contribute to theoretical and empirical future related research in this field.

Harbi and Bujang (2012) examined on effects of changes in dividend announcements on stock return to prove the relevancy of dividend signalling theory in Malaysian capital market. Numerous studies have been conducted in developed and emerging market and yet no attempt has been made by local studies to investigate the relationship between unexpected changes in dividend announcements and cumulative abnormal return based on Malaysian economic conditions namely before Asian financial crisis (1990-1996), during Asian financial crisis (1997-1998), after Asian financial crisis (1999-2007) and during global crisis (2008-2010). This paper employs both robust panel data and cross-sectional analyses for comparison purpose. Panel data approach reveals that the unexpected changes in dividend announcements are positive and significantly correlated with cumulative abnormal return for overall period (1990-2010), during and after financial crisis. On the other hand, cross sectional approach offer similar results only in period before and during financial crisis.

Islam (2013) studied to explain the ex-day stock price behavior. The previous research has mostly focused on dividend yield and expected return. This paper examines the most liquid common stock (blue-chip) prices behaviour on the ex-day in a period of financial crisis and covers four major capital markets from different geographic locations (the US, the UK, Japan, and China). On the New York and Shanghai Stock Exchanges, they observe that the stock prices drop does not differ from the dividend amount on the ex-dividend day and there is no evidence of abnormal return and short-term trading. On the Tokyo Stock Exchange, the stock prices fall less than the dividend amount, which is in contrast to the London Stock Exchange, where the stock prices fall more than the dividend amount. On the Tokyo and London Stock Exchanges, they observe abnormal return and short-term trading around the ex-day. Possible explanations for these differences can be financial crisis (in the UK) and short-term trading (in the Japan).

Grullon, Michaely, Benartzi, and Thaler (2013) studied on 'Dividend Changes Do Not Signal Changes in Future Profitability' to show the well-known nonlinear patterns in the behavior of earnings, dividend changes contain no information about future earnings changes. They showed that dividend changes are negatively correlated with future changes in profitability (return on assets) and investigated whether including dividend changes improves out-of-sample earnings forecasts and also found models that include dividend changes do not outperform those that do not include dividend changes.

2.4 Literature Dividend Determinants

Redding (1997) showed that firm size and liquidity explain the decision of whether to pay dividends well, whereas existing informational explanations (such as monitoring and signaling) explain the level of dividends well.

De Angelo, DeAngelo, Skinner (2002) studied to analyze dividends as it has been increased despite a precipitous decline in the number of payers because of the reduction in payers occurs almost entirely among firms that pay very small dividends, and increased real dividends from the top payers swamp the modest dividend reduction associated with the loss of many small payers. These secular changes reflect high and increasing concentration in the supply of dividends which, in turn, reflect high and increasing earnings concentration. Their findings on dividend concentration cast doubt on the empirical validity of the dividend clientele and signaling hypotheses.

Kang (2003) studied on Country Influences on Corporate Dividend Policy Evidence from Australia, France, the U.K., and the U.S. to investigate 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 paper indicates 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.

Leary and Michaely(2005) conducted a study on Determinants of Dividend Smoothing: Empirical Evidence. In this study researchers document the cross-sectional properties of corporate dividend smoothing policies and relate them to extant theories. They find that younger, smaller firms, firms with low dividend yields, more volatile earnings and returns, and firms with fewer and more disperse analyst forecasts smooth less. Firms that are cash cows, with low growth prospects, weaker governance and greater institutional holdings smooth more. They also document that dividend smoothing has steadily increased over the

past 80 years, even before firms began using share repurchases in the mid-1980s. Taken together, their results suggest that dividend smoothing is most common among firms that are not financially constrained, face low levels of asymmetric information, and are most susceptible to agency conflicts. These findings provide challenges and guidance for the developing theoretical literature.

Eije and Megginson(2007) showed that financial reporting frequency has steadily increased and is associated with higher payout, and that privatized companies account for almost one-quarter of total EU cash dividend payments but only two percent of the number of listed firms. This paper indicates that similar influences affect payout in the EU as in America, but that increasing fractions of retained earnings to total equity do not increase the likelihood of cash payouts, whereas company age does.

Hashim and Devi (2007) found positive significant associations between proportion of family members and earnings quality which suggest that concentrated shareholdings in family ownership have incentives to reduce agency costs through a better alignment of shareholder and managerial interests and also find positive significant evidence on the relationship between institutional ownership and earnings quality. Concentrated shareholdings by institutional investors provide an incentive for diligent monitoring as they have the resources, expertise and stronger incentives to actively monitor the actions of management and improve financial reported earnings.

Husam-Aldin and Nizar Al-Malkawi (2007) studied to examine the determinants of corporate dividend policy in Jordan using a firm-level panel data set of all publicly traded firms on the Amman Stock Exchange between 1989 and 2000. The study examines the determinants of the amount of dividends using Tobit specifications. The results suggest that the proportion of stocks held by insiders and state ownership significantly affect the amount of dividends paid. Size, age, and profitability of the firm seem to be determinants of corporate dividend policy in Jordan. The findings provide strong support for the agency costs hypothesis and are broadly consistent with the pecking order hypothesis. The results provide no support for the signaling hypothesis.

Amidu(2007) studied to examine 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 support the

identification of how dividend policy affects performance of firms listed on the Ghana Stock exchange.

Anil, and Kapoor(2008) studied 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 and to identify the various factors that influence the dividend payout policy decisions of IT firms in India.

Chaya and Suhb (2008) studied to conduct comprehensive analysis of its importance in payout policy. With worldwide firm-level data, they present evidence that cash flow uncertainty is an important cross-sectional determinant of corporate payout policy. The results show that across countries, cash-flow uncertainty (represented by stock return volatility) is a key factor that affects the amount of dividends as well as the probability of paying dividends. The impact of cash-flow uncertainty on dividends is generally stronger than the impact of other potential determinants of payout policy—such as the earned/contributed capital mix, agency conflicts, investment opportunities, firm size, and profitability. Furthermore, cash flow uncertainty also has a significant impact on the amount of total payouts (i.e., the sum of dividends and repurchases).

Nizar andAl-Malkawi (2008) studied on Factors Influencing Corporate Dividend Decision: Evidence from Jordanian Panel Data to examine the determinants of corporate dividend decisions of publicly quoted companies in Jordan as a case study of an emerging market based on 15-year unbalanced panel data with 1137 firm-year observations covering the period between 1989 and 2003. The study develops five research hypotheses and used the general-to-specific modeling approach to choose between the competing hypotheses and estimates the determinants for a given firm to pay dividends to its shareholders through Profit specifications. The findings support for the agency costs hypothesis and are broadly consistent with the pecking order hypothesis.

Kouki, and Guizani (2009) studied on Ownership Structure and Dividend Policy Evidence from the Tunisian Stock Market to identify and to analyze the influence of shareholder ownership on dividend policy for a panel of Tunisian firms from 1995 to 2001. The results indicate that Tunisian companies with highly concentrated ownership distribute more dividends. They find that there is a significant negative correlation between institutional

ownership and distributed dividend level. The relation between dividend policy and state ownership is positive.

Duha Al-Kuwari (2009) studied to investigate the determinants of dividend policies for firms listed on Gulf Co-operation Council (GCC) country stock exchanges using a panel dataset of non-financial firms listed on the GCC country stock exchanges between the years of 1999 and 2003. The models considered the impact of government ownership, free cash flow, firm size, growth rate, growth opportunity, business risk, and firm profitability on dividend payout ratios. The results suggest that the main characteristics of firm dividend payout policy were that dividend payments related strongly and directly to government ownership, firm size and firm profitability, but negatively to the leverage ratio. These results indicate that firms pay dividends with the intention of reducing the agency problem and maintaining firm reputation, since the legal protection for outside shareholders was limited. In addition, and as a result of the significant agency conflicts interacting with the need to built firm reputation, a firm's dividend policy was found to depend heavily on firm profitability. This may indicate that listed firms in GCC countries alter their dividend policy frequently and do not adopt a long-run target dividend policy.

Ramli (2010) studied to investigate the effect of large shareholders and dividend policy of Malaysian companies using panel data from 2002 to 2006. Ownership structure in Malaysia is concentrated; therefore the relevant agency conflicts to analyze are the one that arises from the relationship between large shareholders and minority shareholders. The result shows that companies make higher dividend payout as the shareholding of the largest shareholder increase. The magnitude of dividend payout is also larger when there is a presence.

Moradi , Salehi & Honarmand (2010) studied to examine the effects of dividends in relation to profitability, size, beta rate, the rate of retained earnings, P/E, and debt ratio covering all listed companies in the Tehran Stock Exchange between 2000 and 2008. The study shows that there is a direct relationship between dividend and profitability. The results also reveal that there is a reverse relationship of these factors with P/E, beta rate and debt ratio and also show that there is no meaningful relationship between the dividend policy and a company's size and rate of retained earnings.

Tsuji (2010) studied to explore the determinants of the dividend policy of firms in the Japanese electrical appliances industry. The paper reveals that in this industry, corporate managers do not cater to investors' demands in both their dividend initiation and

continuation decisions. 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.

Gill, Biger and Tibrewala(2010) studied on Determinants of Dividend Payout Ratios Evidence from United States to find the dividend payout ratio is the function of profit margin, sales growth, debt-to-equity ratio, and tax. For firms in the Services industry, the dividend payout ratio is the function of profit margin, sales growth, and debt-to-equity ratio and also found that the results are different when the dividend payout ratio is defined as the ratio between the cash dividend that the after-tax cash flow, not the after tax earnings of the companies.

Khalid, Shabibi and Ramesh (2011) studied to examine the factors which affect dividend policy for nonfinancial UK companies in the year 2007. They found that corporate governance factors affect the dividend policy. It seems that board independence is one of the important factors which drive firms to pay dividends. Furthermore, some of the firm characteristics have also influenced the dividend policy decision among the non-financial UK firms.

Appannan and Sim(2011) studied on leading determinants of dividend policy in Malaysia. The study confirms the fact that debt equity ratio and past dividend per share are the important determinants of dividend payment.

Imran (2011) studied on Determinants of Dividend Payout Policy: A Case of Pakistan Engineering Sector. The return on investment can be divided in capital gain and dividend payouts to empirically investigate 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.

Kinfe (2011) studied on Determinants of Dividend payout: An Empirical Study on Bank Industry in Ethiopia to investigate the factors determining dividend payout policy in Ethiopia bank industry using a panel dataset of audited financial statement of banks. The models considered the impact of profitability, liquidity, leverage, firm size, growth, and lagged dividend per share on dividend payout ratios. The results show 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 and there is no relationship of profitability, leverage, and growth as independent variables with dividend payout and also confirm that firms pay dividends with the intention of reducing the agency problem. Mangers 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.

Said (2012) studied to examine the determinants of dividends' information content using a sample of 136 French firms during the year 2007 to empirically validate their model. The empirical results show a negative reaction of stock prices to dividend announcement. This finding is consistent with the hypothesis of deterioration of growth opportunities and concluded that firms' characteristics significantly affect dividends' information content.

Abassi, Muzammil, and Qazi (2012) studied on Determinants of Dividend Payout in Pakistan to find the impact of expenses, gross sales, cost of sales, taxes, net profit before tax, earning per share on dividend payout of all registered firms in KSE, Pakistan. Quantitative and numeric data base on cross sectional data used in this study. The study 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.

Gustav (2012) studied on Determinants of Dividend Payout Ratios: Study of Swedish Large and Medium Caps. The results indicate that some of the company selected factors have an impact on the companies' dividend payout ratios and there are some differences between large and medium caps. The dividend payout ratios of large caps have a significant relationship to free cash flow, growth and risk. While the dividend payout ratios of medium caps have a significant relationship to free cash flow, leverage, risk and size.

Thanatawee (2012) studied on Ownership Structure and Dividend Policy: Evidence from Thailand to examine the relationship between ownership structure and dividend policy in Thailand in a sample of 1,927 observations over the period 2002-2010. The results show that Thai firms are more likely to pay dividends when they have higher ownership concentration or the largest shareholder is an institution and that firms pay higher dividends when the largest shareholder, especially an institution, holds more percentage of

shares. It is also found that both the likelihood of paying dividends and the magnitude of dividend payouts increase (decrease) with higher institutional (individual) ownership, the findings mostly driven by the ownership of domestic investors.

Warrad, Abed, Khriasat, and Imad (2012) studied on the Effect of Ownership Structure on Dividend Payout Policy: Evidence from Jordanian Context .The study examines the payout behavior of dividends for Jordanian industrial public shareholding companies over the period 2005-2007 and support that there is positive and significant relation between foreign ownership structure and the dividends payout policy through Tobin's Q. However, the results document significant relationship between foreign ownership structure, company size and debt ratio and dividends policy measured by return on assets (ROA).

Longinidis and Symeonidis(2013) provided evidence supporting the hypothesis that data-mining methods perform better in accuracy measures against the traditional methods used. The prediction of dividend policy determinants provides valuable benefits to all related parties, as they can manage, invest, consult and monitor the dividend policy in a more effective way.

Turki & Al-Khadhiri (2013) studied on Determination of Dividend Policy: The Evidence from Saudi Arabia to examine the factors determining dividend represented by Dividends per share for companies in the Saudi Arabia stock exchanges (TASI) using 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.

Komrattanapanya(2013) studied on Factors Influencing Dividend Payout in Thailand. A tobit Regression analysis to determine the factors that influence the dividend payout of all firms listed in the Stock Exchange of Thailand (SET) during year 2006 to 2010. Using the Tobit regression analysis, results reveal that financial leverage, investment opportunities, and sales growth negatively affected the dividend payout; on the other hand, size of firm is positively affected dividend payout. The paper shows that firms in property and construction sector are more likely to pay dividend than others.

2.5 Literature on Management Views on Dividend

Lintner (1956) in his pioneering work on dividend policy interviewed managers from 28 enterprises and based on findings concluded that dividends are sticky, tied to long-term sustainable earnings, paid by mature enterprises, smoothed from year to year, and targeted a long-term payout ratio when determining dividend policy.

Baker et al. (1985) survey revealed that the first highly ranked determinant was the anticipated level of an enterprise's future earnings, the second factor was the pattern of past dividends and the third factor cited as important in determining dividend policy was the availability of cash. In particular, respondents were highly concerned with dividend continuity, and the respondents believed that dividend policy affects share value and dividend payments provide a signalling device of enterprise future prospects.

Khurana (1985) surveyed the corporate dividend policy in India mailing structured questionnaire to the 215 enterprises. The survey and personal interviews, among others, revealed that dividend decision of enterprises was primarily governed by net profits and dividend paid in the previous year.

Baker and Phillips (1992) surveyed managements' views on stock dividends. The analysis was based on the responses of 121 responding enterprises. The major findings of the survey were that managers strongly agree stock dividends have a positive psychological impact, managers believe stock dividends enable them to express their confidence in the enterprise's future prospects, and the dominant motive for paying stock dividends is to maintain the enterprise's historical practice.

Baker and Powell (2000) investigated the views of corporate managers of major US enterprises about the factors influencing dividend policy. They concluded that the most important determinants of an enterprise's dividend policy were the level of current and expected future earnings and the pattern or continuity of past dividends.

Manandhar (2002) surveyed the views of corporate executives on dividend policy and practice of corporate enterprises in Nepal. The major findings of the survey were that dividend decision was considered as discretionary decision, and lack of timely disclosure of relevant financial information and low rate of dividend payment are the major causes to the declining investors' confidence in the stock market.

Chinmoy Sahu(2002) made an attempt at testing the stable dividend hypothesis from empirical evidence gathered in the Indian context. According to the stable dividend hypothesis, a firm's value is influenced by the stability of its dividend payout. Firms with

stable dividend policies should enjoy better valuations in the capital market than those with a variable dividend policy. It follows therefore, that investors of firms following a stable dividend policy will enjoy better opportunity for wealth creation. Using regression analysis methodology, the study tries to examine the association between dividend stability and stock market returns available to investors.

Pradhan and Adhikari (2003) surveyed the views of financial executives of 50 large Nepalese enterprises. The survey findings, among others, revealed that major motive for paying cash dividends is to convey information to shareholders about favourable prospects of the enterprise and dividend decision is not a residual decision.

Revista de Contabilidade(2004) surveyed on management views on corporate dividend policy in Portugal. This paper focuses on the dividend policy of the companies listed on the Lisbon Stock Exchange (LSE), from the viewpoint of their managers. It takes as its starting point the results obtained from a questionnaire answered by the Chief Executive Office and the Chief Financial Officer.

Anand(2005) analyzed the results of 2001 survey of 81 CFOs of bt-500 companies and her most valuable PSUs in India to find out the determinants of the dividend policy decisions of the corporate India. Most of the firms have target dividend payout ratio and dividend changes follow shift in the long-term sustainable earnings. The findings on dividend policy are in agreement with Lintner's study on dividend policy. The dividend policy is used as a signaling mechanism to convey information on the present and future prospects of the firm and thus affects its market value. The dividend policy is designed after taking into consideration the investors' preference for dividends and clientele effect.

Brav et al. (2005) surveyed 384 chief financial officers and treasurers to determine key factors that drive dividend and repurchase policy. The survey unveiled that, except under extraordinary circumstances, managers have a strong desire not to cut dividends. As a result, for enterprises that pay dividends tend to be smoothed from year to year and linked to sustainable long-run changes in profitability.

H. Kent Baker et. al. (2005) reported the results of a 2004 survey from managers of dividend-paying Norwegian firms listed on the Oslo Stock Exchange about their views on dividend policy. Specifically, they identified the most important factors in making dividend policy decisions and managers' views about various dividend-related issues. The most important determinants of a firm's dividend policy are the level of current and expected future earnings, stability of earnings, current degree of financial leverage, and

liquidity constraints. No significant correlation exists between the overall rankings of factors influencing dividend policy between Norwegian and U.S. managers. Norwegian managers express mixed views about whether a firm's dividend policy affects firm value. Respondents point to the possible role of dividend policy as a signaling mechanism. No support exists for the tax-preference explanation for paying dividends.

Basnet (2007) surveyed the views of managers on dividend policy of Nepalese enterprises listed at Nepal Stock Exchange Ltd. (NEPSE). The survey revealed that level of current and expected future earnings, liquidity constraints, projection about future state of the economy are the important factors in setting the enterprise's dividend policy in Nepal.

Mizuno (2007) surveyed the views of corporate managers on payout policy of Japanese enterprises listed in Tokyo Stock Exchange. The analysis of the responses obtained from 69 enterprises revealed that on payout policy enterprises put higher emphasis on dividends than on share repurchases, enterprises attach more importance to stable dividends than to performance linked dividends, and corporate managers recognize the relationship between dividends and an enterprise's value.

Adeyemi and. Adewale (2008) studied on dividend policy is a pivot around which other financial policies rotate, hence central to the performance and valuation of listed firms. This paper is motivated by the apparent dearth of empirical works on dividend policies and practices in Nigeria and hence aims to evaluate such policies and practices among selected Nigerian quoted firms. The result of the survey questionnaires shows that Nigerian investors' attitudes are consistent with those of the bird-in-the-hand theorists.

Shah (2009) surveyed the views of 60 financial executives on practices of dividend policy in Nepal. The results revealed, among others, stability of earnings, level of current earnings, and pattern of past dividends are the three important factors in order of their importance determining dividend policy of corporate sector.

Stuart Archbold and Fátima Simões (2009) reported the empirical results of a questionnaire survey about corporate dividend policy addressed to finance directors of UK and Portuguese listed firms. Similar to other studies (for example, Brav et al., 2005 in the US and Dhanani, 2005 in the UK), They survey 313 finance directors in the UK and 48 in Portugal to examine their views of and understanding about the dividend decision in order to compare practice with theoretical propositions to be found in the literature. Their survey results demonstrate similarities in the responses from the UK and Portugal, but also

substantive differences, particularly in respect of the interaction between dividend and investment decisions and views about the signalling consequences of dividends.

Nabaraj Adhikari, (2010) analyzed the perceptions of managers on dividend policy by surveying the views of 125 Managers of 66 companies listed at Nepal Stock Exchange. This survey is motivated by the observation that much of dividend policy theory is implicitly based on a capital market perspective. Out of 66 listed enterprises surveyed, 16 were from banks and 50 were from nonbanks. The results of this study indicate that the most important determinants of dividend policy in order are growth rate of enterprise's earnings, patterns of past dividends, availability of investment opportunities; managers have more emphasis on the stable dividend policy; and dividend policy influences the value of the enterprise in Nepal. The findings of the study could be useful for research scholars, and users of financial information including corporate managers, investors, financial analysts, and regulators. The current study extends limited previous research based on questionnaire and survey related dividend policy. It thus provides new evidence from a pre-emerging capital market of Nepal.

Baker, Dutta & Saadi (2010) surveyed on managers of firms listed on the Toronto Stock Exchange about their views on dividends. They find the perceptions of factors that influence dividend policy differ between managers of financial and non-financial firms. Industry classification also affects how managers view statements about the dividend pattern, dividend setting process, dividend policy and firm value, residual dividend theory, and explanations for paying dividends. However, they find weak, if any, multinational operations effect on manager perception of dividends. They conclude that researchers investigating dividends should partition the data by industry type and perhaps other firm characteristics to better understand the dividend puzzle.

Haleem, Ijaz-Ur-Rehman, & Javid (2011) examined the perceptions of managers of dividend-paying firms listed on Karachi Stock Exchange (KSE) on factors influencing dividend policy, issues relating dividend policy and the corporate governance practices. The survey shows that the most important factors that affect dividend policy are; the level of current earnings, the projection about the future state of the economy, the stockholders characteristics, concerns about the stock prices, need of current stockholders.

Khan et al (2011) surveyed the opinions of finance directors of 60 foreign listed companies out of 105 foreign listed companies on Karachi stock exchange in order to visualize their view about the dividend decision. The survey resulted into some very

important points to be noted that include: the firms give importance to the dividend as it was in past and the growth is considered at time of declaration of dividend; the dividend decision is influenced by the competitor policy and the fear of signalling of shortage of profitable investment; and the results demonstrate that foreign listed companies are more concerned with dividend policy.

Alshammari (2012) surveyed the corporate managers of 123 Kuwaiti firms listed in the Kuwait Stock Exchange (KSE) in order to look into what affects dividend policies in Kuwait. The major findings of the survey were that future earnings was a paramount factor that affects the level of current dividends and the level of current liquidity is another important factor affecting dividends in Kuwaiti listed firms.

Baker and Powell (2012) surveyed managers of dividend-paying firms listed on the Indonesian Stock Exchange (IDX) to learn their views about the factors influencing dividend policy, dividend issues, and explanations for paying dividends. The evidence showed that managers view the most important determinants of dividends is the stability of earnings and the level of current and expected future earnings. The evidence also showed that managers of Indonesian firms perceive that dividend policy affects firm value.

Naser et al (2013) surveyed the managers of the companies listed on Abu Dhabi Securities Exchange. The survey based on the responses obtained through 34 filled up questionnaires revealed, among others, that external factors related to the economic conditions together with the state of the capital market and lending conditions are all important factors in formulating dividend policy, and restrictions imposed on them by debt providers together with current financial market crises are the most important factors that affect their dividend policy.

John (2013) surveyed the opinions of managers on factors influencing dividends decision in Nigerian listed firms. The survey revealed, among others, that pattern of past dividends, the level of current earnings, current degree of financial leverage, availability of alternative source of capital, liquidity constraints such as availability of cash, growth and investment opportunities have a significant influence on dividend decision in Nigerian firms.

Akinyomi(2013) studied to examines the opinions of managers on factors influencing dividends decision in Nigerian listed firms. The study employs survey research design and obtained primary data from selected managers through the administration of questionnaire. The result of the study reveals that pattern of past dividends, level of current earnings,

current degree of financial leverage, availability of alternative source of capital; liquidity constraints such as availability of cash, growth and investment opportunities have significant influence on dividend decision in Nigeria. The study recommends that future researchers should investigate the relationship between dividend payment and firms' value.

Rana and Rashed(2013) studied to explore the perception of managers of companies listed on Abu Dhabi exchange about dividend policy. Thirty-four out of fifty-nine managers of companies listed on Abu Dhabi Securities Exchange were asked to reflect their experience about different aspects of dividend policy. The bird- in- hand theory received the highest support. The current study extends limited previous research based on questionnaire and survey related dividend policy. It thus provides new evidence from an emerging and fast growing economy.

2.6 Literature on Dividend Policies in Bangladesh

Ahmed M. F. (1991) investigated the dividend policy of the enterprises listed on Dhaka Stock Exchange (DSE) and to draw an analogy between that of Japanese and Bangladeshi enterprises. He comments that both dividend and retained earnings convey a return to the stockholders but in Bangladesh dividend rate demonstrate a declining trend while that of Japanese enterprises appears to be somewhat stable. Thus lower dividend yield in Bangladesh is attributable to both lower dividend rate and higher market capitalization while it is mostly due to higher market capitalization in Japan. He also found that dividend rate and yield in Bangladesh is lower than time deposit interest rate whereas in Japan although dividend yield is lower than interest rate but dividend rate is higher than that of. It is also found that companies paying regular dividend have higher P/E ratio than those paying irregularly which ultimately implies that market regards regular dividend policy and regular dividend stimulate the price.

Ahmed M. F. (2000) investigated the relative importance of dividend and retained earnings to explain the stock price variation in Bangladesh. The findings reveal that both dividend and retained earnings influence the stock price. In most cases, dividend hypothesis appears to be stronger than the retained earnings hypothesis. Dividends convey valuable information to the investors and it has been documented that the managers' behavior also appears to be consistent with this view thus supporting Dividend Relevance Theory (Linter, 1956). Although other alternative exists through which managers can

disseminate information but dividends are highly visible compared to other announcements in addition to its credibility of cash signals.

Hassan, Islam and Basher (2000) studied on Market Efficiency, Time-Varying Volatility and Equity Returns in Bangladesh. They examined the issue of market efficiency and time-varying risk return relationship for Bangladesh, an emerging equity market in South Asia. The study utilized a unique data set of daily stock prices and returns compiled by the authors which was not utilized in any previous study. The Dhaka Stock Exchange (DSE) equity returns show positive skewness, excess kurtosis and deviation from normality. The returns display significant serial correlation, implying stock market inefficiency. The results also show a significant relationship between conditional volatility and the stock returns, but the risk-return parameter is negative and statistically significant. While this result is not consistent with the portfolio theory, it is possible theoretically in emerging markets as investors may not demand higher risk premia if they are better able to bear risk at times of particular volatility (Glosten, Jagannathan and Runkle, 1993).

Hamid and Chowdhury (2005) used two measures i.e. daily market- adjusted abnormal return (MARR) and daily cumulative abnormal return (CAR) to study the impact of dividend announcement on shareholders' value. They explained MARR as an indicator of the relative daily percentage price change in the dividend paying stocks compared to the change in average market price. The CAR has been defined as a measure of the investors' total return over a period starting from well before the announcement of dividend to well after the dividend announcement day. They have taken 137 samples of dividend paying companies listed on Dhaka Stock Exchange and found that MARR on the day of dividend announcement was not statistically significant which entails that the market reacts earlier than the actual announcement of dividend. On the other hand, the findings of CAR results that investors lost more value in the ex-dividend period than the value gained in the pre-dividend period. These findings also suggest that dividend announcement does not carry information about the future earnings and cash flows of the companies.

Hossain. M. (2006) examined the determinants of stock price and return movements of listed companies of Dhaka Stock Exchange (DSE). He used several factors like number of listed securities, number of initial public offerings, earnings per share, dividend per share dividend payout ratio and also used some macroeconomic variables like gross domestic product (GDP), per capital income, savings, investment, export, import, foreign exchange reserve, inflation rate, money supply, consumption, deposit interest rate, advance interest

rate as influential factors for determining the price of stock. He found a negative relation in between dividend yield and the price of any stock.

Imam and Malik (2007*)* studied on Firm Performance and Corporate Governance through Ownership Structure: Evidence from Bangladesh Stock Market to examine how corporate governance is practiced through ownership structure and how firm's performance as well as its dividend payout policy is influenced by different ownership pattern and to investigate the pattern of ownership mix and ownership concentration scenario towards sponsorship in Bangladesh. They found that foreign holding is positively and significantly related to the firm performance as measured by firm's holding period returns and Tobin's Q, and the relationship is a monotonic one and also found that firms with high institutional ownership and firms with concentrated ownership pay high and less dividend payout respectively.

Rahman, Z. and Rahman, L. (2008) in their study of stock price behavior around ex-dividend date from DSE found an increase of stock prices. They have made a conclusion that ex-dividend price increased instead of dropped in DSE that implies a clear preference for capital gains without having any focus of dividends by the stockholders.

Ali and Chowdhury (2010) examined the impact of dividend announcement on stock market prices of 25 listed commercial banks in Dhaka Stock Exchange (DSE). They have employed an standard even study methodology to analyze the stock price reaction for dividend announcement and found 11 out of 25 banks' stock price declines, 6 bank's stock price raises and no change in 8 banks. Finally they agreed with the dividend irrelevance theory and conclude that dividend announcement itself has no influence on price.

Misir (2010) studied on Dividend announcements and contagion effects: an investigation on the firms listed with Dhaka stock exchange. The principal purpose of this study was to examine the intra-industry information effects of announcements of dividend initiations of the firms associated with Dhaka Stock Exchange (DSE). The study found that the intra-industry effects of dividend revisions are apparent.

Mollah(2010) studied to investigate 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.

Ali (2011) investigated the impact of changes in selected microeconomic and macroeconomic variables on stock returns at Dhaka Stock Exchange (DSE). A Multivariate Regression Model computed on Standard OLS Formula has been used to estimate the relationship. Regression coefficient reveals that inflation and foreign remittance have negative influence and industrial production index; market P/Es and monthly percent average growth in market capitalization have positive influence on stock returns. All the independent variables can jointly explain 44.48 percent variation in DSE all share price index. No unidirectional Granger Causality is found between stock prices and all the predictor variables except one unidirectional causal relation from stock price and market P/Es. Finally, lack of Granger causality between stock price and selected micro and macro variables ultimately reveals the evidence of informational inefficient market.

Hasan, Akhter, Ahmed, Huda (2012) studied on Cash Dividend Announcement Effect: Evidence from Dhaka Stock Exchange. The sole motive of the paper is to investigate cash dividend announcement effect of the stocks traded in the Dhaka Stock Exchange from 2006 to 2010. Classic event study methodology was used to analyze the data. It was found that in 2006, 2007 and 2009 market has reacted over the announcement in the event date. Some sectors like Food & Auxiliary, Fuel and Miscellaneous have impacted the market both in the event and post event date across the years considered. All the efforts were given to discover reaction therefore the underlying reasoning of such impact are set aside.

Hossain & Ali (2012) studied to explore the impact of firm specific factors on capital structure decision for a sample of 39-firm listed on Dhaka Stock Exchange (DSE) during 2003-2007. To achieve the objectives, this study tests a null hypothesis that none of the firm's specific factors namely profitability, tangibility, non-debt tax shield, growth opportunity, liquidity, earnings volatility, size, dividend payment, managerial ownership, and industry classification has significant impact on leverage using estimate of fixed effect model under Ordinary Least Square (OLS) regression.Checking multi-collinearity and estimating regression analysis through Pearson correlation and autoregressive model respectively this study found that profitability, tangibility, liquidity, and managerial ownership have significant and negative impact on leverage. Positive and significant impact of growth opportunity and non-debt tax shield on leverage has been found in this

study. On the other hand size, earnings volatility, and dividend payment were not found to be significant explanatory variables of leverage. Results also reveal that total debt to total assets ratios is significantly different across Bangladeshi industries.

Rahman , Amin and Siddikee (2012)studied on Declaration Effect of Cash & Stock Dividends on Share Price: An Empirical Study on Dhaka Stock Exchange. This study analyzes the impact of different types of dividend declaration, namely stock and cash dividends. Using event study method, MAAR and CAAR, this study found no evidence of abnormal returns on the declaration day for either of the types of dividends. However, significant negative returns are reported on days prior to the declaration day for stock dividend, indicating speculative nature of the investors. Furthermore, it provides positive returns during the post-announcement period as the investors realize the chance of potential gains. However, as far as cash dividend is concerned companies listed under DSE do not provide any significant abnormal returns during the 60 days event window. For CAAR, no significant return is reported for cash dividend, while stock dividend provided a maximum 5.6% abnormal returns during the post announcement period.

Ahsan, Khaled And Bashar(2010) conducted their study on Security Price Reaction to Dividend Announcement: Evidence from Dhaka Stock Exchange Ltd. In this paper, the effectiveness of dividend as a signaling device which conveys information to the market about the firm is studied. Here, a test is conducted on some selected securities traded in the Dhaka Stock Exchange Ltd. In Bangladesh, there is no recognized research work on the effect of dividend announcement on security prices. From this point of view, it is hoped that the study will explore the avenues for further study and draw attention of security analysis and portfolio investors.

Hossain & Ali (2013) studied on Determinants of Dividend Policy of a Private Commercial Bank in Bangladesh: Which is the Strongest, Profitability, Growth or Size to study dividend policy of all 30 Dhaka Stock Exchange listed private commercial banks in Bangladesh over a period of seven years: January 2006 - December 2012. Bank profitability, growth, and size are measured as potential determinants of dividend policy during the same period of time using multiple regression and correlation, which 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.

Chapter 3: Research Methodology

3.0 Introduction

Research is defined as any organized inquiry carried out to provide information for the solution of problem (Emory, 1980). Research methodology is a way to systematically solve the research problem. However, research methodology is the process where there is a clear purpose and objective, define the research problem, and develop strategies for the solution of problems that have been identified. In general, the research methodology consists of four major stages: exploration of the situation, development of the research design, data collection, and analysis and interpretation of the results (Emory, 1980). It is a framework or blueprint for conducting the research project.

3.1 Population and Sample

3.1.1 Sample selection criteria:

i. The sample period is 20 years from 1994 to 2013.

ii. The companies are excluded from sample which have all company data missing.

iii. The companies are excluded from sample which have all market data missing.

iv. The companies which are enlisted after the year 2010 are excluded.

v. Samples are divided into two categories: Financial sector and nonfinancial Sector.

3.1.2 Sample size determination:

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

n = Sample size

N= Population size

e= level of precision

$$n = \frac{147}{1+147*(.05)^2}$$

n=108

The final sample consists of 108 companies listed in Dhaka stock exchange. Now the sample is selected from each sector with Proportionate stratified random sampling technique.

Sample size in stratum g / Total sample size = Population in stratum g / total population

(Source: K.N Krishnaswamy et al.(2011), Management research methodology: Integration of Principles, Methods and Techniques)

3.1.3 Sample Profile`

The samples are divided into two categories: Financial sectors and non financial sectors.

3.1.3.a Sector-wise sample: Non Financial Sectors

Sectors	**No. of Population**	**No. of Sample companies**
Cement	5	4
Ceramics	5	3
Engineering	20	16
Food and Allied	15	11
Fuel and power	11	8
Jute	3	2
Miscellaneous	9	6
Paper and printing	1	1
Pharmaceuticals and chemicals	19	15
Tannery Industries	5	3
Textile	24	18
Total	117	86

3.1.3.b Sector-wise sample: Financial Sectors

Sectors	**No. of Population**	**No. of Sample companies**
Bank	30	22
Total	30	22

3.1.4 Sample period: The study period is Twenty years (1994-2013) is considered for this study.

3.2 Data Collection Procedures

3.2.1 Survey Instruments and Primary data collection

Questionnaire development: I developed the questionnaire on the base of previous studies, opinion of top management of companies, academician and financial analyst.

Respondents: I prepared questionnaire for Chief Financial Officer (CFO), directors (Board of directors), and chairman (Board of directors) of listed corporate firm.

Pilot survey: I have done two pilot surveys. First, I personally surveyed to 6 respondents and found some errors from their opinions. I revised the questionnaire and second time surveyed to 5 respondents. Then, I prepared the questionnaire for final survey.

Final Survey: I mailed the survey instruments to the chief financial officer (CFO) and Managing director, Chairman, Board of directors of each firm in September 2013. The mailing included a cover letter and a stamped return envelope. The cover letter assured recipients that their answers would be confidential and released only in summary form. But I did not find satisfactory response. So, later, I went personally to the respondents of each firm. Finally, I have collected 108 respondents' opinion through questionnaire. The questionnaires are collected from the following sectors: Non Financial Sectors and Financial Sectors.

3.2.2 Secondary data collection

The data are taken from Dhaka Stock Exchange, Website of Dhaka Stock Exchange (www.dse.bd.com), Publications of stock exchange (Monthly review) annual reports of the sample companies, website of the sample companies, companies' internal sources.

3.3 Models, Techniques and Variables

3.3.1 Data Analysis techniques in chapter 4: The Impact of Dividend Policy on the Value of the Firm

Hypothesis

H_0: There is no association between wealth of shareholders and dividend policy.

Variable Used in study

Dependent Variable: PE ratio

Independent Variables: Independent variables are Dividend payout ratio (DPR), Capital structure, Investment opportunity, liquidity, ownership (institution), age of the firm, size of the firm.

Model

The studies conducted by Miller and Modigliani (1961), Friend and Puckett's (1964) and Chawla and Srinivasan (1987) have influenced this paper. The theoretical statement could be framed as:

$PE_{it} = \alpha + \beta_1 DPR_{it} + \beta_2 AGE_{it} + \beta_3 LIQ_{it} + \beta_4 SIZE_{it} + \beta_5 OWN(INSTITUTION)_{it} + \beta_6 INVESTOPP_{it} + \beta_7 CAPITAL\ STRUCTURE_{it} + u_{it}$

Methods: In this study, the panel data approach is used to analyze the relationship between dividend policies on shareholder's wealth. Descriptive statistics and panel regression analysis (Fixed effect and random effect) are used to analyze the results.

3.3.2 Data Analysis Techniques in Chapter 5: Announcement Effects of Dividend on Share Price

Models:

Event study process:

Gurgul et al. (2003) used in their study a rather short event window, compared with those in other event studies. In particular, Gurgul et al. (2003) attempted to examine the impact of corporate dividend announcements in the Austrian security prices by incorporating an event window which comprised five trading days – two days before (-2), two days after (+2) and the event day (0). An even shorter event window was used by Lonie et al. (1996) in an attempt to scrutinize the UK market response to dividend announcements and identify any abnormal share activity. Namely, they used a three-day event window – one day before and one day after the dividend declaration day. Furthermore, the majority of the researchers make use of 41-day event window – 20 days before and 20 days after the announcement day (Dasilas, 2007; Dasilas et al., 2008; Asimakopoulos et al., 2008). The above researchers believe that this event window is the most appropriate, in order for the stock prices to capture all the available information conveyed by the dividend announcements. Finally, it is a common practice for the most recent researchers the use of more than one event window in their studies. Travlos et al. (2001) employed a symmetrical event window of 31 days – 15 days before and 15 days after the event day (0).

Selecting the event window

For the study, the returns on 15 days prior to the announcement day, and returns on 15 days after the announcement have been considered for analyzing the cumulative average abnormal returns. The event window is similar to the study of Eades & et.al (1985).

Selecting the estimated window

For the study, the returns on 45 days prior to event window have been considered as estimated window.

Abnormal Returns Measures Approach:

Return measures:

The current event study employs the use of Logarithmic returns. I have calculated Log – returns $R_{i,t}$ for company i on date t which is as follows:

$R_{i,t} = \ln(P_{i,t}/P_{i,\,t-1})$

Where $P_{i,t}$ stands for the stock price of company i on date t.

$P_{i,\,t-1}$ denotes the stock price of company i on date t-1

Ln denotes the natural logarithm.

The all share Price index of DSE is used for calculating market return, $R_{m,t}$ which is as follows:

$R_{m,t} = \ln(P_{m,t}/P_{m,\,t-1})$

Where $P_{m,t}$ stands for the market price on date t.

$P_{m,\,t-1}$ denotes the market price on date t-1

ln denotes the natural logarithm.

The Market Model

This study used traditional event study methodology which is commonly used to test the announcement effects of a dividend (see Pettit, 1972; Masulis, 1980; Brown and Warner, 1980; Aharony and Swary, 1980; Woolridge, 1982; Asquith and Mullins, 1983; Venkatesh, 1989; Akhigbe and Madura, 1996, R.Michachy,1995).

The abnormal return can be estimated using the following equation:

$AR_{i,t} = R_{i,t} - E(R_{i,t})$

Where $AR_{i,t}$ is the abnormal return on stock i on day t and $E(R_{i,t})$ is the expected return on stock i on day t.

Market model equation is composed of following variables:

$E(R_{i,t}) = \alpha_i + \beta_i R_{m,t} + e_{i,t}$

Where,

i = stock under observation

t = Represents event date

R_{mt} =the return of market on day *t*,

α_i, β_i = estimation parameters for based on estimation window.

The benefit of regressed parameter is that both companies specific as well as market oriented factors are covered by this model. The calculation of parameters alpha (α) and beta (β) is carried through very simple ordinary least square regression model. Security returns and market returns are taken as exogenous and endogenous variables respectively in estimation time frame of 45 days. The regression beta is then used for calculation of abnormal returns.

The Average abnormal Return (AAR_t) on day t is measured as follows:

$AAR_t=(1/N)\ \sum_{i=1}^{n} AR_{i,t}$

The 3-days cumulative abnormal return (CAR) is used to measure the market reaction to the dividend announcements and is calculated surrounding the announcement date as:

$CAR_{i,(-1,+1)} = \sum_{i=1}^{n} AR_{i,t}$

The cumulative average abnormal return is defined as:

$CAAR_t = (1/N)\sum_{i=1}^{n} CAR_{i,t}$

Buy and Hold Abnormal Return (BHAR)

The second approach consists of determining the abnormal returns according to the buy and-hold abnormal returns (BHARs). The abnormal return for a share is defined as the geometrically compounded return on the share minus the geometrically compounded return on the market index. This methodology has been influenced by Ritter (1991), Loughran and Ritter (1995), Barber and Lyon (1999), R. Michacly &et.al (1995), Rodney (2002).

Therefore, the "buy-and-hold" abnormal return for share i from time a to b [$BHAR_{i\ (a\ to\ b)}$] generating model takes the following form:

$BHAR_{i\ (a\ to\ b)} = \prod_{t=a}^{b} (1 + R_{i,t}) - \prod_{t=a}^{b} (1 + R_{m,t})$

Where $BHAR_{i\ (a\ to\ b)}$ is the buy and hold abnormal return for company i from time a to b. The time period a to b constitutes three trading days from t = -1, 0, +1. The average 'buy and hold abnormal returns' are calculated as follows:

$ABHAR= \frac{1}{N}\sum_{i=1}^{N} BHAR_i$

Where, N is the number of observations.

Methods:

Event studies are widely utilized in economics, accounting, law, and related fields. In order to derive reliable inferences from outcomes of statistical tests applied to such diverse fields, it is vital to use methods that are as powerful and robust as possible. Due to improved power properties, parametric event study tests by Patell (1976) and Boehmer, Musumeci, and Poulsen (1991) that utilize standardized abnormal returns have gained popularity over non standardized tests. Harrington and Shrider (2007) argue that in short-horizon testing of mean abnormal returns, tests that are robust against cross sectional

variation in the true abnormal return should always be used. The t-statistic is a good candidate for a robust parametric test in conventional event studies. Corrado and Zivney (1992) provide a nonparametric rank test based on standardized returns that has proven to have competitive and often superior empirical power compared to parametric tests when testing single day abnormal returns [e.g., Corrado (1989), Corrado and Zivney (1992), Cowan (1992), Campbell and Wasley (1993), and Kolari and Pynnonen (2010)]. Furthermore, the rank test appears to be robust to event-induced volatility [Campbell and Wasley (1993) and Kolari and Pynnonen (2010)].

Parametric Test:

T-test: The t-test is used for testing the statistical significance of results arrived at by analyzing the data related to dividend announcement. (Paul Asquith (1983), Joseph Aharony(1980).The t-statistics for each day during the event window is calculated as:

$t=AAR_t / \delta (AAR_t)$, where, δ=Standard error

Assuming that the AAR_t and $CAAR_t$ are independent and identically distributed and normal, t test has a student-t distribution under the nul hypothesis with (N-1) degree of freedom (Brown and Waner). The statistic for CAARs for each day during the event window is calculated as follows:

$t= CAAR_t / \delta(CAAR_t)$

3.3.3 Data Analysis Techniques in Chapter 6: Determinants of Divided Policy: An Analysis on Listed Companies in Dhaka Stock Exchange (DSE)

Hypothesis

H_0: *Dividend payout is 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.*

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.*

Model

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 pooled data and panel data regression are used 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:

$DPR_{it} = \alpha + \beta_1 DPR_{it-1} + \beta_2 EPS_{it} + \beta_3 LEV_{it} + \beta_4 CF_{it} + \beta_5 SG_{it} + \beta_6 SIZE_{it} + \beta_7 LIQ_{it} + \beta_8 OWN(SPONSOR)_{it} + \beta_9 OWN(INST)_{it} + \beta_{10} OWN(IND)_{it} + \beta_{11} RISK_{it} + \beta_{12} AGEit + \beta_{13} RELATAX + \beta_{14} RE/TE + \beta_{15} ROA_{it} + \beta_{16} INVEST OPPORT_{it} + u_{it}$

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

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

Methods: Descriptive statistics and multiple regression (polled data and panel data analysis) analysis are used to analyze the results. Structural Equation Modeling Techniques are also used to identify significant variables.

3.3.4 Data Analysis Techniques in Chapter 7: Factors Influencing Dividend Policy in Bangladesh: Survey Evidence from Listed Companies with DSE

Survey Instruments

The present research is based on an empirical study of 108 listed firms from the DSE (Dhaka Stock Exchange) with the objective of identifying the determinants of dividend policy. The data have been collected through the primary mode using a structured questionnaire containing 28 statements based on 5 point likert scale where not important=0, low important=1, moderate=2, important=3 very important=4. The respondents are asked to indicate the level of importance of the factors for determining their firm's dividend policy. The questionnaire has been prepared after reviewing the prior studies on dividend practices by decision maker. The survey has followed the literature of Baker and Powell (2000), Brav et al.(2005),Edelman(1983) etc.

Variables used in the study

	Factors
X_1	Pattern of past dividend
X_2	Desire to maintain a constant payout ratio
X_3	The dividend policies of competitors or other companies in the same industry
X_4	Stability of earnings
X_5	Level of current earnings
X_6	Anticipated level of future earnings
X_7	A sustainable change in earnings
X_8	Attracting institutional investors to purchase the stock
X_9	The influence of institutional shareholders
X_{10}	Attracting individual investors to purchase the stock
X_{11}	Concern about the stock price
X_{12}	Liquidity level
X_{13}	Tax positions of shareholders
X_{14}	Category of shareholders and their expectations
X_{15}	Preference for dividends rather than risky reinvestment
X_{16}	Cost of raising external funds
X_{17}	Availability of profitable investment opportunities for the firm
X_{18}	Availability of alternative source of capital
X_{19}	Investors' opportunities for investing in another projects
X_{20}	Concern that a dividend change may provide a wrong signal to investors
X_{21}	The future state of the economy
X_{22}	Inflationary Consideration
X_{23}	Concern about maintaining a target capital structure
X_{24}	Legal rules and constraints
X_{25}	Contractual constraints such as dividend restriction in debt contracts
X_{26}	Accessibility to capital market
X_{27}	Dilution of control & Dilution of earnings
X_{28}	Internal rate of return consideration i.e. reinvestment rate

Non-parametric Test:

I have used a non parametric test(Chi-square test) to determine whether the mean response for each of the 28 factors involving dividend policy differs significantly from 0 (not important).This study follows the test of Baker and Powell (2000), Edelman(1983) etc.

Factor Analysis:

The factor analysis has been used to analyze the dividend determinants by decision maker. The Principal Components Analysis has been used to explore and confirm the inter-relation between the occurrences of variables pertaining to dividend. The number of principal components to be retained has been decided based on Kaiser's criterion of Eigen value>1 and Bartlett's test. The Bartlett's test of significance led to acceptance of significant principal components. The PCA with varimax rotation method has been used

to maximize the sum of squared loading of each factor extracted in turn. It explained more variance than the loadings obtained from any other method of factoring. The factors loaded by variables having significant loadings of the magnitude of .5 and above have been interpreted.

3.3.5 Data Analysis Techniques in Chapter 8: Dividend Practices in Listed Companies of Bangladesh: Analytical Study on Dhaka Stock Exchange

Primary data: Survey Instruments, Parametric and Non-parametric Test

The present research is based on an empirical study of 108 listed firms from the DSE with the objective of identifying the dividend practices. The data has been collected through the primary mode using a structured questionnaire containing 8 statements based on 5 point likert scale where Strongly Agree=2, Agree=1, Indifferent=0, disagree=-1 strongly disagree=-2. The respondents are asked to indicate the level of agreement on issues for their firm's dividend policy. The questionnaire has been prepared after reviewing the prior studies on dividend practices by decision maker. The survey is followed the literature of Baker and Powell (2000), Brav et al.(2005), Edelman(1983) etc.

I have used one-sample t-test to determine whether the mean response for each of the 8 factors involving dividend policy differs significantly from 0 (indifferent opinion).This study follows the test of Baker and Powell (2000), Brav et al.(2005), etc. The non parametric test (Chi-square test) is also done which is similar testing tools of Edelman and Farrelly(1983).

Secondary data:

The study is based on secondary data obtained from published annual reports of sample firms, monthly review of Dhaka stock exchange and website of DSE. The data are analyzed with descriptive way of dividend practices in Bangladesh.

3.3.6 Data Analysis Techniques in Chapter 9: Application of Dividend Models in the Stock Market of Bangladesh

Survey Instruments

The present research is based on an empirical study of 108 listed firms from the DSE with the objective of identifying the dividend theories practices in the capital market of Bangladesh. The data has been collected through the primary mode using a structured questionnaire containing 21 statements based on 5 point likert scale where Strongly Agree=2, Agree=1, Indifferent=0, Disagree=-1, Strongly Disagree=-2. The respondents are asked to indicate the level of agreement on different model related issues. The questionnaire has been prepared after reviewing the prior studies on dividend practices by decision maker. The survey has followed the literature of Baker and Powell (2000), Brav et al.(2005),Edelman(1983) etc.

Variables used in the study

	Factors
Z_1	Dividends disclose important information to shareholders about company's performance
Z_2	Reasons for dividend policy changes should be disclosed to investors
Z_3	The market adjusts dividend announcements for setting security price
Z_4	A dividend decrease always refers to a reduction in company's earnings
Z_5	Dividend distributions should be made after financing desired investments from available earnings
Z_6	Expenditures on new plans affect the dividend
Z_7	Provide a bonding mechanism to encourage managers to act for the best interest of the shareholders
Z_8	The company prefers funding from retained earnings before resorting to external financing
Z_9	Different dividends in different stages of life cycle of the company
Z_{10}	Decision makers should be responsive to its shareholders' preferences regarding dividends
Z_{11}	A stockholder is attracted to firms which have dividend policies appropriate to the stockholder's particular tax bracket
Z_{12}	Director shareholders have different dividend preferences than general shareholders
Z_{13}	Stock price increases when dividends unexpectedly increase
Z_{14}	Dividend payout affects the price of the common stock
Z_{15}	There should be balancing between future growth of the company and current dividend payment
Z_{16}	The company distributes cash dividends because of investors' preference for certainty
Z_{17}	Paying dividends makes the stock of a firm less risky than retained earnings to shareholders
Z_{18}	The company has a target payout ratio and periodically adjust its payout toward the target
Z_{19}	A firm should avoid making changes in dividends that might have to be reversed in a year ago.
Z_{20}	Investors are indifferent between receiving dividends and capital gains
Z_{21}	The dividend decision is important like financing decision and investment decisions in determining firm's value

Parametric and on parametric Test:

I have used one-sample t-test to determine whether the mean response for each of the 21 factors involving dividend policy differs significantly from 0 (indifferent opinion).This study has followed the test of Baker and Powell (2000), Brav et al.(2005), Edelman(1983) etc. The non parametric test (Chi-square test) is also done which is similar testing tools of Edelman and Farrelly(1983).

Factor Analysis:

The factor analysis has been used to analyze the dividend models application in listed companies. The Principal Components Analysis has been used to explore and confirm the inter-relatedness between the occurrences of variables pertaining to dividend. The number of principal components to be retained has been decided based on Kaiser's criterion of Eigen value>1 and Bartlett's test. The Bartlett's test of significance led to acceptance of significant principal components. The PCA with varimax rotation method has been used to maximize the sum of squared loading of each factor extracted in turn. It explained more variance than the loadings obtained from any other method of factoring. The factors loaded by variables having significant loadings of the magnitude of .5 and above have been interpreted.

3.3.7 Data Analysis Techniques in Chapter 10: Flaws with the Existing Dividend Practices of Corporate Firm

Parametric and Nonparametric Test:

I have used one-sample t-test to determine whether the mean response for each of the 12 issues involving dividend policy problems significantly from 0 (indifferent opinion).This study follows the test of Baker and Powell (2000), Brav et al.(2005), Edelman(1983) etc. The non parametric test (Chi-square test) is also done which is similar testing tools of Edelman and Farrelly(1983). The open ended opinion of the respondents regarding dividend related problems are mentioned in a descriptive form.

3.5 Conclusion

The purpose of this chapter has been to explain the general research methodology considered and the suitability of choosing a specific method for this research. The models, methods, and variables are described separately as per used in each chapter for clear understanding.

Chapter Four: The Impact of Dividend Policy on the Value of the Firms

4.1 Introduction

The dividend policy has the significant importance in the financial decisions of the corporation. The dividend policy is guidelines for financial managers, how to pay dividend to the shareholders. Net earnings are divided into two parts. One is retained earnings and the other is dividends. The retained earnings of the business may be reinvested in business and used for growth of the business. The dividend is distributed to the shareholders in order to meet their expectation of being made better off financially. So the problem is to take decision that how much earnings should be given in the form of dividend payout and how much earnings should be kept as retained earnings.

In the modern and complex environment, globalization and privatization have brought deep competition in every field of activity. It is very difficult for the companies to compete in the markets of stunning nature. To cope with this competitiveness and to add value to the companies, today's the finance managers have to make critical financial decisions. The primary objective of any organization is to maximize the wealth of shareholders. Financial manager's aim is to take a decision in such a way that shareholders receive the high contribution of dividend which leads to increase the price of share. Dividend policy plays a vital role at company in financial markets and it directly affects the stock price of the company. If a company pays handsome return to its shareholders it will attract to the new investors to invest their money in the company and vice versa. The dividend policy causes to increase the wealth of shareholders, finance manager make different financial decisions and dividend policy decision is one of them (Baker &Powell, 1999). Dividend decision has great impact on firm financial decision and stock price. The stock price increases when there is smooth payment of dividend exist. Investors do not prefer to purchase the shares of such type of companies which cannot make payment regularly and of which the dividend decisions have variability because of the risk of loss associated with these variations. Simians (1995) argued that shareholders' wealth is largely influenced by the organization's dividend policy.

The dividend decisions can donate to the value of firm or not which is a controversial issue. There are mainly two schools of thoughts available in the field of finance that presented two different opinions about the dividend policy. One school of thought

followed the opinion of Miller and Modigliani (1961) and considered dividend policy irrelevant while the second school of thought followed the point of view of Gordon (1963) and considered dividend policy relevant. Since the half century passed, the question still remains i.e. whether dividend policy is relevant or not. The impact of dividend on share price is a vital issue. If there is impact of dividend, the company should aware for dividend payment. For this reason, I want to study the relationship between dividend and market value of shares and to identify the degree of influence of dividend on market value of firm.

4.2 Prior Theoretical and Empirical Evidences

4.2.1 Prior Theoretical and Empirical Evidences of Foreign Context

Dividend policy is one of the most discussed topics and an essential theory of corporate finance which still has its significance. Many researchers presented numerous theories and pragmatic evidences, however the problem is quiet unsettled and open for further debate. It is among the top ten unsettled issues in economic literature that does not have satisfactory clarification for the observed dividend behavior of the firms (Allen and Michaely, 2003; Black, 1976). Discussion of dividend policy cannot be completed without including the work of Linter (1956). Linter (1956) raised the question, which is still important, "what choices made by managers do affect the size, shape and timing of dividend payments?" After the contribution of Linter (1956), Miller & Modigliani (1961) introduced the concept of Dividend Irrelevance theory in which they explain that dividend policy does not affect the stock prices. Many researchers like Chen, Firth, & Gao (2002), Uddin & Chowdhury (2005), Denis & Osobov (2008) and Adesola & Okwong (2009) provide the strong evidence in the favor of dividend irrelevance theory and do not consider its relevance to the stock prices. Gordon (1963) gave another view about the dividend policy by presenting the concept of dividend relevance theory. They said that the dividend policy affects the value of firm and market price of shares. Investors always prefer secure and current income in the form of dividends over capital gains. Studies conducted by Travlos, Trigeorgis, & Vafeas (2001), Baker, Powell & Veit (2002), Myers & Frank (2004), Dong, Robinson & Veld (2005) and Maditinos, Sevic, Theriou, & Tsinani (2007) support dividend relevance theory. Black & Scholes (1974) found no relationship between dividend policy and stock prices. Their results further explain that dividend policy does not affect the stock prices and it depends on investors' decision to keep either high or low yielding securities.

Barclay and Smith (1995) in their article 'The Maturity Structure of Corporate Debt' found that high growth companies have lower dividend payouts and debt ratios than the low growth companies, which have higher Dividend Payouts and Debt Ratios. So investors prefer higher Dividend Payouts and consider it less risky than capital gain. Allen & Rachim (1996) found no relationship between the dividend yield and stock market price even after studying Australian listed stocks but it shows positive relation between stock prices and size, earnings and leverage and negative relation stock prices and payout ratio while Baskin (1989) examined 2344 U.S common stocks from the period of 1967 to 1986 and found a significant negative relationship between dividend yield and stock price. Another study conducted by Ho (2002) relevant to the dividend policy in which he used the panel data approach and fixed effect regression model. Results of his study show the positive relation between dividend policy and size of Australian firm and liquidity of Japanese firms. He found the negative relation between dividend policy and risk in case of only Japanese firms. The overall industrial effect of Australia and Japan is found to be significant. Baker, Powell & Veit (2002) in their article "Reinvesting Managerial Perspectives on Dividend Policy" provided new evidence of managers' decision about dividend policy. They conducted a survey of managers of NASDAQ firms that are consistently paying cash dividends. Their survey result shows that managers are mostly aware of historical pattern of dividends and earnings. So, they design their dividend policies after considering it.

Pradhan (2003) also explained the effect of dividend payment and retained earnings on stock market price of the Nepalese companies. Results of his study show that dividend payment has strong relation with stock price while retained earning has very weak relation with stock market price. His results further explain that Nepalese stockholders give more importance to dividend income than capital gains. Nishat & Irfan (2003) studied 160 companies listed at Karachi Stock Exchange for the period of 1981-2000. Their results were based on cross sectional regression analysis show that dividend yield and payout ratio is positively related to the share price volatility. Adefila, Oladipo & Adeoti (2004) studied the factors affecting the dividend policy of Nigerian firms. Results of their study show that Nigerian firms prefer regular dividend payouts that can be in accordance with the expectations of their shareholders. Their results also conclude that there is no relation between Dividend Payments, Net Earnings and Stock Prices. Nigerian firms pay dividends to their shareholders regardless of their level of profits for satisfaction of their

shareholders. Myers & Frank (2004) conducted a study by using the data of 483 firms from Multex Investor Database and concluded that there is a positive relationship between the price Earnings Ratio and Dividend Payout Ratio. Their results further show that there is a significant positive relation between Debt to Equity Ratio and Dividend Payout.

Hussainey, Mgbame, & Chijoke-Mgbame (2011) studied the impact of Dividend Policy on Stock Prices. The results of their study show the positive relation between Dividend Yield and Stock Price Changes and negative relation between Dividend Payout Ratio and Stock Price Changes.

The academicians also engaged in finding out the facts and issues relating to dividend policy and they made different theories on this topic. According to Hayn (1995), dividend payments reduce the earning of any corporation if there are low earnings are realized, it makes the decision uneven which enables managers to take strong decision for dividend and earning in future. Whereas, DeAngeb et al. (1992)& Charitou (2000) describe the changing in dividend policy make the managers informative about the cost of dividend payment. Spencer (1973) argues that dividends payout increases the investors' confidence in the company. Thus, the company can make future decisions of dividends payout on the basis of the past dividends policies. The study conducted by Farley and Baker (1989) suggests that dividends policy has a significant impact on stock prices. Dividend payout ratio is based on current and last year earnings, the changes in year wise earning and increasing rate of earnings. The past year dividend payments have great influence on current policy (Pruitt and Gitman 1991).

4.2.2 Prior Theoretical and Empirical Evidences of Bangladeshi Context

Studies related to dividends impact on share price in the context of Bangladesh are mentioned below.

Uddin(2009) analyzed to identify what determines the share prices and there is a significant linear relationship between market price of stock and net asset value per share; dividend percentage; earning per share.

Ali (2011) examined the long-run equilibrium relationship and the direction of causality between stocks. He found that the DSI, in anyway, do not granger cause dividend yield; but DSI has bi-directional causal relation with market price earnings multiples and the first lag of the monthly average trading volume. On the other hand, unidirectional causality is found from DSI to the first lag of monthly average market capitalization but no causality is found from the opposite direction.

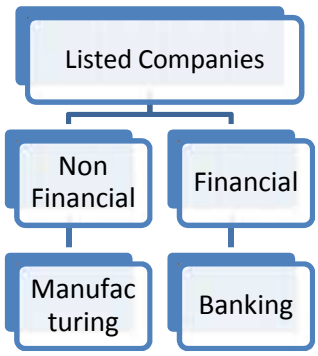
Kabir, Bhuiyan and Chowdhury (2013) attempted to identify the economic and psychological factors that impact the market price of shares of the listed Pharmaceutical companies in Dhaka Stock Exchange (DSE). They found that the percentage of shares held by public, and bad news about a particular company negatively influence the market prices of shares of that particular company.

Masum(2014) analyzed to find the relation between the shares market price and the dividend policy of the banks. He found that the Model shows significant negative relation between Dividend Yield and Stock Price while Retention Ratio has a negative but statistically insignificant relationship with Stock Market Prices. He further shown that Return on Equity and Earnings per share have statistically significant positive impact on stock price and Profit after Tax has a significant negative impact on Stock Market Prices of the commercial banks of Bangladesh.

So, it is observed that the dividends policy implications on shareholders wealth carry diverse arguments from the previous researchers. One school of thought hold the notion that dividend policy does help maximizing the shareholders' wealth, however, the other argues that there is no such impact that can be arguably supported. The very few papers are found in the context of Bangladesh which motivates me to study the impact of dividend on share prices and to justify the relevance of dividend of financial decision making.

4.3 Research Design

4.3.1 Sample



The study is based on secondary data obtained from published annual reports of sample firms, monthly review of Dhaka stock exchange and website of DSE. The sample includes listed financial and nonfinancial firms of DSE. It is taken 22 banks from banking sectors and 86 companies from manufacturing sectors as sample. The study period is 20 years from 1994 to 2013 for study.

4.3.2 Hypothesis

H_0: There is no association between wealth of shareholders and dividend policy.

Variables Used in study

Dependent Variable: PE ratio

Independent Variables: Independent variables are Dividend payout ratio (DPR), Capital structure, Investment opportunity, liquidity, ownership (institution), age of the firm, size of the firm.

4.3.3 Model and Methods

The studies conducted by Miller and Modigliani (1961), Friend and Puckett's (1964) and Chawla and Srinivasan (1987) have influenced this paper. This theoretical statement could be framed as:

$PE_{it}= \alpha +\beta_1 DPR_{it}+ \beta_2 AGE_{it}+ \beta_3 LIQ_{it}+ \beta_4 SIZE_{it}+ \beta_5 OWN(INSTITUTION)_{it}+ \beta_6 INVESTOPP_{it}+ \beta_7 CAPITAL\ STRUCTURE_{it} +u_{it}$

Where,

Dependent Variable

PE ratio=Market price per share/Earnings per share

Independent Variables:

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

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

LIQ (Liquidity) = Quick ratio ((Current Asset-Inventory)/Current liability)

SIZE (Size) = Log of Total Assets

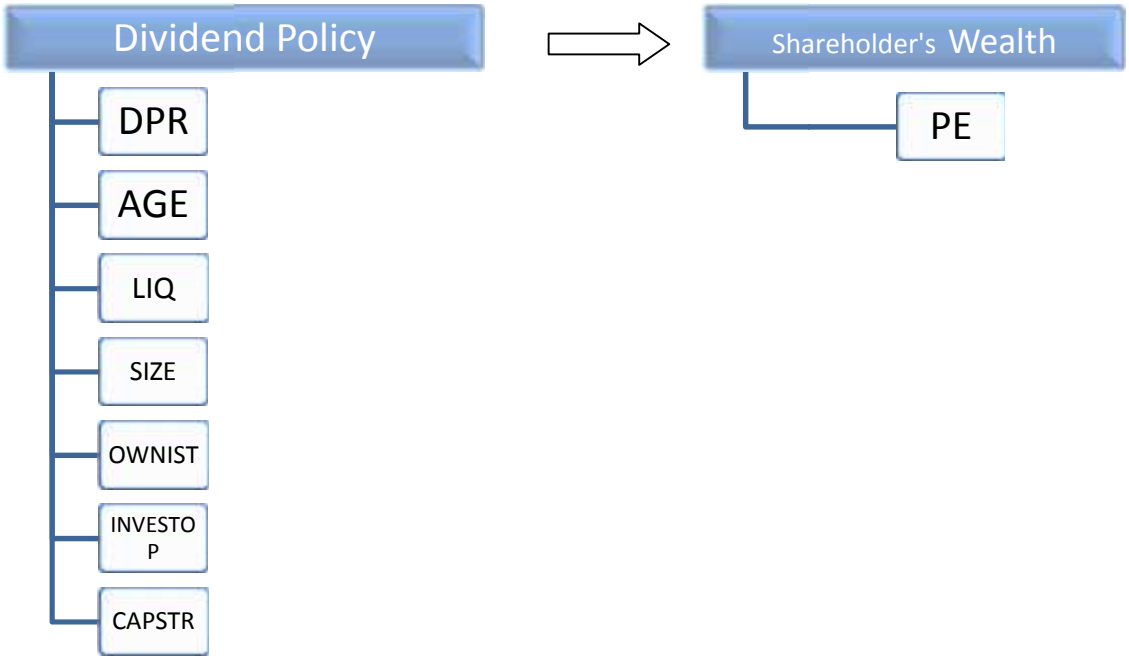
OWNIST (Institutional ownership) = No. of Share held by institution/total no. of share

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

CAPITAL STRUCTURE: Total liabilities/ Equity

Methods: In this study, the panel data approach is used to analyze the impacts of dividend policies on shareholder's wealth. Descriptive statistics and panel regression analysis (Fixed effect and random effect) are used to analyze the results.

4.3.4 Conceptual Framework



4.4 Analytical Results

4.4.1 Panel Data Analysis: Non Financial Sector

A panel data regression differs from a regular time-series or cross-section regression in that it has a double subscript on its variables:

$y_{it} = a + X'_{it}\, b + u_{it}$ ($i = 1, \ldots, N$; $t = 1, \ldots, T$)

The i subscript denotes the cross-section dimension and t denotes the time-series dimension. Most of the panel data application utilizes a one-way error component model for the disturbances, with: $u_{it} = \alpha_i + \varepsilon_{it}$.

There are several different linear models for panel data. The fundamental distinction is that between fixed-effects and random-effects models. In the fixed-effects (FE) model, the α_i is permitted to be correlated with the regressors x_{it}, while continuing to assume that x_{it} is uncorrelated with the idiosyncratic error ε_{it}. In the random-effects (RE) model, it is assumed that α_i is purely random; a stronger assumption implying that α_i is uncorrelated with the regressors .

Descriptive Statistics

The descriptive statistics is shown in table-4.1 which represents the mean, standard deviation, and minimum, maximum of variables.

Table 4.1: Descriptive statistics: nonfinancial

Variable	Obs	Mean	Std. Dev.	Min	Max
DPR	1292	50.91884	80.35464	-485.4369	985.9155
Investoppo~y	1133	15.25584	69.10146	-91.77528	988.6974
Capitalstr~e	1191	1.217675	10.78562	-160	115.6156
Liquidity	1200	1.943313	3.180107	.0018081	45.78755
Owninstitu~n	1256	15.83767	14.40954	-2	71.57
PE	1107	32.41737	57.89823	-119.64	881.73
Ageoffirm	1298	2.383588	.8109209	0	3.637586
Size	1202	6.556505	1.594046	2.288354	11.59599

.

Serial correlation

Because serial correlation in linear panel-data models biases the standard errors and causes the results to be less efficient, researchers need to identify serial correlation in the idiosyncratic error term in a panel-data model. While a number of tests for serial correlation in panel-data models have been proposed, a new test discussed by Wooldridge (2002) is very attractive because it requires relatively few assumptions and is easy to implement. Wooldridge's method uses the residuals from a regression in first-differences. Note that first differencing the data removes the individual-level effect, the term based on the time-invariant covariates and the constant.

Table 4.2: Wooldrige test: nonfinancial

```
Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
F( 4, 865) = 2.485
Prob > F = 0.710
```

I have accepted the null hypothesis that there are no first order autocorrelations in the model (From the table 4.2).

Heteroskedasticity

The standard error component assumes that the regression disturbances are homoskedastic with the same variance across time and individuals. This may be a restrictive assumption for panels. When heteroskedasticity is present the standard errors of the estimates will be biased and I should compute robust standard errors correcting for the possible presence of heteroskedasticity.

The fixed-effects regression model estimated by *xtreg, fe* invokes the OLS estimator under the classical assumptions that the error process is independently and identically distributed. Also, the command *xtreg, fe* estimates this model assuming homoskedasticity. The most likely deviation from homoskedastic errors in the context of pooled cross-section time-series data (or panel data) is likely to be error variances specific to the cross sectional unit.

In the linear regression the error term is assumed to be homoskedastic constant across observations. Violation of this assumption is pernicious. Estimates of standard errors for the regression coefficients are biased and the direction of the bias is not known a priori may inflate or deflate t-tests. So, the homoscedasticity assumption means that the variance of the error terms is constant for each observation. The Breusch- Pagan/ Cook-Weisberg test is used to test heteroskedasticity in this study as shown in table 4.3 by using STATA. A large chi-square would indicate that the heteroskedasticity is present.

Table 4.3 Breusch- Pagan/ Cook-Weisberg test for heteroskedasticity(nonfinancial)

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of PE
         chi2(1)      =   0.26
         Prob > chi2  =   0.651
```

From the table 4.3, it is observed that the chi- square value is small, indicating heteroskedasticity is probably not a problem. Here, the chi-square value is 0.26(p=.651) and indicates the insignificancy which indicates that the errors have a constant variance (the data does not suffer from heteroscedasticity).

The Hausman test

The Hausman principle can be applied to all hypothesis testing problems, in which two different estimators are available, the first of which $b^{\wedge}$ is efficient under the null hypothesis, however inconsistent under the alternative, while the other estimator $b\sim$ is consistent under both hypotheses, possibly without attaining efficiency under any hypothesis. Hausman had the intuitive idea to construct a test statistic based on $q = b^{\wedge} - b\sim$. Because of the consistency of both estimators under the null, this difference will converge to zero, while it fails to converge under the alternative. Hausman suggested the statistic $m = q'(var\ q)^{-1} q$, where $var\ q$ = var $b\sim$ − var $b^{\wedge}$ follows from the known properties of both estimators under the null hypothesis and from uncorrelatedness. The

statistic m is distributed as χ^2 under the null hypothesis, with degrees of freedom corresponding to the dimension of b.

In the concrete case of panel models, It is known that the FE estimator is consistent in the RE model as well as in the FE model. In the FE model it is even efficient, in the RE model it has good asymptotic properties. By contrast, the RE–GLS estimator cannot be used in the FE model, while it is efficient by construction in the RE model. The inconsistency of the RE estimator in the FE model follows from the fact that, as $T \to \infty$, the individual fixed effects α_i are not estimated but are viewed as realizations of random variables with mean zero. The violation of the assumption $E\alpha = 0$ for the regression model leads to an inconsistency. In Stata, the Hausman test statistic can be properly computed based upon the contrast between the RE estimator and fixed effects (FE).

Table 4.4: Hausman test: nonfinancial

```
                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |     fixed        random       Difference          S.E.
-------------+------------------------------------------------------------------
         DPR |    .1113619     .1173229       -.0059611        .0086804
Investoppo~y |    .0228262     .0221168        .0007094        .0055006
Capitalstr~e |    .2020514     .1904061        .0116453        .0578876
   Liquidity |    .5178672     1.129106       -.6112384        .8960415
Owninstitu~n |   -.3782005    -.2048128       -.1733877        .1560135
   Ageoffirm |    20.42063     8.826631          11.594         3.96594
        Size |     .560498     .8034145       -.2429165        3.432448
------------------------------------------------------------------------------
                           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(7) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       21.49
                Prob>chi2 =      0.0031
```

The probability is 0.0031(less than 0.05), so, I have rejected the null hypothesis that individual effect are random and that RE provides consistent estimates. Concluding that I have a fixed-effects model, I continued with the estimation of my model using the within estimator, the most commonly used with this type of models.

Fixed Effect Model (FE)

The FE explores the relationship between predictor and outcome variables within an entity. Each entity has its own individual characteristics that may or may not influence the predictor variables. When using FE it is assumed that something within the individual may impact or bias the predictor or outcome variables and we need to control for this. This is the rationale behind the assumption of the correlation between entity's error term and predictor variables. The FE removes the effect of those time-invariant characteristics from the predictor variables so we can assess the predictors' net effect. Another important assumption of the FE model is that those time-invariant characteristics are unique to the individual and should not be correlated with other individual characteristics. Each entity is different therefore the entity's error term and the constant (which captures individual characteristics) should not be correlated with the others.

Table 4.5: Fixed Effect Model: nonfinancial

```
Fixed-effects (within) regression               Number of obs      =       939
Group variable: Company                         Number of groups   =        86

R-sq:  within  = 0.765                          Obs per group: min =         1
       between = 0.266                                         avg =      11.3
       overall = 0.595                                         max =        20

                                                F(7,849)           =      7.27
corr(u_i, Xb)  = -0.3787                        Prob > F           =    0.0000

------------------------------------------------------------------------------
          PE |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         DPR |   .1113619   .0246447     4.52   0.000     .0629902    .1597335
Investopport |   .0228262   .0332137     0.69   0.492    -.0423644    .0880168
 Capitalstru |   .2020514   .1744354     1.16   0.247    -.1403238    .5444266
   Liquidity |   .5178672   1.252381     0.41   0.679    -1.940259    2.975994
 Owninstitut |  -.3782005   .2107083    -1.79   0.073    -.7917708    .0353698
   Ageoffirm |   20.42063   4.649984     4.39   0.000     11.29381    29.54744
        Size |    .560498    3.66059     0.15   0.878    -6.624369    7.745365
       _cons |   -25.2651   19.95572    -1.27   0.206    -64.43344    13.90324
-------------+----------------------------------------------------------------
     sigma_u |  25.883871
     sigma_e |  50.574622
         rho |  .20756602   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Coefficient of Multiple Determination (R^2):

The summary of the model is shown in table 4.5. The R^2 shows the amount of variance of PE of explained by DPR, SIZE, AGE, INVT.OPP, LIQ, CAPST,(OWNINST). The value of R^2 of the model is .765(within) which indicates that the independent variables explain 76.5% of the dependent variable (PE). This represents satisfactory result for interpreting the model.

Significant of the Model: F-Test

The table 4.5 represents the significance of the model through the F-test. It tests whether R^2 is different from zero. The F value of model is 7.27(p=0.00) which is statistically significant. It is interpreted that the model significantly improves the ability to predict the outcome variable (dependent variable).The F-statistics of the model is significant at 5 percent level of significant indicating that the model provides significant explanation of variation in the market price of nonfinancial sector.

Significant of the Variables/Model parameter:

The result of model parameter is shown in table 4.5. The coefficient indicates the individual contribution of each predictor to the model. The coefficient values tell about the relationship between PE and each predictor. If the value is positive, it indicates that there is a positive relationship between the predictor and the outcome whereas a negative co-efficient represents a negative relationship. The coefficient values also tell us to what degree each predictor affects the outcome if the effects of all other predictors are held constant. The beta values have an associated standard errors indicating to what extent these value would vary across different sample and these standard error are used to determine whether or not the beta values differ significantly from zero. In the model, the Coefficient values of DPR, AGE are .1113, 20.42 respectively which are positive in nature. It infers that the DPR, AGE of the firm have positive impact on the PE.

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 4.5, it is observed that the t value of DPR, AGE are 4.52(p=.000), 4.39(p=.000) respectively which are significant at 5 percent level of significant. The p values of the independent variables DPR, AGE are less than .05 which also indicates the significance of the variables. So, finally it is concluded that among the independent variables, DPR, AGE have positive impact on the PE. This result supports the findings of Grdon(1963), Ho(2002), Gul and others(2012).

Model: PE_{it}= -25.26+0.11DPR_{it}+ 20.42AGE_{it}+ .517LIQ_{it}+ .56$SIZE_{it}$-.37 $OWN(INSTITUTION)_{it}$+ 0.022$INVESTOPP_{it}$+0.202CAPITAL $STRUCTURE_{it}$ +u_{it}

4.4.2 Panel Data Analysis: Financial Sector (Banking)

Descriptive Statistics:

The descriptive statistics is shown in table-4.6 which represents the mean, standard deviation, minimum, maximum of variables.

Table 4.6: descriptive statistics: financial (banking)

Variable	Obs	Mean	Std. Dev.	Min	Max
DPR	249	17.42444	44.54847	0	531.9149
PE	248	14.43669	12.51422	2.78	106.11
Age	249	1.973088	.8516627	0	3.433987
Size	247	10.8508	.8817517	8.954932	13.2192
Capitalstr~e	236	14.36617	5.705738	.8979271	30.23159
InvestOppo~s	240	47.18417	82.29007	-56.60184	635.1039
Owninstitu~n	245	18.03947	132.0959	0	2071

Serial correlation

Serial correlation tests apply to macro panels with long time series (over 20-30 years). Not a problem in micro panels (with very few years). Serial correlation causes the standard errors of the coefficients to be smaller than they actually are and higher R-squared.

Table 4.7: Wooldridge test: financial (banking)

```
Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
F( 3, 372) = 4.485
Prob > F = 0.0761
```

The null hypothesis is no serial correlation. From the table 4.7, I have failed to reject the null hypothesis and concluded that the data does not have first-order autocorrelation.

Heteroskedasticity

The Breusch- Pagan/ Cook-Weisberg test is used to test heteroskedasticity in this study as shown in table 4.8 by using STATA. A large chi-square would indicate that the heteroskedasticity is present.

Table 4.8 Breusch- Pagan/ Cook-Weisberg test for heteroskedasticity (banking)

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of PE

         chi2(1)      =   1.26
         Prob > chi2  =   0.127
```

From the table 4.8, it is observed that the chi- square value is small, indicating heteroskedasticity is probably not a problem. Here, the chi-square value is 1.26(p=.127) and indicates the insignificancy which indicates that the errors have a constant variance (the data does not suffer from heteroscedasticity).

The Hausman test

To decide between fixed or random effects, I have run a Hausman test where the null hypothesis is that the preferred model is random effects vs. the alternative the fixed effects (Green, 2008). It basically tests whether the unique errors (u_i) are correlated with the regressors, the null hypothesis is they are not. I have run a fixed effects model and saved the estimates, then run a random model and saved the estimates, then performed the test.

Table 4.9: Hausman test: financial (banking)

```
---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |     fixed        random       Difference          S.E.
-------------+------------------------------------------------------------
         DPR |     -.02874    -.0380667        .0093267        .0059236
         Age |    2.528843      2.06536        .4634827        2.370792
        Size |    2.959291     1.943975        1.015316        1.437625
Capitalstr~e |    .7260964     .5594769        .1666195        .0734172
Invest Oppo~s |   -.0022657    -.0076784        .0054127               .
Owninstitu~n |   -.0076183    -.0036449       -.0039735        .0018442
------------------------------------------------------------------------------
                           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(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =        8.64
                Prob>chi2 =      0.1947
                (V_b-V_B is not positive definite)
```

The probability is 0.1947(more than 0.05), so I have accepted the null hypothesis that individual effects are random and 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 like race or gender 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 4.10: Random-effects GLS regression: financial (banking)

```
Random-effects GLS regression                   Number of obs      =       224
Group variable: Company                         Number of groups   =        22

R-sq:  within  = 0.6913                         Obs per group: min =         4
       between = 0.2847                                        avg =      10.7
       overall = 0.6754                                        max =        20

                                                Wald chi2(6)       =     18.54
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0050

------------------------------------------------------------------------------
          PE |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         DPR |  -.0380667    .018267    -2.08   0.037    -.0738694    -.002264
         Age |    2.06536   1.329107     1.55   0.120    -.5396415    4.670362
        Size |   1.943975   1.256221     1.55   0.122    -.5181731    4.406123
Capitalstruc |   .5594769   .1681896     3.33   0.001     .2298314    .8891224
Invest Oppor |  -.0076784   .0098799    -0.78   0.437    -.0270426    .0116858
Owninstitut  |  -.0036449   .0060593    -0.60   0.547    -.0155208    .0082311
       _cons |  -17.65226   13.89136    -1.27   0.204    -44.87883     9.57431
-------------+----------------------------------------------------------------
     sigma_u |   1.948646
     sigma_e |  12.011505
         rho |  .02564417   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Coefficient of Multiple Determination (R^2):

The summary of the model is shown in table 4.10. The R^2 shows the amount of variance of PE of explained by DPR, SIZE, AGE, INVT.OPP, LIQ, CAPST,(OWNINST). The value of R^2 of the model is .691(within) which indicates that the independent variables explain 69.1% of the dependent variable (PE). This represents satisfactory result for interpreting the model.

Significant of the Model: Wald Chi –Square test

In table 4.10, The Wald Chi-square value represents the significance of the model. The wald chi-square value of model is 18.54(p=0.005) 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 market price of financial sector.

Significant of the Variables/Model parameter:

The result of model parameter is shown in table 4.10. In the model, the Coefficient values of DPR, Capital Structure are -.038, 0.55 respectively. It infers that the DPR, CAPITALSTR of the firm have impact on the PE. From the table 4.10, it is observed that the t value of DPR, Capital structure are -2.08(p=.037), 3.33(p=.001) respectively which are significant at 5 percent level. The p values of the independent variables DPR, capital structure are less than .05 which also indicates the significance of the variables. So, finally it is concluded that among the independent variables DPR, Capital structure have impact on the PE.

Model: PE_{it}= -17.65 -.038DPR_{it}+ 2.06AGE_{it}+ 1.94$SIZE_{it}$-.003 $OWN(INSTITUTION)_{it}$-.007$INVESTOPP_{it}$+0.55CAPITAL $STRUCTURE_{it}$ +u_{it}

4.5 Summary of Findings

Nonfinancial sector:

The DPR, AGE of the firm have positive impact on the PE. The t value of DPR, AGE are 4.52(p=.000), 4.39(p=.000) respectively which are significant at 5 percent level of significant. The dividend payout ratio is derived from formula of Gordon growth model as one of the direct determinant factors to P/E ratios. When the dividend payout ratio is high, the expected returns investors gained will be correspondingly high, which will further lead investors make a high measure of stock values, the companies' P/E ratios will then rise. Conversely, the P/E ratios will decline. Therefore, it is supposed that there is a positive correlation between dividend payout ratios and companies' P/E ratios. The DPR has positive impact on the PE (t=4.52) which indicates that the dividend has the impact on the market price of firms.

This result infers the relevance theory of dividend policy which is supported by many other researchers' findings like Myers and Frank (2002), Friend and Puckett (1964), John and Willians(1985), Richardson and Thompson(1986).

Financial sector:

The DPR, Capital structure of the firm have impact on the PE. It is observed that the t value of DPR, Capital structure are -2.08(p=.037), 3.33(p=.001) respectively which are significant at 5 percent level. Investors are willing to pay a premium for fast growing companies, i.e. those companies that usually retain their earnings to finance future growth. Other things held constant, firms with higher PE ratios have higher growth than firms with low PE ratios (positive relation with growth options).The negative impact of DPR (-0.038) on PE indicates that growing companies' dividend payout is low (where PE is high). This result supports the findings of Ambarish and other (1987), Liaonly (2009) ,Gul and other (2012).

The DPR is significant factor for market price determination which supports the relevance theory and against the irrelevance the theory. The pioneer of irrelevance theory Miller and Modigliani (1961) assumed that the market should be perfect, there will be no tax, no floatation cost which are absent in our market. So, my finding is justified and practical.

4.6 Conclusion

The impact of dividend on market price of share is a controversial issue. To solve this issue in our market perspective, this study is done whether there is impact of DPR on PE or not. My findings support the relevance theory of dividend on shareholder wealth. The study is conducted separately on financial sector and non financial sector and is found the DPR has impact on PE in both sectors. There are other co factors such as AGE, CAPITALSTRUCTRE which have also impact on PE (market price share/Earnings per share). These findings will help the dividend decision maker for taking corrective dividend decision.

Chapter Five: The Announcement Effects of Dividend on Share Price

5.1. Introduction

During the last decades, there are numerous researchers that have been concerned in their papers with the impact of the dividend announcements on the stock prices. However, it is a matter of intense debate for the academics, the managers and the shareholders of many companies for several years. The theories that have been introduced by significant academics were essentially unable to terminate the above mentioned debate, as the empirical results of various studies, in the most important stock exchanges globally, concluded to different outcomes, supporting different theories.

In this part of the study, it is considered worthy of examining the empirical findings of different researches, which investigate the dividend signaling hypothesis. The main issue of the financial economists was the corporate dividend policy and how – it affects the firm value and thus, the shareholders' wealth, as well as the existence of an optimal corporate dividend policy. Lintner (1956) is considered to be a pioneer in the research of the relevance between dividend policy and firm value. According to Lintner (1956), under the assumption that capital markets are 'imperfect', the firms' dividend policy plays a prominent role in managements' decision making and hence, in shareholders' wealth. He claimed that changes in corporate dividend policy may convey information to the market about company's current and future financial position; given that there are information asymmetries between managers and investors (the former have information advantage over the investors). Therefore, Lintner suggested that increases in the amount of dividends that companies distribute to their shareholders lead to a positive market reaction, while decreases in the amount of dividends lead to a negative reaction of the stock prices. Similar outcomes about the reaction of the market to changes in corporate dividend policy have been resulted from other important researchers as well (Walter, 1956; Gordon, 1959; Gordon, 1962). On the other hand, Miller and Modigliani (1961) postulated in their land-mark study the irrelevance between the dividend policy a firm adopts and the value of the firm. In particular, they argued that under the assumption that 'perfect' capital markets with perfect certainty, no taxes and transaction costs exist, dividend policy does not have

any impact on the shareholders' wealth. Indeed, they suggested that managers can affect the firm value only by changing the firm's investment policy. Finally, a last group of researchers, the most important of which were Brennan (1970) and Brennan & Thakor (1990), declared that the corporate dividend policy is relevant as well as crucial to the value of a corporation. Nevertheless, this group of academics claimed that an increase in dividends has a negative effect on the stock prices due to the existence of taxation. According to Brennan and Thakor (1990), most of a company's shareholders prefer dividend payments when distributions are small, while they prefer tender offer stock repurchases when distributions are quite larger. The level of taxation seems to affect stock prices considerably in many stock exchanges all over the world.

There have been a significant number of empirical tests showing that dividend change announcements are positively associated with share returns in the days surrounding the dividend change announcement. Pettit (1972, 1976) found strong support that dividend change announcements convey information to the market. Similar results were obtained by several authors, such as by Aharony and Swary (1980), Benesh, Keown and Pinkerton (1984) and Dhillon and Johnson (1994) for dividend change announcements, Asquith and Mullins (1983) for dividend initiations, Lee and Ryan (2000, 2002) for dividend initiations and omissions and Lippert, Nixon and Pilotte (2000) for dividend increase announcements. Although all these studies were carried out on the American market, Travlos, Trigeorgis and Vafaes (2001) analyzed the market of Cyprus, Gurgul, Madjosz and Mestel (2003), the Austrian market, and Yilmaz and Gulay (2006), the Turkey market, findings also support for the dividend information content hypothesis. Although there are empirical evidences supporting the positive relationship between dividend change announcements and the subsequent share price reactions and some studies have not supported this idea. Studies done by Lang and Litzenberger (1989) and Benartzi, Michaely and Thaler (1997) for the American market, Conroy, Eades and Harris (2000) for the Japanese market, Chen, Firth and Gao (2002) for the Chinese market and Abeyratna and Power (2002), for the United Kingdom, found no evidence of a significant relationship between dividend announcements and share returns.

Since its establishment in 1976, Dhaka Stock Exchange has experienced a remarkable development and it has become one of the most active and organized market among the emerging markets. It plays an important role in financial development in Bangladesh. Bangladesh's capital market was increasingly viewed as a critical component in the economic development plans of the country. The Bangladesh government adopted a comprehensive capital market reforming policy, which aimed at building on the previous 40 years' experience, boosting the private sector, expanding and diversifying the national economy, and improving regulation of the securities market to international standards. Among the most important features of the new orientation were institutional changes in the capital market, use of international electronic trading, settlement and clearance systems, elimination of obstacles to investment, and strengthening capital market supervision to reach optimum transparency and safe trading in securities. Although many studies have been conducted on dividend signaling and information content of dividend in developed markets, there is no such comprehensive study found about the effectiveness of the dividend announcement as a signaling device to influence the security prices of an emerging market. Therefore, the existing published evidence is limited in investigating the market reaction to dividend announcement and in identifying the appropriate dividend policy and behaviour in the emerging market, and still these issues of market reaction to dividend announcement and dividend policy and behaviour of an emerging market remain unresolved.

This study will contribute to the literature by providing empirical evidence of the market's reaction to dividend announcements in Bangladesh. Information content studies provide the opportunity to understand the markets' assessment of dividend payments, and consequently, to help for a better understanding of the dividend policies of Bangladeshi firms. This is important for investors, regulators, and management. The purpose of this study is to investigate stock price reaction to announcement of dividend by the companies listed in the Dhaka stock exchange to identify whether or not such dividend announcement contains information to price formation.

5.2. Prior Theoretical and Empirical Evidences

5.2.1 Prior Theoretical and Empirical Evidences of Developed Countries

Paul Asquith and David W. Mullins (1983) analyzed on the Impact of Initiating Dividend Payments on Shareholders' Wealth. The empirical results exhibit larger positive excess returns than any previous study on dividends. This result does not depend on any other events (such as earnings announcements) and the excess return is positively related to the size of the initial payment. Subsequent dividend increases for the same sample of firms are also investigated. Compared with the initiation of dividends, the results suggest that subsequent increases may produce a larger positive impact on shareholders' wealth. The results also indicate that other studies may have underestimated the effect of dividend increases. The findings for both initial and sub-sequent dividends are consistent with the view that dividends convey unique, valuable information to investors.

De Angelo et al. (2000) tested the dividend signaling hypothesis in the case of special dividends paid by 942 NYSE firms. They stated that the majority of the firms on the US market used to pay special dividends quite often, but they rarely distributed this type of dividends. They indicated that special dividends are paid by the companies as predictably as the regular dividend payments, in a way that is difficult to distinguish the difference between them.

Lonie et al. (1996) were from the first economists who attempted to investigate the dividend signaling phenomenon in a European capital market, using UK data from a sample of listed companies on the London Stock Exchange. They stated that in capital markets with information asymmetries, the market participants try to explain correctly the managers' announcements of dividends and earnings, in order to make beneficial choices. Their results indicated that both dividends and earnings announcements affect the share prices. However, they found that earnings announcements have a more significant impact on them than dividend announcements.

In addition, Balachandran (1998) scrutinized the dividend reductions in accordance with the interim effect in the UK capital market. He provided empirical evidence that the effect of dividend reductions on the firm value is quite significant around the announcement date and leads to value declines. However, the reductions of interim dividends have a more considerable impact on shareholders' wealth than the reductions on final dividends. According to the same author, the usual stability of interim dividends and the managers'

reluctance to change them, compared to the final dividends, are the main reasons for the market's negative response.

In addition, Asimakopoulos et al. (2007) explored the same hypothesis in the ASE using a sample of listed firms, which distributed the lowest amount of dividend required or above the lowest required amount. Their outcomes suggest that when the listed companies in the ASE declared publicly the distribution of higher dividends than the compulsory amount and when this increase was regarded by the market participants as an unexpected one, then there was a negative stock price reaction. Consequently, in this vein, Elliott et al. (2009) examine the information content of SEOs and found no support for the information signaling hypothesis.

Below and Johnson (1996) also failed to support the semi-strong form of market efficiency for the US equity market. Adelegan (2003) conducted a study to analyze the reaction of stock prices to dividend announcements and capital market efficiency in Nigeria. He used the standard event study methodology to test the semi-strong form of market efficiency and finds that the Nigerian stock market was inefficient in its semi-strong form.

Kong and Taghavi (2006) analyzed earning announcements for the Chinese equity markets. They used the M-EGARCH approach to model changes in stock returns with event study methodology and rejected the semi strong form of market efficiency on the basis of their findings.

Acker (1999) investigated the impact of dividend announcements on stock volatility rather than stock returns and found that stock volatility increases around dividend announcements, particularly final dividend announcement and interim dividend announcements when there is a dividend cut.

Islam (2013) observed that the stock prices drop does not differ from the dividend amount on the ex-dividend day and there is no evidence of abnormal return and short-term trading.

Bernhardt & others (2002) found that dividends are used as a signaling device from the hypothesis that dividends contain information but are not used as Special signals.

Dividend is not only meant for providing cash to the owners but it is also used for sending signals regarding the performance of company's profitability and liquidity. This preposition is generally known as "Signaling hypothesis of dividend". The main contributor to these concepts was Ambarish at el, (1987). "Samuelson (1965), Fama(1970) and (1991)" contributed in a way that they established that stock returns are not capable of

being forecasted on the grounds of normally available data only as the chances of arbitrage cuts down such tends immediately and efficiently.

Firm is making an extremely visible and qualitative change in corporate policy. Michaely et al. (1995, pp. 573-575) investigate both the immediate reaction to initiation or omission announcements and the long term post announcement price performance. Charest G. (1978) examined investment performance and capital market efficiency with respect to trading based on quarterly dividend information. His findings indicated significant abnormal returns in months following the announcement of selected dividend changes. In a study titled ”Price reaction to short run dividend initiation and omission”, Roni Michaely et al. (1995) observed firms omitting dividends perform quite poorly in the year before the omission declaration, consistent with the evidence presented in DeAngelo, DeAngelo and Skinner (1992, pp. 1837-1864) . In the long run analysis of price response, Roni Michaely et al. observed that stock price continues to rise even after the initiation announcement. This was calculated using the cross-sectional variance of excess return as in Korajczyk, Lucas and McDonald (1991, pp. 685-708) and Michaley and Shaw (1994, pp. 279-319). Aharony and Dotan (1985), and Healy and Palepu (1986) found a positive association between unexpected dividend changes and subsequent unexpected dividend changes and subsequent unexpected earning of the firm.

5.2.2 Prior Theoretical and Empirical Evidences of Developing Countries

The studies on dividend announcement reaction on market have been done in developing countries also. Ahmed (1999) observed that there is no relationship in share prices and spending in sub continent specially in Pakistan. "Hussain and Uppal (1998)" come up with findings that share prices have a positive trend and the mean is also positive in KSE. Uppal in 1994 researched about stochastic characteristics of Pakistani stock prices and concluded that Pakistani markets are in weak form of efficiency. Farid and Ashraf (1995) tested the size and volatility effect on share prices in KSE with small sample. Salman and Mustifa (2001) carried research on the form of market efficiency and found KSE in week form. Husain (1998, 1999), Chakraborty (2006), and Ali and Akbar (2009) have a few studies that investigated the weak form of market efficiency in the Pakistani equity market. Ali and Mustafa (2001) examined the semi strong form of market efficiency in the Karachi Stock Exchange (KSE) by analyzing public news in two daily newspapers and the changes in trade volume and stock returns. They concluded that public information did not play an important role in the determination of stock returns since stock returns appeared more sensitive to private information. Hameed and Ashraf(2006) worked on weak form of market efficiency by GARCH model. Haijra at el, (2007) observed the effect of macroeconomic variables on share prices.

5.2.3 Prior Theoretical and Empirical Evidences of Bangladesh

From Bangladesh standpoint, ample researches have been done examining security price reaction towards dividend declaration.

In one of the outset studies, Ahsan and Bashar (1997) found that there was no significant impact of dividend announcement on the security prices on an average considering 21 actively traded securities in Dhaka Stock Exchange (DSE) over 1995 and 1996, and thus reflect the hypothesis of dividend irrelevancy given by Miller and Modigliani (1961).

Uddin and Chowdhury (2005) investigated dividend announcements on the Dhaka Stock Exchange and found that there were no statistically significant abnormal returns and that dividend had no information content for stock returns and prices in the Dhaka Stock Exchange.

Sabur Mollah(2007) studied on Security Price Reaction to the Announcement of Dividend in an emerging market: An Empirical Investigation. He used the market model and found no significant impact of dividend announcement on the security prices.

Rahman and Rahman (2008) in their study of stock price behavior around ex-dividend date from DSE found an increase of stock prices. They have made a conclusion that ex-dividend price increased instead of dropped in DSE that implies a clear preference for capital gains without having any focus of dividends by the stockholders.

In a recent study based on the listed private commercial banks in DSE, Bangladesh, Ali & Chowdhury (2010) found no strong evidence that stock price reacts significantly on the announcement of dividend.

Misir(2010) studied to examine the intra-industry information effects of announcements of dividend initiations of the firms associated with Dhaka Stock Exchange (DSE) with market model. The study found that the intra-industry effects of dividend revisions are apparent.

Hasan & Huda (2012) found that in 2006, 2007 and 2009 market has reacted over the announcement in the event date. Some sectors like Food & Auxiliary, Fuel and Miscellaneous have impacted the market both in the event and post event date across the years considered. All the efforts were given to discover reaction therefore the underlying reasoning of such impact are set aside.

Rahman & et.al.(2012) found that the cash dividend is concerned companies listed under DSE do not provide any significant abnormal returns during the 60 days event window. For CAAR, no significant return is reported for cash dividend, while stock dividend provided a maximum 5.6% abnormal returns during the post announcement period.

Mamun and Hoque (2013) analyzed the impact of dividend announcement on stock prices of the securities. The study employed market model in event study and found that the dividend declaration does not bring any gain to the investors.

The dividend announcement effect on the market value is done extensively in my study. It is analyzed for both financial and nonfinancial sector. Further it is categorized as dividend 'omission and dividend initiation', 'cash, stock, and both', increasing trend, decreasing trend and unchanged trend'. Many studies are found in this field but it is not found clear and extensive impact of dividend announcement in Bangladesh. So, my study will contribute clear picture of dividend announcement effects on stock price.

5.3. Research Design

5.3.1 Sample Selection

Sample selection criteria:

The companies are excluded from samples which have market data missing. From the sample period 1994 to 2013, I have taken the year 2000, 2003, 2006, 2009, and 2012 for this study. The abnormal period is excluded which is the year of 2010 and 2011.

Characteristics of Sample:

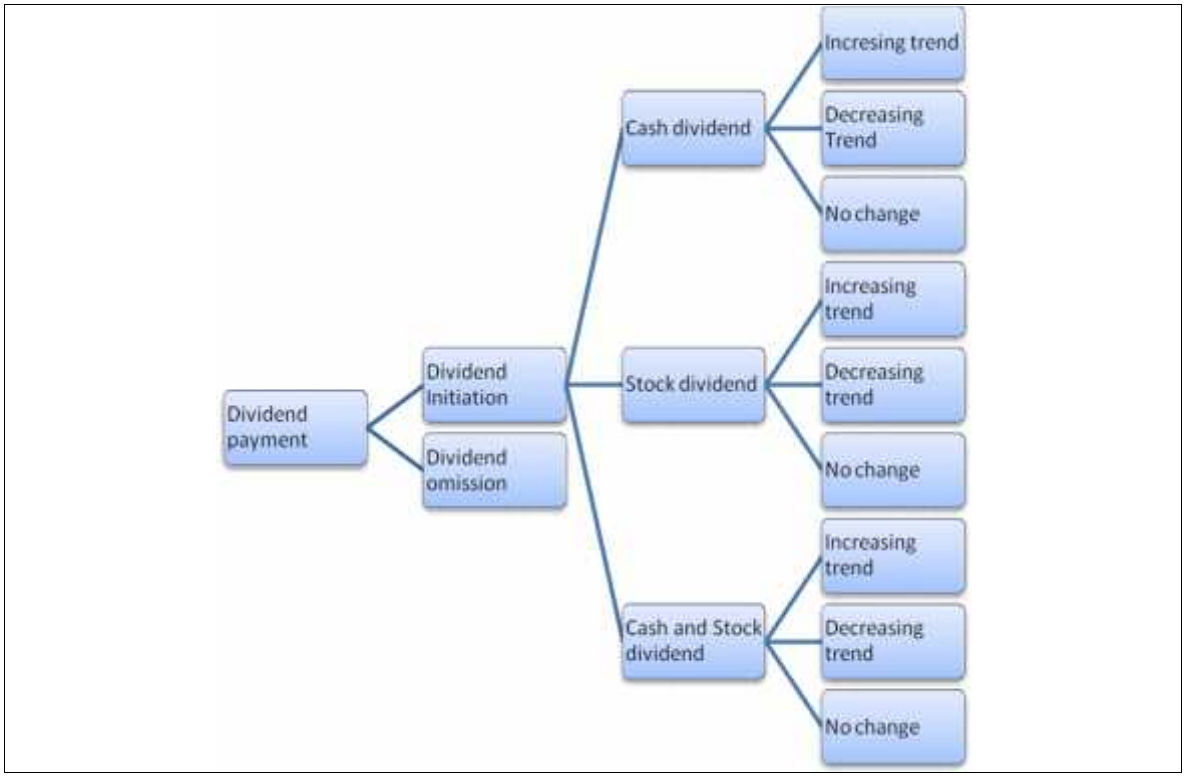


Figure-5.1: dividend payment pattern

Table 5.1: Sample Characteristics

Sectors	Total dividend Initiation	Total Dividend Omission	Total
Non financial: Manufacturing	259	41	300
Financial: Bank	79	9	88
Total	338	50	388

	Financial :Bank		Non financial: manufacturing	
Nature	**No. of events**	**Percentage**	**No. of events**	**Percentage**
Dividend Initiation	79	89.77	259	86.33
Dividend Omission	9	10.23	41	13.67
Total	**88**	**100.00**	**300**	**100.00**
Cash Dividend	9	11.39	203	78.38
Stock dividend	49	62.03	29	11.20
Cash and stock dividend	21	26.58	27	10.42
Total	**79**	**100.00**	**259**	**100.00**
Increasing trend	37	46.84	107	41.31
Decreasing trend	28	35.44	60	23.17
No change trend	14	17.72	92	35.52
Total	**79**	**100**	**259**	**100**

Total 300 and 88 events are undertaken for study of nonfinancial and financial sectors respectively. In case of nonfinancial sector, an average 86.33 percent event is the case of dividend initiation which is good symptom of the market. But still 13.66 percent case is observed the nonpayment events of dividend. For more diagnosis of the sample, it is observed that the increasing trend, decreasing trend and unchanged trend of dividend payment are 41.31 %, 23.16% and 35.52 % respectively. So, most of the cases, the companies follow good news messages about dividend payments. The forms of dividend payment- cash dividend, stock dividend and cash & stock are 78.37 %, 11.19%, 10.42% respectively. The percentage of events indicates that the nonfinancial companies provide the cash dividend most (78.37%).

In case of financial sector, average 89.77 percent events is the case of dividend initiation which is good symptom of the market .But still 10.22 percent case is observed the nonpayment event of dividend. For more diagnosis of the sample, it is observed that the increasing trend, decreasing trend and unchanged trend of dividend payment are 46.83%, 35.44% and 17.72% respectively. So, most of the cases, the companies follow good news messages about dividend payments. The forms of dividend payment- cash dividend, stock dividend and cash & stock are 11.39 %, 62.02%, 26.58% respectively. The percentage of events indicates that the financial companies provide the stock dividend most (62.02%). The most of the companies of financial sector provide the stock dividend and the nonfinancial companies provide cash dividend.

5.3.2 Hypothesis

The current study attempts to examine whether the dividend announcement by the listed companies of DSE convey information to the market and can be evaluated by the investors and cause abnormal activity to the stock price. Therefore, the current study aims to investigate the impact of the dividend announcements on the value of listed companies of DSE. The null hypothesis is formulated as follows:

Hypothesis 1: *Dividend announcements do not convey information to the market and have no effect on market value of share.*

(There is no abnormal return of stock price around the event day. That means, the abnormal returns around the event day are equal to zero).

For accepting the null hypothesis, it means that there is no significant abnormal activity by the stock prices during the examined period and thus, the irrelevance theory introduced by Miller and Modigliani (1961) stands true. Alternatively, in case of rejecting the null hypothesis, it means that statistically significant abnormal activity – positive or negative – has been observed in the firms' stock prices during the same period and hence, either the conservative rightists' or the radical leftists' theory stands true.

5.3.3. A. Models:

Event study process:

Gurgul et al. (2003) used in their study a rather short event window, compared with those in other event studies. In particular, Gurgul et al. (2003) attempted to examine the impact of corporate dividend announcements in the Austrian security prices by incorporating an event window which comprised five trading days – two days before (-2), two days after (+2) and the event day (0).

An even shorter event window was used by Lonie et al. (1996) in an attempt to scrutinize the UK market response to dividend announcements and identify any abnormal share activity. Namely, they used a three-day event window – one day before and one after the dividend declaration day.

Furthermore, the majority of the researchers make use of 41-day event window – 20 days before and 20 days after the announcement day (Dasilas, 2007; Dasilas et al., 2008; Asimakopoulos et al., 2008). The above researchers believe that this event window is the most appropriate, in order for the stock prices to capture all the available information conveyed by the dividend announcements. Finally, it is a common practice for the most recent researchers the use of more than one event window in their studies. Travlos et al. 2001 employed a symmetrical event window of 31 days – 15 days before and 15 days after the event day (0).

Selecting the event window

For the study, the returns on 15 days prior to the announcement day, and returns on 15 days after the announcement have been considered for analyzing the cumulative average abnormal returns. The event window is similar to the study of Eades &et.al (1985).

Selecting the estimated window

For the study, the returns on 45 days prior to the event window have been considered as estimated window.

Abnormal Returns Measures Approach:

Return measures:

The current event study employs the use of Logarithmic returns. I have calculated Log – returns $R_{i,t}$ for company i on date t which is as follows:

$$\mathbf{R_{i,t} = \ln(P_{i,t}/P_{i,\,t-1})\text{------(5.1)}}$$

Where $P_{i,t}$ stands for the stock price of company i on date t.

$P_{i, t-1}$ denotes the stock price of company i on date t-1

Ln denotes the natural logarithm.

The all share Price index of DSE is used for calculating market return, $\mathbf{R_{m,t}}$ which is as follows:

$$\mathbf{R_{m,t} = ln(P_{m,t}/P_{m, t-1})} \quad \text{-----(5.2)}$$

Where $P_{m,t}$ stands for the market price on date t.

$P_{m, t-1}$ denotes the market price on date t-1

ln denotes the natural logarithm.

The Market Model

This study has used traditional event study methodology which is commonly used to test the announcement effect of a dividend (see Pettit, 1972; Masulis, 1980; Brown and Warner, 1980; Aharony and Swary, 1980; Woolridge, 1982; Asquith and Mullins, 1983; Venkatesh, 1989; Akhigbe and Madura, 1996, Michachy, 1995).

The abnormal return can be estimated using the following equation:

$$\mathbf{AR_{i,t} = R_{i,t} - E(R_{i,t})} \quad \text{------(5.3)}$$

Where $AR_{i,t}$ is the abnormal return on stock i on day t and $E(R_{i,t})$ is the expected return on stock i on day t.

Market model equation is composed of following variables;

$$\mathbf{E(R_{i,t}) = \alpha_i + \beta_i R_{m,t} + e_{i,t}} \quad (5.4)$$

Where,

i = stock under observation

t = Represents event date

R_{mt} =the return of market on day *t*,

α_i, β_i = estimation parameters for based on estimation window

The benefit of regressed parameter is that both companies specific as well as market oriented factors are covered by this model. The calculation of parameters alpha (α) and beta (β) is carried through simple ordinary least square regression model. Security returns and market returns are taken as exogenous and endogenous variables respectively in estimation time frame of 45 days. The regression beta is then used for calculation of abnormal returns.

The Average abnormal Return (AAR_t) on day t is measured as follows:

$AAR_t=(1/N)\ \sum_{i=1}^{n} AR_{i,t}$ -------(5.5)

The 3-day cumulative abnormal return (CAR) is used to measure the market reaction to the dividend announcements and is calculated surrounding the announcement date as:

$CAR_{i,(-1,+1)} = \sum_{i=1}^{n} AR_{i,t}$ (5.6)

The cumulative average abnormal return is defined as:

$CAAR_t = (1/N)\sum_{i=1}^{n} CAR_{i,t}$ (5.7)

Buy and Hold Abnormal Return (BHAR)

The second approach consists of determining the abnormal returns according to the buy and-hold abnormal returns (BHARs). The abnormal return for a share is defined as the geometrically compounded return on the share minus the geometrically compounded return on the market index. This methodology has been influenced by Ritter (1991), Loughran and Ritter (1995), Barber and Lyon (1999), Michacly &et.al (1995), Rodney (2002).

Therefore, the "buy-and-hold" abnormal return for share i from time a to b [$BHAR_{i\ (a\ to\ b)}$] generating model takes the following form:

$BHAR_{i\ (a\ to\ b)} = \prod_{t=a}^{b} (1 + R_{i,t}) - \prod_{t=a}^{b} (1 + R_{m,t})$ (5.8)

Where $BHAR_{i\ (a\ to\ b)}$ is the buy and hold abnormal return for company i from time a to b. The time period a to b constitutes three trading days from t = -1, 0, +1. The average 'buy and hold abnormal returns' are calculated as follows:

$ABHAR = \frac{1}{N}\sum_{i=1}^{N} BHAR_i$ (5.9)

Where, N is the number of observations.

5.3.3. B. Methods:

Event studies are widely utilized in accounting, law, and economics, and related fields. In order to derive reliable inferences from outcomes of statistical tests applied to such diverse fields, it is vital to use methods that are as powerful and robust as possible. Due to improved power properties, parametric event study tests by Patell (1976) and Boehmer, Musumeci, and Poulsen (1991) that utilize standardized abnormal returns have gained popularity over non standardized tests. Harrington and Shrider (2007) argued that, in short-horizon testing of mean abnormal returns, tests that are robust against cross sectional

variation in the true abnormal return should always be used. The t-statistic is a good candidate for a robust parametric test in conventional event studies. Corrado and Zivney (1992) provided a nonparametric rank test based on standardized returns that has proven to have competitive and often superior empirical power compared to parametric tests when testing single day abnormal returns [e.g., Corrado (1989), Corrado and Zivney (1992), Cowan (1992), Campbell and Wasley (1993), and Kolari and Pynnonen (2010)]. Furthermore, the rank test appears to be robust to event-induced volatility [Campbell and Wasley (1993) and Kolari and Pynnonen (2010)].

Parametric Test:

t-test: The t-test is used for testing the statistical significance of results arrived at by analyzing the data related to dividend announcement. (Paul Asquith (1983), Joseph Aharony(1980)).The t-statistics for each day during the event window is calculated as:

$t=AAR_t / \delta (AAR_t)$ (5.10)

δ=Standard error

Assuming that the AAR_t and $CAAR_t$ are independent and identically distributed and normal, t test has a student-t distribution under the null hypothesis with (N-1) degree of freedom (Brown and Waner).

The t-statistic for CAARs for each day during the event window is calculated as follows:

$t=CAAR_t / \delta(CAAR_t)$ (5.11)

5.4 Empirical Results

I have tested the null hypothesis that the daily mean abnormal return is zero. In other words, cash dividend announcements have no systematic impact on corresponding stock prices. I analyzed daily mean abnormal returns and t- statistics (testing that the mean abnormal returns are equal to zero) for 15 days before and after the dividend announcement date (day 0), using both the market model and buy and hold abnormal return (BHAR).

5.4.1. Dividend Initiation and Omission Events

When a firm initiates the payment of dividend or omits such a payment, the firm is making an extremely visible and qualitative change in corporate policy. What effect do such abrupt changes have on returns? I investigated the reaction to initiation or omission announcements price performance. (Michachy, 1995)

5.4.1.1 Non Financial: Manufacturing Sectors

Dividend Initiations

Table 5.2 provides daily mean abnormal returns and t- statistics (testing that the mean abnormal returns are equal to zero) for 15 days before and after the dividend announcement date (day 0), using both the market model and buy and hold abnormal return (BHAR). Findings reported in table 5.2 show that the average abnormal return (AAR) on the day of dividend announcement is (-.57%) which is not statistically significant but the average cumulative abnormal return (CAAR) on the day of dividend announcement is (-1.39%) which is statistically significant. This indicates the impacts of dividend initiation announcement on market price of share on the day event date.

It is observed that the AARs of day -2, day-3 , day 1 , day 2 are -.38%, -.54%, , -.92%, -.45% respectively which are statistically significant . The CAARs of day -2, day-3 , day 1 , day 2 are -.82%, -1.01% , -1.95%, -1.72% respectively which are statistically significant .So, it is observed that the AAR and CAAR are significant on the day -2, day-3 , day 1 day 2. This indicates that the abnormal returns around the event day are significant. The dividend announcements react on the share price around the event dates.

Moreover, the AAR of day-7, day 7, day 9 are significant and the CAAR of the day -6, day-7, day-8 , day 6, day 7, day 8 are statistically significant . These indicate that the one week before and one week after the event date, the abnormal returns are significant.

Before the dividend initiation announcement event, the market is reacted which indicates the information leakage before final announcement. It is observed that the AAR and CAAR are negative on both before the event date and after the event date of dividend initiation.

Table: 5.2- Dividend initiation (Manufacturing sector)

IM	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR(%)	t-statistic	CAAR(%)	t-statistic	Average BHAR	t-statistic
-10	-0.129281106	-0.72496			-4.587036773	***-1.311******
-9	-0.184525984	-1.15843	-0.51453	-1.49001	-0.566242175	-0.172
-8	-0.20191684	-0.9556	-0.76848	***-1.84256****	2.895468035	0.672
-7	-0.382559377	***-1.84813****	-0.76539	***-1.93582****	2.396474797	0.337
-6	-0.189104314	-0.88648	-0.67907	***-1.72467****	-1.983679533	-0.222
-5	-0.10225815	-0.49902	-0.39926	-0.91406	0.221623059	0.028
-4	-0.086078828	-0.40434	-0.73962	***-1.77304****	3.106614368	0.723
-3	-0.547097168	**-2.81963***	-1.01001	***-2.55637****	-0.466196624	-0.135
-2	-0.388647032	***-1.81149****	-0.82944	***-2.14044****	1.993600254	0.293
-1	0.087282762	0.400257	-0.86238	-1.50449	10.88816384	0.863
0	-0.577324744	-1.31367	-1.39316	***-2.06615****	-20.57193869	***-1.56******
1	-0.925018346	***-2.52913****	-1.95677	***-2.86392****	27.71498313	***1.532******
2	-0.455561568	***-1.84567****	-1.72549	***-2.3511****	-1.624876494	-0.085
3	-0.315843846	-0.67355	-0.96984	-1.19672	-1.943252654	-0.564
4	-0.165502212	-0.41259	-0.64577	-0.83923	1.361256932	0.401
5	-0.142414122	-0.76356	-0.75675	***-1.77074****	0.483907327	0.156
6	-0.425383774	-1.03796	-1.6737	***-2.6928****	0.814720647	0.264
7	-1.114084767	***-3.15173****	-1.68284	***-3.05268****	2.1257852	0.481
8	-0.157755839	-0.4485	-1.76138	***-4.10364****	0.630064559	0.115
9	-0.519901509	***-2.22516****	-0.70611	***-1.91715****	-5.388314488	***-1.288******
10	-0.020743849	-0.11165			18.91394602	0.991

**Significant at 1 % level, ***Significant at 5 % level, ****Significant at 10 % level*

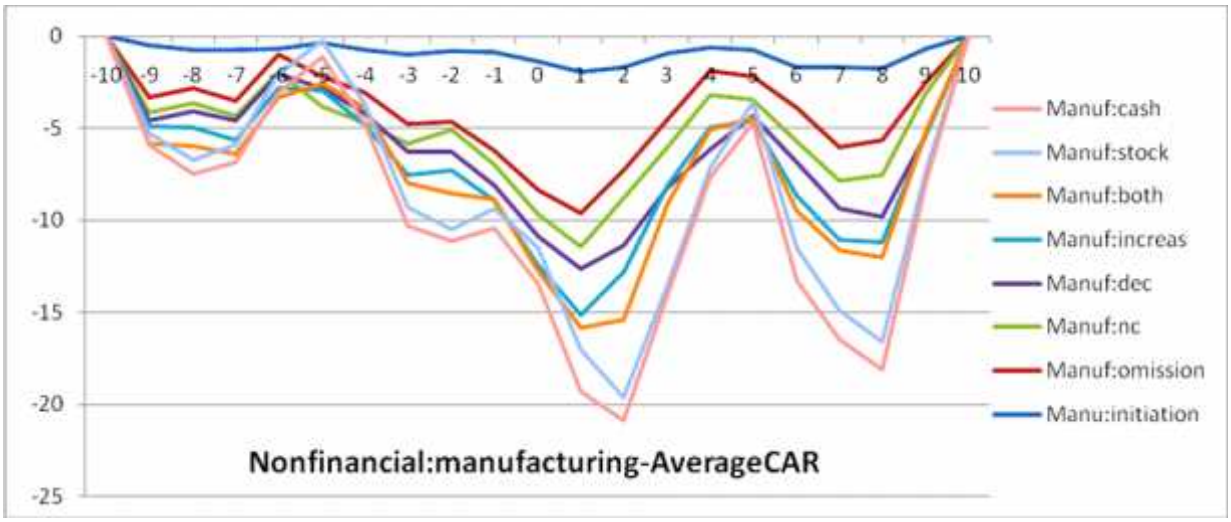


Figure 5.2: CAAR (manufacturing sector)

From the table -5.2 , the average BHAR is -20.57 percent which is statistically significant at 10 level of significance. The average BHAR of day 1 is 27.71 percent which is also significant at 10 percent level of significant. So, it supports the result of market model. The average BHAR of day-10 , day 9 are -4.58 % and -5.38% respectivly which are statistically significant. This indicates the little impact of announcement on the earliar and later distance date**.**

Dividend Omissions

I am interested in whether investors rationally react to the information carried by announcement of dividend omissions and cuts. Two hypotheses emerge concerning the nature of the LRARs of firms following major corporate events. The first, Market efficiency hypothesis (Fama, 1998) rejects LRARs. Fama argued that any observed can be attributed to either chance or misspecification of methodology. The second hypothesis, behavioral finance, predicts that investors will under react or overreact to corporate events. Barberis, Shleifer, & Vishny (1998) used as a representativeness bias and conservatism, which were based on the findings in psychology literature, to model investors Behavior.

Table: 5.3- Dividend omission (Manufacturing sector)

OM	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR (%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	-0.153	-0.24256			3.166522539	0.33
-9	-0.035	-0.09498	-2.840	-1.55092	4.994224829	1.198
-8	-2.665	-1.35949	-2.051	-1.07117	-9.28829649	***-2.29***
-7	0.640	1.025366	-2.783	-1.43889	11.57634795	***1.348***
-6	-0.799	-1.36362	-0.310	-0.30585	62.68476286	1.08
-5	-0.163	-0.21299	-1.812	***-1.7758***	40.11936781	1.105
-4	-0.929	-1.48425	-2.326	***-2.37066***	28.35251816	1.066
-3	-1.322	***-2.47875***	-3.762	***-3.28261***	16.51290387	0.839
-2	-1.611	***-2.75938***	-3.842	***-3.63822***	5.685511568	1.003
-1	-1.022	***-1.69435***	-5.393	***-4.35796***	-3.221522049	-0.534
0	-2.819	***-2.4393***	-6.971	***-4.6241***	-16.01922142	-1.011
1	-3.101	***-3.15774***	-7.680	***-4.24744***	-35.87114904	***-1.686***
2	-1.647	***-1.63269***	-5.551	***-3.87995***	3.50519291	0.222
3	-0.756	-1.43603	-3.594	***-2.37047***	-11.56695967	***-1.699***
4	-1.215	-0.82233	-1.238	-0.67663	5.700958679	0.887
5	0.637	0.813653	-1.422	-0.70043	-12.9272063	-1.148
6	-0.975	-1.48412	-2.224	-1.31365	-18.61562903	***-2.4***
7	-2.077	***-2.22231***	-4.354	***-1.98902***	52.53565645	0.945
8	-1.460	-1.50132	-3.924	***-1.98611***	-6.209541133	-0.292
9	-0.499	-1.00249	-1.829	***-2.12202***	8.20941515	***1.383***
10	-0.087	-0.07045			-3.056454073	-0.539

**Significant at 1 % level, **Significant at 5 % level, ***Significant at 10 % level*

Findings reported in table 5.3 show that the average abnormal return (AAR) on the day of dividend announcement is (-2.81%) which is statistically significant and the average cumulative abnormal return (CAAR) on the day of dividend announcement is (-6.97%) which is statistically significant. This indicates the impacts of dividend omission announcement on market price of share on the day event date.

It is observed that in the AARs of day-1, day -2, day-3 , day 1 , day 2 are -1.02%, -1.61%, , -1.32%, -3.1%, -1.64% respectively which are statistically significant . The CAARs of day-1, day -2, day-3 , day-4, day 1 , day 2 , day3 are -5.39%, -3.84%, -3.76%, -2.32% , -7.68%, -5.55%, -3.59% respectively which are statistically significant. So, it is observed that the AAR and CAAR are significant on the day-1, day -2, day-3, day-4, day 1 day 2, day 3. This indicates that the abnormal returns around the event day are significant. The dividend omission announcement reacts negatively on the share price around the event date.

It is observed that the average AAR and CAAR are negative in dividend initiation and omission events but the difference is the negative reaction of dividend omission events is more than the dividend initiation events.

From the table -5.3 , the average BHAR is -16.01 percent which is not statistically significant but the average BHAR of day 1, day 3 are -35.87% and -11.56% which are significant at 10 percent level of significant. So, it supports the result of market model. The average BHAR of day-8, day 9 are -9.28 % and 8.2% respectivly which are statistically significant. This indicates the little impact of announcement on the earlier and later distance dates**.**

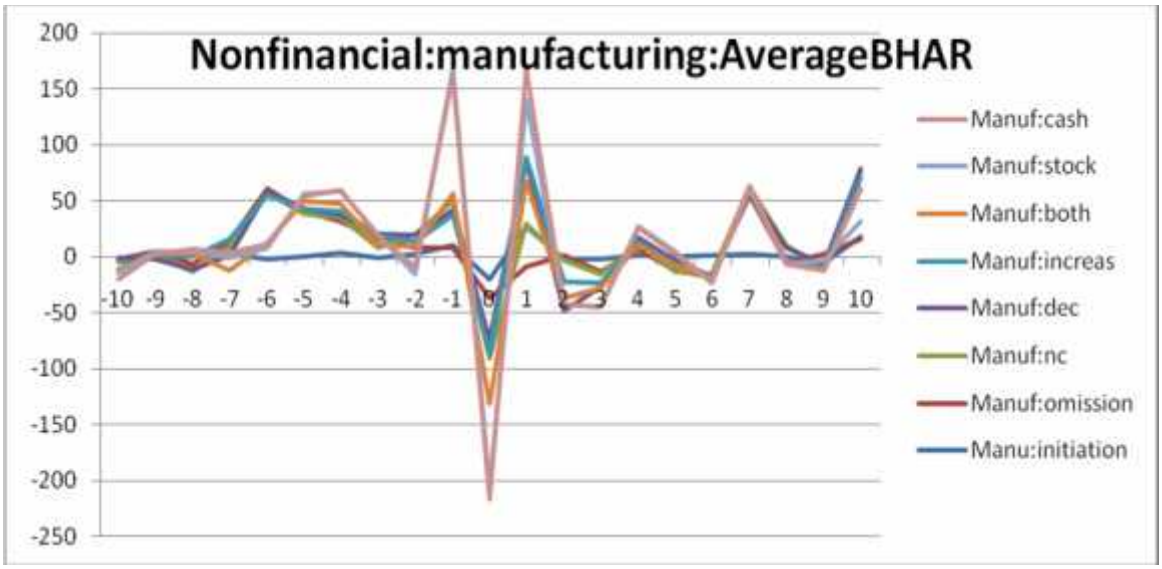


Figure -5.3: Average BHAR (manufacturing sector)

From the figure 5.2 &5.3, it is observed the common scenario about the market reaction. The abnormal returns begin to decline from day-5 and reach to lowest at day o or at day1 then further start to increase. So, it is clear from the t-test & figure-5.3 that the dividend announcement has impact on the market prices.

5.4.1.2 Financial: Banking Sector

Dividend Initiations

Table: 5.4- Dividend Initiation (Banking sector)

	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR (%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	-0.065610094	-0.31883			10.08245921	***1.836974*****
-9	-0.25246692	-1.18195	-0.15862	-0.39615	11.52848907	***1.740715*****
-8	0.159460851	0.816184	0.200022	0.488496	3.754543587	0.94472
-7	0.293028176	1.389449	0.47443	1.050044	-6.330089369	-1.08195
-6	0.021940586	0.079158	-0.09998	-0.11558	12.70835553	***1.395924*****
-5	-0.41494486	-0.55391	1.23099	***2.513853*****	-14.31289351	-0.72353
-4	1.623994255	***2.12493*****	1.70127	***3.840602****	29.22629935	0.986445
-3	0.4922209	***1.967437*****	1.817142	***2.172302*****	-4.573723148	-0.88475
-2	-0.299073096	-1.14254	0.263244	0.61811	0.458032524	0.117517
-1	0.070096272	0.294168	-1.07307	***-1.66575*****	5.155737067	0.287643
0	-0.84409412	***-1.68261*****	-1.6976	***-2.31265*****	0.590176394	0.127544
1	-0.923604897	***-2.17323*****	-1.78294	***-2.05526*****	-5.292124942	-0.66656
2	-0.015236515	-0.02545	-0.64238	-1.0356	-36.93336258	***-1.28212*****
3	0.296462896	0.600543	0.290356	0.484549	-8.058736115	-0.34542
4	0.009129997	0.031513	0.848008	1.301329	-11.28663883	-0.89262
5	0.542415174	1.619143	1.319741	***2.056272*****	-9.289797174	-1.26095
6	0.768196146	1.592248	0.457909	0.546908	0.401120759	0.034623
7	-0.852702267	-1.59011	-2.63468	***-2.66441****	-4.903559165	-0.79105
8	-2.550172677	***-3.23517****	-4.18734	***-4.38407****	-13.63328403	***-1.53305*****
9	-0.784461094	-1.33626	-4.13941	***-3.31948****	-2.520310282	-0.34089
10	-0.804777728	-0.96181			27.89186109	***1.945002*****

*Significant at 1 % level, **Significant at 5 % level, ***Significant at 10 % level

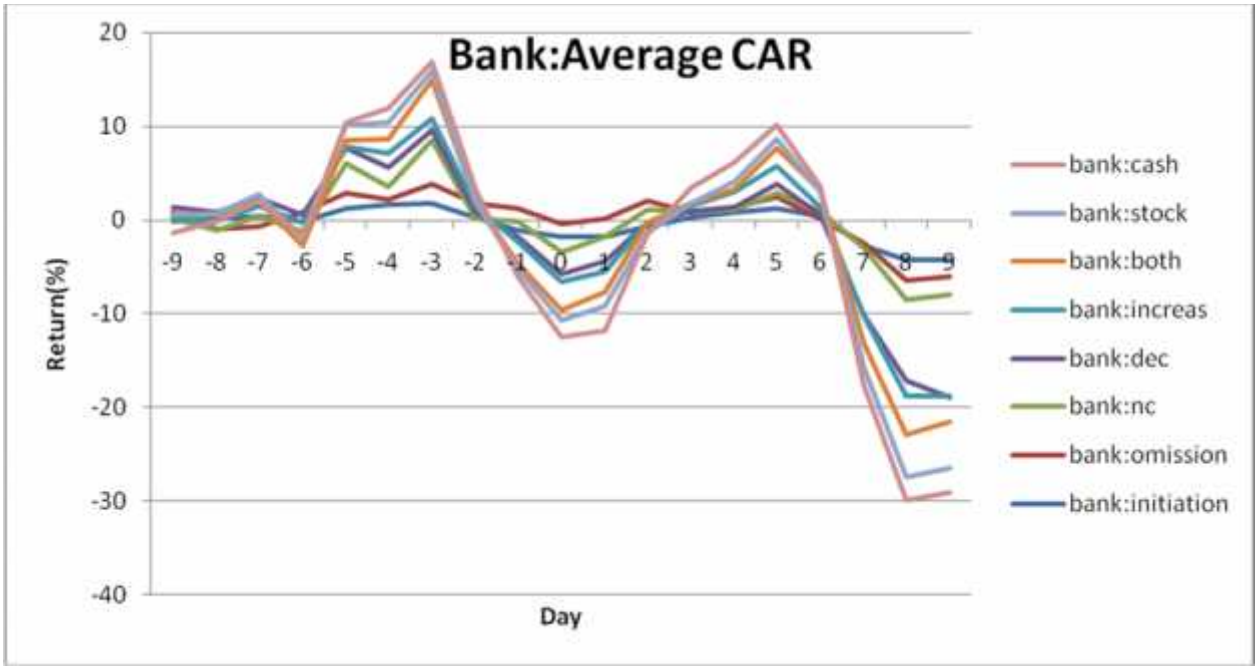


Figure -5.4: CAAR (Banking sector)

The dividend initiation event in banking sector is 89.77 percent which is more than the manufacturning sector(86.33%). From the figure-5.4& 5.5 , it is shown that the abnormal returns start to decline from day-4 and reach to lowest at event day(dayo) then further start to raise. The abnormal return reach to peak at day 5 and further decline . Now it is observed from the table -5.4 , the AAR, CAAR ,BHAR on the event day are -.84, -1.68 percent respectively which is statistically significant at 5% level.

The AAR on the day -3, day-4, day 1, day 8, are .49, 1.62, -.92, 2.55 percent which are statistically significant. The CAAR on the day -1, day-3, day-4, day-5, day 1, day 5, day 7, day 8, day 9 are 1.23, 1.7, 1.81, -1.07, -1.78, 1.31, -2.63, -4.18, -4.13 percent which are statistically significant. The BHAR on the day -9, day-10, day2, day8, day10 are 11.52,10.08, -36.93,-13.63, 27.89 percent which are statistically significant and support the marekt model. So, it is clear that the dividend initiation events have impact on the market price of the share. But the earlier reaction indicates the information leakage in market.

Dividend Omissions

Table: 5.5- Dividend omission (Banking sector)

	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR (%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	1.414974635	1.483039			1.633953553	0.549271
-9	0.080588371	0.172076	0.938223714	0.894374	-0.494807138	-0.39056
-8	-0.557339291	-1.39806	-1.130861501	***-2.20433*****	-0.633907327	-0.89897
-7	-0.65411058	-1.01259	-1.152131443	***-2.17062*****	-1.856027534	-1.18654
-6	0.059318428	0.147704	0.855578897	0.834891	-1.45200613	-0.67714
-5	1.450371049	1.628404	1.590607457	1.296233	1.311450217	0.478092
-4	0.08091798	0.113181	0.512824381	0.365579	-2.493629862	-0.45402
-3	-1.018464648	-1.36677	1.991398999	1.313168	25.6714122	1.002351
-2	2.928945667	1.694848	1.479942824	1.168051	12.19497629	0.828366
-1	-0.430538195	-0.82228	2.288077732	1.283067	11.31952713	1.047289
0	-0.21032974	-0.1591	1.2284036	1.204658	7.046965036	1.140482
1	1.869271536	1.773395	1.862001273	***2.018627*****	-23.22855682	-1.00153
2	0.203059477	0.202625	2.646346111	1.259011	29.07877077	1.012362
3	0.574015098	1.001812	0.503536253	0.419646	-12.74294486	-1.13085
4	-0.273538322	-0.51204	0.432367536	0.427841	5.440450092	***2.081105*****
5	0.13189076	0.404183	1.121488845	0.443569	2.099126071	1.16895
6	1.263136407	0.520317	-0.417196037	-0.42173	-20.55606252	-1.53711
7	-1.812223204	-0.60201	0.177282973	0.150292	-16.84292722	-1.22566
8	0.72636977	**1.726785****	-2.303183102	-0.75142	-11.40976425	-1.27303
9	-1.217329668	-1.03929	-1.889668232	-0.82338	-4.13782965	-0.81435
10	-1.398708334	-0.77849			-7.062594581	-1.17375

**Significant at 1 % level, **Significant at 5 % level, ***Significant at 10 % level*

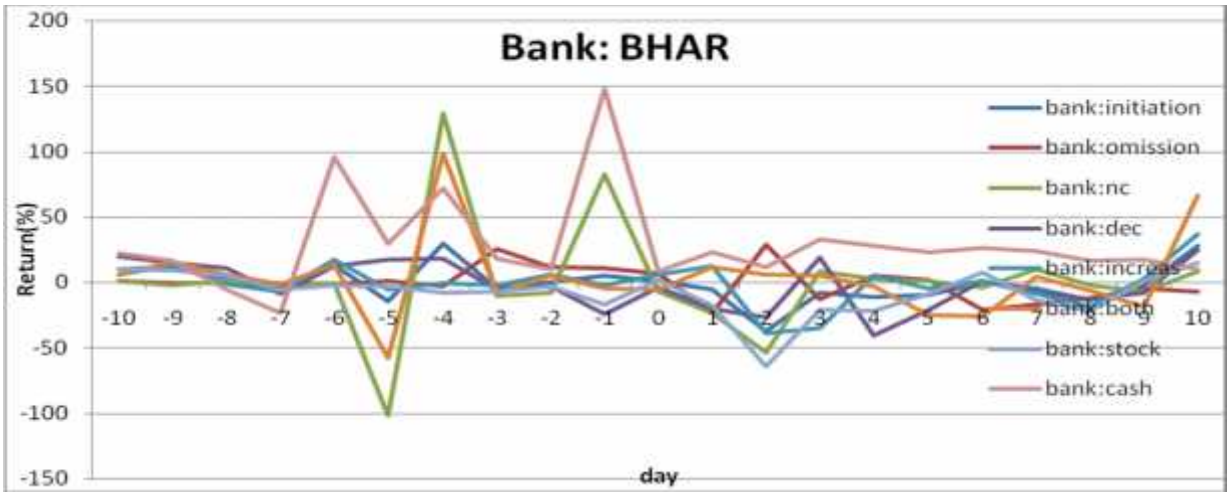


Figure -5.5: Average BHAR (Banking sector)

The dividend omission event is only 10.23 percent. The AAR, CAAR, BHAR on the event dates are -.21, 1.22, 7.04 which are not statistically significant. It is also observed that the abnormal returns on the days before and after the event date are not significant. From the figure-5.5 it is shown that dividend omission events have no unique direction like dividend initiation event. So, it is inferred that the dividend omission announcements do not convey any significant information to the market.

5.4.2 Forms of Dividend: Cash dividend, Stock dividend, Cash and Stock dividend

5.4.2.1 Non Financial: Manufacturing Sectors

Cash Dividend

Chen (2007) conducted similar study to find out the impact of cash dividend announcement on share price.

Table: 5.6-Cash Dividend (Manufacturing sector)

	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR (%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	-0.199791932	-0.9717			-5.382232429	-1.239
-9	-0.165547414	-0.93486	-0.60862	-1.51728	-1.101348083	-0.271
-8	-0.243283308	-0.96032	-0.74404	-1.52815	3.259216572	0.605
-7	-0.335211564	-1.46384	-0.94762	***-2.02044*****	5.188804993	0.646
-6	-0.369127358	***-1.64916*****	-0.97628	***-2.0765*****	3.916196693	0.412
-5	-0.271943983	-1.11439	-0.89478	***-1.82254****	-1.480605223	-0.149
-4	-0.253707645	-1.08729	-1.10476	***-2.35717*****	1.489852318	0.319
-3	-0.579108998	***-2.74004****	-1.04615	***-2.45139*****	-0.589735919	-0.144
-2	-0.213328604	-1.03811	-0.61017	-1.47617	6.752637111	0.841
-1	0.18227122	0.733208	-1.03944	***-1.7034*****	-4.516128142	-0.832
0	-1.008382742	***-2.1575*****	-1.91296	***-2.45263*****	-9.486975441	-0.786
1	-1.08684479	***-2.77214****	-2.23365	***-2.77284****	27.88555434	***1.31*****
2	-0.138420357	-0.48898	-1.25628	-1.53742	0.686623371	0.029
3	-0.031013536	-0.06658	-0.4687	-0.48661	0.68654541	0.192
4	-0.299265752	-0.59557	-0.50832	-0.56195	-0.161267672	-0.048
5	-0.178038887	-0.81867	-1.10494	***-2.19314*****	-0.90213163	-0.253
6	-0.627630713	-1.23274	-1.74657	***-2.33878*****	2.030330003	0.545
7	-0.940902392	***-2.30235*****	-1.6084	***-2.48892*****	2.579421419	0.467
8	-0.03986708	-0.09408	-1.48656	***-3.2624****	1.475192625	0.215
9	-0.505793732	***-1.90516*****	-0.61933	-1.48655	-7.771015377	***-1.491*****
10	-0.073672368	-0.33957			29.82725703	1.235

**Significant at 1 % level, **Significant at 5 % level, ***Significant at 10 % level*

In the nonfinancial sectors, most of the companies pay cash dividend (78.37%). The AAR and CAAR are -1.008% and -1.91% which are statistically significant at 5% and 1% level of significance respectively. The AAR, CAAR and BHAR on the day1 are -1.08%,-2.23%, and 27.88% respectively which are significant at 1%, 1% and 10% level of significance. It indicates that the market reacts immediately for the cash announcement. In the market model, this reaction is negative over the price. In the BHAR model, before and after the event date the market does not react significantly except day 9(significant at10% level).

The AAR of the day -6, day-3 day7, day 9 are significant and the CAAR of the day -3, day-4, day-5, day-6, day-7, day5, day6, day7, day8 are significant at 1% and 5% level. It infers that the cash dividend announcement has effects on market price before and after the event date. The earlier reaction indicates the information leakage in the market.

Stock Dividend Events

The relationship between stock dividends and share prices has been the subject of much empirical discussion within the finance literature. Empirical research has shown that the market generally reacts positively to the announcement of a bonus issue/stock dividend (see for example, US - Foster & Vickrey (1978), Woolridge (1983), Grinblatt et al (1984), and McNichols & Dravid (1990); Canada – Masse et al (1997); NZ- Anderson et al (2001); Sweden – Lijleblom (1989)). The hypothesis that has received strongest support in explaining the positive market reaction to bonus issue announcements is the signalling hypothesis, which suggests that 'the announcement of a bonus issue conveys new information to the market in instances where managers have asymmetric information'. This hypothesis has received almost unequivocal support with few exceptions (for example, Papaioannou, Travlos and Tsangarakis (2000)2). Ball, Brown and Finn (1977) investigated share price reaction around the announcement of 'share capitalization changes' (bonus share issues, share splits and rights issues) in Australia for the period between 1960 and 1969 inclusive using monthly data. They found 20.2% abnormal return for 13 months up to including the month of bonus issue announcements. However, they did not provide any statistically significant evidence of price reaction on announcement period. Despite extensive research undertaken in this area in abroad, research into the Bangladeshi market has been minimal.

Table: 5.7-Stock Dividend (Manufacturing sector)

	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR (%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	0.927496514	1.575415714			-4.327163587	-0.703
-9	-0.378734584	-0.710543147	0.550029	0.604543	-0.259946339	-0.039
-8	0.001267486	0.002485215	-0.74689	-0.73639	0.739392096	0.135
-7	-0.369418153	-0.665947064	0.527698	0.609448	10.84729834	0.826
-6	0.895848751	***2.063796406*****	1.226464	1.506484	-5.299986291	-0.78
-5	0.700033462	1.30072228	2.360184	***1.859083*****	5.376979363	0.512
-4	0.764301918	0.870293668	0.227032	0.153006	10.74547072	0.709
-3	-1.237303006	-1.847924161	-1.29983	-1.03198	8.099274512	1.158
-2	-0.826832114	-1.261049283	-1.95031	-1.48547	-25.70523794	-1.146
-1	0.113827125	0.159768991	-0.50605	-0.28847	110.8301644	1.06
0	0.206955054	0.177357508	1.284876	0.764975	-76.22295445	-0.972
1	0.964094175	0.759017614	-1.17891	-0.72856	72.09172232	1.229
2	-2.349957029	***-3.264374225****	-4.14516	-1.52261	-6.57548271	-0.206
3	-2.75930075	-1.074173185	-4.3921	-1.8443	-18.65662939	-1.055
4	0.717153837	1.223999456	-2.07203	-0.81361	15.82637767	0.831
5	-0.029881358	-0.051824502	0.85901	0.793073	10.46319117	0.879
6	0.171737349	0.274046459	-1.99874	-1.37518	-5.153577659	-1.152
7	-2.1405932	***-2.248591414*****	-3.21082	***-2.3653*****	-2.803295088	-0.606
8	-1.241966977	-1.444394555	-4.58241	***-2.98328****	-4.148360312	-0.474
9	-1.199846196	-1.658072398	-2.13198	-1.9039	8.039945957	1.092
10	0.309833253	0.579583073			-30.61749844	***-1.762*****

The stock dividend event is only 11.19 percent in nonfinancial sector. The AAR, CAAR, BHAR of the event date is not significant. In BHAR model, abnormal return of the day before and after the event day is not significant. But the AAR and CAAR of the day before and after the event day have weakly significant. So, it infers from the table 5.7 that the stock dividend does not significantly react on the market price of share.

Cash and Stock dividend Events

Table: 5.8- Cash and Stock Dividend (Manufacturing sector)

	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR (%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	-0.73681311	***-2.37769*****			1.112533441	0.27227
-9	-0.117919387	-0.23466	-0.95404	-0.98231	3.127977087	0.80393
-8	-0.110669393	-0.2463	-0.97447	-0.78843	2.476403193	0.39129
-7	-0.750905811	-0.92955	-0.79089	-0.75497	-27.67452196	-0.9775
-6	-0.007585207	-0.00716	-0.50214	-0.52483	-42.78004908	-0.9107
-5	0.305522644	0.800176	0.344145	0.255827	7.482623374	0.81571
-4	0.254661153	0.573292	0.953898	0.954827	7.057572222	0.48316
-3	0.433730948	0.688338	-0.42834	-0.27887	-8.737314623	-0.9053
-2	-1.22964537	-1.05283	-1.26602	-0.84683	-4.036702506	-1.6328
-1	-0.651882241	-1.17718	0.079597	0.032797	19.36050673	1.07113
0	1.805253085	0.933906	-0.38074	-0.18841	-44.14112695	***-1.5584*****
1	-1.74336358	-1.3378	-0.72079	-0.38921	-21.23136468	-0.9407
2	-0.793526615	-1.363	-2.63701	-1.4412	-13.68661325	-1.1808
3	0.177657179	0.319516	-1.04335	-0.92844	-3.764033449	-1.0747
4	-0.112790742	-0.28145	-0.1422	-0.14208	-2.728224791	***-2.0118*****
5	0.003243374	0.008004	0.112727	0.110435	0.18637684	0.06813
6	0.446370632	0.741602	-0.77935	-0.58832	-1.91446633	-0.2272
7	-1.307199405	-1.28116	-0.59855	-0.39668	4.009310234	0.59445
8	0.124784669	0.199714	-0.78741	-0.52182	-0.591664191	-0.1802
9	0.104862375	0.158083	0.176166	0.160306	-1.896880133	-0.7284
10	0.020175592	0.044896			-9.93754457	-1.2952

**Significant at 1 % level, **Significant at 5 % level, ***Significant at 10 % level*

The cash and stock dividend event is only 10.42 percent in nonfinancial sector. The AAR, CAAR of the event date are not significant. In AAR and CAAR of the day before and after the event day is not significant. So, it is inferred from the table 5.8 that the cash & stock dividend does not significantly react the market price of share. But in BHAR model the average BHAR on the event date is -44.14% which is statically significant at 10 percent level of significance.

5.4.2 Financial Sectors: Banking Sector

Cash Dividend Events

Table: 5.9- Cash Dividend (Banking sector)

	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR(%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	-1.196074291	***-2.49556****			21.9722159	1.027296
-9	-0.714407663	-0.85632	-2.0585	***-2.3495****	16.77068582	0.730299
-8	-0.148013704	-0.40934	-0.93432	-0.94155	-5.232867458	-0.18475
-7	-0.0718988	-0.15073	-0.74994	-0.80214	-23.45234321	-0.5283
-6	-0.530030895	-1.01822	-0.03006	-0.03204	95.79567377	1.613192
-5	0.571873332	0.954713	0.256365	0.244724	29.3950736	1.383259
-4	0.214522652	0.354436	1.364222	0.941081	72.47560419	1.473213
-3	0.577826299	0.752765	0.886812	0.605232	18.23412498	0.59936
-2	0.094462593	0.108245	1.268652	1.041834	9.834517867	0.333584
-1	0.596363143	0.784671	-0.78229	-0.29833	148.2102242	1.129249
0	-1.473111916	-0.91085	-1.84124	-0.65647	8.618126101	0.302633
1	-0.964490152	-1.34349	-2.64605	-0.95829	22.92566095	1.066645
2	-0.208445508	-0.29275	-0.31286	-0.2123	12.02450433	0.50805
3	0.860078027	***2.159502****	1.531542	1.713549	33.10820367	1.67319
4	0.879909502	1.523568	2.004952	***2.157173****	28.31076413	1.377633
5	0.264964143	0.355767	1.479573	0.793112	23.53719662	1.091668
6	0.334698874	0.249799	0.407438	0.252296	26.32577707	1.070993
7	-0.192225371	-0.38623	-1.91304	-0.92571	24.15381379	1.212385
8	-2.055514844	-1.39806	-2.51032	***-2.19287****	16.4167507	0.796967
9	-0.26257587	-0.31271	-2.62603	-1.93544	17.46293306	0.873517
10	-0.307937335	-0.76716			10.44350196	0.478323

**Significant at 1 % level, **Significant at 5 % level, ***Significant at 10 % level*

Among the dividend initiation events, the cash dividend is lowest which is 11.39 percent. From the table 5.9, it is seen that the AAR, CAAR, average BHAR on the event date are not statistically significant. The AAR, CAAR, average BHAR of the days before and after the event dates are not statistically significant. So, there are no remarkable reactions of cash dividend announcement of dividend on stock price. It implies that the cash dividend does not convey information to the market in banking sector.

Stock Dividend Events

Table: 5.10- Stock Dividend (Banking sector)

	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR (%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	0.196503918	0.737417			9.772859482	1.236473
-9	-0.381135314	-1.45022	-0.0014	-0.00284	8.869730976	***1.422672******
-8	0.183226944	0.715796	0.190336	0.357709	4.493941296	***1.440872******
-7	0.388244363	1.261047	0.651628	1.05873	-5.375011914	-1.1913
-6	0.080156818	0.196177	0.904416	1.380102	-2.787914193	-0.36067
-5	0.436015158	1.35187	1.649029	***2.391409****	-3.60392917	-0.27519
-4	1.132857038	***2.52095****	1.911034	***3.524252****	-8.42362845	-0.9562
-3	0.342161526	1.061779	1.032218	***1.718841****	-7.190124665	-1.36527
-2	-0.442800514	-1.21688	-0.05721	-0.09351	-3.191412882	-0.98475
-1	0.043431932	0.126789	-0.55396	-0.83471	-16.85953772	-1.13384
0	-0.154587762	-0.30773	-1.09117	-1.30295	1.620138991	0.327391
1	-0.980012514	-1.50821	-1.42359	-1.24083	-17.75780446	***-1.62772*****
2	-0.288990193	-0.31439	-0.94448	-1.01281	-64.15855177	-1.3971
3	0.324521168	0.414717	0.074013	0.082769	-21.34350182	-0.57094
4	0.038482271	0.101464	0.90661	0.911381	-21.9158646	-1.10808
5	0.543606559	1.147488	1.052875	1.161711	-8.620175362	-0.89421
6	0.470786605	0.756913	-0.06119	-0.04925	7.057858332	0.761721
7	-1.075578469	-1.34368	-2.6378	***-2.06709*****	-14.09077897	***-2.20045*****
8	-2.033009978	***-2.09184*****	-4.51809	***-3.4804****	-22.29925596	***-1.68304*****
9	-1.409506005	-1.57137	-4.98736	***-2.821****	0.654946266	0.063761
10	-1.544845879	-1.17755			14.61766641	***1.469703*****

**Significant at 1 % level, **Significant at 5 % level, ***Significant at 10 % level*

The stock dividend initiation event in banking sector is 62.02 percent which is more than the manufacturning sector(11.19%). From the figure-5.4, it is shown that the abnormal return start to decline from day-4 and reach to lowest at event day(dayo) then further start to raise. The abnormal return reach to peak at day 5 and further decline . Now it is observed from the table -5.10 , the AAR on the day-4, day 8, are 1.13, -2.03 percent respecctively which are statistically significant. The CAAR on the day-3, day-4, day-5, day 7, day 8, day 9 are 1.03,1.91, 1.64, -2.63, -4.51, -4.98 percent which are statistically significant. The BHAR on the day -8, day-9, day7, day 8, are 4.49, 8.86, -14.09, -22.29 percent which are statistically significant and support the marekt model. So, it is clear that

the stock dividend initiation events impact on the market price of the share. But the earlier reaction indicates the information leakage in market.

Cash and Stock dividend

Table: 5.11-Cash and Stock Dividend (Banking sector)

	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR(%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	-0.1927248	-0.5009			5.709248562	***1.832508*** **
-9	0.245733938	0.646795	0.288791	0.330349	15.48560222	0.848217
-8	0.235781444	0.574784	0.70877	0.869211	5.881029857	0.95776
-7	0.227254348	0.810735	0.585698	0.706482	-1.220494638	-0.18684
-6	0.122661918	0.329833	-2.47352	-0.87328	13.25746756	1.319965
-5	-2.823440317	-1.05269	0.673262	0.861529	-58.03246287	-0.85991
-4	3.374040351	1.261662	1.356271	1.463878	98.54071451	0.915482
-3	0.805671411	***1.687177*** **	4.047344	1.474028	-8.243578327	-1.01877
-2	-0.132367273	-0.37279	0.580074	1.111741	4.954911422	1.521417
-1	-0.093229881	-0.35359	-2.40896	-1.58134	-4.784354334	-1.01572
0	-2.183363233	***-1.68603*** **	-3.05106	***-1.93192*** **	-5.253619538	-0.89112
1	-0.774464874	-1.75159	-2.2515	-1.47802	11.7011238	1.028345
2	0.70632592	1.11345	-0.07869	-0.12871	5.610135913	0.888162
3	-0.010555749	-0.03221	0.26322	0.335756	5.296076345	1.030679
4	-0.432549859	-0.73898	0.215437	0.307396	-3.455427575	-0.60412
5	0.65854286	1.218157	1.873929	***2.06616*** **	-24.9209597	-1.96487**
6	1.647936286	1.749086	1.69076	1.622473	-26.2418339	-0.71957
7	-0.615719323	-0.81539	-2.93666	-1.3877	4.080127201	0.266646
8	-3.968881856	***-2.17857*** **	-4.13429	***-2.16434*** **	-6.291269184	-0.73313
9	0.450311937	0.819612	-2.80945	-1.28594	-18.49348938	***-1.68775*** **
10	0.709116361	1.091958			66.34285021	1.389145

*Significant at 1 % level, **Significant at 5 % level, ***Significant at 10 % level

The cash and stock dividend initiation event is only 10.42 percent. From the figure-5.4, it is shown that cash and stock initiation events go to same direction of dividend initiation event. It is also observed that the abnormal returns on the days before and after the event date are not significant. So, it is inferred that the cash and stock dividend announcements do not convey any significant information to the market.

5.4.3 Dividend payment Trend: Increasing trend, Decreasing trend, No change trend

This study examined the possibility that the response to a dividend being increased, decreased or left unchanged. The dividend direction is identified compared to previous period announcement. If current announcement is increased compared to previous period announcement, it is considered as a dividend increase and if decreased compared to previous period announcement, it is considered as a dividend decrease and no change is treated as a constant.

5.4.3.1 Non Financial: Manufacturing Sectors

Increasing trend

Table: 5.12- Increasing Trend (Manufacturing sector)

	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR (%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	-0.313625885	-1.07264			-11.12941311	***-1.6425*****
-9	0.18620256	0.701712	-0.33015	-0.60433	2.877948032	0.42094
-8	-0.205597947	-0.65792	-0.90463	-1.35806	11.91040842	1.30539
-7	-0.886505938	***-2.25084*****	-1.03529	***-1.79943*****	14.3605686	0.88653
-6	0.037064564	0.108887	-0.74061	-1.35796	-2.701709766	-0.136
-5	0.121240542	0.380988	-0.1322	-0.20705	-0.758682466	-0.0436
-4	-0.237908073	-0.70342	-0.63356	-1.0255	2.788189737	0.36023
-3	-0.50679474	***-1.81349*****	-1.26717	***-1.98896*****	-1.534180391	-0.3128
-2	-0.550961732	***-1.60515*****	-0.96005	***-1.68087*****	-5.99193264	***-1.6118*****
-1	0.051840456	0.168811	-0.82371	-0.83238	-5.526710366	-0.8095
0	-0.363917582	-0.43082	-1.58516	-1.42419	-12.67419262	-1.0107
1	-1.325890753	***-2.47735*****	-2.51711	***-2.1507*****	3.239603489	0.11592
2	-0.830043046	***-1.90539*****	-1.44456	-1.13669	25.34979106	0.70341
3	0.781469565	1.227554	0.108611	0.068425	3.486309402	0.94409
4	0.236592854	0.342606	1.200466	0.816376	-3.65163293	-1.0174
5	0.235470977	0.758097	-0.24906	-0.39317	-3.834400355	-0.8204
6	-0.664575942	-0.71931	-1.84633	-1.37214	1.208374995	0.21968
7	-1.43696837	***-1.91272*****	-1.66821	***-1.62502*****	0.577298563	0.14609
8	0.398638345	0.571985	-1.40886	***-1.98964*****	-10.56932701	***-2.4369*****
9	-0.443743892	-1.01884	0.012996	0.020923	-4.0499218	-0.8718
10	0.076687445	0.285401			-7.210765961	***-1.6162*****

The number of increasing events is 107(41.31%) of nonfinancial sector. It appears negative reactions are more than the positive reactions. The average abnormal return on

the day 3,4,5,8,10 are positive and average BHAR on the day 1,2,3,6,7 are positive which implies that the market react positively immediate after increase dividend announcement. Now It is tested statistically and observed from the table 5.12 that in the AARs of day-3 day-7 , day 1 , day 2 , day 7 are --.5%, -.88%, , -1.32%, -.83%, -1.43% respectively which are statistically significant . The CAARs of day-2, day -3, day-7 , , day 1 , day82 are -.96, -1.26,-1.03, -2.15, -1.40 percent respectively which are statistically significant .The average BHAR day -2, day—8, day-10, day8, day 10 are statistically significant. This indicates that the abnormal returns around the event day are significant. The increasing dividend announcement reacts on the share price around the event dates. This result supports the signaling hypothesis of dividend policy.

Decreasing trend

Table: 5.13- Decreasing Trend (Manufacturing sector)

	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR (%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	-0.141776604	-0.3772			3.137124248	0.60414
-9	-0.360915539	-0.98553	-0.43251	-0.52712	-2.714374233	-0.72541
-8	0.070184066	0.136698	-0.42487	-0.41245	2.21403177	0.431944
-7	-0.134143396	-0.43894	-0.27802	-0.2797	-8.140951513	-1.25479
-6	-0.214059458	-0.43161	-0.12923	-0.11867	1.073336488	0.0806
-5	0.218971207	0.43202	1.008367	0.944311	5.28704175	0.728179
-4	1.003455564	***2.301267*****	0.472409	0.492002	3.108579468	0.544611
-3	-0.750017829	-1.63055	-0.40139	-0.48603	12.51748974	1.39432
-2	-0.654823379	-1.49154	-1.18638	-1.16344	-0.437935562	-0.09172
-1	0.218462245	0.525516	-1.12933	-0.92011	-6.591494091	-0.75572
0	-0.692969186	-0.88349	-1.13832	-0.71527	16.645115	0.737654
1	-0.66380991	-0.7345	-1.18668	-0.74432	57.31406264	1.105478
2	0.170099921	0.301787	-2.56822	-1.28195	-44.2142537	-0.8901
3	-2.07450806	-1.33788	-2.19757	-1.48899	-10.57144696	-1.08588
4	-0.293157244	-0.76292	-2.92583	***-1.94173*****	6.744606278	0.824152
5	-0.558163061	-1.30849	-0.86814	-0.9749	10.09419578	1.44877
6	-0.016824335	-0.04002	-1.12478	-1.50847	-2.358806763	-0.39908
7	-0.549793712	-1.5109	-1.54464	-1.41981	-2.758119651	-0.49878
8	-0.978024062	-1.5108	-2.26699	***-2.25898*****	-2.104115906	-0.51217
9	-0.739168004	-1.51332	-2.21723	***-2.51105*****	5.219711899	1.103489
10	-0.50003448	-0.97879			3.783101526	0.201946

**Significant at 1 % level, **Significant at 5 % level, ***Significant at 10 % level*

Among the dividend initiation events, the decreasing trend of dividend is lowest which 23.16 percent is. The AAR, CAAR, and ABHAR on the event dates are not statistically significant. The AAR, CAAR, ABHAR of the days before and after the event date are not statistically significant. So, there are no remarkable reations of decreasing announcement of dividend on stock price. It implies that the dividend decrease (bad news) massage does

not convey information to the market. But the abnormal returns are negative which indicates the negative reaction of dividend decreasing events.

No change trend

Table: 5.14- No change trend (Manufacturing sector)

NCM	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR(%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	0.093133305	0.334926			-2.015464959	-0.4199
-9	-0.502580013	**-2.30214****	-0.78158	-1.52214	-3.171029443	-0.772
-8	-0.372135047	-1.10839	-0.83047	-1.42072	-7.144884635	***-1.5126*****
-7	0.044242136	0.151442	-0.76404	-1.23418	-4.646051918	-0.8937
-6	-0.436144711	-1.36855	-0.96011	***-1.65356****	-3.142285254	-0.587
-5	-0.56820263	**-1.93061****	-1.61257	***-2.37344****	-1.941772923	-0.2408
-4	-0.608217956	**-1.7966****	-1.64026	***-2.40573****	3.475674472	0.48016
-3	-0.463836741	-1.42799	-1.10122	***-1.73233****	-7.691706609	***-1.4763*****
-2	-0.02916793	-0.08286	-0.44863	-0.79355	12.86690643	0.69966
-1	0.044377732	0.105163	-0.73615	-0.90677	41.37915316	1.21447
0	-0.751363268	-1.3484	-1.33329	-1.41618	-54.02935229	***-1.761****
1	-0.626300412	-1.08363	-1.79893	***-2.01864****	36.8771663	1.83949
2	-0.42126276	-1.39646	-1.51179	***-2.30316****	-5.221906882	-0.4969
3	-0.464228045	-1.11853	-1.43678	-1.54032	-2.630986152	-0.4423
4	-0.551290529	-0.73398	-1.33081	-1.54031	3.680585787	0.54612
5	-0.31528932	-1.21751	-1.27578	***-1.68623****	-0.761292513	-0.1496
6	-0.409203828	-1.2967	-1.82493	***-2.97359****	2.426575313	0.54169
7	-1.100439406	**-2.69067***	-1.78847	***-2.54187****	7.111897822	0.64625
8	-0.278824887	-0.74074	-1.84712	***-3.05851****	15.43860506	1.08311
9	-0.467859572	***-1.68163****	-0.57337	-1.25075	-13.86320145	***-1.3911*****
10	0.173310485	0.670904			59.16606397	1.13788

**Significant at 1 % level, **Significant at 5 % level, ***Significant at 10 % level*

The no change event is 35.52 percent. It is shown from the table 5.13, the BHAR of the event date is -54 percent which is significant. The BHAR of the day-3, day-8, day 1, day 9 are -7.69, -7.14, 36.87, -13.86 percent which are statistically significant at 10 level. So, it indicates that the abnormal return on the before and after the event dates of the no change (stable dividend) events react the market. The CAAR of day-3, day-6, day-5, day-6, day1, day 2, day 6, day 7, day 8 are statistically significant which supports the BHAR model.

5.4.3.2 Financial Sectors: Banking Sector

Increasing trend

Table: 5.15- Dividend Increase (Banking sector)

	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR (%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	-0.341794144	-1.05612			5.992693814	0.957917
-9	-0.715631849	***-2.23919*****	-1.09538	***-2.02279*****	13.76526198	1.445643
-8	-0.03795607	-0.12023	-0.95359	-1.85698	-0.681605048	-0.0995
-7	-0.199997114	-0.63808	-0.86605	-1.28986	-6.695368264	-0.61424
-6	-0.628096798	-1.42613	-0.83869	-1.28139	17.462573	1.021869
-5	-0.010593845	-0.03391	0.187667	0.246257	-5.153107569	-0.3311
-4	0.826357523	1.836485	1.55803	***2.430313*****	-0.327076501	-0.04666
-3	0.742266109	***2.009102*****	1.257469	***1.884257*****	-1.514718131	-0.222
-2	-0.311154782	-0.98855	0.633928	1.157407	6.202887082	1.087492
-1	0.202816876	0.641816	-0.58996	-0.5747	-1.643617456	-0.24846
0	-0.481623025	-0.53682	-0.76152	-0.67301	6.651553561	0.790975
1	-0.482717374	-1.15327	-1.18675	-0.84047	12.69652041	1.450962
2	-0.22241046	-0.21235	-0.04611	-0.05298	-38.53872038	-0.71889
3	0.659014563	0.688747	0.531851	0.633852	-34.54171203	-0.72662
4	0.095246827	0.245561	1.641935	1.487507	5.477582709	0.946546
5	0.887673527	1.609888	1.918997	1.597348	-4.320053326	-0.35028
6	0.936076483	1.070696	0.934339	0.68792	1.560440976	0.063144
7	-0.889411354	-1.21242	-0.03699	-0.03931	-8.68743273	-0.7805
8	-0.083657664	-0.2009	-1.71567	-1.51711	-18.48852611	-1.01038
9	-0.742599472	-0.73509	0.131752	0.110941	2.7778163	0.194731
10	0.958008924	1.635881			37.35477161	1.304913

**Significant at 1 % level, **Significant at 5 % level, ***Significant at 10 % level*

The dividend increasing event is only 46.83 percent. From the figure-5.4 it is shown that dividend increasing events go to same direction of dividend initiation event. The AAR, CAAR, ABHAR on the event dates are -.48, -.76, 6.65 which are not statistically significant. It is also observed that the abnormal returns on the days before and after the event date are not significant. So, it is inferred that the dividend increasing announcement events do not convey any significant information to the market in banking sector.

Decreasing trend

Table: 5.16- Dividend Decrease (Banking Sector)

	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR (%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	0.294292052	0.891531			19.72430172	***1.51083******
-9	0.398042563	1.111402	1.350698	***1.851477****	15.14841404	1.088551
-8	0.658363825	***2.272977****	1.897267	***2.482133****	10.87532238	***1.670488****
-7	0.840860537	***2.71499****	1.957159	***2.659525****	-8.937638862	-1.08204
-6	0.457935026	1.185188	1.847233	***2.104127****	12.81172437	1.068158
-5	0.548437232	1.360077	1.623299	***2.247493****	17.26247424	***1.44443******
-4	0.61692723	1.227639	2.063506	***2.845235****	18.14635912	1.070767
-3	0.898141389	***2.446062****	1.146478	1.307971	-5.725009661	-0.86967
-2	-0.368591017	-0.69214	0.70523	0.852747	-3.233772874	-0.598
-1	0.175679355	0.379985	-1.57964	***-1.61496******	-24.57512545	-0.94956
0	-1.38673046	***-2.24322****	-2.27267	***-2.42069****	-3.566487427	-0.83252
1	-1.061616449	-1.52176	-2.54234	***-1.86971****	-20.15894635	***-1.38448******
2	-0.09399314	-0.19423	-1.26788	-1.00976	-26.459621	-0.78821
3	-0.112266125	-0.19124	0.040515	0.045857	18.81016366	0.965083
4	0.246774117	0.450606	0.360108	0.371528	-40.71511989	-1.18037
5	0.225600403	0.426064	1.015044	1.289805	-20.98521313	***-1.66294****
6	0.542669942	0.910208	-0.35991	-0.23999	1.092623323	0.27534
7	-1.128184683	-0.96787	-7.05724	***-3.23913****	-7.50510553	-0.89927
8	-6.471724858	***-3.44266****	-8.53071	***-4.35359****	-13.20792711	***-1.94225****
9	-0.930803951	-0.97666	-10.8701	***-4.09182****	-7.514144541	-0.83942
10	-3.467620484	***-1.61247******			24.9216142	***1.769725****

**Significant at 1 % level, **Significant at 5 % level, ***Significant at 10 % level*

The dividend decreasing event of banking sector is 35.44 percent. The AAR, CAAR are -1.38 and -2.27 respectively which are statistically significant. The CAAR on the days -4, -5, -6, -7, -8, -9, 7, 8, 9 are statistically significant. So, it indicates that the dividend decreasing events have effect on market price of share.

No change Trend

Table: 5.17- Dividend No change (Banking sector)

	Market Model				Buy and hold Abnormal Return(BHAR)	
Day	AAR (%)	t-statistic	CAAR (%)	t-statistic	Average BHAR	t-statistic
-10	-0.055499397	-0.13102			1.607439867	1.023582
-9	-0.329407145	-0.83529	-0.70151	-0.97241	-1.6228321	***-1.64307******
-8	-0.316600376	-0.8147	-0.14565	-0.1884	1.237093107	0.702663
-7	0.500358862	0.929444	1.051666	1.320096	-0.149610444	-0.10181
-6	0.867907649	1.3868	-2.04208	-0.48106	-0.063099711	-0.00853
-5	-3.41035101	-0.8333	3.203725	***2.976664****	-101.6716347	-1.01021
-4	5.746168237	1.452167	1.355363	1.137961	129.4915302	0.785066
-3	-0.980453844	***-1.64393******	4.637607	1.141641	-10.35566338	-0.53152
-2	-0.128107086	-0.19905	-1.60039	-1.81168	-7.34118658	-0.61741
-1	-0.491831493	-0.93878	-1.33672	-0.8864	82.58718477	0.975268
0	-0.716780762	-0.72759	-3.0214	-1.37173	-7.115849903	-0.659
1	-1.812784534	-1.10129	-1.83976	-1.05321	-23.09990197	-0.9681
2	0.689807875	0.392752	-0.96723	-1.08436	-53.63811441	-1.10686
3	0.155748673	0.603261	0.151804	0.078475	8.194186393	1.282656
4	-0.693752721	-1.03727	-0.27443	-0.2408	3.264880681	0.732485
5	0.26357621	0.436255	0.345388	0.427247	0.96671171	0.179188
6	0.775564805	0.867989	0.83442	0.973115	-4.045802085	-1.40286
7	-0.204720562	-0.61372	-0.65487	-0.43874	10.29977085	1.127442
8	-1.225715135	-1.05325	-2.03285	***-1.95501****	-1.652286669	-0.37336
9	-0.602409667	-0.92681	-1.96601	-1.39841	-6.534833448	***-1.53534******
10	-0.137885511	-0.28711			8.823234207	0.904144

**Significant at 1 % level, **Significant at 5 % level, ***Significant at 10 % level*

The dividend no change event is only 17.72 percent. From the figure-5.4 &5.5, it is shown that dividend no change events go to same direction of dividend initiation event. The AAR, CAAR, and BHAR on the event dates are -0.71, -3.02, and 7.11 respectively which are not statistically significant. It is also observed that the abnormal returns on the days

before and after the event date are not significant. So, it is inferred that the dividend no change announcements do not convey any significant information to the market.

5.5 Summary of Findings

The most of the companies of financial sectors provide the stock dividend and the nonfinancial companies provide cash dividend. Only 12.88 percent event is dividend nonpayment event and 87.12 percent event is dividend initiation event. The findings are summarized in different points with the support of previous researchers' findings.

5.5.1 Nonfinancial Sector

Dividend Initiation Events

The AAR and CAAR are significant on the day -2, day-3, day 1 day 2. This indicates that the abnormal returns around the event day are significant. The dividend announcements react on the share price around the event dates. Moreover, the AAR of day-7, day 7, day 9 are significant and the CAAR of the day -6, day-7, day-8, day 6, day 7, day 8 are statistically significant. These indicate that the one week before and one week after the event date the abnormal return is significant. Before the dividend initiation announcement event, the market is reacted which indicates the information is leakage before final announcement. It is observed that the AAR and CAAR are negative on both before the event date and after the event date of dividend initiation. The result of BHAR supports the result of market model. This result supports the findings of the Pettit(1972,1976), Asquith and Mullins(1996), Lee and Rayan(2002), Travlos(2001), Gurjul and ohters(2003) etc.

Dividend Omission Events

The average abnormal return (AAR) and CAAR on the day of dividend announcement are statistically significant. This indicates the impacts of dividend omission announcement on market price of share on the day event day. It is also observed that the AAR and CAAR are significant on the day-1 day -2, day-3, day-4, day 1 day 2, day 3. The dividend omission announcement negatively reacts on the share price around the event dates. It is observed that the AAR and CAAR are negative in dividend initiation and omission events but the difference is the negative reaction of dividend omission events is more than the dividend initiation events. The BHAR of day 1, day 3 are -35.87% and -11.56% which

are significant at 10 percent level of significant. So, it supports the result of market model. It is observed the common trend about the market reaction. The abnormal returns start to decline from day-5 and reach to lowest at day o or at day1 then further stating to increase. So, it is clear from the t-test & figure-5.2&5.3 that the dividend has impact on the market prices which indicates the presence of signaling hypothesis of dividend. This results support the studies of Asimakopoulos et al.(2007), Hossain (2006) etc.

Forms of dividend

The market reacts immediately for the cash announcement. It infers that the cash dividend announcement has impact on market before and after the event date. The earlier reaction indicates the information leakage in the market. This result supports the finding of Brennan (1970), Brennan and Thakor(1990) etc. The stock dividend and both (cash and stock) dividend events do not significantly react on the market price of share.

Dividend payment trends

The abnormal returns of dividend increasing trend around the event day are significant. The dividend increasing announcement reacts on the share price around the event dates. The no change announcement events convey information to market. Fernando and Guneratne (2010) ,Akber and Baig(2010) found the similar results.

The AAR, CAAR, BHAR of decreasing events of the days before and after the event dates are not statistically significant. So, there are no remarkable reactions of decreasing announcement of dividend on stock price. It implies that the dividend decrease (bad news) massage does not convey information to the market. This is similar to the study of Ali and Chowdhury(2010).

5.5.2 Financial Sector

Dividend Initiation Events

It is shown that the abnormal returns start to decline from day-4 and reach to lowest at event day(dayo) then further start to raise. The abnormal returns reach to peack at day 5 and further decline .The AAR, CAAR ,BHAR on the event day are statistically significant at 5% level. The AAR CAAR, BHAR around the event date are also significant. So, it is clear that the dividend initiation events have impact on the market price of the share. But the earlier reaction indicates the information leakage in market. This study supports the studies of Lee and Ryan (2002), Yilmaj and others (2006) etc.

Dividend Omission Events

The AAR, CAAR, and BHAR on event day and on the days before and after the event date are not significant. So, it is inferred that the dividend omission announcements do not convey any significant information to the market. This finding is similar to the findings of Eades and Harris (1995),Abeyratna and Power(2002) etc.

Forms of dividend

In the event of cash dividend, the AAR, CAAR, BHAR of the days before and after the event dates are not statistically significant. So, there are no remarkable reactions of cash dividend announcement of dividend on stock price. It implies that the cash dividend does not convey information to the market. The both (cash and stock) dividend announcements also do not convey any significant information to the market. The result is similar to the findings of Islam (2013), Chen(2002). The stock dividend initiation events have impact on the market price of the share. But the earlier reaction indicates the information leakage in market. This result supports the result of Akbar and Baig(2010).

Dividend payment trends

The dividend increasing announcement events of banking sector do not convey any significant information to the market and the dividend no change announcement events also do not convey any significant information to the market. But dividend decreasing event of banking sector has impact on the market price of share. This is similar to study of Sing and Sapna(2011).

5.6. Conclusion

The signaling hypotheses explain that the dividend conveys information to the market. This means that the dividend announcement reacts to the market price of the share. The dividend announcement effect to the market value is done extensively in this study. It is analyzed for both financial and nonfinancial sector. Further it is categorized as dividend 'omission and dividend initiation', 'cash, stock, and both', increasing trend, decreasing trend and unchanged trend'. It is found that the dividend announcements have the impact on the market value in various aspects (initiation and omission, cash, stock, increasing, decreasing, no change) which supports the signaling hypothesis of dividend policy. For the study event study methodology is used. This finding will help the investors, decision makers, and other stakeholders in our country.

Chapter Six: The Determinants of Divided Policy: An Analytical Study on Dhaka Stock Exchange (DSE)

6.1 Introduction

Dividend may be defined as the distribution of created value to the shareholders. It may be in the 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.

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.

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 analyses the factors determining such payment of dividends.

Previous results also show that dividend rate is more or less explained by a good number of explanatory variables used in the study. 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 it nature of influence on dividend decision in the capital market of Bangladesh.

6.2 Prior Evidences

6.2 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.

Feldstein, Martin, and Green (1983) presented a simple model of market equilibrium to explain why firms that maximize the value of their shares pay dividends even though the funds could instead be retained and subsequently distributed to shareholders in a way that would allow them to be taxed more favorably as capital gains. The two principal ingredients of their explanation are: (1) the conflicting preferences of shareholders in different tax brackets and (2) the shareholders' desire for portfolio diversification, they show that companies will pay a positive fraction of earnings in dividends. They also provided some comparative static analysis of dividend behavior with respect to tax parameters and to the conditions determining the riskiness of the securities.

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 find 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.

Redding (1997) presented a model of large institutional and small individual investors choosing stocks. Dividend policy of firms is determined by the preferences of the resulting stockholders. Large investors choose to invest in large corporations because it lowers their transaction costs. Since these institutions prefer dividends, the large corporations choose to pay dividends, while the small corporations, owned by individuals, do not. The results show that firm size and liquidity explain the decision of whether to pay dividends well, whereas existing informational explanations (such as monitoring and signaling) explain the level of dividends well.

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.

Porta, Lopez-de-Silanes, Shliefer and Vishny (2000) hold that firms in countries with better investor protection make higher dividend payouts than do the firms in countries with lower investor protection. Moreover, in countries with more legal protection, high growth

firms have lower payout ratios. This finding supports the outcome agency model where investors use their legal power to force dividends when growth prospects are low. Thus, their findings indicate that without enforcement of management there is not a strong incentive to 'convey its quality' through payout policy. There is also no evidence that in countries with low investor protection, management will voluntarily commit itself to payout higher dividends and to be monitored more frequently by the market.

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).

Kanwer (2003) found the relation for the dividend policy, for companies which are registered with KSE Pakistan, the researcher has found what factor become a reason to impact on Dividend policy payouts. The researcher has used investment opportunities of firm size, surplus, , quality of firms and the researchers have used Heckman procedure to over comes on this research limitation, as per the result of this research out of the above factors quality of firms and investment opportunity has significant effect on dividend policy or payout decisions.

Bathala and Rao (2004) inferred that firms with high dividend yields have lower costs of capital. They find 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.

Amidu and Abor (2006) explained the determinants of dividend payouts of registered firms in Ghana. In this research they have used financial data from firm which are registered with Ghana SE for the period of six year & the OLS model is used to analyze the equation of regression in their research.

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.

Eije and Megginson(2007) examined the evolution of cash dividends and share repurchases from 1989 to 2005 in the fifteen nations that were members of the European Union before May 2004. As in the United States, the fraction of European firms paying dividends declines over this period, while total real dividends paid increase significantly. Most strikingly, share repurchases have surged in the EU, rising to over half the value of cash dividend payments in 2005. They also show that financial reporting frequency has steadily increased and is associated with higher payout, and that privatized company's account for almost one-quarter of total EU cash dividend payments but only two percent of the number of listed firms. They logistic regression analyses of the likelihood to pay dividends and repurchase shares, and their panel data analyses of the payout amounts, verify that similar influences affect payout in the EU as in America, but that increasing fractions of retained earnings to total equity do not increase the likelihood of cash payouts, whereas company age does.

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.

Aldin and Al-Malkawi (2008) examined the determinants of corporate dividend decisions of publicly quoted companies in Jordan as a case study of an emerging market. The analysis is based on 15-year unbalanced panel data with 1137 firm-year observations covering the period between 1989 and 2003. They estimated the determinants for a given firm to pay dividends to its shareholders through Probit specifications. The factors that affect dividend policy in developed stock markets seem to apply for this emerging market. For example, factors such as size, profitability, and age increase the likelihood to pay dividends. Financial leverage decreases the probability to pay dividends. Taken together, the findings support for the agency costs hypothesis and are broadly consistent with the pecking order hypothesis.

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.

Chaya and Suhb(2008) conducted comprehensive analysis of its importance in payout policy. With worldwide firm-level data, they present evidence that cash flow uncertainty is an important cross-sectional determinant of corporate payout policy. They results show that across countries, cash-flow uncertainty (represented by stock return volatility) is a key factor that affects the amount of dividends as well as the probability of paying dividends. The impact of cash-flow uncertainty on dividends is generally stronger than the impact of other potential determinants of payout policy—such as the earned/contributed capital mix, agency conflicts, investment opportunities, firm size, and profitability. Furthermore, cash flow uncertainty also has a significant impact on the amount of total payouts (i.e., the sum of dividends and repurchases).

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.

Ahmed & Javid (2009) explained determinants of dividend payout policy. They have used three hundred twenty firms which are from non financial sectors of KSE. They have used six years period data from 2001 to 2003 for research analysis, the outcome of this research

show that the KSE listed non financial sectors note their previous dividend outs and earnings per share before announcing final dividends. Non-financial firms having different adjustments and low payout ratio represents the fluctuation in their dividend payouts. They have used regression analysis to find out results. The result shows that the firms which are enjoying stable profit maintain smooth cash flow due to which they pay good dividends, at same time association awareness and market worth has positive impact on dividend payments but investment chances and leverage have negative impact on dividend payments.

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.

Al-Kuwari(2009) investigated the determinants of dividend policies for firms listed on Gulf Co-operation Council (GCC) country stock exchanges. This is a case study of emerging stock exchanges, where the determinants of dividend policy have received little attention. This study used a panel dataset of non-financial firms listed on the GCC country stock exchanges between the years of 1999 and 2003. Seven hypotheses pertaining to agency cost theory were investigated using a series of random effect Tobit models. The models considered the impact of government ownership, free cash flow, firm size, growth rate, growth opportunity, business risk, and firm profitability on dividend payout ratios. The results suggest that the main characteristics of firm dividend payout policy were that dividend payments related strongly and directly to government ownership, firm size and firm profitability, but negatively to the leverage ratio. These results, taken as a whole, indicate that firms pay dividends with the intention of reducing the agency problem and maintaining firm reputation, since the legal protection for outside shareholders was limited. In addition, and as a result of the significant agency conflicts interacting with the need to built firm reputation, a firm's dividend policy was found to depend heavily on firm

profitability. This may indicate that listed firms in GCC countries alter their dividend policy frequently and do not adopt a long-run target dividend policy.

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.

Nazir, et al. (2010) explained and further investigated the dividend policy to contribute in the field of finance, they present their work on the role of corporate policy for dividend and volatility in stock share prices with respect to Pakistan. They have used 73 firms from Karachi stock exchange, Pakistan, for five year data, from 2003 to 2008 and they applied fixed effect with arbitrary effect model. Outcome of that research show that dividend policy for payouts has a major effect on stock worth instability in KSE, so they suggest that volatility can be reduce if firms announce positive dividend payouts policy.

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.

Akhtar(2010) investigated the determinants of dividend payments using a sample of Multinational Corporations (MCs) and Domestic Corporations (DCs) listed on the Australian Stock Exchange. Six different measures of dividend payout ratios are investigated and four international factors (multinationality, political risk, foreign exchange risk, and diversification) are employed in addition to traditional firm specific factors. They find: MCs pay significantly less regular cash dividends, special cash

dividends, total dividends and net dividends relative to DCs; the degree of foreign involvement is important in determining special cash and net dividend payments; Australian MCs are comparatively more active than DCs in dividend increasing activities and the factors that enable MCs to increase dividend payments are dependent on earnings received from a safer political environment, availability of cash in hand and firm's size; and Australian MCs are significantly less likely to be a dividend payer relative to DCs and this is due to tax disadvantages coupled with unfavorable foreign risk exposures.

Mehdi Moradi , Mahdi Salehi & 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.

Shabibi and Ramesh(2011) examined the factors which affect dividend policy for nonfinancial UK companies in the year 2007. In particular, the research examines the extent to which corporate governance factors affect corporate dividend policy. The factors are classified into two parts which are corporate governance factors and firm characteristics. Corporate governance factors include board size, board independence and audit type. On the other hand, firm characteristics are firm size, profitability, debt level, growth, risk, industry type and tangibility. Based on the sample of 90 nonfinancial UK companies, it is found that corporate governance factors do affect the dividend policy. It seems that board independence is one of the important factors which drive firms to pay dividends. Furthermore, some of the firm characteristics have also influenced the dividend policy decision among the non-financial UK firms.

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. Mangers 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.

Appannan and Wei Sim(2011) examined the leading determinants that affecting the dividend payment decision by the company management in Malaysia listed companies for food industries under the consumer products sector. There are 5 sample companies that declared cash dividend from year 2004 until 2008 chosen to be analyzed on how the changes in dividend payment decision vary according with the predictors' variables. The relationship between independent variables with the current dividend per share as dependent variable is empirically analyzed through the Pearson correlation analysis and Regression Model. The findings showed that variables having strong relationship with dependent variable are not necessary are the determinants of dividend payment decision such as profit after tax that has the strongest relation with dividend per share but being excluded from the regression model. Lastly, the study confirms the fact that debt equity ratio and past dividend per share were the important determinants of dividend payment.

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.

Rehman and Takumi (2012) examined the determinants of dividend payout ratio in the largest stock exchange of Pakistan i.e. Karachi Stock Exchange (KSE). The effect of Debt

to equity ratio, Operating cash flow per share, profitability, market to book value ratio, current ratio and corporate tax on dividend payout ratio were analyzed for the year 2009 for 50 companies that announced dividend in 2009. Relation of debt to equity ratio, profitability, current ratio and corporate tax was found to be positive with dividend payout ratio while operating cash flow per share and market to book value ratio has a negative relationship with dividend payout ratio. Profitability, debt to equity and market to book value ratios were found to be the significant determinants of dividend payout ratio in 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.

Said(2012) examined the determinants of dividends' information content. They put an emphasis on the role of ownership structure in explaining the impact of dividends on shareholders' wealth. To this end, their study examined a sample of 136 French firms during the year 2007 to empirically validate their model. The empirical results show a negative reaction of stock prices to dividend announcement. This finding is consistent with the hypothesis of deterioration of growth opportunities. However, they have concluded that firms' characteristics significantly affect dividends' information content.

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.

Komrattanapanya and Suntrauk (2013) analyzed to determine the factors that influence the dividend payout of all firms listed in the Stock Exchange of Thailand (SET) during year 2006 to 2010. Using the Tobit regression analysis, results reveal that financial leverage, investment opportunities, and sales growth negatively affected the dividend payout; on the other hand, size of firm is positively affected dividend payout. Moreover,

evidence shows that firms in property and construction sector are more likely to pay dividend than others. Additionally, profitable small and large firms tend to pay dividend; meanwhile, profitable medium firms are less likely to pay dividend. However, it is found that profitability, liquidity, and business risk are insignificantly related to dividend payout.

6.2.2 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.

Imam and Malik (2007) have examined how corporate governance is practiced through ownership structure and how firm's performance as well as its dividend payout policy is influenced by different ownership pattern and their Results show that there exists significant relationship between changes in institutional ownership pattern and dividend payout ratio. The relationship is positive, implying that institutional holding creates more monitoring and controlling upon firm.

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.

Khan(2009) studied to determined factors that have statistically significant impacts on the dividend policy of banks. He found that the overall impact of dividend on stock prices is comparatively better that of retained earnings and expected dividends play an important

role in the determination of stock prices whatever determinants, like lagged price earnings ratio or lagged price, are considered.

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.

Sumaiya Zaman(2011) examined what kind of relationship exists between dividend policy and stock returns of these banks, and to what degree the returns on stocks can be explained by their respective dividend policy for the same period of time. She found that a positive correlation exists between dividend policy of commercial banks and their respective market returns in 2008 but with time, the correlation becomes negative by using correlation and regression analyses.

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.

Alam and Hossain(2012) analyzed to indentify the determinants of dividend policy: leverage, growth, market capitalization and it can be mentioned that the degree of influence of liquidity, leverage, profitability, growth and market capitalization on dividend rate is higher in case of Bangladeshi Company compared to the UK based company.

Abu (2012) studied to indentify the determinants of dividend policy. The empirical findings reveal that current earnings and liquidity has potential roles for firms to determine payout policy.

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.
Huda and Abdullah(2014) studied to examine whether there is any relationship between ownership structure and dividend policy of the selected companies listed in the CSE-30 index and found that Director's ownership has a significant positive effect whereas, institutional ownership showed a significant negative effect on the dividend per share.

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 me to conduct the study in this field.

6.3 Research Design

6.3.1 Sample

The study is based on secondary data obtained from published annual reports of sample firms, monthly review of Dhaka stock exchange and website of DSE. The sample includes listed financial and nonfinancial firms of DSE. It is taken 22 companies from banking sectors and 86 companies from manufacturing sectors as sample. The sample period is 20 years from 1994 to 2013 for study.

6.3.2 Hypothesis

H_0: *Dividend payout is 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.*

6.3.3. 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.*

6.3.4 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:

$DPR_{it} = \alpha + \beta_1 DPR_{it-1} + \beta_2 EPS_{it} + \beta_3 LEV_{it} + \beta_4 CF_{it} + \beta_5 SG_{it} + \beta_6 SIZE_{it} + \beta_7 LIQ_{it} + \beta_8 OWN(SPONSOR)_{it} + \beta_9 OWN(INST)_{it} + \beta_{10} OWN(IND)_{it} + \beta_{11} RISK_{it} + \beta_{12} AGEit + \beta_{13} RELATAX + \beta_{14} RE/TE + \beta_{15} ROA_{it} + \beta_{16} INVEST\ OPPORT_{it} + u_{it}$

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 multiple regression (polled data and panel data analysis) analysis are used to analyze the results. Structural Equation Modeling Techniques are also used to identify significant variables.

Description of Variables:

Dependent Variable

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

The dividend payout ratio indicates the percentage of profits distributed by the company among shareholders out of the net profits, or what remains after subtracting all costs (e.g., depreciation, interest, and taxes) from a company's revenues. Most of the previous studies that investigated the impact of agency theory and transaction cost theory employed dividend payout ratios as a determinant of dividend in lieu of dividend per share and dividend yield (Rozeff, 1982; Lloyd,1985; Jensen et al., 1992; Dempsey and Laber, 1992; Alli et al., 1993; Moh'd et al., 1995; Holder et al., 1998; Chen et al., 1999; Saxena, 1999; Mollah et al., 2002; Manos, 2002; Travlos, 2002). .

Independent Variables:

DPR_{t-1}=Lagged dividend payout ratio

According to Pandey (2001), past dividend (DPR_{t-1}) paid by the companies is highly significant to the current dividend payout ratios for all industries in the Kuala Lumpur Stock Exchange (KLSE).Generally, 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. His research is also proven with strong evidence that the management of Malaysian companies always consider past dividend as a more important benchmark for

deciding the current dividend payment. Previous year's dividend payment (LDPR) 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. Furthermore, the information asymmetry hypothesis assumes that dividend policy is "sticky" or shows a tendency to remain at the level of previous dividends (Baskin, 1989). Ahmed and Javid (2009) examined the dynamics and determinants of dividend payout policy of 320 non-financial firms. The results consistently support that firms rely on both current earnings per share and past dividend to set their dividend payments. The positive relationship of dividend payout ratio (DPR) with the lagged dividend payout ratio is expected.

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

The decision to pay dividends starts with profits. Therefore, it is logical to consider profitability as a threshold factor, and the level of profitability as one of the most important factors that may influence firms' dividend decisions. The theory suggests that dividends are usually paid out of the annual profits, which represents the ability of the firm to pay dividends. Thus, firms incurring losses are unlikely to pay dividends. In his classic study, Lintner (1956) found that a firm's net earnings are the critical determinant of dividend changes. Furthermore, several studies have documented a positive relationship between profitability and dividend payouts (Jensen et al, 1992, Han et al., 1999, and Fama and French, 2002). Evidence from emerging markets Al-Malkawi also supports the proposition that profitability is one of the most important factors that determines dividend policy (see, for instance, Adaoglu, 2000, Pandey, 2001, and Aivazian et al., 2003). The positive relationship of dividend payout ratio (DPR) with the Earnings per share is expected.

CF(Cash flow)= Net cash flow/ total no. of shares

A firm's cash flow is a good measure of the firm's liquidity and it is very important to compare a firm's liquidity position in relation to its dividend payment. According to Amidu and Abor (2006), cash dividend distribution does not only depends on the profitability of firms but also depends on the free cash flow which is the amount of operating cash flow left over after the payment for capital expenditures. The empirical results of this study indicate a significantly positive relationship between cash flow and

dividend payout ratios and thus the liquidity or cash-flow position can be considered as an important determinant of the dividend payout ratio. Besides that, Chay and Suh (2005) also consider cash flow as a determinant of dividend payments where firms facing high levels of cash flow uncertainty are likely to pay low dividends fearing cash shortfalls in the future. The positive relationship of dividend payout ratio (DPR) with the cash flow is expected.

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

A firm which has high growth will have greater need for external financing and thus they may be motivated to establish a good reputation with stockholders through higher dividend payout in order to insure access to external equity that can capitalize the firm (LaPorta, Silanes, Schliefer & Vishny, 2000). However, the research conducted by Amidu and Abor (2006) also stated that growth in sales were found to have statistically significant and negative associates with dividend payout ratios. According to them, growth in sales is used as proxies for the firm's future prospects since growing firms require more funds in order to finance their growth and therefore would typically retain greater proportion of their earnings by paying low dividend. In addition, Jeong (2008) also supported Amidu and Abor where sales growth is expected to be negatively related to the degree of dividend smoothing in term of dividend payout.

SIZE (Size)= Log of Total Assets

Eddy and Seifert (1988), Jensen et al. (1992), Redding (1997), and Fama and French (2000) indicated that large firms distribute a higher amount of their net profits as cash dividends, than do small firms. Several studies have tested the impact of firm size on the dividend. Lloyd et al. (1985) were among the first to modify Rozeff's model by adding "firm size" as an additional variable. They considered it an important explanatory variable, as large companies are more likely to increase their dividend payouts to decrease agency costs. Their findings support Jensen and Meckling's (1976) argument, that agency costs are associated with firm size. They were of the view that for large firms, widely spread ownership has a greater bargaining control, which, in turn, increases agency costs. Furthermore, Sawicki (2005) illustrated that dividend payouts can help to indirectly monitor the performance of managers in large firms. That is, in large firms, information asymmetry increases due to ownership dispersion, decreasing the shareholders' ability to

monitor the internal and external activities of the firm, resulting in the inefficient control by management. Paying large dividends can be a solution for such a problem because large dividends lead to an increase in the need for external financing, and the need for external financing leads to an increase in the monitoring of large firms, because of the existence of creditors. Other studies related the positive association between dividends and firm size to transaction costs. For example, Holder et al. (1998) revealed that larger firms have better access to capital markets and find it easier to raise funds at lower costs, allowing them to pay higher dividends to shareholders. This demonstrates a positive association between dividend payouts and firm size. 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). The positive relationship of dividend payout ratio (DPR) with the firm size is expected.

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

A firm may have adequate earnings to declare dividends, but it may not have sufficient cash to pay the same. The liquidity position of a company is expected to be positively related to dividend payment. Current ratio and quick ratio has been used as proxy to measure liquidity position of the company by various researchers. Amidu and Abor (2006) found a positive relationship between cash flow and dividend payout ratios. Based on the findings of the studies, it can be speculated that there is a positive relationship between the liquidity and the dividend payout ratio.

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

Ownership Structure: In a modern corporate environment where there is a large separation between ownership and management, conflicts of interest can arise between managers, inside owners (controlling shareholders), and outside shareholders, such as minority shareholders. Referring to this problem, Jensen and Meckling (1976) describe the firm as a nexus of contracting relationships among individuals. However, when the manager makes a decision, it tends to be in favour of the agent, rather than of the firm. La

Porta et al. (2000) illustrated that managers may take advantage of their authority to benefit themselves by diverting firm assets to themselves through theft, excessive salaries or sales of assets at favourable prices to themselves. Accordingly, the ownership structure in large firms may influence dividends and other financial policies (Desmetz, 1983; Desmetz and Lehn, 1985; Shleifer and Vishny, 1986; Morck et al., 1988; Schooley and Barney,1994; Fluck,1999; La Porta 2000; Gugler and Yurtoglu, 2003). Several studies have suggested that dividend payouts can play a useful role in reducing the conflict between inside and outside owners. When insider owners pay cash dividends, they return corporate earnings to investors and can no longer use these earnings to benefit themselves (La Porta et al., 2000).

LEV (Leverage): Total liabilities/ total assets

A growing number of studies have found that the level of financial leverage negatively affects dividend policy (Jensen et al., 1992; Agrawal and Jayaraman, 1994; Crutchley and Hansen, 1989; Faccio et al., 2001; Gugler and Yurtoglu, 2003; Al-Malkawi, 2005). Their studies inferred that highly levered firms look forward to maintaining their internal cash flow to fulfill duties, instead of distributing available cash to shareholders and protect their creditors. However, Mollah et al. (2001) examined an emerging market and found a direct relationship between financial leverage and debt-burden level that increases transaction costs. Thus, 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. To analyze the extent to which debt can affect dividend payouts, this study employed the financial leverage ratio, or ratio of liabilities (total short-term and long term debt) to total shareholders' equity. The negative relationship of dividend payout ratio (DPR) with the leverage is expected.

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

Several studies have been used to measure the beta value, as a proxy for the systematic risk where beta measures the stock's volatility in relation to the market (Rozeff, 1982; Lloyd et al., 1985; Alli et al., 1993; Moh'd et al., 1995; Casey and Dickens, 2000). This study uses price volatility (standard deviation) as a common proxy for firm risk, which represents a firm's operating and financial risk (Rozeff, 1982; Loyed et al., 1985; Jensen et al., 1992; Alli et al., 1993; Moh'd et al., 1995; Holder et al., 1998; Chen et al., 1999; Saxsena, 1999; Manos, 2002).

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

The dependent variable (DPR) used in the regression equations takes values over a continuous range, but both RTAX (relative tax rate: capital gain tax rate/dividend tax rate) in the independent variables take on distinct values because of the limitation of data. Tax-adjusted models presume that investors require and secure higher expected returns on shares of dividend-paying stocks. The consequence of tax-adjusted theory is the division of investors into dividend tax clientele. Modigliani [1990] argues that the clientele effect is responsible for the alterations in portfolio composition. Masulis and Trueman's [1988] model predicts that investors with differing tax liabilities will not be uniform in their ideal firm dividend policy. They conclude that as tax liability increases (decreases), the preference for dividend payment also increases (decreases). Tax-adjusted model assumes that investors maximize after-tax income. As far back as 1967, Farrar and Selwyn [1967] concluded that in a partial equilibrium framework, individual investors choose the amount of personal and corporate leverage and also whether to receive corporate distributions as dividends or capital gain. Recently Amidu and Abor [2006] found a positive relationship between tax and dividend payout ratios.

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

The financial literature documents that a firm's profitability is a significant and positive explanatory variable of dividend policy (Jensen et al., 1992; Han et al., 1999; Fama and French, 2000). However, there is a significant difference between dividend policies in developed and developing countries. This difference has been reported by Glen et al. (1995), showing that dividend payout rates in developing countries are approximately two-thirds of those in developed countries. Moreover, emerging market corporations do not follow a stable dividend policy; dividend payment for a given year is based on firm profitability for the same year. La Porta et al. (2000) compared countries that had strong legal protection for shareholders with those that had poor shareholder legal protection, and related that to countries with inferior quality shareholder legal protection. Their conclusion was that shareholders will take whatever cash dividend they can get from firm profits, where a dividend is perceived as unstable. Wang et al. (2002) compared the dividend policy of Chinese and UK listed companies, and found that the former tended to vote for a higher dividend payout ratio, than the latter. Moreover, UK companies had a clear

dividend policy in which annual dividend increases and all companies paid a cash dividend. In contrast, Chinese companies had unstable dividend payments and their dividend ratios were heavily based on firm earnings for the same year, not on any other factor. The latter finding was consistent with that of Adaoğlu (2000), who stated that the main determinant in the amount of cash dividends in the Istanbul Stock Exchange was earnings for the same year. Any variability in the earnings of corporations was directly reflected in the cash dividend level. A similar result was reported by Pandey (2001) for Malaysian firms. Al-Malkawi (2007) identified the profitability ratio as the key determinant of the corporate dividend policy in Jordan. As a proxy, this study measured firm profitability by the return on asset (ROA). The positive relationship of dividend payout ratio (DPR) with the ROA is expected.

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

A review of the literature revealed several explanations for the relationship between growth opportunities and dividend policy. One explanation was that a firm tended to use internal funding sources to finance investment projects if it had large growth opportunities and large investment projects. Such a firm chooses to cut, or pay fewer dividends, to reduce its dependence on costly external financing. On the other hand, firms with slow growth and fewer investment opportunities pay higher dividends to prevent managers from over-investing company cash. As such, a dividend here would play an incentive role, by removing resources from the firm and decreasing the agency costs of free cash flows (Jensen, 1986; Lang and Litzenberger, 1989; Al-Malkawi, 2007). Consequently, dividends were found to be higher in firms with slow growth opportunities, compared to firms with high-growth opportunities, as firms with high-growth opportunities have lower free cash flows (Rozeff, 1982; Lloyd et al., 1985; Jensen et al., 1992; Dempsey and Laber, 1992; Alli et al., 1993; Moh'd et al., 1995; Holder et al., 1998). Several studies found that the sales/revenues growth rate was commonly used as a proxy variable for growth opportunities (Rozeff, 1982; Lloyd et al., 1985; Jensen et al, 1992; Alli et al., 1993; Moh'd et al., 1995 ; Holder et al., 1998; Chen et al., 1999;, Saxsena, 1999; Manos, 2002; Travlos, 2002). Firms with many investment opportunities have large cash requirements and thus may pay low dividends. This is the standard view taken by researchers in extant payout literature [see, for example, Rozeff (1984), Smith and Watts (1992), La Porta et al. (2000),

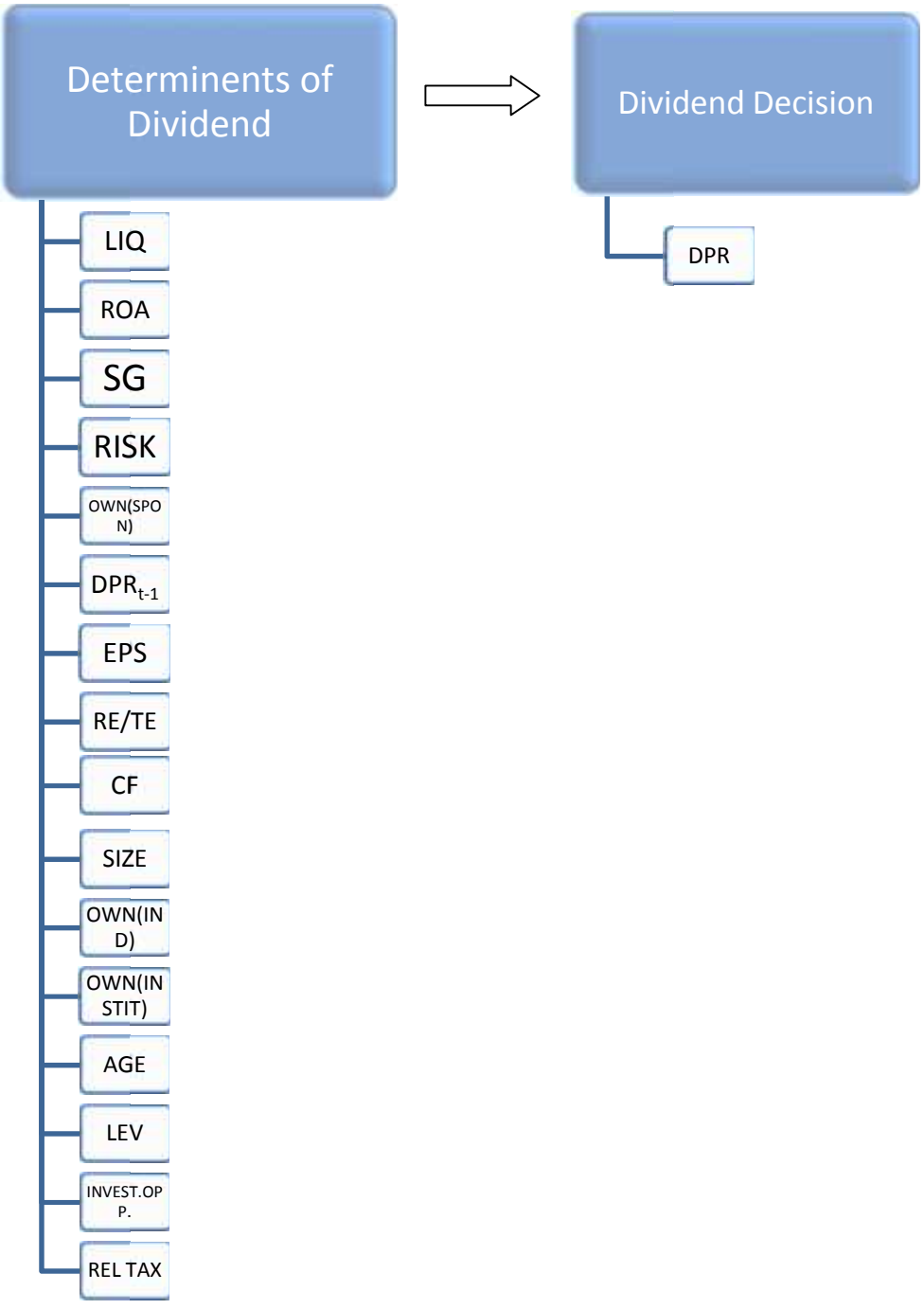
Fama and French (2001), DeAngelo et al. (2006)].The impact of investment opportunities on dividends will be negative.

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

DeAngelo et al. (2006) pay attention to the fact that dividends are paid usually by mature and established firms. They argue that firms with a low earned/contributed capital mix are in the capital infusion stage and thus cannot afford to pay dividends, while firms with a high earned/contributed capital mix are mature firms with large cumulative profits and thus are likely to pay dividends. Consistent with their financial life cycle theory, they find that the probability of firms paying dividends tends to increase with the earned/contributed capital mix. I have used the retained earnings-to-total equity ratio (RE/TE) as a proxy for the earned/contributed capital mix. According to DeAngelo et al. (2006), RE/TE has a greater impact on the probability of paying dividends than alternative measures of earned/contributed capital mix such as the retained earnings-to-total assets ratio. Based on the financial life cycle theory of dividends; I predict that the impact of RE/TE on dividends is positive.

AGE (Firm age): Natural log of No. of years of listing on the stock exchange. Following Fink et al (2009), I have defined age as the number of years since a firm's listing date. The positive relationship of dividend payout ratio (DPR) with the age of the firm is expected.

6.3.4 Conceptual Framework



6.4 Analytical Results

6.4.1 Nonfinancial Sector: Manufacturing

6.4.1.1 Pooled Data Regression Model: Study on Nonfinancial Sectors

Descriptive Statistics:

The descriptive statistics is shown in table-6.1 which represents the mean, standard deviation of variables.

Table-6.1: Descriptive Statistics

Descriptive Statistics

	Mean	Std. Deviation	N
DPR	21.4934	15.31370	20
DPR_{t-1}	21.4845	8.01277	20
EPS	33.0071	10.57957	20
RE/TE	13.6872	68.09011	20
CF	11.4234	38.43686	20
SG	1.0576E2	320.53986	20
SIZE	6.4568	.60403	20
LIQ	1.8796	.37714	20
OWN(SPONSOR)	41.9433	2.23869	20
OWN(INDIVIDUAL)	31.3278	3.65695	20
OWN(INSTITUTION)	15.4245	1.85630	20
LEV	2.3985	4.61013	20
RISK	5.3267	4.39947	20
AGE	2.5979	.20852	20
RELATIVE TAX	1.5000	.00000	20
INVEST. OPPORT.	33.4716	50.10906	20
ROA	5.7033	6.39315	20

Multi collinearity

The Tolerance is simply the reciprocal of VIF (Variance Inflation Factor) and is computed as: Tolerance=1/VIF. The large values of VIF are unwanted and undesirable. The larger values of tolerance are indicating of lesser problem with collinearity. The theoretical maximum value of tolerance is 1.00 and minimum value of tolerance is zero**.**

From the table 6.5 & 6.6, it is observed that the tolerance of the variable LIQ, ROA, SG, RISK, OWN(sponsor), $DPR_{t-1,}$ EPS, RE/TE, CF, SIZE, OWN(individual),

OWN(institution), LEV, AGE, INVEST.OPPORT are 0.832, 0.826, 0.520, 0.823, 0.394, 0.374, 0.309, 0.930, 0.835, 0.252, 0..438, 0.491, 0.726, 0.296, 0.664 respectively which are highly positive and more than zero. So, it is concluded that the variables are free from multicollinearity.

Auto correlation

Durbin-Watson test is for correlation between errors. It tests whether adjacent residuals are correlated (one of assumption of regression is that the residuals are independent). In short, this option is important for testing whether the assumption of independent errors is tenable. The test statistic can vary between 0 and 4 with a value of 2 meaning that the residuals are uncorrelated. A value greater than 2 indicates a negative correlation between adjacent residuals whereas a value below 2 indicates a positive correlation. As a very conservative rule of thumb, Field (2009) suggests that the values less than 1 or greater than 3 are definitely cause for concern. The value of Durnin-Watson test of this model is 1.943 which is more than 1 and near to 2(table-6.3). So, it indicates the model is free from autocorrelation.

Homoscedasticity

In the linear regression the error term is assumed to be homoskedastic constant across observations. Violation of this assumption is pernicious. Estimates of standard errors for the regression coefficients are biased and the direction of the bias is not known a priori may inflate or deflate t-tests. The Breusch- Pagan/ Cook-Weisberg test is used to test heteroskedasticity in this study as shown in table 6.2 by using STATA. A large chi-square would indicate that the heteroskedasticity is present.

Table 6.2 Breusch- Pagan/ Cook-Weisberg test for heteroskedasticity

Test	Chi-square(chi2)	Prob> chi2
Breusch- Pagan/ Cook-Weisberg test	11.63	.752

From the table 6.2, it is observed that the chi- square value is small, indicating heteroskedasticity is probably not a problem. Here, the chi-square value is 11.63(p=.752) and indicates the insignificancy which infers that the errors have a constant variance (the data does not suffer from heteroscedasticity).

Coefficient of Multiple Determinations (R^2):

The summary of the model is shown in table 6.3. The table represents the R, R^2, and adjusted R^2. R is the values of multiple correlations co-efficient between the predictors and the outcome. Where LIQ, ROA, SG, RISK, OWN (sponsor), DPR_{t-1} are used as a predictors. Among the 9 models, I have taken the model 8 for highest R^2 (0.963). The R value of model 8 is 0.981 which implies the strong relationship between independent variables and dependent variable.

Table-6.3: Model Summary[d]

Model Summary[j]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.711[a]	.505	.476	11.08094	.505	17.378	1	17	.001	
2	.809[b]	.654	.611	9.55246	.149	6.876	1	16	.018	
3	.892[c]	.796	.755	7.58336	.142	10.388	1	15	.006	
4	.950[d]	.903	.875	5.41504	.107	15.418	1	14	.002	
5	.966[e]	.933	.908	4.65590	.030	5.938	1	13	.030	
6	.977[f]	.954	.931	4.03554	.020	5.304	1	12	.040	
7	.973[g]	.947	.926	4.15590	-.007	1.787	1	12	.206	
8	.981[h]	.963	.944	3.61880	.016	5.145	1	12	.043	
9	.981[i]	.962	.947	3.51417	.000	.259	1	12	.620	1.943

a. Predictors: (Constant), LIQ

b. Predictors: (Constant), LIQ, OWN(INSTITUTION)

c. Predictors: (Constant), LIQ, OWN(INSTITUTION), ROA

d. Predictors: (Constant), LIQ, OWN(INSTITUTION), ROA, SG

e. Predictors: (Constant), LIQ, OWN(INSTITUTION), ROA, SG, RISK

f. Predictors: (Constant), LIQ, OWN(INSTITUTION), ROA, SG, RISK, OWN(SPONSOR)

g. Predictors: (Constant), LIQ, ROA, SG, RISK, OWN(SPONSOR)

h. Predictors: (Constant), LIQ, ROA, SG, RISK, OWN(SPONSOR), DPR_{t-1}

i. Predictors: (Constant), ROA, SG, RISK, OWN(SPONSOR), DPR_{t-1}

j. Dependent Variable: DPR

The R^2 shows the amount of variance of DPR of explained by LIQ, ROA, SG, and RISK, OWN (sponsor), DPR_{t-1}. The value of R^2 of the model-8 is .963 which indicates that the independent variables explain 96.3% of the dependent variable (DPR). This represents satisfactory result for interpreting the model. The adjusted R^2 gives more idea of how well

the model generalizes and the value should be same or very close to the value of R^2. In this study, the difference for the final model is fair bit (0.963-0.944=0.019 or 1.9%). This shrinkage means that if the model were derived from the population rather the sample, it would account for approximately 1.9 % less variance in the outcome.

Significant of the Model: F-Test

ANOVA table is shown in table 6.4 which represents the significance of the model through the F-test. It tests whether R^2 is different from zero. The F values of model 1, model 2, and model 3, model 4, model 5, model 6, model 7, model 8, model 9, are 17.378, 15.130, 19.467, 32.489, 36.345, 41.199, 46.280, 51.722, and 65.76 which are statistically significant. It is interpreted that the Final model(model 8) significantly improves the ability to predict the outcome variable(dependent variable).The F-statistics(F=51.722) of the model 8 is significant at 1 percent level of significant indicating that the model provides significant explanation of variation in the dividend payout ratio of nonfinancial sector.

Table-6.4:ANOVA[d]

ANOVA[j]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2133.787	1	2133.787	17.378	.001[a]
	Residual	2087.382	17	122.787		
	Total	4221.169	18			
2	Regression	2761.176	2	1380.588	15.130	.000[b]
	Residual	1459.992	16	91.250		
	Total	4221.169	18			
3	Regression	3358.559	3	1119.520	19.467	.000[c]
	Residual	862.610	15	57.507		
	Total	4221.169	18			
4	Regression	3810.651	4	952.663	32.489	.000[d]
	Residual	410.518	14	29.323		
	Total	4221.169	18			
5	Regression	3939.363	5	787.873	36.345	.000[e]
	Residual	281.806	13	21.677		
	Total	4221.169	18			
6	Regression	4025.741	6	670.957	41.199	.000[f]
	Residual	195.427	12	16.286		
	Total	4221.169	18			
7	Regression	3996.639	5	799.328	46.280	.000[g]
	Residual	224.530	13	17.272		
	Total	4221.169	18			
8	Regression	4064.020	6	677.337	51.722	.000[h]
	Residual	157.148	12	13.096		
	Total	4221.169	18			
9	Regression	4060.627	5	812.125	65.762	.000[i]
	Residual	160.542	13	12.349		
	Total	4221.169	18			

a. Predictors: (Constant), LIQ

b. Predictors: (Constant), LIQ, OWN(INSTITUTION)

c. Predictors: (Constant), LIQ, OWN(INSTITUTION), ROA

d. Predictors: (Constant), LIQ, OWN(INSTITUTION), ROA, SG

e. Predictors: (Constant), LIQ, OWN(INSTITUTION), ROA, SG, RISK

f. Predictors: (Constant), LIQ, OWN(INSTITUTION), ROA, SG, RISK, OWN(SPONSOR)

g. Predictors: (Constant), LIQ, ROA, SG, RISK, OWN(SPONSOR)

h. Predictors: (Constant), LIQ, ROA, SG, RISK, OWN(SPONSOR), DPR_{t-1}

i. Predictors: (Constant), ROA, SG, RISK, OWN(SPONSOR), DPR_{t-1}

j. Dependent Variable: DPR

Significant of the Variables/Model parameters:

The result of model parameters is shown in table 6.5. The coefficient (B) indicates the individual contribution of each predictor to the model. The B values tell about the relationship between DPR and each predictor. If the value is positive, it indicates that there is a positive relationship between the predictor and the outcome whereas a negative co-efficient represents a negative relationship. The B values also tell us to what degree each

predictor affects the outcome if the effects of all other predictors are held constant. The unstandardized beta(B) values has an associated standard error indicating to what extent these value would vary across different sample and these standard errors are used to determine whether or not the B values differ significantly from zero. In the model 8, the Coefficient (B) values of LIQ, ROA, SG, RISK, OWN (sponsor), DPR_{t-1} are 2.36, 1.411, -0.034, 1.481, 3.894, 0.461 respectively. It infers that the LIQ, ROA, RISK, OWN (sponsor), DPR_{t-1} have positive relationship and SG, has negative relationship with DPR. The OWN (sponsor) has highest coefficient (3.894) which indicates the Sponsors has maximum role in DPR determination.

Table-6.5:Coefficients[a]

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
8 (Constant)	-109.955	29.753		-3.696	.003					
LIQ	2.360	4.636	.058	2.36	.045	.711	.145	.028	.832	1.201
ROA	1.411	.147	.589	9.616	.000	.501	.941	.536	.826	1.210
SG	-.034	.004	-.703	-9.102	.000	-.286	-.935	-.507	.520	1.922
RISK	1.481	.214	.425	6.930	.000	.276	.894	.386	.823	1.215
OWN(SPONSOR)	3.894	.607	.569	6.416	.000	.311	.880	.357	.394	2.537
DPR_{t-1}	.461	.203	.241	2.268	.043	.543	.548	.126	.374	2.650

a. Dependent Variable: DPR

The t test associated with B 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 (and the larger the value of t) is the greater the contribution of that predictor (independent variable).

I have explained the final model (model 8) because this includes all predictors that make a significant contribution to dividend payout ratio. From the table 6.4, it is observed in model 8 that the t value of LIQ, ROA, SG, RISK, OWN (sponsor), DPR_{t-1} are 2.36(p=.045), 9.61(p=.000), -9.10(p=.000), 6.93(p=.000), 6.416(p=0.00), 2.268(0.043) respectively which are significant at 1 percent level of significant. The p values of the independent variables, LIQ, ROA, SG, RISK, OWN (sponsor), DPR_{t-1} are less than .05 which also indicates the significance of the variables. So, finally it is concluded that among the independent variables, LIQ, ROA, SG, RISK, OWN (sponsor), DPR_{t-1} act as a determinant of dividend decision. The OWN (institution) is also a significant determinant which is shown in model 1.

The standardized beta values tell the number of standard deviation that the outcome will change a result of one standard deviation change in one predictor. The standardized beta values are all measured in standard deviation units. So, these are directly comparable, therefore, they provide a better insight into the importance of a predictor in the model. In the model 8, the standardized betas of LIQ, ROA, SG, RISK, OWN (sponsor), DPR_{t-1} are .058, 0.589, -0.703, 0.425, 0.569, 0.241 respectively which also represent the significant contribution on DPR.

Non Significant Variables:

From the table 6.6, it is shown that the model 8 explains the contribution of EPS, RE/TE, CF, SIZE, OWN (individual), LEV, AGE, INVESTOPPORT on the dividend decision. The coefficient of EPS, RE/TE, CF, SIZE, OWN (individual), LEV, AGE, INVESTOPPORT are -0.047, -0.075, 0.051, -0.059, 0.318, 0.082, 0.014, 0.002 respectively which indicates the little impact of these variables on dividend payout ratio. The t value of EPS, RE/TE, CF, SIZE, OWN (individual), LEV, AGE, INVESTOPPORT are -0.454(p=.658), -1.34(p=.207), 0.822(p=0.429), -0.511(0.619), 1.864(p=0.089), 1.296(p=0.22), 0.134(p=0.896), 0.023(p=0.982) which are not statistically significant. So, it is concluded that EPS, RE/TE, CF, SIZE, OWN (individual), LEV, AGE, INVESTOPPORT have not significant impact on dividend decision.

Table-6.6: Excluded Variables[d]

Excluded Variables[j]

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
					Tolerance	VIF	Minimum Tolerance
8 EPS	-.047[h]	-.454	.658	-.136	.309	3.236	.192
RE/TE	-.075[h]	-1.340	.207	-.375	.930	1.075	.231
CF	.051[h]	.822	.429	.241	.835	1.198	.218
SIZE	-.059[h]	-.511	.619	-.152	.252	3.973	.198
OWN(INDIVIDUAL)	.318[h]	1.864	.089	.490	.438	2.287	.089
OWN(INSTITUTION)	.168[h]	1.595	.139	.434	.491	2.036	.127
LEV	.082[h]	1.296	.222	.364	.726	1.378	.210
AGE	.014[h]	.134	.896	.040	.296	3.375	.200
INVEST. OPPORT.	.002[h]	.023	.982	.007	.664	1.506	.219

a. Predictors in the Model: (Constant), LIQ

b. Predictors in the Model: (Constant), LIQ, OWN(INSTITUTION)

c. Predictors in the Model: (Constant), LIQ, OWN(INSTITUTION), ROA

d. Predictors in the Model: (Constant), LIQ, OWN(INSTITUTION), ROA, SG

e. Predictors in the Model: (Constant), LIQ, OWN(INSTITUTION), ROA, SG, RISK

f. Predictors in the Model: (Constant), LIQ, OWN(INSTITUTION), ROA, SG, RISK, OWN(SPONSOR)

g. Predictors in the Model: (Constant), LIQ, ROA, SG, RISK, OWN(SPONSOR)

h. Predictors in the Model: (Constant), LIQ, ROA, SG, RISK, OWN(SPONSOR), DPR_{t-1}

i. Predictors in the Model: (Constant), ROA, SG, RISK, OWN(SPONSOR), DPR_{t-1}

j. Dependent Variable: DPR

6.4.1.2 Structural Equation Modeling on Determinants of Dividend Decision: Study on Nonfinancial Sectors

Structural Equation Modeling is used to show how models that better match the theoretical relationship among variables can enhance interpretability and to quite different conclusion. Structural equation modeling (SEM), also known as path analysis with latent variables, is now a regularly used method for representing dependency (arguably "causal") relations in multivariate data in the behavioral and social sciences.

I have shown the impact of determinants on dividend policy along with other variables with regression model. Now, I want to develop an optimum model by using structural equation modeling techniques.

Significant Variables

I have run the existing model ($DPR_{it}= \alpha + \beta_1 DPR_{it-1}+ \beta_2 EPS_{it}+ \beta_3 LEV_{it}+ \beta_4 CF_{it}+ \beta_5 SG_{it}+ \beta_6 SIZE_{it}+ \beta_7 LIQ_{it}+ \beta_8$ OWN(SPONSOR)$_{it}+ \beta_9$ OWN(INST)$_{it}+ \beta_{10}$ OWN(IND)$_{it} + \beta_{11}$ $RISK_{it}+ \beta_{12}$ $AGE_{it}+ \beta_{13}$ $RELATAX_{it}+ \beta_{14}$ $RE/TE_{it}+ \beta_{15}$ $ROA_{it} + \beta_{16}$ INVEST $OPPORT_{it}$ $+u_{it}$) with structural equation modeling.

Table- 6.7 : Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
DPS	21.008	1.810	11.609	***	
EPS	32.714	2.318	14.112	***	
RE	17.957	15.403	1.166	.244	
PE	88.758	39.067	2.272	.023	
CF	11.018	8.784	1.254	.210	
SG	95.202	72.476	1.314	.189	
SIZE	6.432	.134	48.127	***	
OWNSP	41.745	.525	79.452	***	
OWNIND	31.322	.795	39.402	***	
OWNINST	15.395	.405	38.056	***	
LEV	2.063	1.057	1.953	.051	
RISK	5.325	.956	5.568	***	
AGE	2.581	.048	53.225	***	
INVTOPP	33.616	11.464	2.932	.003	
ROA	5.463	1.410	3.873	***	
LIQ	1.834	.094	19.517	***	

From the table 6.7 it is seen that the C.R.(critical ratio) of lagged DPR, EPS, SIZE, OWNSP, OWNIND, OWNINST RISK, AGE, ROA, LIQ, INTOP are 11.6, 14.11, 48.12, 79.45, 39.4, 38.05, 5.5, 53.22, 3.87, 19.517, 2.29 respectively which have significant impact on the dividend payout.

Model Fit

This is a conventional null hypothesis significance test (NHST) for the goodness of fit test, albeit with the ‘‘hoped for’’ decision reversed so that the aim is now to ‘‘accept’’ the null hypothesis, and not reject it. If the discrepancy (expressed as a $\chi 2$ variate) between the model implied covariance and the observed sample covariance is larger than the expected distribution value by a probability usually adjudged at a 0.05 threshold (as per convention in NHST), then the model is rejected as ‘‘not-fitting’’. Conversely, if the fit statistic is less than the value expected, with a probability of occurrence >0.05, then the model is accepted as ‘‘fitting’’; that is, the null hypothesis of ‘‘no difference’’ between the model-implied population covariance and the actual observed sample covariance is not rejected. This test has become known amongst SEM users as the $\chi 2$ ‘‘exact- fit’’ test.

Table- 6.8 : Result (Default model)

Minimum was achieved
Chi-square =240.09
Degrees of freedom = 137
Probability level = .000

Here, the chi-square value is 240.09 and p- value is 0.0 which indicates the rejection of null hypothesis. So, this model does not fit and the modification is required to get the optimum model.

Modifying the model to obtain the Optimum model

Evaluating Model fit

From the modified model, it is seen that the chi-square value is not significant. So, the null hypothesis is accepted that the model fit the data. So, it indicates the modified model is an accepted model. Since the minimum was achieved, I have proceed further for calculation and interpretation.

Table- 6.9 : Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments:	170
Number of distinct parameters to be estimated:	50
Degrees of freedom (170 - 50):	120

Result (Default model)

Minimum was achieved
Chi-square = 50.34
Degrees of freedom = 120
Probability level = .92

Optimum Model

Figure -6.1 indicates the optimum model which influence the factors on the dividend payout ratio.

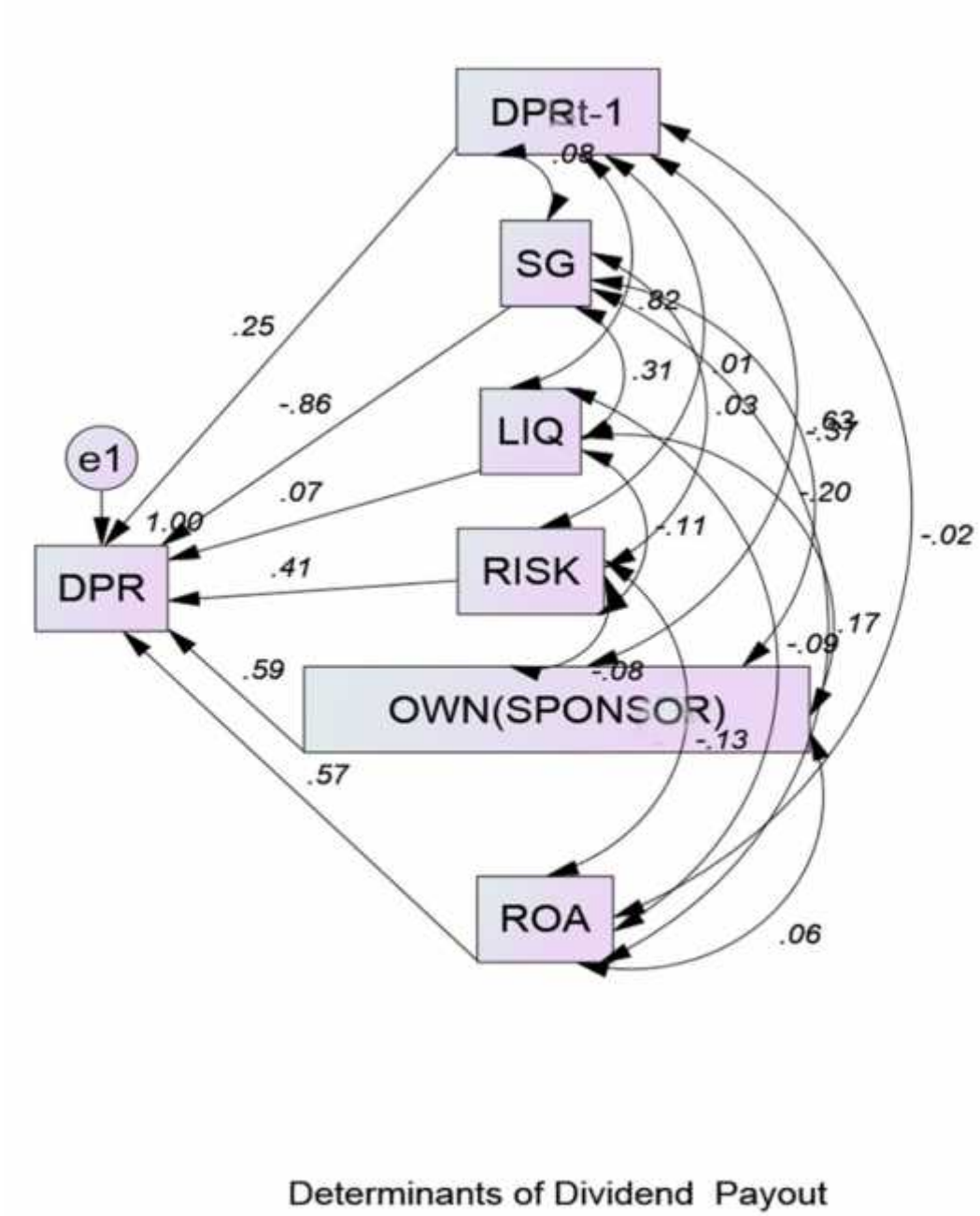


Figure-6.1: Determinants of dividned payout:nonfinancial

The standardized regression weights and the correlations are independent of the units in which all variables are measured. The number 1.0 is the squared multiple correlation of Dividend payout ratio with lagged DPR, SG, LIQ, RISK, OWN (SPONSOR), ROA.

Regression Weights

From the table 6.10, it is seen that the C.R of SG, LIQ, RISK, OWNSP, ROA, lagged DPR are -31.81, 2.9, 24.07, 23.31, 33.183 and 8.00 which are statistically significant. So, it is certain that the SG, LIQ, RISK, OWNSP, ROA, lagged DPR have impact on dividend payout ratio.

The entries -.861, .066, .409, .589, .574, and .247 are standardized regression weights of SG, LIQ, RISK, OWNSP, ROA, and LAGGED DPR respectively. This result infers that the SG is negatively related to DPR and RISK, OWNSP, ROA, lagged DPR, LIQ are positively related to DPR.

Table- 6.10 :

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
DPR	<---	SG	-.034	.001	-31.810	***	
DPR	<---	LIQ	2.417	1.268	2.907	.050	
DPR	<---	RISK	1.479	.061	24.079	***	
DPR	<---	OWNSP	3.885	.167	23.313	***	
DPR	<---	ROA	1.410	.042	33.973	***	
DPR	<---	DPR_{it-1}	.461	.058	8.003	***	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
DPR	<---	SG	-.861
DPR	<---	LIQ	.066
DPR	<---	RISK	.409
DPR	<---	OWNSP	.589
DPR	<---	ROA	.574
DPR	<---	DPR_{it-1}	.247

Correlations: (Group number 1 - Default model)

			Estimate
SG	<-->	DPR_{it-}	.076
LIQ	<-->	DPR_{it-}	.825
RISK	<-->	DPR_{it-}	.011
OWNSP	<-->	DPR_{it-}	-.374
ROA	<-->	DPR_{it-}	-.024
SG	<-->	LIQ	.314
SG	<-->	RISK	.032
SG	<-->	OWNSP	.628
SG	<-->	ROA	.173
LIQ	<-->	RISK	-.113
LIQ	<-->	OWNSP	-.203
LIQ	<-->	ROA	-.087
RISK	<-->	OWNSP	-.081
OWNSP	<-->	ROA	.058
RISK	<-->	ROA	-.127

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
DPR	.996

Squared Multiple Correlations:

Squared multiple correlations are also independent of units of measurement. The squared multiple correlation of a variable is the proportion of its variance that is accounted for by its predictors. In the present study, lagged DPR, SG, LIQ, RISK, OWN (SPONSOR), ROA are account for 99.6% of the variance of DPR.

Model Fit Summary:

Table- 6.11 : Model fit summary

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	34	33.288	1	.50	93.288
Saturated model	35	.000	0		

Model	NCP	LO 90	HI 90
Default model	12.288	64.218	127.767
Saturated model	.000	.000	.000

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	2.148	1.792	2.528	.000

- CMIN – minimum value of the discrepancy between the model and the data. This is the same as the chi-square statistic. Here, CMIN is not significant which indicates the model fit.
- NCP – the noncentrality parameter. The columns labeled "LO 90" and "HI 90" gives the 90% confidence interval for this statistic. This statistic can also be interpreted as a chi-square, with the same degrees of freedom as in CMIN. Here, this value is 12.288 which indicates the support of model fitness.

Optimum Model:

$$DPR_{it} = \alpha + \beta_1 SG_{it} + \beta_2 LIQ_{it} + \beta_3 RISK_{it} + \beta_4 OWN(SPONSOR)_{it} + \beta_5 ROA_{it} + \beta_6 DPR_{it-1} + u_{it}$$

6.4.1.3 Panel Data Analysis: Non Financial Sector

A panel data regression differs from a regular time-series or cross-section regression in that it has a double subscript on its variables:

$y_{it} = a + X'_{it}\, b + u_{it}$ ($i = 1, \ldots, N$; $t = 1, \ldots, T$)

The *i* subscript denotes the cross-section dimension and *t* denotes the time-series dimension. Most of the panel data application utilizes a one-way error component model for the disturbances, with: $u_{it} = \alpha_i + \varepsilon_{it}$.

The Hausman test

The Hausman principle can be applied to all hypothesis testing problems, in which two different estimators are available, the first of which $b\hat{}$ is efficient under the null hypothesis, however inconsistent under the alternative, while the other estimator $b\sim$ is consistent under both hypotheses, possibly without attaining efficiency under any hypothesis. Hausman had the intuitive idea to construct a test statistic based on $q = b\hat{} - b\sim$. Because of the consistency of both estimators under the null, this difference will converge to zero, while it fails to converge under the alternative. Hausman suggested the statistic $m = q'\ (var\ q)^{-1}\ q$, where *var q* = var $b\sim$ − var $b\hat{}$ follows from the known properties of both estimators under the null hypothesis and from uncorrelatedness. The statistic *m* is distributed as χ^2 under the null hypothesis, with degrees of freedom corresponding to the dimension of *b*.

To decide between fixed or random effects I have run a Hausman test where the null hypothesis is that the preferred model is random effects vs. the alternative the fixed effects (Green, 2008). It basically tests whether the unique errors (u_i) are correlated with the regressors, the null hypothesis is they are not. I run a fixed effects model and saved the estimates, then run a random model and saved the estimates, then performed the test.

Table-6.12 Hausman test: Non financial

```
. hausman fixed random


                ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |     fixed        random       Difference          S.E.
-------------+------------------------------------------------------------
   LaggedDPR |    .7998660     .3307001        .4507135        .0143841
         EPS |    .0252479     .0388827       -.0641306        .0476028
    Ownspons |     .524836     .2836841        .2411519        .4196435
Owninstitu~n |    -1.03086    -.1866909       -.8441693        .5976765
Ownindivid~l |   -.8624573    -.0811543        -.781303        .4791821
   Liquidity |      .3069093   .3935919       -.0866826        1.528338
        Risk |    .7822479     .4227951        .3594528               .
          CF |     .001929     .0000679        .0018611               .
          SG |   -.0027372     .0037001       -.0064373               .
        Size |   -3.330507     -4.88666        1.556153        8.496206
         Lev |   -.9260590    -.0279383       -.6466750        .0979066
        RETE |   -.0061153    -.0002356       -.0058797        .0085627
         ROA |    .2936110     .1406220       -.0152989        .0249973
Investment~y |    .0010132     .0008827        .0001306               .
   Ageoffirm |    -11.4956    -11.72314        .2275417        9.305416
------------------------------------------------------------------------------
                           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)
                         =      322.68
              Prob>chi2 =      0.0000
              (V_b-V_B is not positive definite)
```

From the table 6.12, it is observed that the probability is 0.0000(less than 0.05), so, I have rejected the null hypothesis that individual effects are random and that RE provides consistent estimates. Concluding that I have a fixed-effects model, I have continued with the estimation of my model using the within estimator, the most commonly used with this type of models.

Fixed Effect Model (FE)

The FE explores the relationship between predictor and outcome variables within an entity. Each entity has its own individual characteristics that may or may not influence the predictor variables. When using FE, it is assumed that something within the individual may impact or bias the predictor or outcome variables and I need to control for this. This is the rationale behind the assumption of the correlation between entity's error term and predictor variables. The FE removes the effect of those time-invariant characteristics from the predictor variables, so I can assess the predictors' net effect. Another important assumption of the FE model is that those time-invariant characteristics are unique to the individual and should not be correlated with other individual characteristics. Each entity is different therefore the entity's error term and the constant (which captures individual characteristics) should not be correlated with the others.

Table-6.13 Fixed Effect Model: Non financial

```
Fixed-effects (within) regression               Number of obs      =      1047
Group variable: Company                         Number of groups   =        83

R-sq:  within  = 0.6322                         Obs per group: min =         3
       between = 0.2534                                        avg =      12.6
       overall = 0.4960                                        max =        19

                                                F(15,949)          =      4.11
corr(u_i, Xb)  = -0.0320                        Prob > F           =    0.0081
------------------------------------------------------------------------------
         DPR |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  LaggedDPR |    .799866   .3333421     2.40   0.017     .0145697    .1454035
         EPS |   .0252479   .0700601     0.36   0.719    -.1627386    .1122428
    Ownspons |    .524836   .2467174     2.12   0.032    -.3919787    1.441651
Owninstitution |  -1.03086    .677489    -1.52   0.128     -2.36041    .2986894
 Ownindividual |  -.8624573   .5409538    -1.59   0.111    -1.924061    .1991467
    Liquidity |   .3069093   .1428912     2.15   0.030    -3.674763    4.288581
         Risk |   .7822479   .4231796     1.85   0.065     -.048228    1.612724
           CF |    .001929   .0107666     0.18   0.858    -.0192001    .0230582
           SG |  -.0027372   .0046465    -0.59   0.556    -.0118558    .0063815
         Size |  -3.330507   8.945136    -0.37   0.710    -20.88504    14.22403
          Lev |  -.9260590   .2854168    -3.23   0.016    -.6527268    .4675151
         RETE |  -.0061153   .0222265    -0.28   0.783    -.0497341    .0375035
          ROA |   .2936110   .0967522     3.03   0.021     -.219234    .1605118
Investmentopportunity |   .0010132   .0086595     0.12   0.907    -.0159807    .0180072
    Ageoffirm |   -11.4956   10.71815    -1.07   0.284    -32.52962    9.538423
        _cons |   123.0106   61.11936     2.01   0.044     3.065871    242.9553
-------------+----------------------------------------------------------------
      sigma_u |  91.791367
      sigma_e |  121.85099
          rho |  .36203066   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Coefficient of Multiple Determination (R^2):

The summary of the model is shown in table 6.13. The R^2 shows the amount of variance of DPR of explained by Lagged DPR,EPS, SIZE, AGE, INVT.OPP, LIQ, LEV, OWNSPONS, OWNINDIVIDUAL, RISK, CF, SG, RETE, ROA, OWNINST. The value of R^2 of the model is .6322(within) which indicates that the independent variables explain 63.22% of the dependent variable (DPR). This represents satisfactory result for interpreting the model.

Significant of the Model: F-Test

The F- test is shown in table 6.13 which represents the significance of the model. It tests whether R^2 is different from zero. The F value of model is 4.11(p=0.008) which is statistically significant. It is interpreted that the model significantly improve the ability to predict the outcome variable(dependent variable).The F-statistics of the model is significant at 5 percent level of significant indicating that the model provides significant explanation of variation in the dividend payout ratio of nonfinancial sector.

Significant of the Variables/Model parameters:

The result of model parameters is shown in table 6.13. The coefficient indicates the individual contribution of each predictor to the model. The coefficient values tell about the relationship between DPR and each predictor. The beta values have an associated standard errors indicating to what extent these value would vary across different sample and these standard error are used to determine whether or not the beta values differ significantly from zero. In the model, the Coefficient values of Lagged DPR, OWN (spon), Liquidity, leverage, ROA are 0.799, 0.52, 0.306, -0.92, 0.29 respectively. It infers that the Lagged DPR, OWN (spon), liquidity, ROA have positive impact and leverage has negative 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 p 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 6.13, it is observed that the t value of Lagged DPR, OWN (spon), Liquidity, leverage, ROA are 2.40(p=.017), 2.12(p=.032), 2.15(p=-.030), -3.23(p=0.016), 3.03(p=0.021) respectively which are significant at 5 percent level of significant. The p values of the independent variables Lagged DPR, OWN (spon), Liquidity, leverage, ROA are less than .05 which also indicates the significance of the variables. So, finally it is concluded that among the independent variables Lagged DPR, OWN(spon),liquidity, ROA have positive impact and leverage has negative impact on the DPR.

Model: DPR_{it}= 123.01 + 0.799DPR_{it-1}+ 0.025EPS_{it} -0.92LEV_{it}+ 0.001CF_{it} -0.002SG_{it}- 0.3.33$SIZE_{it}$+ 0.306LIQ_{it}+ 0.52 $OWN(SPONSOR)_{it}$ -1.03$OWN(INST)_{it}$-0.862 $OWN(IND)_{it}$ + 0.78 $RISK_{it}$ -11.49 AGE_{it}+ 0.006 RE/TE_{it}+ 0.29 ROA_{it} + 0.001 INVEST $OPPORT_{it}$ +u_{it}

6.4.2 Financial Sector: Banking

6.4.2.1 Pooled Regression Model: Study on Banking Sector

Descriptive Statistics:

The descriptive statistics is shown in table-6.14 which represents the mean, standard deviation of variables.

Table-6.14: Descriptive Statistics: Bank

Descriptive Statistics			
	Mean	Std. Deviation	N
DPR	18.7825	24.00960	20
EPS	86.1455	190.79493	20
RE/TE	11.4086	4.95266	20
CF	1.2201E2	140.11235	20
SG	38.4963	29.12911	20
SIZE	10.6804	.76459	20
OWN(SPONSOR)	49.4912	10.33043	20
OWN(INDIVIDUAL)	37.1071	10.61277	20
OWN(INSTITUTION)	24.9410	65.53396	20
LEV	14.1881	2.54602	20
RISK	5.2389	2.69501	20
AGE	1.9218	.52824	20
RELATIVE TAX	1.5000	.00000	20
INVEST. OPPORT.	55.0126	36.75631	20
ROA	1.9881	2.92024	20
DPR_{it-1}	18.7825	21.00960	20

Multi colinearity

The theoretical maximum value of tolerance is 1.00 and minimum value of tolerance is zero**.** From the table 6.18 & 6.19, it is observed that the tolerance of the variable ROA, SG, RISK, OWN (sponsor), EPS, RE/TE, PE, CF, SIZE, OWN (individual), OWN (institution), LEV, AGE, INVEST.OPPORT are 0.708, 0.882, 0.791, 0.774, 0.911, 0.726, 0.708, 0.98, 0.852, 0.453, 0.914, 0.884, 0.863, respectively which are highly positive and more than zero. So, it is concluded that the variables are free from multicollinearity.

Auto correlation

The value of Durnin-Watson test of this model is 2.204 which is near to 2 and indicates the model is free from autocorrelation (table-6.18)

Homoscedasticity

In the linear regression the error term is assumed to be homoskedastic constant across observations. Violation of this assumption is pernicious. Estimates of standard errors for the regression coefficients are biased and the direction of the bias is not known a priori may inflate or deflate t-tests. The Breusch- Pagan/ Cook-Weisberg test is used to test heteroskedasticity in this study as shown in table 6.15 by using STATA. A large chi-square would indicate that the heteroskedasticity is present.

Table 6.15 Breusch- Pagan/ Cook-Weisberg test for heteroskedasticity

Test	Chi-square(chi2)	Prob> chi2
Breusch- Pagan/ Cook-Weisberg test	8.13	0.112

From the table 6.15, it is observed that the chi- square value is small, indicating heteroskedasticity is probably not a problem. Here, the chi-square value is 8.13(p=.0.112) and indicates the insignificancy which indicates that the errors have a constant variance (the data does not suffer from heteroscedasticity).

Coefficient of Multiple Determination(R^2):

The summary of the model is shown in table 6.16. The table represents the R, R^2, and adjusted R^2. R is the values of multiple correlations co-efficient between the predictors and the outcome. Where LEV, RE/TE, SIZE are used as a predictors. The R value of model 3 is 0.763 which implies the strong relationship between independent variables and dependent variable.

Table-6.16: Bank: Model Summary[c]

Model Summary[a]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.539[a]	.290	.251	20.78389	.290	7.355	1	18	.014	
2	.678[b]	.460	.396	18.65771	.170	5.336	1	17	.034	
3	.763[c]	.582	.504	16.91537	.122	4.682	1	16	.046	2.204

a. Predictors: (Constant), LEV

b. Predictors: (Constant), LEV, RE/TE

c. Predictors: (Constant), LEV, RE/TE, SIZE

d. Dependent Variable: DPR

The R^2 shows the amount of variance of DPR of explained by LEV, RE/TE, and SIZE. The value of R^2 of the model -3 is 0.582 which indicates that the independent variables explain 58.2% of the dependent variable (DPR). This represents satisfactory result for interpreting the model.

Significant of the Model: F-test

ANOVA table is shown in table 6.17 which represents the significance of the model through the F-test. The F values of model 1, model 2, and model 3 are 7.355, 7.23, and 7.426 which are statistically significant. It is interpreted that the Final model(model 3) significantly improve the ability to predict the outcome variable(dependent variable).The F-statistics(F=7.42) of the model 3 is significant at 5 percent level of significant indicating that the model provides significant explanation of variation in the dividend determinants of financial sector.

Table 6.17:Bank: ANOVA[c]

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3177.301	1	3177.301	7.355	.014[a]
	Residual	7775.459	18	431.970		
	Total	10952.759	19			
2	Regression	5034.889	2	2517.444	7.232	.005[b]
	Residual	5917.870	17	348.110		
	Total	10952.759	19			
3	Regression	6374.684	3	2124.895	7.426	.002[c]
	Residual	4578.076	16	286.130		
	Total	10952.759	19			

a. Predictors: (Constant), LEV

b. Predictors: (Constant), LEV, RE/TE

c. Predictors: (Constant), LEV, RE/TE, SIZE

d. Dependent Variable: DPR

Significant of the Variables/Model parameters:

The result of model parameters is shown in table 6.18. In the model, the Coefficient (B) values of LEV, RE/TE, and SIZE are 5.961, -2.247, and 11.096 respectively. It infers that the LEV, RE/TE, SIZE are significant determinants of dividend decision.

Table:6.18:Bank:Coefficients[a]

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	-53.281	26.975		-1.975	.064	-109.953	3.391					
LEV	5.079	1.873	.539	2.712	.014	1.145	9.014	.539	.539	.539	1.000	1.000
2 (Constant)	-45.855	24.428		-1.877	.078	-97.393	5.683					
LEV	6.230	1.753	.661	3.553	.002	2.531	9.930	.539	.653	.633	.919	1.088
RE/TE	-2.082	.901	-.430	-2.310	.034	-3.984	-.180	-.242	-.489	-.412	.919	1.088
3 (Constant)	-158.656	56.638		-2.801	.013	-278.723	-38.589					
LEV	5.961	1.595	.632	3.738	.002	2.580	9.341	.539	.683	.604	.914	1.094
RE/TE	-2.247	.821	-.464	-2.738	.015	-3.987	-.507	-.242	-.565	-.443	.911	1.097
SIZE	11.096	5.128	.353	2.164	.046	.226	21.966	.366	.476	.350	.980	1.021

a. Dependent Variable: DPR

I have explained the final model (model 3) because this includes all predictors that make a significant contribution to DPR. From the table 6.17, it is observed in model 3 that the t value of LEV, RE/TE, SIZE are 3.73(p=.002), -2.73(p=.015), 2.16(p=.046) respectively which are significant at 5 percent level of significant. The p values of the independent variables, LEV, RE/TE, SIZE are less than .05 which also indicates the significance of the variables. So, finally it is concluded that among the independent variables LEV, RE/TE, SIZE are the significant determinants of dividend decision.

In the model 3, the standardized betas of LEV, RE/TE, and SIZE are 0.632, -0.464, and 0.353 respectively which also represents the significant contribution of LEV, RE/TE, and SIZE on DPR.

Non Significant

From the table 6.19, it is shown that the model 3 explains the contribution of determinants on the DPR. The coefficient of EPS, lagged DPR, CF, SG, OWN (SPON), OWN (INDIV), OWN(INSTIT) RISK, AGE, INVEST.OPPT, ROA are -0.005, 0.044, -0.321, 0.046, -

0.154, 0.044, 0.12, -085, -0.242, 0.061, 0.063 respectively which indicates the little impact of these variables on dividend decision.. The t value of EPS, lagged DPR, CF,SG, OWN(SPON), OWN(INDIV), OWN(INSTIT) RISK, AGE, INVEST.OPPT, ROA are -0.026(p=.98), 0.225(p=0.825), -1.78(p=0.095), 0.243(p=0.811), -0.842(p=0.413), 0.245(p=0.810), 0.488(p=0.633), -0.481(p=0.638), -1.46(p=0.165), 0.343(p=0.736), 0.271(p=0.79) which are not statistically significant. So, it is concluded that EPS, lagged DPR, CF, SG, OWN (SPON), OWN (INDIV), OWN (INSTIT) RISK, AGE, INVEST.OPPT, ROA are not significant determinants of dividend decision.

Excluded Variable:

Table-6.19: Bank: Excluded Variables[c]

Excluded Variables[a]

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
					Tolerance	VIF	Minimum Tolerance
3 EPS	-.005[c]	-.026	.980	-.007	.774	1.291	.774
Lagged DPR	.044[c]	.225	.825	.058	.726	1.378	.704
CF	-.321[c]	-1.781	.095	-.418	.708	1.413	.708
SG	.046[c]	.243	.811	.063	.787	1.271	.787
OWN(SPONSOR)	-.154[c]	-.842	.413	-.212	.791	1.265	.791
OWN(INDIVIDUAL)	.044[c]	.245	.810	.063	.852	1.173	.843
OWN(INSTITUTION)	.120[c]	.488	.633	.125	.453	2.210	.453
RISK	-.085[c]	-.481	.638	-.123	.882	1.134	.823
AGE	-.242[c]	-1.460	.165	-.353	.884	1.131	.834
INVEST. OPPORT.	.061[c]	.343	.736	.088	.863	1.159	.863
ROA	.063[c]	.271	.790	.070	.511	1.957	.501

a. Predictors in the Model: (Constant), LEV

b. Predictors in the Model: (Constant), LEV, RE/TE

c. Predictors in the Model: (Constant), LEV, RE/TE, SIZE

d. Dependent Variable: DPR

6.4.2.2 Structural Equation Modeling on Determinants of Dividend Decision: Study on Banking Sector

Structural Equation Modeling is used to show how models that better match the theoretical relationship among variables can enhance interpretability and different conclusion. Structural equation modeling (SEM), also known as path analysis with latent variables, is now a regularly used method for representing dependency (arguably "causal") relations in multivariate data in the behavioral and social sciences.

I have shown the impact of determinants on dividend policy along with other variables with regression model. Now, I want to develop an optimum model by using structural equation modeling techniques.

Significant Variables

I have run the existing model ($DPR_{it}= \alpha + \beta_1 DPR_{it-1}+ \beta_2 EPS_{it}+ \beta_3 LEV_{it}+ \beta_4 CF_{it}+ \beta_5 SG_{it}+ \beta_6 SIZE_{it}+ \beta_7 LIQ_{it}+ \beta_8$ OWN(SPONSOR)$_{it}+ \beta_9$ OWN(INST)$_{it}+ \beta_{10}$ OWN(IND)$_{it} + \beta_{11}$ $RISK_{it}+ \beta_{12}$ AGEit+ β_{13} RELATAX+ β_{14} RE/TE+ β_{15} $ROA_{it} + \beta_{16}$ INVEST $OPPORT_{it} + +u_{it}$) with structural equation modeling.

Table- 6.20: Regression Weights: (Group number 1 - Default model)

Maximum Likelihood Estimates

	Estimate	S.E.	C.R.	P	Label
DPR <--- DPR_{it-1}	.109	.267	.407	.684	
DPR <--- EPS	.042	.014	3.096	.002	
DPR <--- RE	-1.545	.510	-3.031	.002	
DPR <--- CF	.038	.018	2.032	.042	
DPR <--- OWNINST	-.026	.040	-.648	.517	
DPR <--- OWNIND	-.057	.212	-.271	.787	
DPR <--- OWNSP	-1.746	.203	-8.590	***	
DPR <--- INVTOPP	-.205	.071	-2.897	.004	
DPR <--- LEV	10.574	.895	11.820	***	
DPR <--- SG	-.367	.086	-4.246	***	
DPR <--- ROA	-3.992	.893	-4.468	***	
DPR <--- AGE	-37.438	4.822	-7.764	***	
DPR <--- RISK	-.705	.951	-.741	.458	
DPR <--- SIZE	-5.780	2.808	-2.059	.040	

From the table 6.20 it is seen that the C.R.(critical ratio) of $DPR_{it-1,}$ EPS, RE, CF, OWNPS,INVETOP, LEV, SG, ROA, AGE, SIZE are .409, 3.09, -3.03, 2.05, -8.59, -2.89, 11.82, -4.24, -4.46, -7.76 and -2.05 respectively which have significant impact on the DPR.

Model Fit

This is a conventional null hypothesis significance test (NHST) for the goodness of fit test, albeit with the ‘‘hoped for’’ decision reversed so that the aim is now to ‘‘accept’’ the null hypothesis, and not reject it. If the discrepancy (expressed as a $\chi 2$ variate) between the model implied covariance and the observed sample covariance is larger than the expected distribution value by a probability usually adjudged at a 0.05 threshold (as per convention in NHST), then the model is rejected as ‘‘not-fitting’’. Conversely, if the fit statistic is less than the value expected, with a probability of occurrence >0.05, then the model is accepted as ‘‘fitting’’; that is, the null hypothesis of ‘‘no difference’’ between the model-implied population covariance and the actual observed sample covariance is not rejected. This test has become known amongst SEM users as the $\chi 2$ ‘‘exact- fit’’ test.

Table- 6.21 : Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments:	170
Number of distinct parameters to be estimated:	50
Degrees of freedom (170 - 50):	120

Result (Default model)

Minimum was achieved
Chi-square = 335.556
Degrees of freedom = 120
Probability level = .000

Here, the chi-square value is 335.556 and p- value is 0.0 which indicates the rejection of null hypothesis. So, this model does not fit and the modification is required to get the optimum model.

Modifying the model to obtain the Optimum model

Evaluating Model fit

From the modified model, it is seen that the chi-square value is zero. So, the null hypothesis is accepted that the model fit the data. So, it indicates the modified model is an accepted model. Since the minimum was achieved, I have proceed further for calculation and interpretation.

Table-6.22 : Result (Default model)

Minimum was achieved
Chi-square = .000
Degrees of freedom = 0
Probability level cannot be computed

Optimum Model

Figure -6.2, indicates the optimum model which mentions the Impact the influential factors on dividend payout ratio.

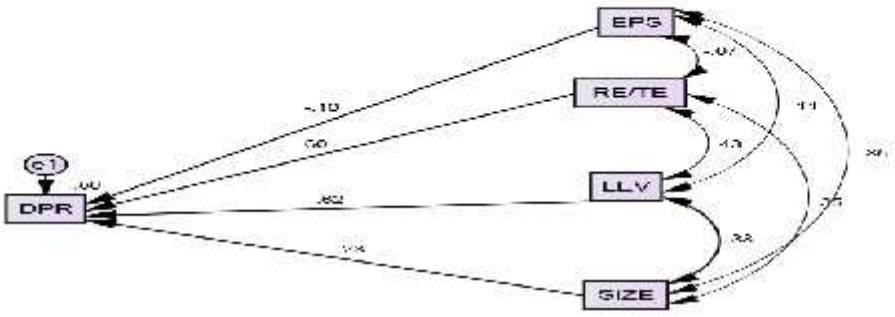


Figure-6.2: Optimum Model of dividend determinants: Banking sectors

The standardized regression weights and the correlations are independent of the units in which all variables are measured; therefore, they are not affected by the choice of identification constraints. The correlation between EPS & RE, EPS &LEV, EPS & SIZE, RE &LEV, RE&SIZE, LEV& SIZE are -.07, -.11, .36, .43, -.35, .33. The entries -0.10, -.60, 62, .23 are standardized regression weights of EPS, RE, LEV, SIZE respectively. The number .50 is the squared multiple correlation of DPR with EPS, RE, LEV, SIZE.

Regression Weights

From the table 6.23, it is seen that the C.R of LEV, SIZE and RE are 3.45, 2.28 and -3.29 which are statistically significant. So, it is certain that the LEV, SIZE and RE have impact on the dividend payout ratio.

Table-6.23 :

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
DPR <--- EPS	-.013	.021	-.596	.551	
DPR <--- RE	-2.488	.756	-3.291	.001	
DPR <--- LEV	5.187	1.501	3.455	***	
DPR <--- SIZE	6.096	4.755	2.282	.048	

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
DPR <--- EPS	-.100
DPR <--- RE	-.599
DPR <--- LEV	.618
DPR <--- SIZE	.234

Correlations: (Group number 1 - Default model)

	Estimate
EPS <--> RE	-.071
RE <--> LEV	.435
LEV <--> SIZE	.325
EPS <--> LEV	-.114
RE <--> SIZE	.351
EPS <--> SIZE	-.348

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
DPR	.502

Squared Multiple Correlations:

Squared multiple correlations are also independent of units of measurement. The squared multiple correlation of a variable is the proportion of its variance that is accounted for by its predictors. In the present study, LEV and RE account for 50% of the variance of DPR.

Model Fit Summary:

Table- 6.24 :

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	20	.000	0		
Saturated model	20	.000	0		
Independence model	5	19.604	15	.188	1.307

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	1.000		1.000		1.000
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.000	.000	.000
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	.000	.000	.000
Saturated model	.000	.000	.000
Independence model	4.604	.000	20.239

- CMIN – minimum value of the discrepancy between the model and the data. This is the same as the chi-square statistic. Here, CMIN is 0 which indicates the model fit.
- Baseline Comparisons – NFI [Normed Fit Index] shows how far between the (terribly fitting) independence model and the (perfectly fitting) saturated model the default model is. In this case, it's 100% of the way to perfect fit.
- Parsimony-Adjusted Measures – The PRATIO [Parsimony Ratio] is an overall measure of how parsimonious the model is.
- NCP – the noncentrality parameter. The columns labeled "LO 90" and "HI 90" gives the 90% confidence interval for this statistic. This statistic can also be interpreted as a chi-square, with the same degrees of freedom as in CMIN. Here, this value is 0 which indicates the support of model fitness.

Optimum Model:

$$DPR_t = \alpha + \beta_1 LEV_t + \beta_2 RE_t + \beta_3 SIZE_t + u_{it}$$

6.4.2.3 Panel Data Analysis: Financial Sector

The Hausman test

Table-6.25 Hausman test: financial

```
. 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~l |     .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 6.25, 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-6.26 Random Effect Model: financial

```
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]
-------------+----------------------------------------------------------------
 LaggedDPR |   .1810952   .0721218     2.51   0.035    -.1232465    .1594656
         EPS |  -.0137096   .0155353    -0.88   0.378    -.0441583     .016739
    Ownspons |  -.0599922   .3300933    -0.18   0.856    -.7069631    .5869787
Ownindividual |  -.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)
------------------------------------------------------------------------------
modified Bhargava et al. Durbin-Watson = 1.9508
Baltagi-Wu LBI = 2.0119057
```

Coefficient of Multiple Determination (R^2):

The summary of the model is shown in table 6.26. The R^2 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 R^2 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 6.26, 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 6.26. 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 6.26,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, liquidity, have positive impact on the DPR.

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

6.5 Summary of Findings

6.5.1 Findings of Regression Model

Nonfinancial Sectors:

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

The Coefficient value of DPR_{t-1} is 0.461 and the t value is 2.268 (p=0.043). 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.

SG (Sale growth):

The coefficient of SG (sales growth) is -0.034 and the t value is -9.102(p=0.00) which is negatively significant. The growth in sales is used as proxies for the firm's future prospects since growing firms require more funds in order to finance their growth and therefore would typically retain greater proportion of their earnings by paying low dividend.

The result supports the result of the Amidu and Abor who (2006) also stated that growth in sales were found to have statistically significant and negative associates with dividend payout ratios. In addition, Jeong (2008) also supported Amidu and Abor where sales growth is expected to be negatively related to the degree of dividend smoothing in term of dividend payout. Higgins [1972] argues that payout ratio is negatively related to a firm's need for funds to finance growth opportunities. Rozeff [1982], Lloyd *et al.* [1985], Collins *et al.* [1996], and recently Amidu and Abor [2006], all show a significantly negative relationship between historical sales growth and dividend payout.

OWNSPONSOR (Sponsor ownership)

The coefficient of Sponsor Ownership is 3.89 and the t value is 6.416(p=0.00) which is positively significant. The Sponsors play vital role in dividend decision making. The dividend payouts can play a useful role in reducing the conflict between inside and outside owners.

This result supports that the ownership structure in large firms may influence dividends and other financial policies (Desmetz, 1983; Desmetz and Lehn, 1985; Shleifer and Vishny, 1986; Morck et al., 1988; Schooley and Barney, 1994; Fluck, 1999; La Porta 2000; Gugler and Yurtoglu, 2003).

Risk:

The coefficient of Risk is 1.48 and the t value is 6.93(p=0.00) which is positively significant. The Risk is positively influence on DPR which implies that in an emerging stock exchange, the dividend might not be the most appropriate tool to convey correct information about transaction costs to the market. Mollah (2002) found that firms listed on the Dhaka Stock Exchange paid a large dividend, even though the beta for their stock was high.

ROA (Return on Assets):

The coefficient of ROA is 1.411 which indicates that if the ROA increases by 1 percent the DPR will increase by 1.411 percent. The t value is 9.61 (p=0.00) which is statistically significant. If the company can make more profit, they will pay more dividends to the shareholder. Several studies have documented a positive relationship between profitability and dividend payouts (see, for example, Jensen et al, 1992, Han et al., 1999, and Fama and French, 2002). Evidence from emerging markets, Al-Malkawi also supports the proposition that profitability is one of the most important factors that determines dividend policy (see, for instance, Adaoglu, 2000, Pandey, 2001, and Aivazian et al., 2003).

LIQ (Liquidity):

The coefficient of liquidity is 2.36 and the t value is 2.36 (p=0.045) which is positively significant. The liquidity position of a company is expected to be positively related to dividend payment.

Financial Sectors

RE/TE(Retained earnings to total equity ratio):

The coefficient of RE/TE is -2.247 and the t value is -2.73(p=0.015) which is negatively significant. It indicates that the DPR is negatively related to RE/TE because a firm that plans to finance future investment opportunities from retained earnings would distribute lesser profits as dividends. Thus, retained earnings of the current year are negatively associated with dividend paid.

SIZE (Size):

The coefficient of size is 11.096 and the t value is 2.16(p=0.046) which 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 5.96 and the t value is 3.73(p=0.002) which 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.

6.5.2 Findings of Structural Equation Modeling

Nonfinancial sectors: Structural equation modeling shows that the SG is negatively related to DPR and LIQ, RISK, OWNSP, ROA, lagged DPR are positively related to DPR. These results have justified the earlier study.

Financial sector: Structural equation modeling reveals that the LEV, SIZE and RE have impact on the dividend payout ratio which supports the earlier regression analysis.

6.5.3 Findings of Panel Data Analysis

Nonfinancial sectors: Panel data analysis shows that the Coefficient values of Lagged DPR, OWN (spon), Liquidity, leverage, ROA are 0.799, 0.52, 0.306, -0.92, 0.29 respectively. It infers that the Lagged DPR, OWN (spon), liquidity, ROA have positive impact and leverage has negative impact on the DPR.

Financial sector: 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.

6.6 Conclusion

The purpose of the study is to identify the determinants of dividend decision of listed companies in DSE. The study is done separately for financial sector and non financial sector. The significant determinants are sponsor ownership, lagged dividend payout ratio, leverage, liquidity, sales growth, risk, profitability (ROA) in nonfinancial sector and leverage, and retained earnings to equity, size, lagged DPR in financial sector. So, it is observed that the determinants are different for financial sector and nonfinancial sector. These findings will help the investors, dividend decision maker and other related parties in the capital market of Bangladesh.

Chapter Seven: Factors Influencing Dividend Policy in Bangladesh: Survey Evidence from Listed Companies in DSE

7.1 Introduction

Over the past half-century, numerous researchers have attempted to identify different factors influencing the payment of dividends. For example, in his seminal study, Lintner (1956) reports that past dividends and current earnings are the primary determinants of current dividends and managers prefer to maintain stable dividends and make periodic adjustments toward a target payout ratio. In a recent study, Brav et al. (2005) benchmark their findings to Lintner. They find that the perceived stability of future earnings still affects dividend policy but the link between dividends and earnings is weaker. They also find that managers continue to make dividend decisions conservatively but that the importance of targeting the payout ratio is not as high. Dividend payers also tend to smooth dividends from year to year and alter the amount of dividends in response to permanent changes in earnings. In their review of the literature on dividend determinants since Lintner, Baker et al. (2010) conclude that managers tend to share some commonly-held beliefs about the factors that affect dividend policy. The evidence suggests that the key determinants that influence dividend policy appear to have remained fairly stable over more than 50 years. Some of the more important and consistent determinants of payout policy are the pattern of past dividends, stability of earnings or cash flows, and the level of current and expected future earnings. Such firm-specific factors appear to be first-order determinants in making dividend decisions.

Since Black (1976) referred to the interest in dividends by shareholders and the practice of firms paying dividends as the 'dividend puzzle,' researchers have tried to understand the determinants of dividend policy. Dividend policy remains a topic of ongoing debate among financial economists (Baker et al., 2002). Although most studies focus on US firms, a growing body of evidences exists on dividend policy outside of the US. These studies generally rely on economic modeling approaches instead of obtaining direct evidence about how investors and managers behave and perceive dividends. Researchers cannot fully identify factors influencing dividend policy by merely modeling market data, but must also use interactive tools such as interviews and surveys. To resolve the dividend

puzzle, Chiang et al. (2006) conclude that the cardinal thrust of academic research must turn toward learning about the motivation for making managerial decisions and the perceptions upon which this motivation is based.

The board of directors takes the dividend decision along with other financial decision. So, their consideration about dividend decision is important. The opinion of dividend decision makers is taken with survey. The survey findings will reveal the factors which are considered in dividend decision. The choice of influencing factors for questionnaire survey is based on the previous studies and opinion of the corporate top level managers. I conducted this study separately (financial sector and non financial sector) to identify the factors in respective sectors. In our country, intensive research in this area is rare. So, this gap inspires me to conduct the primary survey for identifying the factors which are considered in the time of dividend decision.

7.2 Empirical Evidences of Previous studies

7.2.1 Empirical Evidences of Developed ountries

Lintner (1956) in his pioneering work on dividend policy interviewed managers from 28 enterprises and based on findings concluded that dividends are sticky, tied to long-term sustainable earnings, paid by mature enterprises, smoothed from year to year, and targeted a long-term payout ratio when determining dividend policy.

Baker et al. (1985) survey revealed that the first highly ranked determinant was the anticipated level of an enterprise's future earnings, the second factor was the pattern of past dividends and the third factor cited as important in determining dividend policy was the availability of cash. In particular, respondents were highly concerned with dividend continuity, and the respondents believed that dividend policy affects share value and dividend payments provide a signaling device of enterprise future prospects.

Baker and Phillips (1992) surveyed managements' views on stock dividends. The analysis was based on the responses of 121 responding enterprises. The major findings of the survey were that managers strongly agree on stock dividends which have a positive psychological impact, managers believe stock dividends enable them to express their confidence in the enterprise's future prospects, and the dominant motive for paying stock dividends is to maintain the enterprise's historical practice.

Baker and Powell (2000) investigated the views of corporate managers of major US enterprises about the factors influencing dividend policy. They concluded that the most important determinants of an enterprise's dividend policy were the level of current and expected future earnings and the pattern or continuity of past dividends.

Revista de Contabilidade(2004) surveyed on management views on corporate dividend policy in Portugal. This paper focuses on the dividend policy of the companies listed on the Lisbon Stock Exchange (LSE), from the viewpoint of their managers. It takes as its starting point the results obtained from a questionnaire answered by the Chief Executive Office and the Chief Financial Officer. Following Lintner's conclusions (l956), which were later confirmed by the empirical studies of Fama and Babiak (l968), Baker, Farrelly and Edelman (1985) and Partington (1989), they came to the conclusion that the most significant factors were the dividend stability and the shareholders' satisfaction. The importance of signaling and clientele effects was also significant. By using the factorial analysis and the principal component analysis in their study, they tried to identify new variables, which presented positive correlation with the dividend policy. Two factors, which explain about 56% of the total variance, were found. The results suggest that the managers of the listed companies determine the respective dividend policy as passive residual, though they show concern about the signaling of the prospective profit, the quotation stability and taxes. Besides that, they seem to be worried about the dividend stability and alterations, which can be reversible, and, also, with the current practice in the sector to which the company belongs. Also, the relative importance of the amount of shares in the hands of managers and controlling groups is relevant, which can be associated with the degree of capital concentration. Finally, they can say that the fact that it is easy to obtain external capital in the future also conditions the dividend policy.

Brav et al. (2005) surveyed 384 chief financial officers and treasurers to determine key factors that drive dividend and repurchase policy. The survey unveiled that, except under extraordinary circumstances, managers have a strong desire not to cut dividends. As a result, for enterprises that pay dividends tend to be smoothed from year to year and linked to sustainable long-run changes in profitability.

Baker , Mukherjee and Pakelian(2005) reported the results of a 2004 survey from managers of dividend-paying Norwegian firms listed on the Oslo Stock Exchange about their views on dividend policy. Specifically, they identify the most important factors in

making dividend policy decisions and managers' views about various dividend-related issues. The most important determinants of a firm's dividend policy are the level of current and expected future earnings, stability of earnings, current degree of financial leverage, and liquidity constraints. No significant correlation exists between the overall rankings of factors influencing dividend policy between Norwegian and U.S. managers. Norwegian managers express mixed views about whether a firm's dividend policy affects firm value. Respondents point to the possible role of dividend policy as a signaling mechanism. No support exists for the tax-preference explanation for paying dividends.

Mizuno (2007) surveyed the views of corporate managers on payout policy of Japanese enterprises listed in Tokyo Stock Exchange. The analysis of the responses obtained from 69 enterprises revealed that on payout policy enterprises put higher emphasis on dividends than on share repurchases, enterprises attach more importance to stable dividends than to performance linked dividends, and corporate managers recognized the relationship between dividends and an enterprise's value.

Archbold and Elisabete and Simões (2009) reported the empirical results of a questionnaire survey about corporate dividend policy addressed to finance directors of UK and Portuguese listed firms. Similar to other studies (for example, Brav et al., 2005 in the US and Dhanani, 2005 in the UK), they surveyed 313 finance directors in the UK and 48 in Portugal to examine their views of and understanding about the dividend decision in order to compare practice with theoretical propositions to be found in the literature. Their survey results demonstrate similarities in the responses from the UK and Portugal, but also substantive differences, particularly in respect of the interaction between dividend and investment decisions and views about the signalling consequences of dividends.

Baker, Dutta and Saadi (2010) surveyed on managers of firms listed on the Toronto Stock Exchange about their views on dividends. They find the perceptions of factors that influence dividend policy differ between managers of financial and non-financial firms. Industry classification also affects how managers view statements about the dividend pattern, dividend setting process, dividend policy and firm value, residual dividend theory, and explanations for paying dividends. However, they find weak, if any, multinational operations effect on manager perception of dividends. They conclude that researchers investigating dividends should partition the data by industry type and perhaps other firm characteristics to better understand the dividend puzzle.

7.2.2 Empirical Evidences of Developing Countries

Khurana (1985) surveyed the corporate dividend policy in India mailing structured questionnaire to the 215 enterprises. The survey and personal interviews, among others, revealed that dividend decision of enterprises was primarily governed by net profits and dividend paid in the previous year.

Manandhar (2002) surveyed the views of corporate executives on dividend policy and practice of corporate enterprises in Nepal. The major findings of the survey were that dividend decision was considered as discretionary decision, and lack of timely disclosure of relevant financial information and low rate of dividend payment are the major causes to the declining investors' confidence in the stock market.

Pradhan and Adhikari (2003) surveyed the views of financial executives of 50 large Nepalese enterprises. The survey findings, among others, revealed that major motive for paying cash dividends is to convey information to shareholders about favourable prospects of the enterprise and dividend decision is not a residual decision.

Anand(2005) analyzed the results of 2001 survey of 81 CFOs of bt-500 companies in India to find out the determinants of the dividend policy decisions of the corporate India. It uses factor analytic framework on the CFOs' responses to capture the determinants of the dividend policy of corporate India. Most of the firms have target dividend payout ratio and dividend changes follow shift in the long-term sustainable earnings. The findings on dividend policy are in agreement with Lintner's study on dividend policy. The dividend policy is used as a signaling mechanism to convey information on the present and future prospects of the firm and thus affects its market value. The dividend policy is designed after taking into consideration the investors' preference for dividends and clientele effect.

Basnet (2007) surveyed the views of managers on dividend policy of Nepalese enterprises listed at Nepal Stock Exchange Ltd. (NEPSE). The survey revealed that level of current and expected future earnings, liquidity constraints, projection about future state of the economy are the important factors in setting the enterprise's dividend policy in Nepal.

Adeymi and Adewale (2008) studied on dividend policy is a pivot around which other financial policies rotate, hence central to the performance and valuation of listed firms. This is more because managers as decision makers are often confronted with the "dividend puzzle" - the problem of reconciling observed dividend behaviour with economic

incentives. This paper is motivated by the apparent dearth of empirical works on dividend policies and practices in Nigeria and hence aims to evaluate such policies and practices among selected Nigerian quoted firms. The result of the survey questionnaires shows that Nigerian investors' attitudes are consistent with those of the bird-in-the-hand theorists. Hence, Nigerian managers' beliefs are that dividend payouts have significant signaling effect both on share price and future prospects of a firm. Consequently, they strive to maintain a consistent and uninterrupted dividend payout policy.

Shah (2009) surveyed the views of 60 financial executives on practices of dividend policy in Nepal. The results revealed, among others, stability of earnings, level of current earnings, and pattern of past dividends are the three important factors in order of their importance determining dividend policy of corporate sector.

Adhikari, (2010) analyzed the perceptions of managers on dividend policy by surveying the views of 125 Managers of 66 companies listed at Nepal Stock Exchange. This survey is motivated by the observation that much of dividend policy theory is implicitly based on a capital market perspective. Out of 66 listed enterprises surveyed, 16 were from banks and 50 were from nonbanks. To examine whether views of managers on dividend policy differ between banking group and non-banking group, chi-square analysis was used. Spearman's rank correlation coefficient was calculated to find out the degree of relationship between the responses of banking group and non-banking group and it was tested for significance at 5 percent level of significance. Median value of responses for each statement of observation on dividend policy was computed to highlight the significance of observation. The results of this study indicate that the most important determinants of dividend policy in order are growth rate of enterprise's earnings, patterns of past dividends, availability of investment opportunities; managers have more emphasis on the stable dividend policy; and dividend policy influences the value of the enterprise in Nepal.

Haleem,Rehman, and Javid (2011) examined the perceptions of managers of dividend-paying firms listed on Karachi Stock Exchange (KSE) on factors influencing dividend policy, issues relating dividend policy and the corporate governance practices. The survey shows that the most important factors that affect dividend policy are; the level of current earnings, the projection about the future state of the economy, the stockholders characteristics, concerns about the stock prices, need of current stockholders. From a

practical perspective, there is little discrimination among the top ranked factors. All the surveyed firms formulate their dividend policies according the theoretical model of Lintner (1956). The survey also shows that there is no difference in responses about these factors with respect to various titles of the respondents such as chief financial officer or Chief Exceptive Officer. The survey also finds strong support for the life cycling theory followed by agency theory, signaling theory and the catering theory respectively. The survey also shows the presence of corporate governance practices in the surveyed firms.

Khan et al. (2011) surveyed the opinions of finance directors of 60 foreign listed companies out of 105 foreign listed companies on Karachi stock exchange in order to visualize their view about the dividend decision. The survey resulted into some very important points to be noted that include: the firms give importance to the dividend as it was in past and the growth is considered at time of declaration of dividend; the dividend decision is influenced by the competitor policy and the fear of signaling of shortage of profitable investment; and the results demonstrate that foreign listed companies are more concerned with dividend policy.

Alshammari (2012) surveyed the corporate managers of 123 Kuwaiti firms listed in the Kuwait Stock Exchange (KSE) in order to look into what affects dividend policies in Kuwait. The questionnaire based survey with 52.58 percent response rate led some important findings. The major findings of the survey were that future earnings was a paramount factor that affects the level of current dividends and the level of current liquidity is another important factor affecting dividends in Kuwaiti listed firms.

Baker and Powell (2012) surveyed managers of dividend-paying firms listed on the Indonesian Stock Exchange (IDX) to learn their views about the factors influencing dividend policy, dividend issues, and explanations for paying dividends. Of the 163 firms surveyed, 52 firms responded, resulting in a response rate of 31.9 per cent. The evidence showed that managers view the most important determinants of dividends is the stability of earnings and the level of current and expected future earnings. The evidence also showed that managers of Indonesian firms perceive that dividend policy affects firm value.

Naser et al. (2013) surveyed the managers of the companies listed on Abu Dhabi Securities Exchange. The survey based on the responses obtained through 34 filled up questionnaires revealed, among others, that external factors related to the economic conditions together with the state of the capital market and lending conditions are all

important factors in formulating dividend policy, and restrictions imposed on them by debt providers together with current financial market crises are the most important factors that affect their dividend policy.

John (2013) surveyed the opinions of managers on factors influencing dividends decision in Nigerian listed firms. The survey revealed, among others, that pattern of past dividends, the level of current earnings, current degree of financial leverage, availability of alternative source of capital, liquidity constraints such as availability of cash, growth and investment opportunities have a significant influence on dividend decision in Nigerian firms.

Akinyomi(2013) studied to examines the opinions of managers on factors influencing dividends decision in Nigerian listed firms. The study employs survey research design and obtained primary data from selected managers through the administration of questionnaire. The result of the study reveals that pattern of past dividends, level of current earnings, current degree of financial leverage, availability of alternative source of capital; liquidity constraints such as availability of cash, growth and investment opportunities have significant influence on dividend decision in Nigeria. The study recommends that future researchers should investigate the relationship between dividend payment and firms' value.

Rana and Rashed(2013) studied to explore the perception of managers of companies listed on Abu Dhabi exchange about dividend policy. Thirty-four out of fifty-nine managers of companies listed on Abu Dhabi Securities Exchange were asked to reflect their experience about different aspects of dividend policy. The bird- in- hand theory received the highest support. The study extends limited previous research based on questionnaire and survey related dividend policy. It thus provides new evidence from an emerging and fast growing economy.

The review of aforementioned surveys revealed that there are various surveys on dividend policy mostly in the context of developed countries, and there are very few and less comprehensive surveys of managers with inconclusive results on dividend policy conducted in the context of Bangladesh. Thus, there is a need of conducting another survey of managers' views covering the divergent aspects of dividend policy in Bangladesh.

7.3 Research Design

7.3.1 Survey Instruments

The present research is based on an empirical study of 108 listed firms from the DSE (Dhaka Stock Exchange) with the objective of identifying the determinants of dividend policy. The data have been collected through the primary mode using a structured questionnaire containing 28 statements based on 5 point likert scale where not important=0, low important=1, moderate=2, important=3 very important=4. The respondents are asked to indicate the level of importance of the factors for determining their firm's dividend policy. The questionnaire has been prepared after reviewing the prior studies on dividend practices by decision maker. The survey is followed the literature of Baker and Powell (2000), Brav et al.(2005),Edelman(1983) etc.

7.3.2 Sample

I mailed the survey instruments to the chief financial officer (CFO) and Managing director, Chairman, Board of directors of each firm in September 2013. The mail included a cover letter and a stamped return envelope. The cover letter assured recipients that their answers would be confidential and released only in summary form. But I did not find satisfactory response. So, later, I went personally to the respondents of each firm. Finally, I have collected 108 respondents' opinion through questionnaire.

7.3.3 Variables used in the study

	Factors
X_1	Pattern of past dividend
X_2	Desire to maintain a constant payout ratio
X_3	The dividend policies of competitors or other companies in the same industry
X_4	Stability of earnings
X_5	Level of current earnings
X_6	Anticipated level of future earnings
X_7	A sustainable change in earnings
X_8	Attracting institutional investors to purchase the stock
X_9	The influence of institutional shareholders
X_{10}	Attracting individual investors to purchase the stock
X_{11}	Concern about the stock price
X_{12}	Liquidity level
X_{13}	Tax positions of shareholders
X_{14}	Category of shareholders and their expectations
X_{15}	Preference for dividends rather than risky reinvestment
X_{16}	Cost of raising external funds
X_{17}	Availability of profitable investment opportunities for the firm
X_{18}	Availability of alternative source of capital
X_{19}	Investors opportunities for investing in another projects

X_{20}	Concern that a dividend change may provide a wrong signal to investors
X_{21}	The future state of the economy
X_{22}	Inflationary Consideration
X_{23}	Concern about maintaining a target capital structure
X_{24}	Legal rules and constraints
X_{25}	Contractual constraints such as dividend restriction in debt contracts
X_{26}	Accessibility to capital market
X_{27}	Dilution of control & Dilution of earnings
X_{28}	Internal rate of return consideration i.e. reinvestment rate

7.3.4 Statistical Test

Non parametric Test:

I have used a non parametric test(Chi-square test) to determine whether the mean response for each of the 28 factors involving dividend policy differs significantly from 0 (not important).This study follows the test of Baker and Powell (2000), Edelman(1983) etc.

Factor Analysis:

The factor analysis has been used to analyze the dividend determinants by decision maker. The Principal Components Analysis has been used to explore and confirm the inter-relatedness between the occurrences of variables pertaining to dividend. The number of principal components to be retained has been decided based on Kaiser's criterion of Eigen value>1 and Bartlett's test. The Bartlett's test of significance led to acceptance of significant principal components. The PCA with varimax rotation method has been used to maximize the sum of squared loading of each factor extracted in turn. It explained more variance than the loadings obtained from any other method of factoring. The factors loaded by variables having significant loadings of the magnitude of .5 and above have been interpreted.

7.4 Results and Discussions: Non Financial Sector

7.4.1 Non Parametric Test:

Table-7.1: Test of significance

Variable	Level of importance (%)					Mean	Rank	Chi square value	Asymp. Sig.
	Very important	important	moderate	Low importance	Not important				
X_1	**32.56**	**48.84**	15.12	1.16	2.33	**3.0706**	3	72.25	.00
X_2	16.28	26.74	**47.67**	19.77	0	**2.9765**	5	62.6	0.00
X_3	12.79	23.26	27.91	**23.26**	**15.12**	1.9294	23	5.51	**0.239**
X_4	**40.7**	**41.86**	13.95	2.33	1.16	**3.1882**	4	69.23.	.00
X_5	**46.51**	**37.21**	13.95	2.33	0	**3.2941**	1	42.93	.00
X_6	15.12	39.53	30.23	13.95	1.16	2.5294	7	38.76	.00
X_7	13.95	39.95	32.56	10.47	2.33	2.4941	9	41.20	.00
X_8	4.65	12.79	38.37	30.23	13.95	1.6588	26	32.98	.00
X_9	2.33	12.79	43.02	29.07	12.79	1.6353	28	44.23	.00
X_{10}	12.79	24.42	33.72	15.12	13.95	2.0941	18	13.76	0.008
X_{11}	**36.05**	**33.72**	17.44	9.30	3.49	**2.8824**	6	36.09	.00
X_{12}	50.00	34.88	8.14	5.81	1.16	**3.2588**	2	78.18	.00
X_{13}	10.47	22.09	29.07	31.40	6.98	1.9647	21	20.51	.00
X_{14}	11.63	22.09	34.88	24.42	6.98	2.0706	19	20.86	.00
X_{15}	3.49	20.93	33.72	32.56	9.30	1.7529	25	31.55	.00
X_{16}	6.98	19.77	39.53	25.58	8.14	1.9059	22	31.09	.00
X_{17}	16.28	38.37	26.74	13.95	4.65	2.5059	8	30.70	.00
X_{18}	10.47	37.21	29.07	18.60	4.65	2.2941	15	30.39	.00
X_{19}	10.47	17.44	24.42	**22.09**	**25.58**	1.6471	27	6.55	**0.161**
X_{20}	12.79	37.21	30.23	15.12	4.65	2.3765	12	30.62	.00
X_{21}	10.47	39.53	24.42	22.09	3.49	2.3412	14	33.07	.00
X_{22}	6.98	29.07	32.56	23.26	8.14	2.0588	20	24.11	.00
X_{23}	9.30	38.37	36.05	10.47	5.81	2.3765	13	43.07	.00
X_{24}	20.93	26.74	26.74	20.93	4.65	2.4118	11	14.11	0.007
X_{25}	4.65	13.95	40.70	23.26	17.44	1.8588	24	27.37	.00
X_{26}	6.98	31.40	41.86	12.79	6.98	2.1647	16	68.04	.00
X_{27}	12.79	41.86	31.40	9.30	4.65	2.1412	17	42.83	.00
X_{28}	12.79	41.86	31.40	9.3	4.65	2.4824	10	43.41	.00

From the table-7.1, it is seen that the variable 3(The dividend policies of competitors or other companies in the same industry)and variable 19(Investors opportunities for investing

in another projects) are statistically insignificant at chi square test and the more than 40 percent respondents gave their opinion as not important and low important variables on dividend determinants.

Among the significant variables, the variables 5(Level of current earnings), 12(Liquidity level), 1(pattern of past dividend), 4(stability of earnings), 2(desire to maintain a constant payout ratio) are the top five significant determinants in dividend decision. These reveal the picture of dividend determinants in our country. The companies mainly consider the current earnings and liquidity position of the company. They also maintain to follow the pattern of previous years dividend payment by paying stable dividend payout ratio. Others factors are relevant but the managers mainly consider the earlier to most significant factors.

The results support the findings of Mizuno (2007) ,Khan et al. (2011) ,Alshammari (2012) ,Baker and Powell (2012),Naser et al. (2013) ,John (2013) ,Manandhar (2002) ,Shah (2009) ,Akinyomi(2013) ,Rana and Rashed(2013) , Baker, Dutta and Saadi (2010) , Archbold and Elisabete and Simões (2009) .

7.4.2 Factor Analysis

7.4.2.1 Reliability Analysis

The scale of measurement was tested using Cronbach α reliability test. It was found to be 0.810 which is considered a satisfactory level of reliability.

Table-7.2: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.810	.809	26

7.4.2.2 Sampling Adequacy:

The tests have been conducted to know that whether the sample is adequate or not. The sampling adequacy is depicted in table 7.3:

Table-7.3: KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.632
Bartlett's Test of Sphericity	Approx. Chi-Square	940.922
	df	378
	Sig.	.000

KMO recommends accepting value greater than 0.5 as barely acceptable and Bartlett recommends the accepting value less than 0.05.Since the accepting value for variables is .632 (more than .5) for KMO and .000 for Bartlett' test(less than .05), these measures indicate that the set of variables is appropriate for factor analysis and the analysis can proceed for next stage.

7.4.2.3 Component Factor Analysis: Deriving the Factors

Factor analysis procedure is based on initial computation of a table of correlations among the variables that is, correlation matrix. This matrix is then transformed through estimation of a factor model to obtain the factor matrix containing the loadings for each variable on each derived factor. The table 7.4 contains the information regarding the factors and the relative explanatory power as expressed by their eigen values. As per the latent root criteria of retaining the factors, those factors should be retained that have eigen value>1. The Eigen values, the percentage of total variance, and rotated sum of squared loadings have been shown in Table-7.4.The factor matrix as obtained in the principal component analysis has also been further subjected to Varimax Rotation. An examination of Eigen values has led to the retention of ten factors. These factors have accumulated for 10.72%, 9.60%, 9.35%, 8.10%, 7.22%, 6.41%, 6.34%, 5.815%, 5.40%, and 5.00% of variation. This implies that the total variance accumulated for by all ten factors is **74.00%** and remaining variance is explained by other factors.

Table 7.4: Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.122	18.294	18.294	5.122	18.294	18.294	3.004	10.729	10.729
2	3.123	11.153	29.447	3.123	11.153	29.447	2.688	9.601	20.331
3	2.421	8.648	38.095	2.421	8.648	38.095	2.620	9.358	29.688
4	2.217	7.917	46.012	2.217	7.917	46.012	2.270	8.108	37.796
5	1.568	5.601	51.613	1.568	5.601	51.613	2.023	7.226	45.022
6	1.462	5.220	56.833	1.462	5.220	56.833	1.797	6.417	51.440
7	1.410	5.035	61.869	1.410	5.035	61.869	1.777	6.347	57.786
8	1.261	4.503	66.372	1.261	4.503	66.372	1.628	5.815	63.601
9	1.124	4.015	70.387	1.124	4.015	70.387	1.514	5.407	69.008
10	1.014	3.623	74.009	1.014	3.623	74.009	1.400	5.001	74.009
11	.790	2.821	76.830						
12	.676	2.414	79.245						
13	.652	2.329	81.574						
14	.615	2.197	83.771						
15	.579	2.068	85.839						
16	.502	1.792	87.630						
17	.445	1.590	89.221						
18	.435	1.555	90.775						
19	.415	1.484	92.259						
20	.387	1.381	93.640						
21	.328	1.171	94.812						
22	.300	1.071	95.883						
23	.274	.980	96.862						
24	.241	.860	97.723						
25	.216	.772	98.495						
26	.167	.595	99.090						
27	.138	.492	99.582						
28	.117	.418	100.000						

Extraction Method: Principal Component Analysis.

7.4.2.4 Scree plot:

The application of Cattell's (1966) scree test (Figure. 7.1) resulted in acceptance of Factors. The Scree plot shows the factor eigen values in descending order .The eigen values of a factor represents the variance explained by each factor. An elbow in the Scree plot occurs at Factor 10, which indicates the point at which the inclusion of additional factors does not

contribute significantly in explaining the variance of the data set. The results of the analysis are presented in the form of factor pattern matrix. Factors above the elbow of the plot are retained. A set of 10 Factors that were chosen accounts for about 74.009 % of the variations in the data.

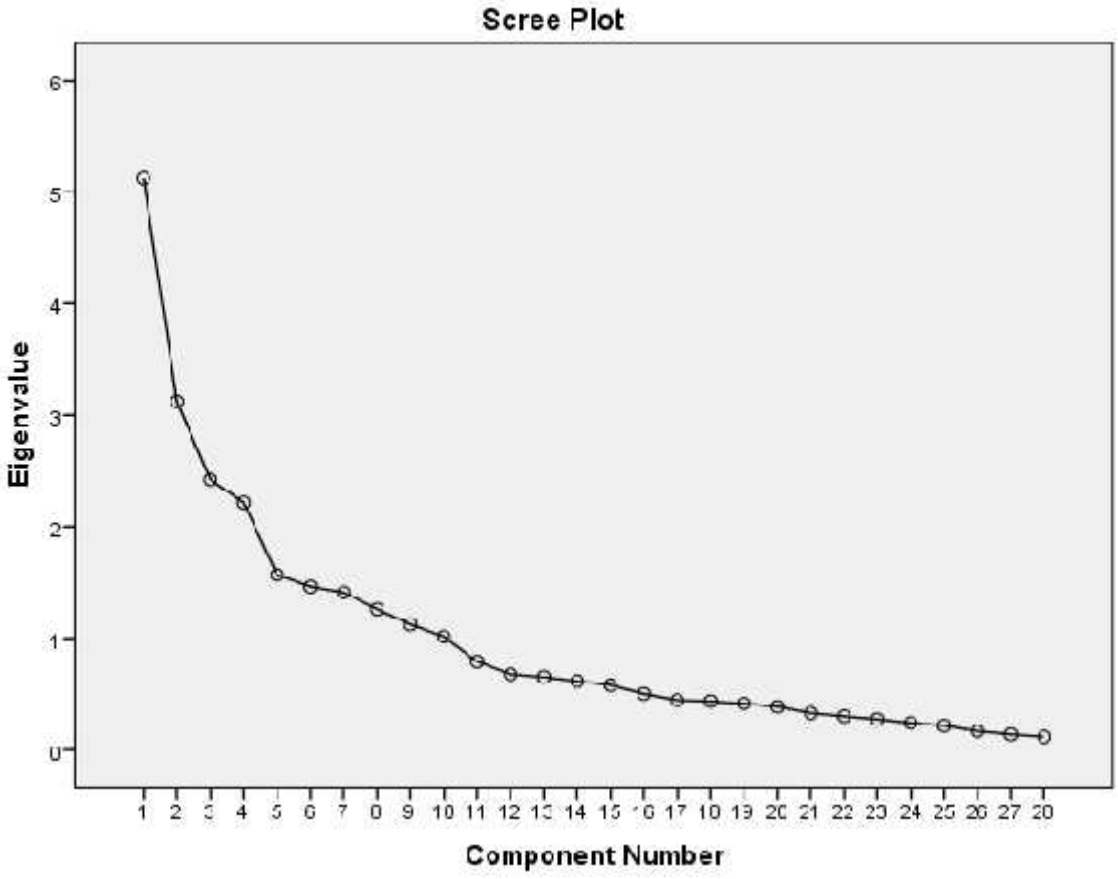


Figure-7.1: Scree Plot

7.4.2.5 Examining and identifying the significant Factors loading:

After studying the Eigen values for the components, the next step is to study the factor matrix and the respective factors loadings. The loadings above 0.45 have been considered for the study. For obtaining the rotated factor matrix, orthogonal rotation method, viz, VARIMAX rotation has been used. The results are displayed in table 7.5.

Table-7.5: Rotated Component Matrix[a]

	Component									
	1	2	3	4	5	6	7	8	9	10
X14	***.782***	-.048	.152	.166	.080	-.119	.153	-.032	.179	-.111
X13	***.753***	-.044	.022	.019	.192	.008	-.246	.173	.060	-.010
X8	***.609***	.098	.045	.200	-.059	.236	.453	-.192	-.234	.099
X9	***.543***	-.113	.119	.086	.183	.526	.100	.108	-.219	.225
X15	***.482***	.101	.471	-.026	.254	.001	.163	-.160	-.075	.251
X4	.090	***.800***	.000	.062	-.044	-.101	-.063	-.225	.023	.023
X5	-.159	***.728***	-.171	.130	.040	-.108	.253	.175	.018	.015
X6	.021	***.677***	.399	-.066	.059	.162	.107	.106	-.201	.051
X7	.003	***.585***	.324	.026	.138	.329	-.022	.216	.210	-.247
X12	.090	***.453***	.017	.252	.375	-.445	-.153	.228	-.155	-.093
X21	.089	.076	***.876***	.045	-.037	.007	.010	.108	.029	.040
X22	.132	.026	***.658***	.362	-.123	.050	.282	-.135	-.080	-.095
X24	-.015	.157	***.580***	***.075***	-.034	.248	.209	.162	.146	-.430
X26	.166	-.117	.100	***.803***	.054	.118	.102	.201	.058	-.212
X27	.067	.218	.150	***.767***	.041	.141	-.060	-.055	.095	.214
X28	-.241	.330	.169	***.468***	.077	.150	.088	.266	.273	-.034
X10	.215	-.078	.053	-.084	***.778***	-.011	.270	-.016	-.133	-.058
X2	-.057	.138	-.092	.065	***.704***	.122	-.244	-.053	.399	.008
X11	.022	.112	-.137	.471	***.644***	-.116	.025	-.150	-.125	.144
X25	.085	.025	.094	.297	-.024	***.835***	.018	.085	-.085	.049
X16	.177	.039	.269	-.001	.146	.162	***.742***	-.005	.054	.100
X17	-.084	.207	.063	.088	-.078	-.195	***.629***	.495	.062	-.002
X18	.124	.037	.070	.086	-.088	.119	.052	***.643***	.096	.085
X1	.074	-.017	-.014	.104	-.036	-.124	.035	.096	***.857***	.134
X23	-.014	-.312	.374	.332	.131	.243	.282	.075	***.481***	.126
X20	-.093	.004	-.008	.019	-.006	.149	.132	.126	.191	***.780***

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 14 iterations.

7.4.2.6 Assessing Communalities

After identifying the significant factor loadings, next step is to study the communalities of the variables, representing the amount of variance accounted for by the factor solution for each variable. It is generally assumed that variable with communalities>0.5 should be retained for the study; the communalities of the variables have been shown in the table 7.6.

Table 7.6: Communalities

	Initial	Extraction
X1	1.000	.796
X2	1.000	.767
X4	1.000	.720
X5	1.000	.711
X6	1.000	.717
X7	1.000	.727
X8	1.000	.789
X9	1.000	.759
X10	1.000	.762
X11	1.000	.742
X12	1.000	.724
X13	1.000	.701
X14	1.000	.753
X15	1.000	.650
X16	1.000	.716
X17	1.000	.750
X18	1.000	.813
X20	1.000	.817
X21	1.000	.799
X22	1.000	.712
X23	1.000	.669
X24	1.000	.706
X25	1.000	.820
X26	1.000	.812
X27	1.000	.746
X28	1.000	.598

Extraction Method: Principal Component Analysis.

7.4.2.7 Factor Analysis Results

The principal component analysis using varimax rotation of twenty six variables has led to the extraction of ten factors. Following tables represent the final results of the study and reflects the extraction of the factors that are considered more influential by the respondents.

Factor Analysis

The rotated factor matrix has been shown in Table-7.5. This shows that variables understudy have constituted ten groups factors. These have been discussed in the following paragraphs.

Factor-I: Clientele factor

Factor-I explains 10.72% of the total variations existing in the variable set. This includes variables- X_{14}, X_{13}, X8, X_9, X_{15}, . This factor has significant factor loadings on these variables which have formed this major cluster. So, this factor provides a basis for conceptualization of a dimension, which may be identified as '*Clientele Factor'*.

Factor-II: Earnings and liquidity factor

Factor-II explains 9.6% of the total variations existing in the variable set. This includes variables- X_4, X_5, X_6 X_7 and X_{12}. This factor has significant factor loadings on these variables which have formed second important cluster. So, this factor provides a basis for conceptualization of a dimension, which may be identified as '*earnings and liquidity factor'*.

Factor-III: Economic Related Factor

Factor-III explains 9.35% of the total variations existing in the variable set. This includes variables- X_{21}, X_{22}, X_{24}. This factor has significant factor loadings on these variables which have formed third cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as '*Economic Related Factor'*.

Factor-IV: Capital market Related Factor

Factor-IV explains 8.1% of the total variations existing in the variable set. This includes variables- $X_{26,}X_{27}$, $X_{28.}$ This factor has significant factor loadings on these variables which have formed fourth cluster. So, this factor provides a basis for conceptualization of a dimension, which may be identified as '*Capital market Access Factor'*.

Factor-V: Market price related Factor

Factor-V: explains 7.22% of the total variations existing in the variable set. This includes variable – $X_{10,}$ $X_{2,}$ X_{11}. This factor has significant factor loadings on these variables which have formed fifth cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as '*Market price related Factor'*.

Factor-VI: Legal Constraint Factor

Factor-VI: explains 6.41% of the total variations existing in the variable set. This includes variables- X_{25}. This factor has significant factor loadings on these variables which have formed sixth cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as '*legal Constraint Factor'*.

Factor-VII: Residual Policy Factor

Factor-VII explains 6.34% of the total variations existing in the variable set. This includes variables - $X_{16,}$ X_{17}. This factor has significant factor loadings on these variables which have formed seventh cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as '*Residual Policy Factor'*.

Factor-VIII: Capital Source Factor

Factor-VIII explains 5.81% of the total variations existing in the variable set. This includes variables – $X_{18,}$. This factor has significant factor loadings on these variables which have formed eighth cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as *'Capital source Factor'*.

Factor-IX: Pattern of Past dividend Issue Factor

Factor-IX explains 5.4% of the total variations existing in the variable set. This includes variable – $X_{1,}$ X_{23}. This factor has significant factor loadings on these variables which have formed ninth cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as *'Pattern of Past dividend Issue Factor'.*

Factor-X: Signaling Factor

Factor-X explains 5.00% of the total variations existing in the variable set. This includes variables – X_{20}. This factor has significant factor loadings on these variables which have formed tenth clusters. So, this factor provides a basis for conceptualization of a dimension which may be identified as '*Signaling Factor'.*

Ranking of the Factors

Finally, the rankings obtained on the basis of factor wise scores are shown in the following table:

Table-7.7: Rankings of the Factors

Factor		Average Score	Rank
I	*Clientele factor*	1.16	10
II	*Earnings and liquidity factor*	1.91	1
III	*Economic Related Factor*	1.59	5
IV	*Capital market Related Factor*	1.51	7
V	*Market price related Factor*	1.85	3
VI	*Legal Constraint Factor*	1.54	6
VII	*Residual Policy Factor*	1.49	8
VIII	*Capital Source Factor*	1.47	9
IX	*Pattern of Past dividend Issue Factor*	1.88	2
X	*Signaling Factor*	1.84	4

Note: Data have been compiled by the researchers

The ranking shows that 'factors II: Earnings and Liquidity Factor' is most important factor that leads the dividend decision in Bangladesh. This factor includes variables- X_4: Stability of Earnings, X_5: Level of current earnings, X_6: Anticipated level of future earnings, X_7: A sustainable change in earnings, $X_{12:}$ Liquidity level. This implies that the managements of a company concern about the earnings and liquidity position of the company.

The second important factor is the' pattern of past dividend issue' which indicates that the company follow the previous trend of dividend payment in dividend decision. The third important factor is 'market price related factor' which implies that the companies take the dividend decision to maximize the market price of share. The other important factors are signaling factor and economy related factor.

But it is a great concern that the clientele issue is lowest position (10^{th}) in ranking. The company has less concern about the categories of investors and they do not set the dividend policy to attract the specific group of investors.

7.4.3 Theoretical Framework Development

On the basis of findings from chi-square test and factor analysis, I have developed a theoretical framework which is discussed below.

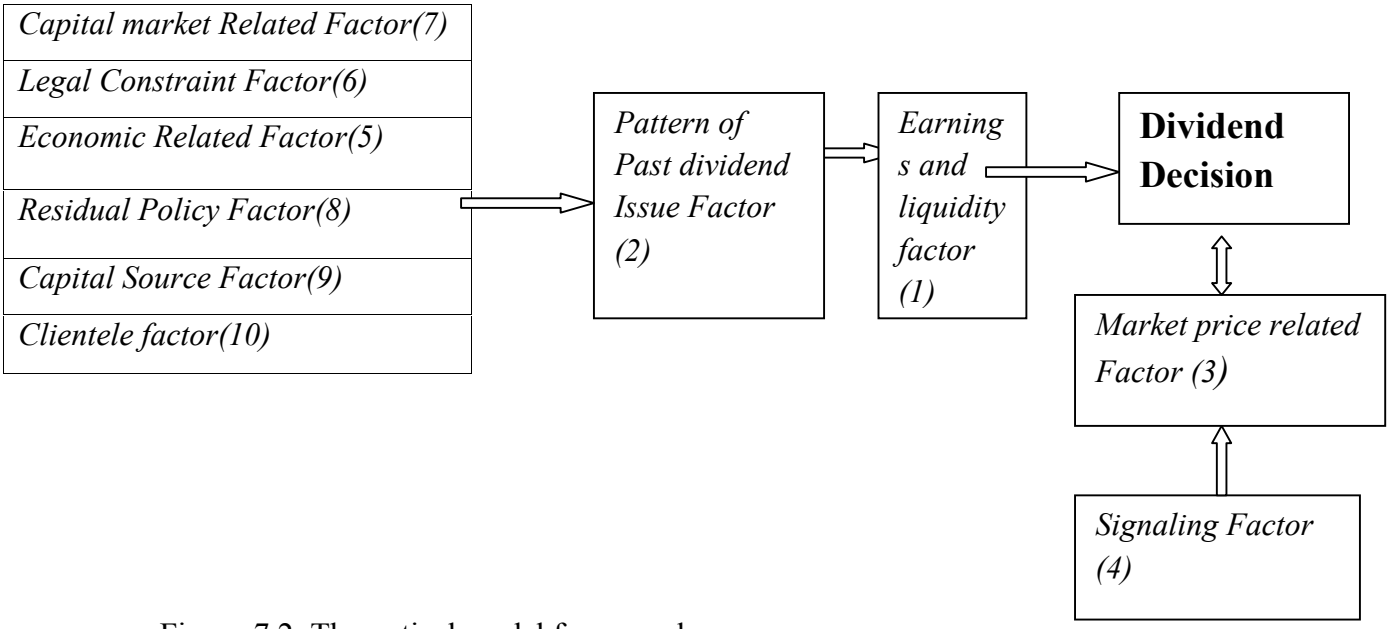


Figure-7.2: Theoretical model framework

I have developed this model framework on the basis of importance of the factors in determining the dividend decision. In the first stage, the factors – economic related factor, legal constraint factor, capital market related factor, residual policy factor, capital resource factor, clientele factors are considered in dividend decision making. Then in the second stage, the companies follow the previous years' pattern of dividend payment. In the next stage, dividend decision is made mainly on the level of earnings and liquidity. On the other hand, dividend decision is closely related to market price of share. The market price of share is influenced by the signaling impact of dividend payment.

7.5 Results and Discussions: Financial Sector (Banking sector)

7.5.1 Non Parametric Test:

Table-7.8: test of significance

Variable	Level of importance (%)					Mean	Rank	Chi square value	Asymp. Sig.
	Very important	important	moderate	Low important	Not important				
X_1	31.82	36.36	27.27	4.55	0.00	2.9545	**4**	18.34	.001
X_2	27.27	54.55	9.09	4.55	4.55	2.9545	**3**	20.27	.00
X_3	4.55	4.55	40.91	27.27	22.73	1.4091	28	6.72	**.08**
X_4	36.36	18.18	27.27	18.18	0.00	2.7273	7	12.45	.025
X_5	59.09	18.18	18.18	4.55	0.00	3.3182	**1**	14.7	.02
X_6	22.73	22.73	36.36	18.18	0.00	2.5000	9	2.34	.65
X_7	9.09	40.91	40.91	9.09	0.00	2.5000	10	8.9	0.031
X_8	4.55	22.73	18.18	36.36	18.18	1.5909	27	5.7	.22
X_9	0.00	18.18	22.73	40.91	18.18	1.6818	24	4.5	.2
X_{10}	9.09	36.36	22.73	31.82	0.00	2.2273	14	3.8	.28
X_{11}	31.82	31.82	22.73	13.64	0.00	2.8182	6	12.7	0.024
X_{12}	54.55	27.27	4.55	4.55	9.09	3.1364	**2**	20..27	.000
X_{13}	18.18	22.73	18.18	27.27	13.64	2.0455	20	11.34	0.029
X_{14}	0.00	27.27	31.82	27.27	13.64	1.7273	23	10.9	.03
X_{15}	0.00	18.18	45.45	22.73	13.64	1.6818	25	5.2	.15
X_{16}	9.09	9.09	45.45	22.73	13.64	1.9545	22	4.8	.3
X_{17}	4.55	50.00	31.82	9.09	4.55	2.4091	12	18	.00
X_{18}	9.09	40.91	13.64	31.82	4.55	2.1818	15	10.7	.03
X_{19}	0.00	31.82	22.73	18.18	27.27	1.5909	26	.9	**.82**
X_{20}	9.09	31.82	31.82	18.18	9.09	2.1364	18	8.91	.032
X_{21}	18.18	9.09	40.91	31.82	0.00	2.1364	17	5.2	.16
X_{22}	9.09	9.09	40.91	22.73	18.18	2.0909	19	8.9	.03
X_{23}	22.73	27.27	27.27	13.64	9.09	2.4091	11	17.7	.00
X_{24}	31.82	31.82	31.82	4.55	0.00	2.9091	5	18.9	.00
X_{25}	4.55	22.73	40.91	22.73	9.09	1.9545	21	10.7	.03
X_{26}	4.55	45.45	18.18	27.27	4.55	2.1364	16	14.3	.006
X_{27}	9.09	45.45	18.18	27.27	0.00	2.3636	13	14.7	.005
X_{28}	22.73	45.45	13.64	13.64	4.55	2.6818	8	10.7	.03

From the table-7.8, it is seen that the variable 3(The dividend policies of competitors or other companies in the same industry)and variable 19(Investors opportunities for investing in another projects), variable 6(anticipated level of future earnings), variable8(attracting individual investor to purchase stock),variable 9(the influence of institutional investors),variable10(attracting individual investors), variable15(preference for dividends rather than the risky reinvestment),variable16(cost of raising external funds),variable19(investors opportunities for investing in another projects),variable 21(the future state of the economy) are statistically insignificant at chi square test and the more than 40 percent respondents gave their opinion as not important and low important variable on dividend determinants.

Among the significant variables, the variables 5(Level of current earnings), 12(Liquidity level), 2(desire to maintain a constant payout ratio) 1(pattern of past dividend), 24(legal rules and constraints), are the top five significant determinants in dividend decision. These reveal the picture of dividend determinants in our country. The companies mainly consider the current earnings and liquidity position of the company. They also maintain to follow the pattern of previous years dividend payment by paying stable dividend payout ratio. Others factors are relevant but the companies mainly consider the earlier to most significant factors.

The findings of Baker & Powell(2009) in Indonesian market, Anand(2005) in Indian market, Khurana (1985) , Pradhan and Adhikari (2003), Chinmoy Sahu(2002) ,Anand(2005) support the findings of this study.

7.5.2 Factor Analysis

7.5.2.1 Reliability Analysis

The scale of measurement was tested using Cronbach α reliability test. It was found to be 0.851 which is considered a satisfactory level of reliability.

Table-7.9: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.851	.854	19

7.5.2.2 Sampling Adequacy

The tests have been conducted to know that whether the sample is adequate or not. The sampling adequacy is depicted in table 7.10:

Table-7.10: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.641
Bartlett's Test of Sphericity	Approx. Chi-Square	294.156
	Df	171
	Sig.	.000

KMO recommends accepting value greater than 0.5 as barely acceptable and Bartlett recommends the accepting value less than 0.05.Since the accepting value for variables is .641 (more than .5) for KMO and .000 for Bartlett' test(less than .05), these measures indicate that the set of variables is appropriate for factor analysis and the analysis can proceed for next stage.

7.5.2.3 Component Factor Analysis: Deriving the Factors

Factor analysis procedure is based on initial computation of a table of correlations among the variables that is, correlation matrix. This matrix is then transformed through estimation of a factor model to obtain the factor matrix containing the loadings for each variable on each derived factor. The table 7.11 contains the information regarding the factors and the relative explanatory power as expressed by their eigen values. As per the latent root criteria of retaining the factors, those factors should be retained that have eigen value>1. The Eigen values, the percentage of total variance, and rotated sum of squared loadings have been shown in Table-7.11.The factor matrix as obtained in the principal component analysis has also been further subjected to Varimax Rotation. An examination of Eigen values has led to the retention of six factors. These factors have accumulated for 18.84%, 15.41%, 14.26%, 11.02%, 10.49%, and 9.85% of variation. This implies that the total variance accumulated for by all six factors is 79.90% and remaining variance is explained by other factors.

Table 7.11 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.972	26.171	26.171	4.972	26.171	26.171	3.580	18.843	18.843
2	3.002	15.799	41.969	3.002	15.799	41.969	2.929	15.418	34.261
3	2.510	13.209	55.178	2.510	13.209	55.178	2.710	14.262	48.523
4	2.072	10.904	66.083	2.072	10.904	66.083	2.095	11.027	59.549
5	1.548	8.148	74.231	1.548	8.148	74.231	1.994	10.493	70.042
6	1.077	5.670	79.901	1.077	5.670	79.901	1.873	9.858	79.901
7	.908	4.781	84.682						
8	.766	4.029	88.712						
9	.488	2.569	91.281						
10	.463	2.439	93.720						
11	.383	2.018	95.738						
12	.284	1.493	97.231						
13	.191	1.007	98.238						
14	.138	.728	98.967						
15	.083	.436	99.402						
16	.054	.287	99.689						
17	.034	.180	99.868						
18	.022	.117	99.985						
19	.003	.015	100.000						

Extraction Method: Principal Component Analysis.

7.5.2.4 Scree plot:

The application of Cattell's (1966) scree test (Figure. 7.3) resulted in acceptance of Factors. The Scree plot shows the factor eigen values in descending order .The eigen values of a factor represents the variance explained by each factor. An elbow in the Scree plot occurs at Factor 6, which indicates the point at which the inclusion of additional factors does not contribute significantly in explaining the variance of the data set. The results of the analysis are presented in the form of factor pattern matrix. Factors above the elbow of the plot are retained. A set of 6 Factors that were chosen accounts for about 79.90 % of the variations in the data.

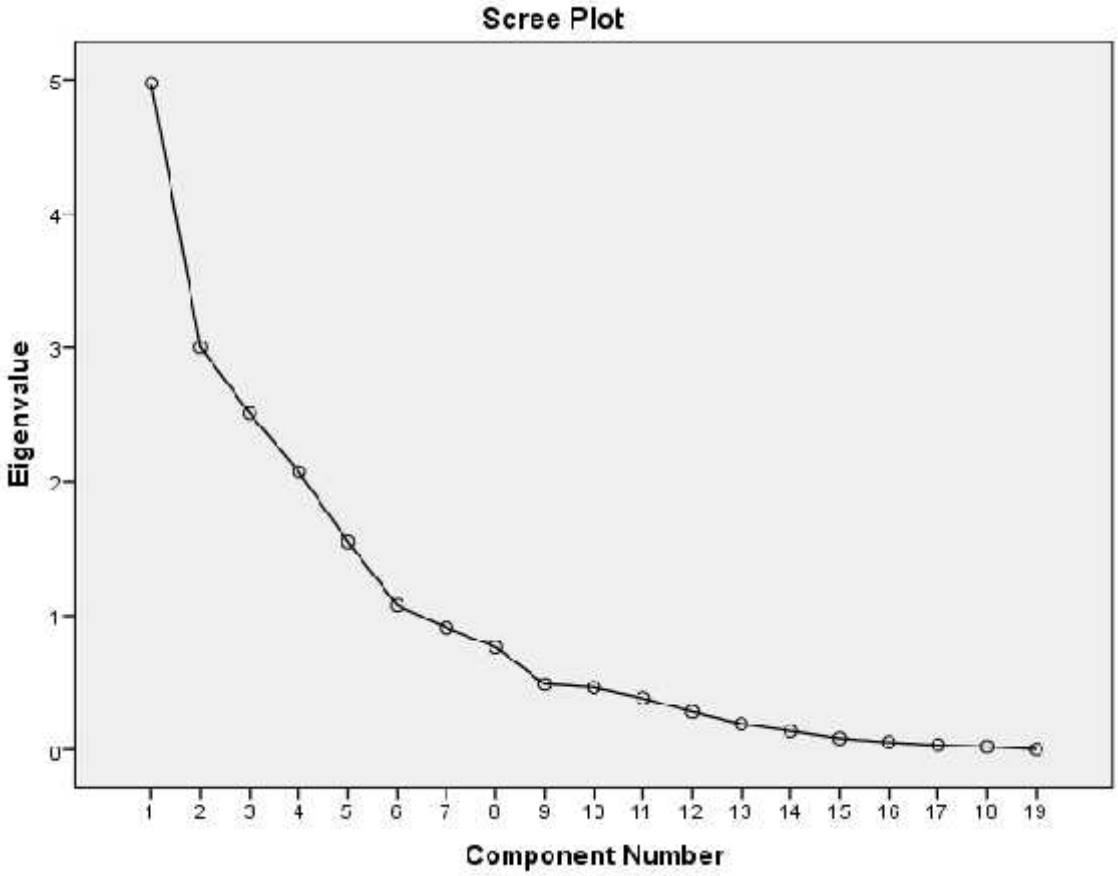


Figure-7.3: Scree Plot

7.5.2.5 Examining and identifying the significant Factors loading:

After studying the Eigen values for the components, the next step is to study the factor matrix and the respective factors loadings. The loadings above 0.5 have been considered for the study. For obtaining the rotated factor matrix, orthogonal rotation method, viz, VARIMAX rotation has been used. The results are displayed in table 7.12.

Table 7.12: Rotated Component Matrix[a]

	Component					
	1	2	3	4	5	6
X26	***.890***	.041	-.030	.150	.092	.210
X25	***.821***	.229	.263	-.027	.035	.061
X28	***.752***	-.071	.107	.340	.378	.146
X17	***.715***	.470	.177	.042	-.235	-.042
X20	.163	***.844***	.132	.112	.066	-.060
X11	.248	***.736***	-.138	-.024	.043	.030
X12	-.297	***.672***	.018	-.170	-.105	.443
X18	.518	***.619***	-.182	.103	-.209	.195
X7	.075	***-.597***	.532	-.283	-.248	.175
X22	-.073	-.106	***.833***	-.010	.177	.100
X24	.289	.070	***.775***	.136	.148	-.308
X23	.418	.041	***.698***	.031	-.355	.255
X4	-.014	-.043	***.573***	.098	-.527	.245
X1	.080	.016	-.047	***.935***	-.061	-.076
X2	.152	.085	.134	***.901***	-.185	-.052
X13	.123	-.013	.055	-.194	***.814***	-.025
X5	.192	.003	.065	.003	-.184	***.797***
X27	.483	.049	-.007	-.244	.238	***.695***
X14	.097	.416	.324	-.096	.492	***.554***

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 11 iterations.

7.5.2.6 Assessing Communalities

After identifying the significant factor loadings, next step is to study the communalities of the variables, representing the amount of variance accounted for by the factor solution for each variable. It is generally assumed that variable with communalities>0.5 should be retained for the study; the communalities of the variables have been shown in the table 7.13.

Table-7.13: Communalities

	Initial	Extraction
X1	1.000	.892
X2	1.000	.898
X4	1.000	.677
X5	1.000	.710
X7	1.000	.817
X11	1.000	.626
X12	1.000	.777
X13	1.000	.892
X14	1.000	.845
X17	1.000	.822
X18	1.000	.777
X20	1.000	.778
X22	1.000	.753
X23	1.000	.855
X24	1.000	.825
X25	1.000	.802
X26	1.000	.870
X27	1.000	.706
X28	1.000	.861

Extraction Method: Principal Component Analysis.

7.5.2.7 Factor Analysis Results

The principal component analysis using varimax rotation of nineteen variables (insignificant variables excluded) has led to the extraction of six factors. Following sections represent the final results of the study and reflects the extraction of the factors that are considered more influential by the respondents.

Factor Analysis

The rotated factor matrix has been shown in Table-7.12. This shows that variables understudy have constituted six groups factors. These have been discussed in the following paragraphs.

Factor-I: Investment Factor

Factor-I explains 18.84% of the total variations existing in the variable set. This includes variables- X_{26}, X_{25}, X_{28}, X_{17}. This factor has significant factor loadings on these variables which have formed this major cluster. So, this factor provides a basis for conceptualization of a dimension, which may be identified as '*Investment Factor'*.

Factor-II: Liquidity and market reaction factor

Factor-II explains 15.11% of the total variations existing in the variable set. This includes variables- X_{20}, X_{11}, X_{12} X_{18} and X_7. This factor has significant factor loadings on these variables which have formed second important cluster. So, this factor provides a basis for conceptualization of a dimension, which may be identified as '*Liquidity and market reaction factor'*.

Factor-III: Legal and capital ratio factor

Factor-III explains 14.26% of the total variations existing in the variable set. This includes variables- X_{23}, X_{22}, X_{24}, and X_4. This factor has significant factor loadings on these variables which have formed third cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as '*Legal and capital ratio factor'*.

Factor-IV: Target payout and dividend pattern Factor

Factor-IV explains 11.02% of the total variations existing in the variable set. This includes variables- X_2, X_1. This factor has significant factor loadings on these variables which have formed fourth cluster. So, this factor provides a basis for conceptualization of a dimension, which may be identified as '*Target payout and dividend pattern Factor'*.

Factor-V: Tax clientele Factor

Factor-V: explains 10.49% of the total variations existing in the variable set. This includes variable –X_{13}. This factor has significant factor loadings on this variable which has formed eighth cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as '*Tax clientele Factor'*.

Factor-VI: Earnings and Catering Factor

Factor-VI: explains 9.85% of the total variations existing in the variable set. This includes variables- $X_{5,}$ $X_{27,}$ X_{14}. This factor has significant factor loadings on these variables which have formed fifth cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as '*Earnings and Catering Factor'*.

Ranking of the Factors

Finally, the rankings obtained on the basis of factor wise scores are shown in the following table:

Table-7.14: Rankings of the Factors

Factor		Average Score	Rank
I	*Investment Factor*	1.81	2
II	*Liquidity and market reaction factor*	1.76	4
III	*Legal and capital ratio factor*	1.74	5
IV	*Target payout and dividend pattern Factor*	2.71	1
V	*Tax clientele Factor*	1.66	6
VI	*Earnings and Catering Factor*	1.80	3

Note: Data have been compiled by the researchers

From the table-7.14, the ranking shows that 'factors II: *Target payout and dividend pattern Factor*' is most important factor that leads the dividend decision in financial sectors. This factor includes variables- X_1: pattern of past dividend, X_2: Desire to maintain a constant payout ratio. This implies that the management of a company concern about the previous year's dividend payment with keeping target payout which supports the Lintner Model. The second important factor is the investment factor which indicates that the companies consider the investment opportunity and rate of return from the investment as dividend determinants. The third important factor is 'earnings and catering factor' which implies that the companies take the dividend decision on considering inventors' preference by availability of earnings. The other important factors are liquidity and market reaction factor, legal and capital ratio factor and tax clientele factor.

But it is a great concern that the clientele issue is lowest position (6^{th}) in ranking. The company has less concern about the categories of investors and they do not set the dividend policy to attract the specific group of investors.

7.5.3Theoretical Framework Development

On the basis of findings from chi-square test and factor analysis, I have developed a theoretical framework which is discussed below.

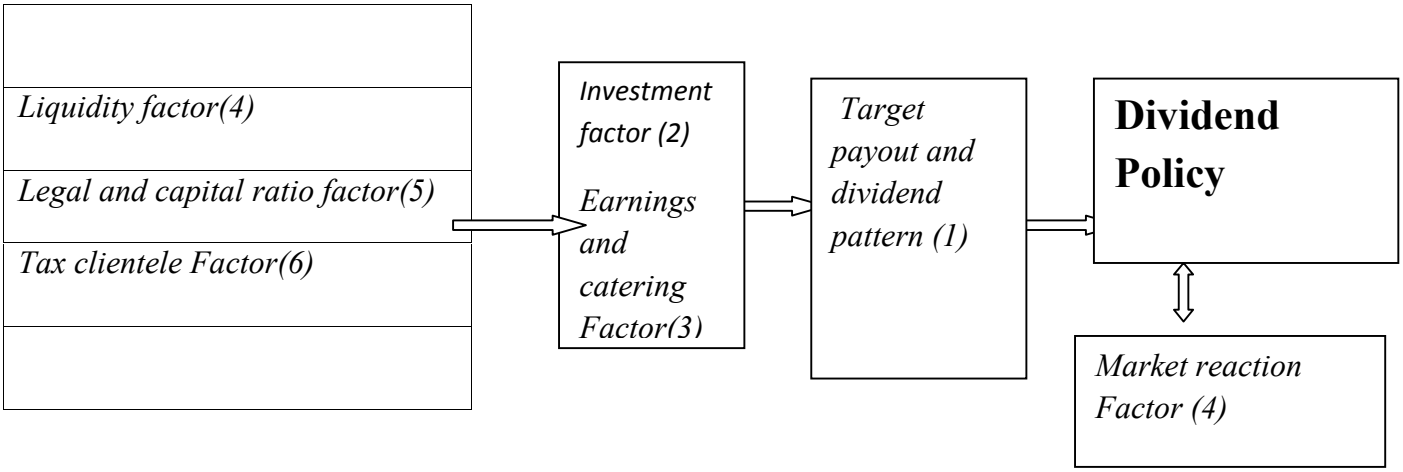


Figure-7.4: Theoretical model framework

I have developed this model framework on the basis of importance of the factors in determine the dividend decision. In the first stage, the factors –tax clientele factor, Legal and capital ratio factor, liquidity factor, earnings and catering factor are considered in dividend decision making. Then in the second stage, the companies follow the investment opportunity and rate of return from the investment. In the next stage, dividend decision is made mainly on the previous years' dividend payment pattern. On the other hand, dividend decision is closely related to market price of share.

7.6 Conclusion

This chapter presents the factors of dividend decision which are considered before taking dividend policy. The companies mainly consider the current earnings and liquidity position of the company for dividend decision. They also maintain to follow the pattern of previous years dividend payment and stable dividend payout ratio. The findings support the findings of Baker et al. (1985), Baker and Phillips (1992) ,Baker and Powell (2000), ,Anand(2005) **,**Mizuno (2007) ,Khan et al. (2011) ,Alshammari (2012).

Chapter Eight: Dividend Practices in Listed Companies of Bangladesh: Analytical Study on Dhaka Stock Exchange

8.1 Introduction

The financial decision is rotate around the dividend decision. So, to identify the dividend practices in the corporate sector in Bangladesh is vital objective of the study. The dividend pattern of listed companies and the management' practices of dividend policy are described for revealing the present scenario of dividend in the capital market of Bangladesh. This study shows the pattern of dividend payout with the different characteristics (category of company, age of the company, size, leverage, risk, PE etc). The dividend practices of the management are depicted with the questionnaire survey.

The Corporations earn profits but they do not distribute all of it. The part of profit is ploughed back or held back as retained earnings. The part of the profit is distributed to the shareholders as dividend. The ratio of the actual distribution or dividend and the total distributable profits is called dividend payout ratio. How much of its profits should a corporation distribute? There are several considerations that is applied in answering this question. Hence, the companies have to frame work on a definitive policy of dividend payout ratio. Of course, no corporate management can afford to a fixed dividend payout ratio year after year. However, management has to decide its policy on its broad. The dividend policy is the policy used by a company to decide how much it will pay out to shareholders. From the share valuation model, the value of a share depends very much on the amount of dividend distributed to shareholders. The dividends are usually distributed in the form of cash or share. When a company distributes a cash dividend, it must have sufficient cash to do so. This creates a cash flow issue. This is a concern to the management as insufficient cash may mean the company is unable to distribute a dividend.

I have shown the details about the dividend scenarios in Bangladesh based on the secondary data (market data and company data) and survey from management.

8.2. Previous Studies

Out of the plethora of literatures available for the present area of study, the following literatures are reviewed having primary focus on finding out patterns in and issues influencing dividend payment.

Dhameja (1978) showed that there is no statistically significant relationship between dividend payout and industry classification, size. The Growth is found to be significantly and inversely related to dividend payout. As regards dividend rates controlling for bonus and rights issues, it is related directly and significantly to industry classification and growth, and mildly related to size.

Bhat and Pandey (1994) showed that payment of dividend depends largely upon current and expected earnings as well as on the pattern of past dividends, and liquidity is not a matter of consideration in dividend policy.

Collins, Saxena and Wansley (1996) 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.

Gupta (1999) showed that regular dividend payments have been the feature in almost all the selected companies though there have been a gradual decline in the proportion of dividend payments to the available earnings for distribution. He also found that dividend rates are more inflated in comparison to the real effective rates of dividend as represented by dividend yield. In the matter of stability in dividend payments, he finds high stability in terms of dividend yields but not so much in terms of dividend rates and dividend payouts.

La Porta, Lopez-de-Silanes, Shliefer and Vishny (2000) hold that firms in countries with better investor protection make higher dividend payouts than do the firms in countries with lower investor protection. Moreover, in countries with more legal protection, high growth firms have lower payout ratios. This finding supports the outcome agency model where investors use their legal power to force dividends when growth prospects are low. Thus, their findings indicate that without enforcement of management there is not a strong incentive to 'convey its quality' through payout policy. There is also no evidence that in countries with low investor protection, management will voluntarily commit itself to payout higher dividends and to be monitored more frequently by the market.

Again, 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).

De Angelo, De Angelo and Skinner (2004) observed that during the period of their study (1978-2000) nominal dividends paid by the companies in US increased manifold, even real dividends doubled during this period. This aggregate dividend increase is even in the face of radical decline in the number of dividend-payers. They find that both dividend and earnings concentration have increased substantially from the already high level.

Brav, Graham, Harvey and Michaely (2005) observed that dividend level is a priority at par with the investment decisions, and increase in dividend is considered only after investment and liquidity needs are met. They opined that managers express strong desire to avoid dividend cuts except in extraordinary circumstances. They also point out that sustainable increase in earnings and demand by institutional investors are the two root causes for the non-payers to initiate dividend payment. They found little support for signalling theories. They also found no evidence that managers use payout policy to attract particular investment clientele. Their survey also suggests that taxes are not the first-order important factor in the determination of payout policy but they are important at the margin of some firms (a very small proportion of dividend initiating firms).

Oza (2005) identified 'current year's earnings', 'patterns of past dividends', 'availability of cash' and 'expected future earnings' as major determinants of dividend policy. While, factors like 'capital expenditure requirements', 'impact on share prices', 'achieving target payouts', 'restrictions imposed by lenders', 'bonus issue by the companies' and 'industry practices' are found to have less significant role in the matter of deciding on dividend payments.

8.3. Research Design

8.3.1 Primary data:

Survey Instruments

The present research is based on an empirical study of 108 listed firms from the DSE with the objective of identifying the dividend policies practices. The data has been collected through the primary mode using a structured questionnaire containing 8 statements based on 5 point likert scale where Strongly Agree=2, Agree=1, Indifferent=0, disagree=-1 strongly disagree=-2. The respondents are asked to indicate the level of agreement on issues for their firm's dividend policy. There are 8 multiple choice questions are also given to respondents. The questionnaire has been prepared after reviewing the prior studies on dividend practices by decision maker. The survey is followed the literature of Baker and Powell (2000), Brav et al.(2005),Edelman(1983) etc.

Sample

I mailed the survey instruments to the chief financial officer (CFO) and Managing director, Chairman, Board of directors of each firm in September 2013. The mailing included a cover letter and a stamped return envelope. The cover letter assured recipients that their answers would be confidential and released only in summary form. But I did not find satisfactory response. So, later, I went personally to the respondents of each firm and finally collected 108 questionnaires as a sample.

Parametric and on parametric Test:

I have used one-sample t-test to determine whether the mean response for each of the 8 factors involving dividend policy differs significantly from 0 (Indifferent).This study follows the test of Baker and Powell (2000), Brav et al.(2005), etc. The non parametric test (Chi-square test) is also done which is similar testing tools of Edelman and Farrelly(1983).

8.3.2 Secondary data: The study is based on secondary data obtained from published annual reports of sample firms, monthly review of Dhaka stock exchange and website of DSE. The sample includes listed financial and nonfinancial firms of DSE. It is taken 22 banks from banking sectors and 86 companies from manufacturing sectors as sample. The sample period is 20 years from 1994 to 2013 for study. The data are analyzed with descriptive way of dividend practices in Bangladesh.

8.4. Analysis and Interpretations: Nonfinancial Sectors

8.4.1 Dividend Performance: An analytical study on Nonfinancial Sector

8.4.1.1 Sectroral Performance of dividend and dividend related issues

Table-8.1: Dividend performance of different sectors

Sectors	DPR	DPS	EPS	DY	MPS
Engineering	54.49	24.63	33.85	3.19	884.1
Cement & Jute	34.52	9.066	8.8	2.177	520.2
Ceramic	53.1427	13.328	22.4682	3.44	560.26
Food	40.6	25.05	3.03	3.38	678.28
Fuel & power	37.76	32.47	64.70	13.04	1217
Miscellaneous	63.2	41.11	75.54	3.24	1529
Pharmaceutical & Chemical	46.98	36.63	79.16	3.03	1559
Textile	43.98	12.02	14.74	3.72	387.9

From the table 8.1, it is seen that the average dividend payout ratio of miscellaneous sector, engineering sector, pharmaceutical & chemical sector, ceramic, textile, food, fuel& power, Cement & jute are 63.2, 54.49, 46.98, 53.14, 43.98, 40.6, 37.76, 34.52 percent respectively which reveal that miscellaneous, engineering sector, chemical& pharmaceutical sectors have the better DPR while the food and cement, jute sector have the lower DPR.

From the table 8.1, it is seen that the average dividend per share of miscellaneous sector, engineering sector, pharmaceutical & chemical sector, ceramic, textile, food, fuel& power, Cement & jute are 41.11, 36.63, 13.32, 12.02, 25.05, 32.47, 9.06 percent respectively which reveal that miscellaneous, engineering sector, chemical& pharmaceutical, fuel & power sectors have the better DPS while the textile sector, ceramic cement, jute sector have the lower DPS.

The average EPS of engineering sector, cement sector, jute sector, ceramic sector, food sector, fuel &power, miscellaneous, pharmaceutical & power, textile are 33.85, 8.8, 22.46, 3.03, 64.7, 75.54, 79.14, 14.74 percent respectively. It indicates that the pharmaceutical &chemical , miscellaneous, fuel & power, engineering sectors have the higher EPS and food, jute, cement, textile have lower EPS. The average dividend yields are almost same of different sectors except fuel and power sector.

Finally , it is concluded that the DPR, DPS, EPS ,DY of the pharmaceutical & chemicals sector, miscellaneous sector, engineering sector, fuel & power sector have the higher performance while jute, cement, food, textile sector have the weaker scenario and the average market price per share of earlier sector is more the average MPS of later sectors. So, the market price of share is positively related to the dividend related issues.

8.4.1.2 Dividend payment of different categories

Table-8.2: Dividend performance of different categories

Category	DPR	DPS	EPS	DY	MPS
A	49.6321	32.4314	58.0849	3.3	1165.38
B	49.23258	8.300459	9.175094	13.37	329.85
Z	35.35478	3.267773	-22.4487	2.29	243.40

From the table 8.2, it is seen that the DPR, DPS, EPS, DY of A category are 49.63%, 32.43%,58.08%, 3.3% while the DPR, DPS, EPS, DY of Z category are 35.35% 3.26% -22.44% 2.29 % . The companies which are under category A have better performance in dividend payment but the companies which are under the Z category have weak position in dividend payment.

8.4.1.3 Dividend nature of different size of the companies

Table-8.3: Dividend performance of different size of the firms

Size	DPR	DPS	EPS	DY	MPS
Large Size	29.62	53.37	100.5	2.423	1899
Medium Size	46.8014	28.6093	48.5317	2.77826	1078
Small Size	54.18264	11.24284	7.843565	3.606971	467

From the table 8.3, it is observed that the DPS of Large, medium, small size firm are 53.37, 28.60, 11.24 respectively. The DPR of large, medium small size firm are 29.62, 46.80, 54.18 respectively. The DPR and DPS is reverse direction because the large firm pay more stock dividend than small size firm. The EPS of large firm is 100.5 while the EPS of small firm is only 7.84. The large firm' market price of share (1899) is more than the MPS of small size firm (467).

8.4.1.4 Dividend payment nature of different age of the companies

Table-8. 4: Dividend performance of different age of the firms

Year	DPR	DPS	DY	EPS	MPS
1976-80	55.67009	69.54433	3.77142	127.6553	2492.25
1980-85	56.98959	25.65987	2.605086	37.46309	1092.12
1985-90	51.7458	18.9972	3.67742	23.3972	695.72
1990-95	48.59985	20.16004	3.605316	41.57735	744.47
1995-00	57.36222	7.637858	9.202072	9.09	238.95
2000-05	26.54954	12.59411	2.211676	12.10936	750.06
2005-10	31.04485	35.54902	1.996858	65.53363	1189.36

From the table 8.4, it is seen that the DPR of the earlier listed companies is more than the former listed companies.(i,e. 1976-80: 55.67%, 1980-85:56.98%, 2000-05:26.54%, 2005-10: 31.04%). It also observed that the DPR of the companies are more which are listed before year 2000 than the companies which are listed after the year 2000. The DY of early listed companies more than the later listed companies.

8. 4.1.5 Dividend and leverage

Table-8.5: Leverage and Dividend performance

Leverage	DPR	DPS	EPS	DY	MPS
Extremely High leveraged firm	40.11723	16.7612	17.0681	2.17	721.38
High leveraged firm	46.0569	21.939	37.0025	9.48	831.82
Medium leveraged firm	60.2978	13.55498	22.19297	4.01	452.277
Low leveraged firm	54.3666	44.0706	69.0424	4.13	1203.21
extremely low leveraged firm	48.54143	31.17432	69.81731	2.66	1390.24

It is seen from the table-8.5 that the DPR of medium leveraged firm is highest (60.29%) comparison to other leveraged group. But the market price of share (1390.24) and earnings per share (69.81%) of the low leveraged firm are the highest.

8.4.1.6 Dividend and Risk

Table-8.6: Risk and Dividend performance of different firms

Risk	DPR	DPS	EPS	DY	MPS
High risk firm	43.79546	9.47941	-1.49453	3.12	449.08
Medium risk firm	41.98837	18.25883	29.43669	5.24	880.17
Low risk firm	52.49349	38.73274	69.34622	3.6	1219.77

It is observed from the table 8.6 that the low volatile companies'(low risk) DPR, DPS, EPS, DY, MPS are 52.49 %, 38.73%, 69.34%, 3.6%, 1219.77 respectively while the high volatile companies'(high risk) DPR, DPS, EPS, DY, MPS are 43.79 %, 9.47%, -1.49%, 3.12%, 449.08 respectively. So, it is concluded that the high volatile companies' performance is not satisfactory in related to market issues.

8.4.1.7 Dividend and Ownership

Table-8.7: Ownership and Dividend performance of different firms

Majority Shareholdings	DPR	DPS	EPS	DY	MPS
Sponsor(50% and above)	46.73	26.95	41.62	2.77	1081
Individual(40% and above)	54.68	15.10	20.58	7.26	1036.67
Institution(40% and above)	43.76254	26.84077	61.0423	3.53	521.74

In the table 8.7, the dividend related performances are observed in respect of majority shareholdings position. The DPR and DY of individual ownership' majority are 54.68% and 7.26 percent which is more than the other two groups. But the DPS and EPS of individual ownership' majority are 15.10 and 20.58 percent respectively which are lower than the other majority groups. The sponsor ownership' majority and institution ownership's majorities are same in respect of dividend and other market related issues and have better performance.

8.4.1.8 Dividend and PE

Table-8.8: PE and Dividend performance of different firms

Class	DPR	DPS	EPS	DY	MPS
20+	49.6616	18.7843	29.8208	4.7	817.07
15-20	46.65545	47.22213	95.53292	3.66	1469.84
10-15	53.5115	50.6015	65.89914	4.19	1090.49
5-10	42.89387	8.531176	-1.72206	5.92	162.53
0-5	7.166318	3.580556	-53.344	2.13	351.42

It is observed from the table 8.8 that the class of PE ratio between 10-15 is the best class in respect of dividend and other market related factors (DPR:53.51%,DPS:50.60%,

EPS:65.89%, 4.19%, MPS:1090.49) . The extremely lower class (0-5) indicates the worst position of dividend related performance (DPR: 7.16%, DPS: 3.5%, EPS:-53.34%, DY: 2.13, MPS: 351.42).

8.4.1.9 Dividend and its payment trend

Table-8.9: Dividend and its payment trend

Pattern	DPR	DPS	EPS	DY	MPS
Regular	49.46618	32.1759	58.33337	3.5	1128.27
Iregular	40.87202	6.583771	-9.46775	2.62	376.28

In the table 8.9, The DPR, DPS, EPS, DY ,MPS of regular dividend paid companies are 49.46 %, 32.17%, 58.33% 3.5 %, 1128.27 respectively while DPR, DPS, EPS, DY, MPS of iregular dividend paid companies 40.87, 6.58, -9.46, 2.62, 376.28 respectivley. This shows the remarkable difference between the regular paid and iregular dividend paid companies. The performance of dividend paid companies better than the iregular dividend paid companies in the dividend and market related issue of the companies.

8.4.1.10 AGM held

Table-8.10: AGM holding companies

Year	AGM held(%)	AGM not held(%)
2002	89.03	10.97
2003	86.726	13.274
2004	81.746	18.254
2005	92.373	7.6271
2006	89.764	10.236
2007	89.474	10.526
2008	90.741	9.2593
2009	99.145	0.8547
2010	99.539	0.4608
2011	97.826	2.1739
2012	99.174	0.8264
2013	98.438	1.5625

Source: Author's calculation from www.dse.bd.com

It is observed from the table 8.10 that the number of AGM holding companies is increasing and the AGM not holding companies is decreasing. The AGM not holding companies are 10.97% in the year 2002 and it reduced to 1.56% in the year2013 which is positive signs. The AGM holding companies are 89.03 percent and 98.43 percent respectively. This scenario indicates positive movement of the market.

8.4.2 Dividend Practices: Survey study on nonfinancial sector

Table-8.11: Survey results of dividend practices

8.4.2.1 Shareholders' Preference for form of dividend	**Issues**	**Percentage of Preference**
	Cash dividend	65.11
	Stock dividend	32.66
	Right Issue	0
	Stock repurchase	2.23
8.4.2.2 Companies' Preference for forms of dividend	Cash dividend	41.86
	Stock dividend	20.93
	Cash and Stock	32.55
	Stock repurchase	0
	No preference	5.81
8.4.2.3 Reasons for companies' preference in choosing form of dividend	Easy to implement	20.93
	More flexible	12.79
	Maintaining consistency	19.76
	Majority shareholders' expectation	41.6
	other	4.64
8.4.2.4 Dividend payment patterns	Regular	68.6
	Irregular	27.9
	No dividend payment	2.32
8.4.2.5 Dividend payment policies	Stable payout ratio	54.65
	Constant DPS	25.58
	Regular plus extra dividend	11.62
	Residual dividend policy	6.9
8.4.2.6 Dividend payment trend	Increasing trend	61.62
	Decreasing trend	11.62
	Unchanged	24.41
8.4.2.7 Manager's target for dividend decision	Amount of dividend	12.79
	Growth in dividend	31.39
	Dividend yield	10.46
	Dividend payout ratio	24.41
	No target at all	22.09
8.4.2.8 Research for dividend preference	Yes	24.41
	No	74.41

From the table-8.11, the managers think that the maximum shareholders prefer cash dividend (65.11%). The 32.66 percent shareholders expect stock dividend. The companies also prefer cash dividend to distribute among the shareholders. The 41.86 percent companies prefer to pay cash dividend but 20.93 percent companies prefer only stock dividend. The 32.55 percent companies prefer both cash and stock dividend. The companies prefer earlier form of dividend payment because of majority shareholders' expectation (41.86%). Other reasons for choosing the forms of dividend are easy to implement (20.93%) and maintain consistency (19.76%).

The maximum companies pay the dividend regularly (68.60 %) and 27.90% company pay the dividend irregularly. But only 2.32 percent companies did not pay the dividend at all. The 54.65 percent companies take the stable dividend payout policy. The companies' other dividend policies are constant dividend per share (25.58%), regular plus extra dividend (11.62%), and residual dividend policy (6.9%).

The dividend increasing trend, decreasing trend, unchanged trend are 61.62%, 11.61%, 6.9% companies respectively. The most of the companies target the growth in dividend (31.39%) and dividend payout ratio (24.41%) and remarkable number of companies have no target at all (22.09%). Only 24.41% companies conduct research about the dividend preference of the shareholders.

8.4.3 Company's views about the dividend policies: Survey Study on Nonfinancial Sectors

Table -8.12: Company's view about the dividend policies

Number	Statements	Level of Agreement (%)					Mean	Rank	t-test	Sig. (2-tailed)	Chi square value	Asymp. Sig.
		Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree						
1	We try to avoid reducing dividends per share, because there are negative consequences of reducing dividends	23.25	43.3	25.58	6.97	1.16	.8023	5	8.105	.000	45.41	.00
2	Rather than reducing dividends, we raise new funds to undertake a profitable project	17.44	40.69	26.71	11.62	3.4	.5647	7	5.061	.000	33.76	.00
3	We make dividend decisions after taking investment plans	13.95	47.67	23.25	13.95	1.16	.5930	6	5.864	.000	53.05	.00
4	We develop dividend policy for maximizing the company's market value	48.88	33.72	6.9	8.13	2.32	1.1860	3	10.629	.000	68.58	.00
5	We change dividends based on sustainable shift in earnings	33.72	41.46	16.26	6.79	1.16	1.0000	4	9.807	.000	51.05	.00
6	We try to maintain a smooth dividend stream from year to year	60.46	31.39	6.79	1.16	0	1.5116	1	20.567	.000	73.44	.00
7	We pay dividends for showing better performance compare to competitors	10.46	26.74	9.3	30.23	23.25	-.2907	8	-1.979	.051	15.35	.059
8	We make dividend policy based on majority shareholders' expectation	51.16	31.39	12.79	2.32	2.32	1.2674	2	12.525	.000	74.23	.00

From the table-8.12, all the statements are significant except statement number 7. The statement 6 ('we try to maintain a smooth dividend stream from year to year) has highest mean value (1.51) and got 91.85 percent opinion of respondents at 'agree and strongly agree' level. This statement is statistically significant with t test and chi-square test. It indicates that the companies try to maintain the smooth dividend payment over the year. They try to avoid reducing the dividend (statement 1 and it is also significant).

The 82.55 percent companies agree and strongly agree with the statement 8 ('we make dividend policy based on majority shareholders' expectation') which is statistically significant with t test and chi-square test. So, the companies take their dividend decision by considering the majority shareholders' expectation.

The statement 7('We pay dividends for showing better performance compare to competitors') is not statistically significant which indicates that the companies do not pay dividend for showing better performance compares to competitors.

The 82.60 percent companies agree and strongly agree with the statement 8 ('we develop dividend policy for maximizing the company's market value') which is statistically significant with t test and chi-square test. So, the companies develop their dividend decision with the objective of maximizing the market value of share. by considering the majority shareholders' expectation.

8.5. Analysis and Interpretations: Financial Sector

8.5.1 Dividend Performance: An analytical study on Financial Sector

8.5.1.1 Sectroral performance of dividend and dividend related issue

Table-8.13: Dividend performance of different sectors

Sectors	DPR	DPS	EPS	DY	MPS
Bank	18.52919	23.87359	81.49525	1.889658	1221.601

From the table-8.13, it is observed that the DPR, DPS, EPS, DY, MPS are 18.52, 23.87, 81.49, 1.88, 1221 respectively. The DPR is lower than other manufacturing sector but DPS is more than other sector. It indicates that the banking sector provide more stock dividend than the manufacturing sectors. The EPS and MPS are much higher than some manufacturing sectors.

8.5.1.2 Dividend payment of different categories

Table-8.14: Dividend performance of different categories

Category	DPR	DPS	EPS	DY	MPS
A	18.52919	23.87359	81.49525	1.889658	1221.601

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It is observed from the table 8.14 that the most of the banks pay the dividend regularly. So, the sample belongs to A category only.

8.5.1.3 Dividend nature of different size of the companies

Table-8.15: Dividend performance of different size of the firms

Size	DPR	DPS	EPS	DY	MPS
Large Size	27.4462	21.7159	31.2467	1.97577	2120.39
Medium Size	11.96	26.84	117.6	1.801	567.8
Small Size	14.52721	17.24615	109.1067	1.990385	773.1755

In the table 8.15, the DPR of large size, medium size and small size are the 27.44, 11.96, and 14.52 percent respectively which indicates that large banks provide more dividends. The MPS of large banks is more than the medium and small banks. But the DPS and EPS of Medium size banks have more than the other two groups.

8.5.1.4 Dividend payment nature of different age of the companies

Table 8.16: Dividend performance of different age of the firms

Year	DPR	DPS	EPS	DY	MPS
1980-90	14.25475	23.29433	39.07967	4.363083	497.5725
1990-00	21.64	22.25	35.64	2.911	378.3
2000-05	17.84	27.38	132.2	1.781	644
2005-10	20.9	18.28	25.11	0.511	2924

It is observed from the table-8.16 that the DPR of the later listed companies is more than the earlier listed companies (ie. 2005-10:20.9%, 2000-05:17.84%, 1990-00:21.64%, 1980-90:14.25%).

8.5.1.5 Dividend and leverage

Table-8.17: Leverage and Dividend performance

Leverage	DPR	DPS	EPS	DY	MPS
High leveraged firm	11.04	23.7	127.4	1.431	456.8
Medium leveraged firm	18.1	21.96	31.4	1.71	2955
Low leveraged firm	28.52335	25.73311	65.42094	2.633198	718.8738

In the table 8.17, the DPR, DPS, EPS, DY, MPS of low leveraged firm are 28.52 percent, 25.73, 65.42, 2.63, 718.87 respectively and these are higher than the high and medium leveraged firm. It indicates that the low leveraged bank performed better in dividend and dividend related issues.

8.5.1.6 Dividend and Risk

Table-8.18: Risk and Dividend performance of different firms

Risk	DPR	DPS	EPS	DY	MPS
High risk firm	23.68	23.45	50.7	1.38	709.1
Medium risk firm	16.53	25.01	132.3	2.546	448.2
Low risk firm	7.380725	21.85682	31.66715	1.618924	446.5665

The DPR of high risky firms is more than the medium and low risky firms but the DPS, EPS, DY of medium risky firms are 25.01, 132.3, and 2.54 respectively which are more than the other two groups (table 8.18).

8.5.1.7 Dividend and Ownership

Table-8.19: Ownership and Dividend performance of different firms

Majority Shareholdings	DPR	DPS	EPS	DY	MPS
Sponsor(50% and above)	26.63	23.78	55.39	2.161	772.6
Individual(40% and above)	12.93	23.23	34.03	1.704	415.2

It is seen from the table 8.19 that those banks' majority shareholders who are sponsors have higher DPR (26.63%), DPS (23.78), EPS (55.39), DY (2.16), and MPS (772.6).

8.5.1.8 Dividend and PE

Table-8.20: PE and Dividend performance of different firms

Class	DPR	DPS	EPS	DY	MPS
20+	4.123	19.02	26.44	1.294	444.1
15-20	26.82	25.23	67.5	1.169	3371
10-15	16.21	23.3	110.5	2.04	410.8
5-10	28.02254	30.25	46.78536	4.118571	398.1518

In the table 8.20, the class of PE ratio between '5-10' is the best class in respect of dividend related variables (DPR: 28.02, DPS: 30.25, DY: 4.11). The extremely higher class (20+) indicates the worst position of dividend related performance (DPR: 4.12, DPS: 19.02, DY: 1.29).

8.5.1.9 Dividend and its payment trend

Table-8.21: Dividend and its payment trend

Pattern	DPR	DPS	EPS	DY	MPS
Regular	18.52919	23.87359	81.49525	1.889658	1221.601

It is found that the majority banks pay the dividend regularly. The DPR of banking sector is lower comparison to other manufacturing sectors.

8.5.2. Dividend Practices: Survey study from banking sector

Table-8.22: Survey results of dividend practices

8.5.2.1 Shareholders' Preference for forms of dividend	**Issues**	**Percentage of Preference**
	Cash dividend	45.45
	Stock dividend	54.55
	Right Issue	0
	Stock repurchase	0
8.5.2.2 Companies' Preference for forms of dividend	Cash dividend	5.52
	Stock dividend	22.73
	Cash and Stock	67.21
	Stock repurchase	0
	No preference	4.54
8.5.2.3 Reason for companies' preference in choosing form of dividend	Easy to implement	4.54
	More flexible	9.09
	Maintaining consistency	45.5
	Majority shareholders' expectation	27.3
	other	13.6
8.5.2.4 Dividend payment patterns	Regular	81.8
	Irregular	13.6
	No dividend payment	4.55
8.5.2.5 Dividend payment policies	Stable payout ratio	54.5
	Constant DPS	18.18
	Regular plus extra dividend	4.55
	Residual dividend policy	22.7
8.5.2.6 Dividend payment trend	Increasing trend	50
	Decreasing trend	13.6
	Unchanged	36.4
8.5.2.7 Manager's target for dividend decision	Amount of dividend	13.6
	Growth in dividend	22.73
	Dividend yield	22.73
	Dividend payout ratio	22.73
	No target at all	18.2
8.5.2.8 Research for dividend preference	Yes	22.73
	No	77.3

From the above table-8.22, the managers think that the maximum shareholders prefer stock dividend (54.55%). The 45.45 percent shareholders expect cash dividend. The companies prefer cash and stock dividend to distribute among the shareholders. The 67.20 percent companies prefer to pay both cash and stock dividend but 5.52 percent companies prefer only cash dividend. The 22.73 percent companies prefer stock dividend. The companies prefer earlier form of dividend payment because of majority shareholders' expectation (27.3%). Other reasons for choosing the form of dividend is maintain consistency (45.5%).

The maximum companies pay the dividend regularly (81.8 %) and 13.6% company pay the dividend irregularly. But only 4.55 percent companies did not pay the dividend at all. The 54.50 percent companies take the stable dividend payout policy. The companies' other policies are constant dividend per share (18.18%), regular plus extra dividend (4.55%), and residual dividend policy (22.7%).

The dividend increasing trend, decreasing trend, unchanged trend are 50%, 13.6%, 36.4% companies respectively. The most of the companies target the growth in dividend (22.73%) and dividend payout ratio (22.73%) and remarkable number of companies has no target at all (18.2%). Only 22.73% companies' conduct research on the dividend preference of the shareholders and 77.3 percent companies don't conduct any research on shareholders' preference.

8.5.3 Company's views about the dividend policies of financial sector

Table -8.23: Company's view about the dividend policies

Number	Statements	Level of Agreement (%)					Mean	Rank	t-test	Sig. (2-tailed)	Chi square value	Asymp. Sig.
		Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree						
1	We try to avoid reducing dividends per share, because there are negative consequences of reducing dividends	31.82	31.82	13.64	9.09	13.64	.5909	5	1.976	.061	5.27	.26
2	Rather than reducing dividends, we raise new funds to undertake a profitable project	4.54	31.82	22.73	22.73	18.18	-.1818	7	-.699	.492	4.36	.35
3	We make dividend decisions after taking investment plans	22.73	36.36	18.18	18.18	4.54	.5455	6	2.160	.042	5.72	.22
4	We develop dividend policy for maximizing the company's market value	54.55	36.36	9.09	0	0	1.454	1	10.168	.000	8.35	.032
5	We change dividends based on sustainable shift in earnings	45.45	31.82	18.18	4.54	0	1.181	4	6.112	.000	8.18	.042
6	We try to maintain a smooth dividend stream from year to year	54.55	31.82	13.64	0	0	1.409	2	9.003	.000	7.23	.05
7	We pay dividends for showing better performance compare to competitors	9.09	2273	9.09	40.91	18.18	-.3636	8	-1.319	.201	6.54	.11
8	We make dividend policy based on majority shareholders' expectation	45.55	36.36	13.64	0	4.54	1.1818	3	5.508	.000	9.63	.022

From the table-8.23, the statements 4, 5, 6, 8 are significant in both t test and chi square test. The statement 4 ('we develop dividend policy for maximizing the company's market value) has highest mean value (1.45) and got 87.27 percent opinion of respondents at

'agree and strongly agree' level. This statement is statistically significant with t test and chi-square test. It indicates that the companies set dividend policy with aims to maximize the market value of share. The 86.37 percent companies agree and strongly agree with the statement 6 ('we try to maintain a smooth dividend stream from year to year') which is statistically significant with t test and chi-square test. So, the companies maintain the consistency in paying the dividend. The 81.91 percent companies agree and strongly agree with the statement 8 ('we make dividend policy based on majority shareholders' expectation') which is statistically significant with t test and chi-square test. So, the companies take their dividend decision by considering the majority shareholders' expectation.

The statements 1, 2, 7 are not significant in both t- test and chi square test and statement 3 is insignificant in chi square test. The statement 7('we pay dividends for showing better performance compare to competitors') is not statistically significant which indicates that the companies do not pay dividend for showing better performance compares to competitors.

8.6. Summary and Conclusion

This chapter depicts the picture of dividend performance in the capital market of Bangladesh. The findings show the difference in manufacturing and banking sectors. In the manufacturing sector, the miscellaneous sector provides the highest payout. The DPS, EPS, MPS of the large size firm is better than small and medium size firms. The payout of the older firms is more than the newly listed firms. The highest payouts are in medium leveraged firm, low risk's firm, medium PE ratio's firm. The survey results reveal that the both shareholders and companies prefer the cash dividend most because of majority shareholders' expectation. The most of the companies pay cash dividend with stable payout. The majority companies follow increasing trend in dividend payment but there is no satisfactory research to justify the investors' preference.

In the banking sector, the maximum payouts are in large size firm, earlier listed bank, low leveraged firm, high risk's firm, medium PE ratio's firm. The survey results reveal that the banks prefer both cash & stock dividend most but majority shareholders prefer stock. The most of the companies follow stable payout with increasing trend in dividend payment but no satisfactory research to justify the investors' preference.

Chapter Nine: Application of Dividend Models in the Stock Market of Bangladesh

9.1 Introduction

The issue of dividend policy has been widely discussed amongst researchers since the 1950s. Opinions towards the effect of dividend distributions are divided into three schools. Scholars, such as Brennan (1970), Litzenberger and Ramaswamy (1980) and Poterba and Summers (1984), argue that dividends have a negative impact on the firm's value due to transaction costs and tax differential. Others, such as Modigliani and Miller (1958) and Bernstein (1996) contended that dividend policy is irrelevant to corporate managers. In their view, investors can create homemade dividends by selling part of their appreciated capital. The overwhelming majority of scholars, including Easterbrook (1984), Jensen (1986) and Crutchley and Hansen (1989), argue that dividends positively influence the firm's value and therefore, it should be considered as a relevant corporate decision. Despite extensive research this controversy remains unresolved. Black [1976, p. 8] epitomizes the current knowledge about corporate dividend policy by stating "What should the corporation do about dividend policy? They don't know." Much of the research on corporate dividend policy represents normative finance which seeks to develop models for decision making.

Study of dividend payments has a very illustrious history. In 1956, John Lintner has laid foundation for the modern understanding of dividend policy. According to him, dividends are sticky, tied to long-term sustainable earnings, paid by mature 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.

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. 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.

I have relied on a survey-based approach. I surveyed managers of firms listed on the DSE and investigate whether their responses to survey questions differ between financial and non-financial firms. A questionnaire is helpful because it allows us to use private information of the firm's managers and to provide insights unavailable through publicly available sources. The review of aforementioned surveys revealed that there are

various surveys on dividend theories mostly in the context of developed countries, and there are very few and less comprehensive surveys of managers with inconclusive results on dividend policy conducted in the context of Bangladesh. Thus, there is a need of conducting another survey of managers' views covering the divergent aspects of dividend theories practiced in Bangladesh.

9.2 Evidences of Previous Study

Although numerous theories, models, and explanations exist, I have focused on the following categories, which are not necessarily mutually exclusive. All categories of these theories are as follows.

Lintner (1956):

Lintner (1956) interviewed managers from 28 selected companies. He found a number of important stylized facts underlying the decision to pay dividends, which can be summarized as follows:

a) Firms have long-term target ratios of dividend payout.

b) Managers focus more on dividend changes than on absolute levels.

c) Dividend changes follow shifts in long run, sustainable levels of earnings rather than short-run changes in earnings.

d) Managers are reluctant to make dividend changes that might have to be reversed.

He further built up a theoretical model of corporate dividend behavior that embodies these findings.

$$DPS^* = \gamma \times EPS \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 9.1$$

$$DPS_t - DPS_{t-1} = (DPS^* - DPS_{t-1}) \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots 9.2$$

$$DPS_t = \alpha + (\lambda\gamma EPS) + (1 - \lambda)\, DPS_{t-1} \quad \ldots\ldots\ldots\ldots\ldots 9.3$$

Where γ is the target payout ratio, λ is the speed of adjustment towards the target payout ratio, α is a constant expected to be positive to reflect the propensity of firms not to cut their dividends. DPS and EPS are for dividend per share and earnings per share, respectively. Equation (9.1) indicates that the target dividend is a function of the target payout ratio, as indicated in the survey results (a). Equation (9.2) states that changes in dividends should reflect the difference between the target dividends and the actual dividends that firm paid in the previous period. The target payout ratio is the long-term desired ratio of dividends to earnings. However, since firms adjust to their target through time, this difference is multiplied by λ, the speed of adjustment, which measures how quickly managers adjust dividends to close the gap in their dividend towards their target. If I rearrange Equation (9.2), I obtain Equation (9.3), which states that dividend at time t is a function of two main variables: earnings at time t and lagged dividends, and by two firm-specific parameters: target payout ratio and speed-of-adjustment.

Miller and Modigliani's (1961) Dividend Irrelevancy Proposition

Prior to Miller and Modigliani (1961), there was a lack of the literature of a complete and reliable theoretical model of the effect of a firm's dividend policy on the current price of its shares. MM (1961) are the first to challenge the belief that a higher dividend payout translates into higher firm value. They concluded that only investment policy rather than dividend policy determines firm value in an ideal economy. Dividend policy merely establishes a tradeoff between dividends at one date and dividends at another date because both the corporations and the individual investors can create any cash inflow stream by making homemade dividends. It means that any desired stream of payments can be replicated by appropriate purchases and sales of equity. Thus, investors will not pay a premium for any particular dividend policy. The net payout can be considered as the difference between the wealth generated from preceding investment and the amount of capital required by the future opportunity of growth, and is simply a residual. Dividend irrelevancy proposition has the implication that firms should never give up a positive NPV project to increase a dividend since the investment policy of the firm is set ahead of time, and firm value is not changed by changes in dividend policy. In order to grasp the spirit of MM's (1961) dividend irrelevancy proposition it is necessary to understand correctly the basic assumptions of perfect capital markets, rational behavior, and perfect certainty. Hence, the MM (1961) framework has formed the foundation of subsequent work on dividends and payout policy in general. Each of imperfections might lead an investor to have a systematic preference between current dividends and current capital gains. But Miller and Modigliani also emphasis that such imperfections are at best only necessary but not sufficient conditions for certain payout policies to command a permanent premium in the market.

Bird-in-the hand theory:

Investors prefer cash in the hand rather than a future promise of capital gains due to lower risk (Gordon, 1962, 1963; Walter, 1963). The corporate finance literature offers a variety of explanations for dividends and the puzzle that they present. In essence, three fundamental positions can be found in the literature with respect to dividends. The first of these, the so-called 'bird-in-the hand' hypothesis (Gordon and Shapiro, 1956) posits that dividends can increase firm value by reducing the risk perceived by investor in corporate cash flows. It holds that, other things equal, if two firms, A and B, are identical in all

respects save that firm A pays a dividend with expectations of future dividend growth, then A will have a higher share price.

Signaling Theory

Dividends mitigate information asymmetry between management and shareholders by conveying private information about a firm's future prospects (Bhattacharya, 1979, 1980; John and Williams, 1985). As reviewed above, Lintner (1956) suggested that firms have long-term target ratios of dividend payout and that dividend changes follow shifts in long run, sustainable levels of earnings rather than short-run changes in earnings. This suggests that firms smooth their dividends. The implications of this model is that dividends act as a signal of past as well as future firm's prospects. Under the perfect capital market conditions described in the Miller and Modigliani (1961) dividend irrelevance proposition, all market participants have the same information about the firm, so a firm's dividend payments will have no effect on the value of the firm's stock. However, the absolute information symmetry does not exist in actual markets. The market imperfection of asymmetric information is the basis for the signaling theory of dividend policy. MM acknowledged that dividend changes influence stock prices and attributed this phenomenon to the "information content of dividends." While the irrelevance of dividends can hold, the market has good reasons to measure the value of stock by taking account of changes in dividends because this indeed reveals earning information not previously known to the market. Signaling models were first developed in the late 1970s and early 1980s. Akerlof (1970) explained the cost of asymmetry information by applying the market for used CAR as a pooling equilibrium in the absence of signaling activities. Next, using a scenario in the employment market, Spence (1973, 1974) carries out a formal partial equilibrium analysis of market signaling. Spence's (1974) signaling model has been extensively used by some researchers to study financial models of signaling. Ross (1977) developed a formal one-period incentive-signaling model in the context of capital structure; assuming that managers have private information about the firm's future cash flows. High-quality firms have an incentive to use leverage, as a signaling device to outsiders since increasing leverage brings higher market value with it. At the same time high quality firms are capable of supporting a signal in the form of raising leverage. In contrast, low-quality firms do not have an incentive to send such a signal because managers are aware that a higher debt ratio is not sustainable and will eventually result in bankruptcy. Bhattacharya (1979) structured a two-period signaling model following Ross'

model (1977), showing that under conditions where outsider investors have imperfect information about firms' profitability and the tax rate is higher on cash dividends than capital gains, changes in dividends transmit the information of managements' views on future prospects to the market. In this two-period model, at the beginning of the first period, the firm announces that it will pay a high-level dividend at the end of this stage for relaying management's confidence in the forthcoming investment. If the project cannot realize the expected returns to cover the announced dividend payments during the first period, the firm is forced to finance externally to meet the dividend decision. After the dividends are paid, part ownership will be transferred to new shareholders who receive the payoffs generated by the firm at the end of the second period. Because issuing new securities is assumed costly, firms with less favorable investment projects will face higher expected financing costs for the same level of dividend payments. The transaction cost of new stock issue discourages the low-quality firm to imitate the dividend policy adopted by the high-quality firm. Other studies (Rozeff, 1982; Eades, 1982; Crockett and Friend, 1988) also suggested that firms announcing higher dividends have to bear the risk of raising external capital and receiving the subsequent monitoring from external financial markets if the actual investment returns are not as good as initially expected. On the basis of Ross's (1977) and Bhattacharya's (1979) framework of dividend signaling, Talmor (1981) developed a multi-period signaling equilibrium model in which several valuation parameters are included and in each period different financial decisions are determined simultaneously by taking into account both the intrinsic value of the firm and a real impact on the firm's cash flow. Talmor show that dividend payment plays the role of information device to signal a firm's future cash flow. Hakansson (1982) contributed to the dividend-signaling framework by proposing three mutually exclusive conditions under which dividend policy is informative. These three conditions include heterogeneous beliefs among investors, an incomplete financial market and non-time additive utility. In this model, the informative function of dividends is pronounced. Myers and Majluf (1984) posited that insiders have superior information about the company's prospects and an incentive to release this information indirectly may be lacking through unexpected changes in dividend policy to convey this information to shareholders. Miller and Rock (1985) constructed a two-period signaling equilibrium model with the assumption that the firm's managers have superior information about the state of firm that outside investors do not have. In their model, at time zero firms invest in a project, the profitability of which

cannot be observed by investors. Investors cannot observe either earnings or the new level of investment. At time 1, the project produces earnings and the firm uses these to finance its dividend payment and its new investment. Financing announcements with respect to earnings, dividends, and other financial changes are mutually related under the model's assumptions. They tie the question of dividend payout and external financing to the concept of net dividends, implying that both dividends and financing are opposing sides of the same topic. This concept views a financing announcement as a negative dividend announcement, while negative values of net dividends may be viewed as financing. They state that an unexpected change in earnings has the same impact on firm returns as an unexpected change in dividend payout. In addition, current dividend payment trends, rather than the dividend itself, are the basis of the market's future earnings projections. Unlike Bhattacharya (1979) in which the dissipative cost of signaling is the transaction cost of issuing new stock, In Miller and Rock's (1985) model dead-weight costs arise from a non-optimal investment policy. The payment of dividends uses cash that could otherwise be used for investment opportunities. John and Williams (1985) developed a signaling model with multiples equilibrium where dividends are taxable. Managers are supposed to behave in the interest of current shareholders and possess superior information that outside investors do not have, retaining the true status of the firm.

Residual Theory

DeAngelo and DeAngelo (2006) pointed out that a key implication of MM's (1961) dividend irrelevance model is that firms pay out as dividends all cash flows after financing all profitable investments. The residual dividend strategy supports flexible dividend payouts. In this theory, the dividends are the remaining segment of earnings after corporations meet all the project capital needs. In case the future profitable projects have not been fully financed with internally generated fund, corporations have the options to lessen dividends or pay no cash dividends. The attractiveness of residual dividend strategy is to the great degree companies may avoid the compelling external financing resulting from executing invariable dividend policies in which a portion of cash flows have to be disgorged out regularly even if internal funds are not sufficient. In the pecking order theory developed by Myers (1984), and Myers and Majluf (1984), there is a financing hierarchy such that firms prefer internal finance to external finance and, within external financing, debt finance over equity finance, because of transaction, information and

monitoring costs. In the process of external financing, the value of corporation can be reduced because the issuing new stocks will be costly. Fama and French (2002) developed formally a prediction that dividends are attractive to firms with profitable investments and less growth opportunities because of the tendency to avoid expensive external finance in the light of pecking order theory. Moreover, Clatworthy and Peel (2007) suggested that companies may be obliged to disclose 'confidential' information if they have to raise external capital.

Clientele Effects

Differentials in tax rates between dividends and capital gains lead to different clienteles (Elton and Gruber, 1970; Miller and Scholes, 1978). Brennan (1970) first introduced taxes into Capital Asset Pricing Model (CAPM) and developed the after tax pricing equation. In a later, Litzenberger and Ramaswamy (1979) generalised Brennan's model. Both models represent single period mean-variance pricing equations with adjustments for differential taxation between dividend and capital gains. However, the school of thought which favours lower dividends, Brennan (1970), Litzenberger and Ramaswamy (1980), bases its case on the view that dividends are less desirable than capital gains because they are more heavily taxed.

The tax clientele argument postulates that investors in low tax brackets prefer high dividend paying stocks when compared to investors in high tax brackets (Brennan, 1970; Elton and Gruber, 1970; Long, 1978; Litzenberger and Ramaswarny, 1979; and DeAnglo and Masulls, 1980). As the individual's personal tax rate on dividend is higher than capital gain tax rate, clientele investors may prefer capital gain to dividend. If the tax rates induce investors to favour capital gains over dividends, then the investors should pressure the management to reinvest rather than pay-out earnings.

Catering Theory of Dividends

Managers give investors what they currently want. That is, they cater to investor demand by paying dividends when investors put a stock price premium on payers, and by not paying when investors prefer non payers (Baker and Wurgler, 2004a, 2004b). Compared with the traditional rationality assumptions, behavioral corporate finance is potentially more realistic, in that it emphasizes that both investor and managerial behaviors are less than fully rational. In practice, corporate payout policy can be influenced by the irrational actions of managers and/or investors (Barberis and Thaler, 2003 and Baker et al., 2007b).

As argued by LaPorta et al. (2000), corporate dividend policy may be substantially shaped by investor preferences in common law countries, in which legal systems provide strong investor rights. Shefrin and Statman (1984) originally established a behavioural dividend theory explaining why individual investors prefer dividend-paying stocks to non-dividend paying stocks. This model assumes that three psychological considerations account for demands for dividends. Firstly, investors may be prone to employ regular cash dividend payment as a "self-control" device for their private consumption. Specifically, the investors follow the rule of "consume only out of dividends" so that they avoid the risk of excessive spending. In line with other dividend theories, such as signaling model, "self-control" hypothesis implies that the benefit resulting from dividends ought to be large enough to offset the relevant costs such as tax burdens caused by dividends. Secondly, adopting the rule of "consume only out of dividends" is beneficial as investors do not regret the decision of selling stocks in case the stock price appreciates later on. This sort of motivation is referred to as "regret aversion". Thirdly, investors tend to discriminately value diverse sources of income due to "mental accounting". For example, if an investor considers the marginal utility of a unit dividend to outweigh that of a unit capital gain, she/he will correspondingly give priority to the type of stocks which come with dividends.

Agency Theory

Dividends help to reduce the agency costs associated with the separation of ownership and control (Jensen and Meckling, 1976; Rozeff, 1982; Easterbrook, 1984; Jensen, 1986). Miller and Modigliani (1961) proposed that, in frictionless environment, the choice between cash distribution and retention will not affect substantially the firm value, and only investment decisions matter. However, in the real world the conflicts of interests among managers, shareholders and debt holders may hurt the firm value. Dividend policy will be relevant if it affects substantially these conflicts of interest. Traditional residual theory of dividends suggests that dividends distributed are the residual funds after making investment decisions. However, residual theory and free cash flow theory are not identical in essence. Free cash flow theory highlights that distributing surplus funds will increase firm value by reducing agency costs and. In contrast, in light of residual theory, the dividend increases (initiations) indicate profitable investment projects are not sufficient and accordingly negative market reaction is possible.

The conflicts of interest on the free cash flow may exist between managers and shareholders. Jensen and Meckling (1976) explicitly described the occurring mechanisms of agency conflict. As agents, managers are conferred the authority of operating assets on behalf of principals (shareholders and/or bankers) with the commitment to maximize principals' wealth. However, in reality managers are not perfect agents as sometimes, they are likely to allocate firm's resources to benefit themselves rather than the shareholders or creditors. The manager-shareholder conflict emerges in the agency relationship as long as the original inside owner(s) sell off a part of stock shareholdings to outside shareholders. As suggested by various previous studies (e.g., Jensen and Meckling, 1976), the separation of ownership and control bring about the interest collisions. Intuitively, the costs of agency conflict can be measured by the discrepancy between the values of firm when the majority of ownership is in the hands of insiders or block holders compared to when ownership is dispersed. In order to minimize the incidence of agency conflict and the subsequent loss in fortune, principals can take preventative measures in pecuniary as well as non-pecuniary means. Jensen and Meckling (1976) argued that the activities in solving agency problem incur three kinds of costs: the monitoring expenditures, the bonding expenditures and the residual loss, Rozeff (1982) argued that dividends help address the agency issue of equity. If the earned capital does not fluctuate, the regular dividend payouts will force managers to raise capital by external financing. Thus, the new capital supplier and existing

shareholders are accessible to the management genuine intentions. At same time, dividend payments increase the transaction cost of raising external capital. Hence, the dividend paying firms gain a benefit that is equal to the discrepancy between the agency cost borne by shareholders and the transaction cost of reissuance resulting from dividend distribution. An optimal dividend policy intends to maximize the sum of agency costs and transaction costs of raising external capital.

In line with Jensen and Meckling (1976) proposition, Easterbrook (1984) claimed that one form of agency cost is the monitoring of managers, and the other is the risk aversion of managers who are inclined to bypass risky projects with higher expected returns because their personal wealth is usually in combination with companies' performance. They will be encountering punishments like redundancy if the risks become out of control. While shareholders would like the managers to take risks so as to expand profit margin, creditors would have the opposite preference because they bear the large part of incremental risk but will not share the profits. Easterbrook specify why dividends payments help alleviate both agency costs. For the monitoring cost, Easterbrook proposes an argument similar to Rozeff (1982) that dividends create a comparable pressure on managers who are compelled to issue new securities when internal funds are distributed as dividends. In the process of external capital sourcing, investment bankers and other relevant capital market participants (e.g. securities exchanges and capital suppliers) will actively monitor managers' behavior for shareholders' interests. For this reason, dividends essentially reduce indirectly the cost associated with monitoring. For the issue of risk aversion, Easterbrook argues that the firm may adjust the debt-equity ratio by issuing new equity and thus the conflicts of interests between debt holders and equity holders can be controlled accordingly. For instance, if firms disgorge cash raised from equity issuance, then the integral risk drops and as a result managers are more likely to undergo risk. Jensen's (1986) developed the free cash flow hypothesis that can be seen as "a minor variant of the agency argument" discussed in the previous section. (Frankfurter, Wood, 2003, P101) Under this theory, managers may find it easier to pursue their self goals when the firm has surplus cash after financing all projects with positive net present value. The possible selfish activities range from spree spending to thoughtless expansion (e.g. invest in negative NPV project). Dividend payments are beneficial to sort out the activity of adverse selection by cutting down the free cash flows that are available for managers. In this sense, dividend payouts act as a statutory discipline upon managers. Grossman and

Hart (1980), Easterbrook (1984) and Stulz (1990) put similar arguments based on freed cash flow hypothesis forward. Free cash flow hypothesis contradicts MM's irrelevancy proposition, suggesting that corporate dividend policy and investment policy are interacted. Free cash flow hypothesis implies that the cash-abundant companies without many growth opportunities are more likely to confront overinvestment problem. Lang and Litzenberger (1989) and Grullon, Michaely and Swaminathan (2002) provided the favorable evidence that firms that increase dividend experience decreasing investment, consistent with free cash flow hypothesis.

Firm life cycle theory

Dividend policy tends to follow a firm's life cycle that a firm begins paying dividends when its growth rate and profitability are expected to decline in the future (Mueller, 1972; Fama and French, 2001; DeAngelo et al., 2006). Firms have their own life cycle. Premised on Knight (1921) and Schumpeter (1934), Mueller (1972) proposed a formal life cycle theory. The start-up stage can be difficult for a fresh firm because of the existing market threshold. The limited initial resources must be invested into product development, marketing and organization. After the startup stage, the firm will reach a high-growth stage during which it expands customers and exploits the market potential. Firms will eventually reach a point at which they progress from a high growth period to a so called 'maturity period'. With increasing market competition, profitable investment opportunities become absent and the growth rate declines.

These characteristics associated with a firm normally vary over its life cycle and dividend polices at different points in time are adjusted by managers correspondingly. In an early period, a newly listed firm, recently entered into the stock market has plenty of growth opportunities but at same time, its profitability is relatively low and volatile. Meanwhile, the cost of capital of young firms is relatively higher due to the severer information asymmetry. Thus, the best financial strategy for a newly established company is to retain earnings rather than to distribute them immediately. When the firm matures, its investment opportunity set begins to shrink due to the more competitive market environment. Simultaneously, the growth rate of assets slows down and the systematic risk set has dropped, but the earning capacity increases. As a result, the quantity of accumulated cash flow exceeds the capital demand. It is unsurprising that a firm in a mature stage has the capability to return surplus cash in the form of dividend payments to shareholders.

Jensen's (1986) agency theory of free cash flow provides a reasonable explanation for the dynamics suggested by the lifecycle proposition. In the early stage, the agency costs are not substantial since it is assumed that managers are less likely to pursue their own interests at the expense of profitable investments. When the corporation reaches the maturity stage, the accumulated surplus capital causes an increase in agency costs, which can consequently reduce firm value. To mitigate the agency costs, mature firms reach a position to initiate or increase dividends so that stock price will be protected. In other words, a young firm can be more efficient in utilizing capital than an established firm, as the need to pay dividends is weak and vice versa. Previous studies relating to the life-cycle theory of dividends (Fama and French, 2001; Grullon, Michaely and Swaminathan, 2002; DeAngelo and DeAngelo, 2006) suggested that corporate decision makers design dividend policy by taking into account the trade-off between the benefit, (e.g., reduction in agency costs of free cash flow) and cost of cash flow distribution (e.g., floating cost due to dividends). In addition, a firm is subject to different levels of capital cost at different points in its life cycle. A young firm has a relatively high cost of external capital for to two reasons. First, investors have less information about a newly listed firm, so information asymmetry tends to be material. Second, a young firm is in great need of cash infusion and its internal funds are limited. As the firm becomes more mature, the information asymmetry is less severe and the cost of external capital drops. These arguments suggest that a firm in its maturity stage faces increasing agency cost as well as lower cost of external capital, and therefore, paying dividends is preferential. The prediction of the signaling theory of dividend policy is seemingly opposite to that of investment opportunities and supply of cash flow. A young firm should have stronger motivation to address the issue of information asymmetry because of its limited communication with the market participants. In contrast, a mature firm should have already set up efficient channels to communicate with outside investors. Thus, if dividend payment is a tool to convey information from insiders to outside investors, newly listed firms have a greater need to pay dividends than mature firms do.

This study has investigated the opinions of the top executives regarding several theoretical issues about dividend policy. Hence, the results of this research may be of value in isolating gaps between dividend policy in theory and in practice and in providing inputs into the creation of useful normative models on dividend policy.

9.3 Research Design

9.3.1 Survey Instruments

The present research is based on an empirical study of 108 listed firms from the DSE with the objective of identifying the application of dividend models. The data have been collected through the primary mode using a structured questionnaire containing 21 statements based on 5 point likert scale where Strongly Agree=2, Agree=1, Indifferent=0, Disagree=-1 Strongly Disagree=-2. The respondents are asked to indicate the level of agreement on different model related issues. The questionnaire has been prepared after reviewing the prior studies on dividend practices by decision maker. The survey is followed the literature of Baker and Powell (2000), Brav et al.(2005),Edelman(1983) etc.

9.3.2 Sample

I mailed the survey instruments to the chief financial officer (CFO) and Managing director, Chairman, Board of directors of each firm in September 2013. The mailing included a cover letter and a stamped return envelope. The cover letter assured recipients that their answers would be confidential and released only in summary form. But I did not find satisfactory response. So, later, I went personally to the respondents of each firm.

9.3.3 Variables used in the study

	Issues
Z_1	Dividends disclose important information to shareholders about company's performance
Z_2	Reasons for dividend policy changes should be disclosed to investors
Z_3	The market adjusts dividend announcements for setting security price
Z_4	A dividend decrease always refers to a reduction in company's earnings
Z_5	Dividend distributions should be made after financing desired investments from available earnings
Z_6	Expenditures on new plans affect the dividend
Z_7	Provide a bonding mechanism to encourage managers to act for the best interest of the shareholders
Z_8	The company prefers funding from retained earnings before resorting to external financing
Z_9	Different dividends in different stages of life cycle of the company
Z_{10}	Decision makers should be responsive to its shareholders' preferences regarding dividends
Z_{11}	A stockholder is attracted to firms which have dividend policies appropriate to the stockholder's particular tax bracket
Z_{12}	Director shareholders have different dividend preferences than general shareholders
Z_{13}	Stock price increases when dividends unexpectedly increase
Z_{14}	Dividend payout affects the price of the common stock
Z_{15}	There should be balancing between future growth of the company and current dividend payment
Z_{16}	The company distributes cash dividends because of investors' preference for certainty
Z_{17}	Paying dividends makes the stock of a firm less risky than retained earnings to shareholders
Z_{18}	The company has a target payout ratio and periodically adjust its payout toward the target
Z_{19}	A firm should avoid making changes in dividends that might have to be reversed in a year ago.
Z_{20}	Investors are indifferent between receiving dividends and capital gains
Z_{21}	The dividend decision is important like financing and investment decisions in determining firm's value

9.3.5 Statistical Test

Parametric and on parametric Test:

I have applied one-sample t-test to determine whether the mean response for each of the 21 factors involving dividend policy differs significantly from 0 (Indifferent).This study follows the test of Baker and Powell (2000), Brav et al.(2005),Edelman(1983) etc. The non parametric test (Chi-square test) is also done which is similar testing tool of Edelman and Farrelly(1983).

Factor Analysis:

The factor analysis has been used to analyze the dividend models application in Bangladesh. The Principal Components Analysis has been used to explore and confirm the inter-relatedness between the occurrences of variables pertaining to dividend.

The number of principal components to be retained has been decided based on Kaiser's criterion of Eigen value>1 and Bartlett's test. The Bartlett's test of significance led to acceptance of significant principal components.

The PCA with varimax rotation method has been used to maximize the sum of squared loading of each factor extracted in turn. It explained more variance than the loadings obtained from any other method of factoring. The factors loaded by variables having significant loadings of the magnitude of .5 and above have been interpreted.

9.4 Results and Discussions: Non Financial Sector (Manufacturing Sector)

9.4.1 Parametric and Non Parametric Test:

Table-9.1: Test of significance

Variable	Level of importance (%)					Mean	Rank	t value	Sig. (2-tailed)	Chi square value	Asymp. Sig.
	Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree						
Z_1	**39.53**	**40.70**	12.79	6.98	0.00	1.1279	1	11.730	.000	32.04	***.00***
Z_2	9.30	55.81	25.58	8.14	1.16	.6395	11	7.318	.000	82.72	***.00***
Z_3	12.79	48.84	23.26	10.47	4.65	.5465	15	5.059	.000	52.48	***.00***
Z_4	6.98	34.88	31.40	24.42	2.33	.1977	18	1.894	.062	36.67	***.07***
Z_5	13.95	51.16	26.74	5.81	2.33	.6860	10	7.302	.000	67.37	***.00***
Z_6	19.77	50.00	15.12	10.47	4.65	.6977	9	6.148	.000	53.76	***.00***
Z_7	**24.42**	**50.00**	20.93	4.65	0.00	.9419	4	10.887	.000	36.32	***.03***
Z_8	17.44	48.84	25.58	5.81	2.33	.7326	7	7.548	.000	59.46	***.00***
Z_9	18.60	37.21	33.72	8.14	2.33	.6163	13	5.953	.000	40.39	***.00***
Z_{10}	**33.72**	**38.37**	20.93	4.65	2.33	.9767	3	9.458	.000	47.95	***.00***
Z_{11}	20.93	40.70	27.91	9.30	1.16	.7093	8	6.969	.000	41.32	***.00***
Z_{12}	16.28	29.07	20.93	24.42	9.30	.2326	19	1.748	.084	10.74	***.08***
Z_{13}	27.91	27.91	26.74	12.79	4.65	.6163	12	4.928	.000	19.69	***.04***
Z_{14}	**32.56**	**39.53**	20.93	4.65	2.33	.9882	2	9.911	.000	49.17	***.00***
Z_{15}	**23.26**	**53.49**	11.63	8.14	3.49	.8837	5	8.734	.000	74.58	***.00***
Z_{16}	19.77	54.65	13.95	6.98	4.65	.7791	6	7.233	.000	70.62	***.00***
Z_{17}	12.79	48.84	23.26	11.63	3.49	.5581	14	5.295	.000	53.18	***.00***
Z_{18}	13.95	45.35	25.58	10.47	4.65	.5349	16	4.892	.000	44.58	***.00***
Z_{19}	16.28	38.37	24.42	15.12	5.81	.4419	16	3.683	.000	25.62	***.00***
Z_{20}	9.30	22.09	27.91	29.07	11.63	-.1395	20	-.705	.483	16.32	***.06***
Z_{21}	16.28	32.56	25.58	22.09	3.49	.3605	17	3.025	.003	20.62	***.03***

Discussion of analysis:

From the table-9.1, it is seen that the variable 4(A dividend decrease always refers to a reduction in company's earnings)and variable 12(Director shareholders have different dividend preferences than general shareholders), variables 20(Investors are indifferent between receiving dividends and capital gains) are statistically insignificant at chi square test, t test and the more than 40 percent respondents gave their opinion as not important and low important variables related to dividend theory. These results show the absence of MM theory in the capital market.

Among the significant variables, the variables 1(Dividends disclose important information to shareholders about company's performance), 14(Dividend payout affects the price of the common stock), 10(Decision makers should be responsive to its shareholders' preferences regarding dividends), 7(Provide a bonding mechanism to encourage managers to act for the best interest of the shareholders), 15(There should be balancing between future growth of the company and current dividend payment) are the top five significant issues in dividend decision. These reveal the picture of dividend theories related issues in our country. The signaling theory, dividend relevancy theory, catering theory and clientele theory are considered most important dividend theories practices in Bangladesh. Now, I have conducted the factor analysis with the significant variables for identifying the relevance of the theories.

9.4.2 Factor Analysis

9.4.2.1 Reliability Analysis

The scale of measurement was tested using Cronbach α reliability test. It was found to be 0.767 which is considered a satisfactory level of construct reliability.

Table-9.2: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.767	.769	18

9.4.2.2 Sampling Adequacy:

The tests have been conducted to know that whether the sample is adequate or not. The sampling adequacy is depicted in table 9.3:

Table-9.3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.716
Bartlett's Test of Sphericity	Approx. Chi-Square	396.933
	df	153
	Sig.	.000

KMO recommends accepting value greater than 0.5 as barely acceptable and Bartlett recommends the accepting value less than 0.05.Since the accepting value for variables is .716(more than .5) for KMO and .000 for Bartlett' test(less than .05), these measures indicate that the set of variables is appropriate for factor analysis and the analysis can proceed for next stage.

9.4.2.3 Component Factor Analysis: Deriving the Factors

Factor analysis procedure is based on initial computation of a table of correlations among the variables that is, correlation matrix. This matrix is then transformed through estimation of a factor model to obtain the factor matrix containing the loadings for each variable on each derived factor. The table 9.4 contains the information regarding the factors and the relative explanatory power as expressed by their eigen values. As per the latent root criteria of retaining the factors, those factors should be retained that have eigen value>1. The Eigen values, the percentage of total variance, and rotated sum of squared loadings have been shown in Table-9.4.The factor matrix as obtained in the principal component analysis has also been further subjected to Varimax Rotation. An examination of Eigen values has led to the retention of seven factors. These factors have accumulated for 13.22%, 11.37%, 10.48%, 9.48%, 9.16%, 8.45%, 7.42% of variation. This implies that the

total variance accumulated for by all seven factors is **69.83%** and remaining variance is explained by other factors.

Table 9.4: Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.913	21.741	21.741	3.913	21.741	21.741	2.380	13.221	13.221
2	1.959	10.884	32.625	1.959	10.884	32.625	2.047	11.375	24.595
3	1.622	9.009	41.634	1.622	9.009	41.634	1.886	10.480	35.075
4	1.517	8.426	50.060	1.517	8.426	50.060	1.750	9.722	44.796
5	1.331	7.395	57.455	1.331	7.395	57.455	1.650	9.167	53.963
6	1.150	6.388	63.844	1.150	6.388	63.844	1.521	8.452	62.415
7	1.079	5.992	69.836	1.079	5.992	69.836	1.336	7.421	69.836
8	.858	4.767	74.603						
9	.683	3.794	78.397						
10	.613	3.407	81.804						
11	.586	3.257	85.061						
12	.540	2.999	88.060						
13	.484	2.689	90.749						
14	.420	2.335	93.084						
15	.382	2.120	95.203						
16	.375	2.082	97.286						
17	.299	1.662	98.948						
18	.189	1.052	100.000						

Extraction Method: Principal Component Analysis.

9.4.2.4 Scree plot:

The application of Cattell's (1966) scree test (Figure 9.1) resulted in acceptance of Factors. The Scree plot shows the factor eigen values in descending order .The eigen values of a factor represents the variance explained by each factor. An elbow in the Scree plot occurs at Factor 7, which indicates the point at which the inclusion of additional factors does not contribute significantly in explaining the variance of the data set. The results of the analysis are presented in the form of factor pattern matrix. Factors above the elbow of the plot are retained. A set of 7 Factors that were chosen accounts for about 69.83 % of the variations in the data.

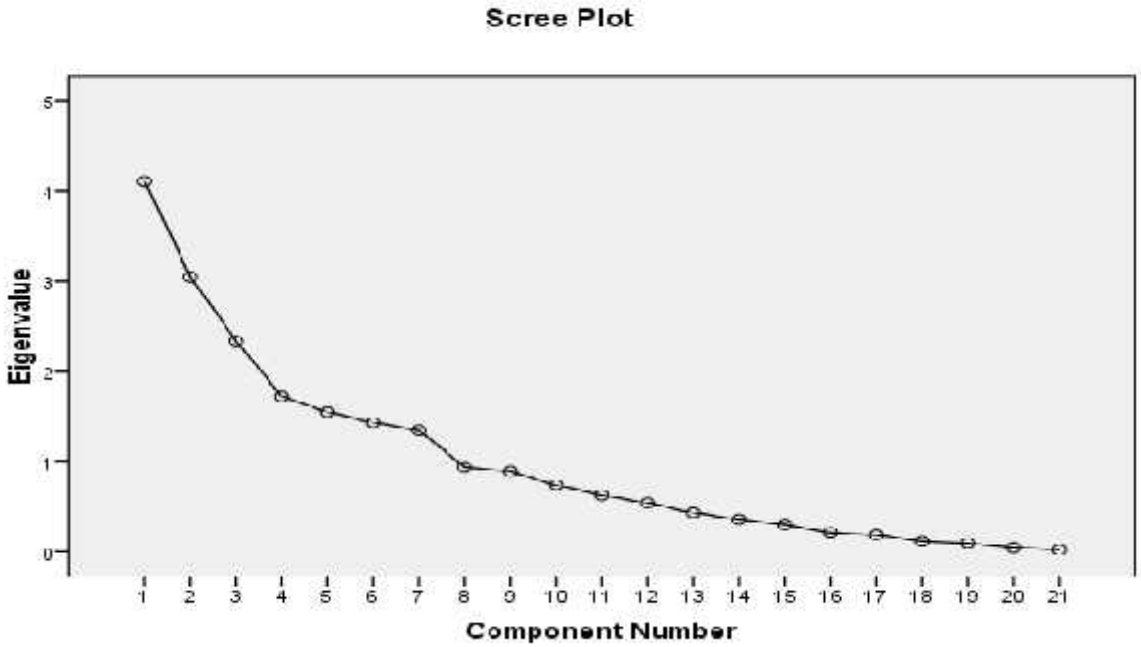

Figure-9.1: ScreePlot

9.4.2.5 Examining and identifying the significant Factors loading:

After studying the Eigen values for the components, the next step is to study the factor matrix and the respective factors loadings. The loadings above 0.45 have been considered for the study. For obtaining the rotated factor matrix, orthogonal rotation method, viz, VARIMAX rotation has been used. The results are displayed in table 9.5.

Table 9.5: Rotated Component Matrix[a]

	Component						
	1	2	3	4	5	6	7
Z5	***.832***	-.017	-.081	.177	-.033	.018	-.006
Z6	***.719***	.271	.005	.087	-.196	.103	-.034
Z15	***.598***	-.159	.392	-.075	.095	-.004	.319
Z7	***.567***	.355	.087	.025	-.078	.201	.152
Z16	.159	***.774***	.004	-.058	.142	.086	.012
Z9	-.002	***.687***	.219	.275	-.093	.043	.283
Z17	.470	***.555***	.113	.091	.184	.260	-.075
Z13	-.005	.007	***.835***	.220	-.115	.054	-.078
Z14	.051	.170	***.786***	-.302	-.054	.006	.044
Z21	.066	.059	-.136	***.833***	-.028	-.069	-.034
Z8	.247	.258	.434	***.589***	.005	-.013	.033
Z3	.088	-.344	.159	***.508***	.270	.347	.330
Z1	-.133	-.056	-.079	-.029	***.856***	.063	.054
Z2	-.010	.187	-.063	.045	***.839***	-.074	-.120
Z19	.181	.196	-.090	-.061	.000	***.783***	-.141
Z11	-.014	-.015	.241	.001	-.020	***.656***	.376
Z18	.330	.353	-.168	.416	-.021	***.461***	-.194
Z10	.102	.157	-.072	.000	-.066	.009	***.888***

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 11 iterations.

9.4.2.5 Assessing Communalities

After identifying the significant factor loadings, next step is to study the communalities of the variables, representing the amount of variance accounted for by the factor solution for each variable. It is generally assumed that variable with communalities>0.5 should be retained for the study; the communalities of the variables have been shown in the table 9. 6.

Table-9.6: Communalities

	Initial	Extraction
Z1	1.000	.768
Z2	1.000	.765
Z3	1.000	.712
Z5	1.000	.731
Z6	1.000	.648
Z7	1.000	.525
Z8	1.000	.663
Z9	1.000	.686
Z10	1.000	.833
Z11	1.000	.631
Z13	1.000	.768
Z14	1.000	.746
Z15	1.000	.653
Z16	1.000	.656
Z17	1.000	.658
Z18	1.000	.685
Z19	1.000	.715
Z21	1.000	.727

Extraction Method: Principal Component Analysis.

9.4.2.6 Factor Analysis Results

The principal component analysis using varimax rotation of 18 variables has led to the extraction of seven factors. Following tables represent the final results of the study and reflects the extraction of the factors that are considered more influential by the respondents.

Factor Analysis

The rotated factor matrix has been shown in Table-9.5. This shows that variables understudy have constituted seven groups. These have been discussed in the following paragraphs.

Factor-I: Residual and Agency Theory

Factor-I explains 13.22% of the total variations existing in the variable set. This includes variables- Z_5, Z_6, Z_{15}, Z_7. This factor has significant factor loadings on these variables which have formed this major cluster. So, this factor provides a basis for conceptualization of a dimension, which may be identified as '*Residual and Agency Theory'*.

Factor-II: Bird in Hands Policy and Life cycle Theory

Factor-II explains 11.37% of the total variations existing in the variable set. This includes variables- Z_9, Z_{16}, Z_{17}. This factor has significant factor loadings on these variables which have formed second important cluster. So, this factor provides a basis for conceptualization of a dimension, which may be identified as '*Bird- in-the Hands Policy and Life cycle Theory '.*

Factor-III: Value of the firm and dividend relevancy theory

Factor-III explains 10.48% of the total variations existing in the variable set. This includes variables- Z_{13}, Z_{14} . This factor has significant factor loadings on these variables which have formed third cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as *'Value of the firm and dividend relevancy theory '.*

Factor-IV: MM model

Factor-IV explains 9.72% of the total variations existing in the variable set. This includes variables- Z_{21}, Z8, and Z3. This factor has significant factor loadings on these variables which have formed fourth cluster. So, this factor provides a basis for conceptualization of a dimension, which may be identified as '*MM model '.*

Factor-V: Signal Theory

Factor-V: explains 7.53% of the total variations existing in the variable set. This includes variables- Z_1 and Z_2. This factor has significant factor loadings on these variables which have formed fifth cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as '*Signaling Theory '.*

Factor-VI: Lintner Model and Clientele theory

Factor-VI explains 8.45% of the total variations existing in the variable set. This includes variables - Z_{18}, Z_{19}, Z_{11}. This factor has significant factor loadings on these variables which have formed sixth cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as '*Lintner Model and Clientele theory '.*

Factor-VII: Catering theory

Factor-VII: explains 7.42% of the total variations existing in the variable set. This includes variables – Z_{10}. This factor has significant factor loadings on these variables which have formed seventh cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as *'Catering theory '.*

Ranking of the Factors*:*

Finally, the rankings obtained on the basis of factor wise scores are shown in the following table:

Table-9.7: Rankings of the Factors

Factor		*Average Score*	*Rank*
I	*Residual and Agency Theory*	*0.54*	*4*
II	*Bird in Hands Policy and Life cycle Theory*	*0.45*	*5*
III	*Value of the firm and dividend relevancy theory*	*0.64*	*3*
IV	*MM theory*	*0.34*	*7*
V	*Signaling Theory*	*0.74*	*2*
VI	*Lintner Model and Clientele theory*	*0.35*	*6*
VII	*Catering theory*	*0.89*	*1*

Note: Data have been compiled by the researchers

The ranking shows that *Factor-VII: Catering Theory* is most important factor that should lead the dividend decision in Bangladesh. This factor includes variable Z_{10}: Decision makers should be responsive to its shareholders' preferences regarding dividends. This implies that the dividend policy maker should consider the shareholders preferences. The second important factor is the Signaling Effect theory that indicates that the dividend conveys the information to the market. The third factor is the value of the firm and dividend relevance theory *(variables: stock price increases when dividends unexpectedly increase, dividend payout affects the price of the common stock*) that indicates the dividend payment has impact on market price of share.

9.4.3 Proposed Theoretical Model Practices

On the basis of t-test, chi-square test, factor analysis, I have proposed optimum theoretical model practices in the context of Bangladesh.

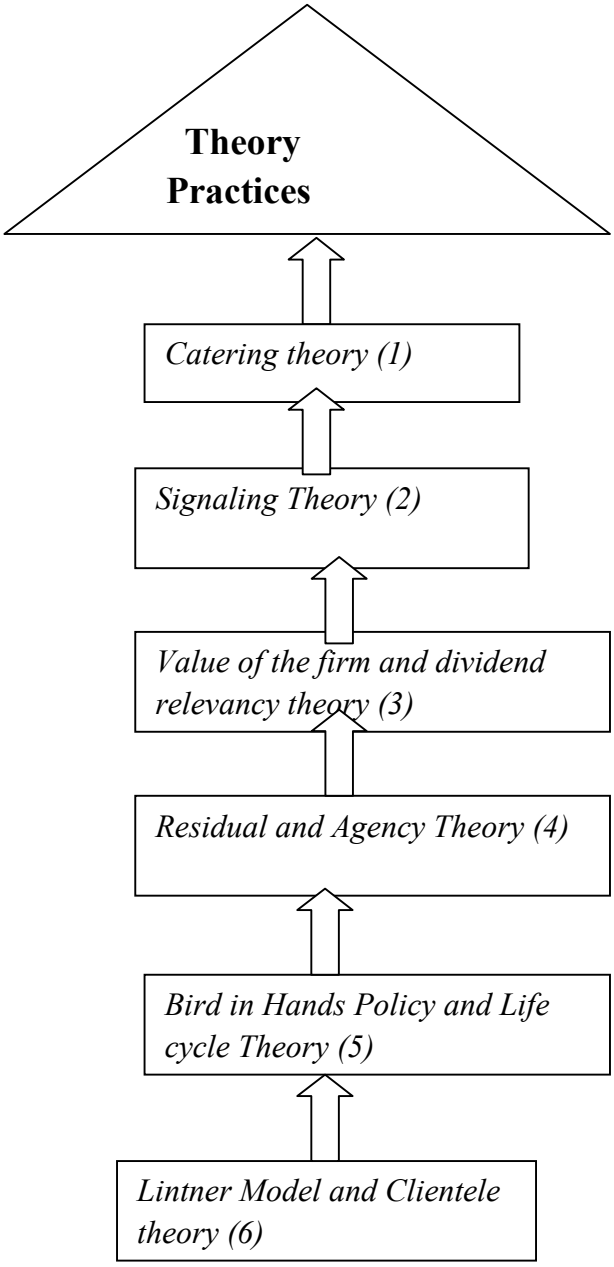

Figure 9.2: Dividend theories practices

On the basis of importance of the theory, I have developed the figure 9.2. This is the survey opinion of the managers. Decision makers should be responsive to its shareholders' preferences regarding dividends (catering theory). It is the top most issue in dividend policy. The second issue is signaling theory of dividend which indicates that the dividend convey information to the market. This is the rejection of MM irrelevancy theory which is shown in the t test and factor analysis. The third important theory of dividend is relevance theory which tells that the dividend has effect on the market value of the firm. Other theories are Residual and Agency Theory, Bird in Hands Policy and Life cycle Theory, Lintner Model and Clientele theory which carry less important in the capital market.

The result supports the findings of Lintner (1956), Baker et al. (1985, Baker and Phillips (1992), Baker and Powell (2000), Revista de Contabilidade(2004), Farrelly and Edelman(1985), Brav et al. (2005), Khurana (1985) , Pradhan and Adhikari (2003).Chinmoy Sahu(2002) ,Anand(2005) **,**Mizuno (2007) ,Khan et al. (2011) ,Alshammari (2012) ,Baker and Powell (2012),Naser et al. (2013) ,John (2013) ,Manandhar (2002) ,Shah (2009) ,Akinyomi(2013).

9.5 Results and Discussions: Financial Sector (Banking Sector)

9.5.1 Parametric and Non Parametric Test:

Table-9.8: test of significance

Variable	Level of agreement (%)					Mean	Rank	t value	Sig. (2-tailed)	Chi square value	Asymp. Sig.
	Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree						
Z_1	40.91	31.82	9.09	18.18	0.00	.9545	6	3.952	.001	6.273	.041
Z_2	22.73	36.36	40.91	0.00	0.00	.8182	8	4.827	.000	1.182	.554
Z_3	9.09	68.18	13.64	9.09	0.00	.7727	14	4.822	.000	22.000	.000
Z_4	4.55	22.73	40.91	27.27	4.55	-.0455	20	-.224	.825	6.000	.112
Z_5	9.52	61.90	19.05	9.52	0.00	.7727	15	4.461	.000	14.000	.003
Z_6	9.09	54.55	36.36	0.00	0.00	.7273	10	5.405	.000	6.909	.032
Z_7	9.09	63.64	18.18	9.09	0.00	.7273	11	4.446	.000	18.000	.000
Z_8	9.09	40.91	45.45	0.00	4.55	.5455	17	3.464	.002	11.818	.008
Z_9	4.55	40.91	27.27	18.18	9.09	.2727	19	1.299	.208	5.230	.211
Z_{10}	22.73	36.36	36.36	0.00	4.55	.7273	12	3.464	.002	8.000	.021
Z_{11}	31.82	50.00	9.09	4.55	4.55	1.0000	4	4.583	.000	18.000	.001
Z_{12}	23.81	38.10	23.81	9.52	4.76	.6364	16	2.731	.013	7.545	.110
Z_{13}	40.91	31.82	22.73	4.55	0.00	1.0909	2	5.555	.000	6.364	.050
Z_{14}	31.82	40.91	18.18	9.09	0.00	.9545	7	4.713	.000	6.273	.041
Z_{15}	45.45	36.36	18.18	0.00	0.00	1.2727	1	7.780	.000	12.545	.002
Z_{16}	22.73	45.45	22.73	9.09	0.00	.8182	9	4.231	.000	7.000	.031
Z_{17}	13.64	31.82	36.36	18.18	0.00	.4091	18	2.001	.059	3.091	.378
Z_{18}	39.13	34.78	8.70	13.04	4.35	1.0000	5	4.062	.001	13.000	.011
Z_{19}	23.81	42.86	23.81	9.52	0.00	.7273	13	3.464	.002	3.455	.327
Z_{20}	8.70	17.39	21.74	21.74	30.43	-.4091	21	-1.43	.165	2.091	.719
Z_{21}	27.27	45.45	27.27	0.00	0.00	1.0000	3	6.205	.000	11.455	.009

Discussion of analysis:

From the table-9.8, it is seen that the variable 4(A dividend decrease always refers to a reduction in company's earnings)and variable 12(Director shareholders have different dividend preferences than general shareholders), variable 20(Investors are indifferent between receiving dividends and capital gains), variable 2(Reasons for dividend policy changes should be disclosed to investors)and variable 9(Different dividends in different stages of life cycle of the company), variable 17(paying dividends makes the stock of a firm less risky than retained earnings to shareholders), variable 19(a firm should avoid making changes in dividends that might have to be reserved in a year ago)are statistically insignificant at chi square test, t test and the more than 40 percent respondents gave their opinion as not important and low important variables related to dividend theory. These results show the absence of MM theory in the financial sector. The variable 20(Investors are indifferent between receiving dividends and capital gains) is insignificant which indicates the irrelevancy of the MM model in the capital model of Bangladesh.

Among the significant variables, the variables 1, 3, 5, 6, 7, 8, 10, 11, 13, 14, 15, 18, 21 are the significant issues in dividend decision. These reveal the picture of dividend theories related issues in our country. The signaling theory, residual theory, agency theory, dividend relevancy theory, catering theory, clientele theory, Lintner model are considered most important dividend theories practices in banking sector of Bangladesh.

The results support the findings of Lintner (1956), Baker et al. (1985, Baker and Phillips (1992), Baker and Powell (2000), Revista de Contabilidade(2004), Farrelly and Edelman(1985), Brav et al. (2005), Haleem,Rehman, and Javid (2011) , Adeymi and Adewale (2008).

9.5.2 Factor Analysis

9.5.2.1 Reliability Analysis

The scale of measurement has been tested using Cronbach α reliability test. It is found to be 0.820 which is considered a satisfactory level of construct reliability.

Table-9.9: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.820	.827	14

9.5.2.2 Sampling Adequacy:

The tests have been conducted to know whether the sample is adequate or not. The sampling adequacy is depicted in table 9.10:

Table-9.10: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.627
Bartlett's Test of Sphericity	Approx. Chi-Square	138.799
	df	91
	Sig.	.001

KMO recommends accepting value greater than 0.5 as barely acceptable and Bartlett recommends the accepting value less than 0.05.Since the accepting value for variables is .627(more than .5) for KMO and .000 for Bartlett' test(less than .05), these measures indicate that the set of variables is appropriate for factor analysis and the analysis can proceed for next stage.

9.5.2.3 Component Factor Analysis: Deriving the Factors

Factor analysis procedure is based on initial computation of a table of correlations among the variables that is, correlation matrix. This matrix is then transformed through estimation of a factor model to obtain the factor matrix containing the loadings for each variable on each derived factor. The table 9.11 contains the information regarding the factors and the relative explanatory power as expressed by their eigen values. As per the latent root criteria of retaining the factors, those factors should be retained that have eigen value>1. The Eigen values, the percentage of total variance, and rotated sum of squared loadings have been shown in Table-9.11.The factor matrix as obtained in the principal component

analysis has also been further subjected to Varimax Rotation. An examination of Eigen values has led to the retention of five factors. These factors have accumulated for 21.11%, 16.198%, 16.07%, 14.38%, and 10.83% of variation. This implies that the total variance accumulated for by all five factors is 78.608% and remaining variance is explained by other factors.

Table-9.11: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.263	30.447	30.447	4.263	30.447	30.447	2.956	21.111	21.111
2	2.376	16.972	47.420	2.376	16.972	47.420	2.268	16.198	37.309
3	1.689	12.061	59.481	1.689	12.061	59.481	2.250	16.071	53.380
4	1.559	11.136	70.617	1.559	11.136	70.617	2.014	14.389	67.769
5	1.119	7.991	78.608	1.119	7.991	78.608	1.517	10.839	78.608
6	.793	5.663	84.271						
7	.586	4.186	88.457						
8	.444	3.172	91.630						
9	.324	2.311	93.940						
10	.273	1.949	95.889						
11	.233	1.663	97.553						
12	.190	1.354	98.907						
13	.098	.702	99.609						
14	.055	.391	100.000						

Extraction Method: Principal Component Analysis.

9.5.2.4 Scree plot:

The application of Cattell's (1966) scree test (Figure 9.3) resulted in acceptance of Factors. The Scree plot shows the factor eigen values in descending order .The eigen values of a factor represents the variance explained by each factor. An elbow in the Scree plot occurs at Factor 5, which indicates the point at which the inclusion of additional factors does not contribute significantly in explaining the variance of the data set. The results of the analysis are presented in the form of factor pattern matrix. Factors above the elbow of the plot are retained. A set of 5 Factors that were chosen accounts for about 78.6 % of the variations in the data.

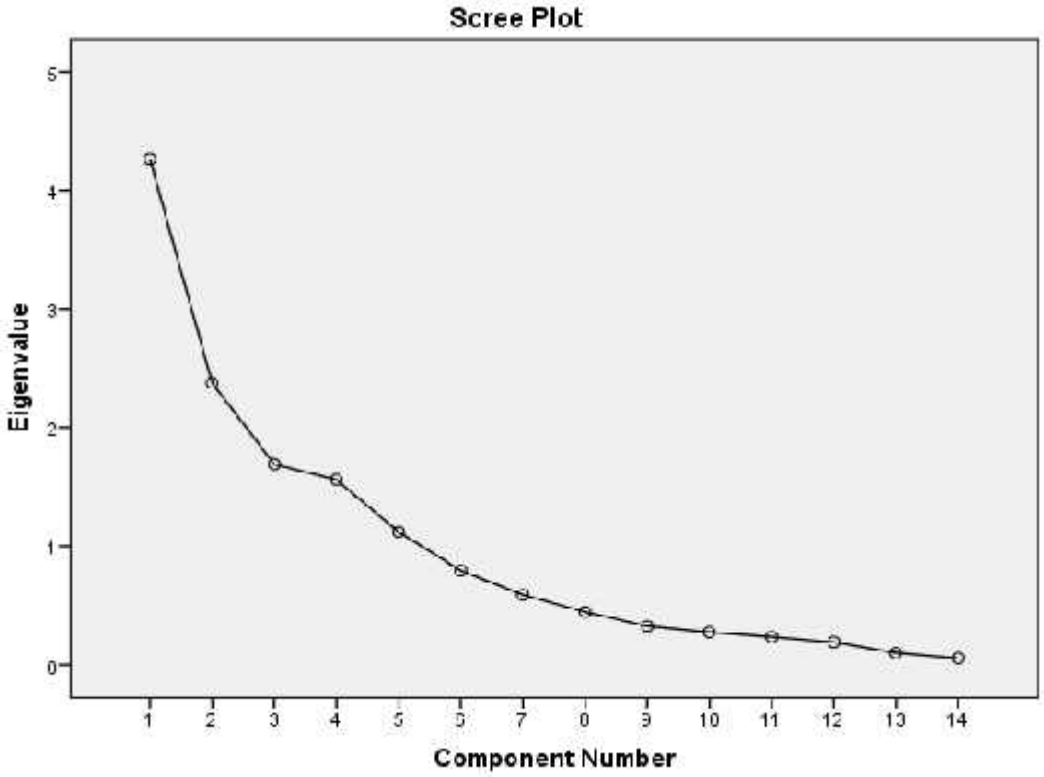

Figure-9.3: ScreePlot

9.5.2.5 Examining and identifying the significant Factors loading

After studying the Eigen values for the components, the next step is to study the factor matrix and the respective factors loadings. The loadings above 0.5 have been considered for the study. For obtaining the rotated factor matrix, orthogonal rotation method, viz, VARIMAX rotation has been used. The results are displayed in table 9.12.

Table-9.12: Rotated Component Matrix[a]

	Component				
	1	2	3	4	5
Z14	**.902**	.124	.043	.108	-.038
Z11	**.833**	.121	-.024	.148	.290
Z13	**.676**	.214	.353	.285	-.176
Z10	**.621**	-.611	.038	.009	.132
Z3	**.561**	.367	.207	.437	.371
Z18	.315	**.787**	-.146	.322	.134
Z16	.298	**.779**	.287	-.065	-.048
Z15	.018	.182	**.862**	-.218	-.013
Z5	.109	-.023	**.811**	.211	.112
Z8	.173	-.499	**.615**	.450	-.069
Z7	.190	.034	-.062	**.816**	.157
Z6	.116	.056	.120	**.798**	-.229
Z21	-.109	-.105	.052	.049	**-.880**
Z1	.021	-.401	.419	-.006	**.597**

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

9.5.2.5 Assessing Communalities

After identifying the significant factor loadings, next step is to study the communalities of the variables, representing the amount of variance accounted for by the factor solution for each variable. It is generally assumed that variable with communalities>0.5 should be retained for the study. The communalities of the variables have been shown in the table 9. 13.

Table 9.13: Communalities

	Initial	Extraction
Z1	1.000	.694
Z3	1.000	.821
Z5	1.000	.727
Z6	1.000	.721
Z7	1.000	.732
Z8	1.000	.864
Z10	1.000	.777
Z11	1.000	.815
Z13	1.000	.740
Z14	1.000	.844
Z15	1.000	.824
Z16	1.000	.784
Z18	1.000	.861
Z21	1.000	.802

Extraction Method: Principal Component Analysis.

9.5.2.6 Factor Analysis Results

The principal component analysis using varimax rotation of 14 variables has led to the extraction of five factors. Following sections represent the final results of the study and reflects the extraction of the factors that are considered more influential by the respondents.

Factor Analysis

The rotated factor matrix has been shown in Table-9.12. This shows that variables understudy have constituted five factors. These have been discussed in the following paragraphs.

Factor-I: Catering and Clientele Theory

Factor-I explains 21.11% of the total variations existing in the variable set. This includes variables- Z_3, Z_{10}, Z_{11}, Z_{13}, and Z14. This factor has significant factor loadings on these variables which have formed this major cluster. So, this factor provides a basis for conceptualization of a dimension, which may be identified as '*Catering and Clientele Theory '*.

Factor-II: Bird in Hands Policy and Lintner Model

Factor-II explains 16.19% of the total variations existing in the variable set. This includes variables- $Z_{16,}$ Z_{18}. This factor has significant factor loadings on these variables which have formed second important cluster. So, this factor provides a basis for conceptualization of a dimension, which may be identified as '*Bird in Hands Policy and Lintner Model '.*

Factor-III: Residual policy and Life cycle theory

Factor-III explains 16.07% of the total variations existing in the variable set. This includes variables- Z_5 $Z_{8,}$ Z_{15}. This factor has significant factor loadings on these variables which have formed third cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as *'Residual policy and Life cycle theory '.*

Factor-IV: Agency theory

Factor-IV explains 14.38% of the total variations existing in the variable set. This includes variables- $Z_{6,}$ $Z_{7.}$ This factor has significant factor loadings on these variables which have formed fourth cluster. So, this factor provides a basis for conceptualization of a dimension, which may be identified as 'Agency theory *'.*

Factor-V: Signal Theory

Factor-V: explains 10.83% of the total variations existing in the variable set. This includes variables- Z_1 and Z_{21}. This factor has significant factor loadings on these variables which have formed fifth cluster. So, this factor provides a basis for conceptualization of a dimension which may be identified as '*Signaling Theory '.*

Ranking of the Factors*:*

Finally, the rankings obtained on the basis of factor wise scores are shown in the following table:

Table-9.14: Rankings of the Factors

Factor		Average Score	Rank
I	*Catering and Clientele Theory*	.66	4
II	*Bird in Hands Policy and Lintner Model*	.71	2
III	*Residual policy and Life cycle theory*	.68	3
IV	*Agency theory*	.58	5
V	*Signal Theory*	.72	1

Note: Data have been compiled by the researchers

The ranking shows that *Factor-I: Signaling Theory* is most important factor that should lead the dividend decision in Bangladesh. This factor includes variable Z_1: Dividends disclose important information to shareholders about company's performance, Z_{21}: The dividend decision is important like financing and investment decisions in determining firm's value. This implies that the dividend convey information to the shareholders. The second important factor is the *Bird- in- the Hands Policy and Lintner Model* that indicates the company has target payout and the investors' desire for cash dividend for certainty. The third factor is the *Residual policy and Life cycle theory.*

9.5.3 Proposed Theoretical Model Practices

On the basis of t-test, chi-square test, factor analysis, I have proposed optimum theoretical model practices in banking sector in the context of Bangladesh.

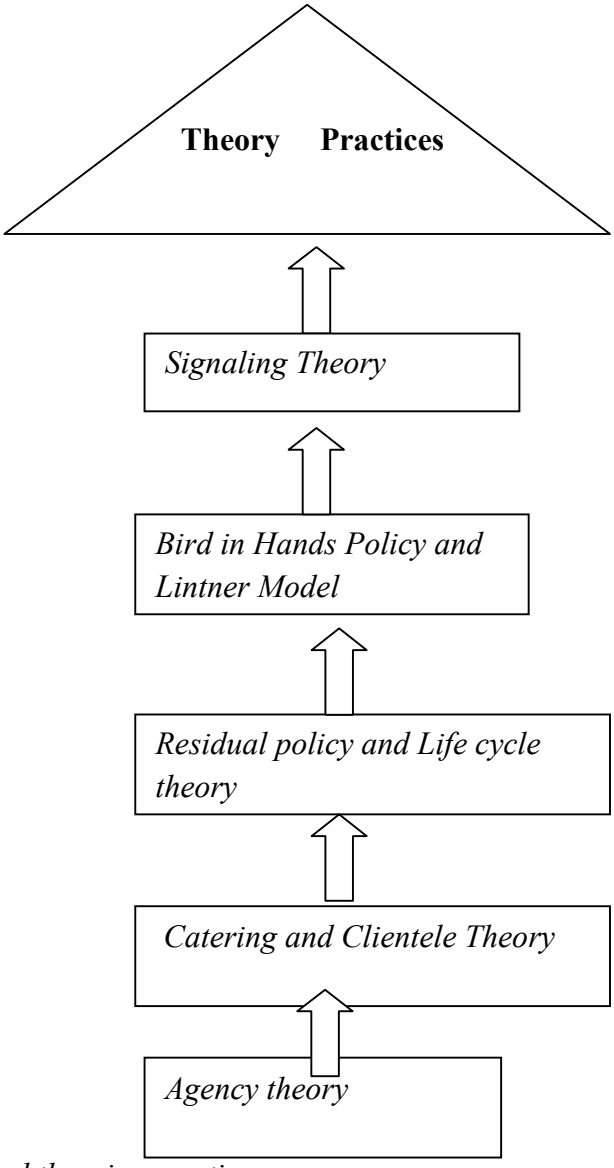

Figure 9.4: Dividend theories practices

On the basis of importance of the theory, I have developed the figure 9.4. This is the survey opinion of the managers. Dividends disclose important information to shareholders about company's performance. It is the top most issue in dividend policy. The second issue is Bird- in- the Hands Policy and Lintner Model. The third important theories of dividend are Residual policy and Life cycle theory which indicate the investment policy from retained earnings and the preference of the investors. Other theories are Agency Theory, Catering and Clientele theory which carry less important in the capital market.

9.5 Conclusion

The academician developed various theories and models of dividend policy. This chapter shows the relevant theories of dividend in Bangladesh. In the nonfinancial sector, among the theories, the catering theory, signaling theory and dividend relevancy theory are important theories in the context of Bangladesh. In the banking sector, the companies follow the signaling theory, bird- in – the hand policy, Lintner dividend relevancy model most.

Chapter Ten: Flaws with the Existing Dividend Practices of Corporate Firm

10.1 Introduction

The setting optimum dividend policy is difficult for the managers. I have made a survey on the managers regarding the problems of the dividend setting with close ended and open ended questionnaire. The findings of the survey are described below. These will help the managers to eliminate these problems while setting the dividend policy.

10.2. Company's views about the problems involving dividend practices: survey study on nonfinancial sectors

Variables used in the study:

Table -10.1: Company's views about the problems involving dividend policies

	Factors
Y_1	Dividend increases are ambiguous because they can indicate either lower future growth or lack of investment opportunities
Y_2	Cash dividends will weaken the company's liquidity position
Y_3	Inconsistency in dividend practices (within the company)
Y_4	Higher expectation of investors
Y_5	Unanticipated change in inflation
Y_6	Imperfect capital market
Y_7	Regulatory changes
Y_8	Absence of incentives for dividend
Y_9	Insider trading
Y_{10}	Complicated regulation practices
Y_{11}	Inconsistency in dividend within industries

Table -10.2: Parametric and Non parametric test: manufacturing sector

Variables	Level of agreement (%)					Mean	Rank	t value	Sig. (2-tailed)	Chi square value	Asymp. Sig.
	Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree						
Y_1	25.58	40.70	15.12	15.12	3.49	.48837	5	4.365	.000	33.53	.000
Y_2	8.14	34.88	12.79	37.21	6.98	1.0000	1	8.914	.000	54.69	.000
Y_3	27.91	25.58	16.28	24.42	5.81	.13095	8	1.054	.295	17.31	.002
Y_4	15.12	36.05	8.14	38.37	2.33	.97674	2	8.271	.000	43.30	.000
Y_5	36.05	29.07	11.63	15.12	8.14	.31395	7	2.601	.011	24.69	.000
Y_6	28.74	33.33	6.90	24.14	6.90	.69767	3	6.148	.000	30.74	.000
Y_7	22.09	41.86	11.63	16.28	8.14	.51765	4	4.391	.000	33.64	.000
Y_8	36.47	25.88	18.82	9.41	9.41	.04706	9	.398	.692	25.17	.000
Y_9	18.60	20.93	20.93	30.23	9.30	.41860	6	2.857	.005	9.58	.048
Y_{10}	31.40	22.09	26.74	9.30	10.47	-.08235	10	-.668	.506	16.58	.002
Y_{11}	24.42	23.26	24.42	6.98	20.93	-.37209	11	-2.87	.005	12.95	.012

From the result of the t test and chi square test, variables 3, 8, 10 are insignificant and variables 1, 2, 4, 5, 6, 7, 9, are significant. Now, I have discussed in details in the next section.

Cash dividends affect on liquidity: For paying the cash dividend, the company needs enough liquidity. So, when the managements set the dividend policy, they always face problem for ensuring liquidity position.

Higher expectation of shareholders: The shareholders have desire for higher return from their investment. But the company has to take dividend decision on considering various factors. The earnings and liquidity are the most important factors for higher dividend payments. So, it is problems for the managers for meeting the expectation of the shareholders.

Imperfect capital market: The dividend has the signaling effect on the share price. But in inefficient market, the dividend information does not reflect in right way which is expected.

Regulatory changes: The regulatory changes in securities market cause the problems.

Ambiguity of dividend: The shareholders take the payment of dividend in different ways. The perceptions of shareholders on dividend payment are not unique. Dividend increases

are ambiguous because they can indicate either lower future growth or lack of investment opportunities. So, the managers are in confusion in setting dividend payment.

Unanticipated economic change: The inflation affects of the real income from the investment. The dividend income is adjusted with the inflation. So, unexpected change in inflation will decrease the return from dividend.

Insider trading: The sensitive information of the company is not fully reflected in imperfect market. The insiders get the information before outsider general shareholders. The insider trading is a problem in the market.

10.3 Company's views about the problems involving dividend policies: survey on financial sector

Table -10.3: Parametric and Non parametric test: Banking sector

Variable	Level of agreement (%)					Mean	Rank	t value	Sig. (2-tailed)	Chi square value	Asymp. Sig.
	Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree						
Y_1	22.73	9.09	27.27	31.82	9.09	.0455	8	.161	.874	4.81	.309
Y_2	*27.27*	*40.91*	*18.18*	*13.64*	*0.00*	*.8182*	*2*	*3.813*	*.001*	*11.81*	*.02*
Y_3	4.55	9.09	36.36	36.36	13.64	-.4545	11	-2.109	.047	10.27	.036
Y_4	*22.73*	*36.36*	*31.82*	*9.09*	*0.00*	*.6818*	*4*	*3.071*	*.006*	*9.81*	*.044*
Y_5	18.18	31.82	36.36	13.64	0.00	.5455	5	2.658	.015	3.09	.378
Y_6	22.73	27.27	36.36	9.09	4.55	.5455	6	2.324	.030	7.54	.110
Y_7	31.82	36.36	18.18	13.64	0.00	.8636	1	3.906	.001	3.09	.378
Y_8	13.64	27.27	31.82	27.27	0.00	.2727	7	1.240	.229	1.63	.651
Y_9	*38.10*	*38.10*	*4.76*	*19.05*	*0.00*	*.8182*	*3*	*3.049*	*.006*	*11.18*	*.025*
Y_{10}	4.55	18.18	36.36	27.27	13.64	-.2727	9	-1.188	.248	6.63	.156
Y_{11}	13.64	9.09	31.82	18.18	27.27	-.3636	10	-1.250	.225	3.90	.418

From the mean of variables 3(Inconsistency in dividend practices (within the company)), 10(Complicated regulation practices), 11(Inconsistency in dividend within industries) are negative which indicates the respondents' disagree on these variables. The results of t test and chi-square test show that variables 2(Cash dividends will weaken the company's liquidity position), 4(Higher expectation of investors), 9(Insider trading) are significant in both tests.

Other Problems:

Previous nonpayment culture: In the recent years, the companies are paying dividend regularly than earlier years. But, the attitude of companies exists regarding nonpayment of dividend culture.

Lack of study on dividend policy: Most of the companies do not conduct any research on the dividend policy (74.14% in manufacturing, 77.3% in banking). So, the management take the dividend decision on the basis of own experience and intention.

Lack of dividend policy: A large number of companies have no specific dividend policy.

Investors' attitude toward dividend: The majority investors act as a trader not as a long time investor. So, they are not serious about dividend gain from their investment.

Conclusion:

The liquidity position, higher expectation of the investors and insider trading are the main problems in both financial and nonfinancial sectors. The company should prepare a specific dividend policy on the basis of study.

Chapter Eleven: Summary, Policy Implications and Conclusion

11.0 Introduction

The dividend policy is a pivotal policy around which other financial policies rotate. Appropriate dividend distribution policy can not only set a good corporate image, but also to build the confidence of investors in the company's future prospects. No comprehensive study in this area has so far been made in the corporate sector in Bangladesh. Against this backdrop, the present study has been under taken to evaluate dividend policy practices of listed companies in Bangladesh. The aims of this study are to analyze the impact of dividend policies on market prices of shares, to identify the determinants of dividend policies of corporate firms, to examine the dividend policies practiced in corporate firms, to examine the application of existing dividend models in the context of Bangladesh, to identify the Flaws with the Existing Dividend Practices of Corporate Firm, to provide the policy implications of dividend policy to strengthen the capital market of Bangladesh.

11.1 Highlights of the Major Findings

11.1.1 The Impact of Dividend Policy on the Value of the Firm

Nonfinancial sector:

The DPR and Age of the firm have positive impact on the value of the firm. The outcome indicates the relevancy of dividend.

Financial sector:

The DPR and Capital structure have positive impact on the value of firm. The outcome also indicates the relevancy of dividend in banking sector.

11.1.2 The Announcement Effects of Dividend on Share Price

Non Financial Sector

Dividend initiation Events

The AAR and CAAR are significant on the day-2, day-3, day1, day2. This indicates that the abnormal returns around the event day are significant. The dividend announcements react on the share price around the event dates. Moreover, the AAR of day-7, day7, day9

are significant and the CAAR of the day -6, day-7, day-8, day6, day7, day8 are statistically significant. These indicate that the one week before and one week after the event date, the abnormal returns are significant. Before the dividend initiation announcement event, the market is reacted which indicates that the information is leakage before final announcement. It is observed that the AAR and CAAR are negative on both before the event date and after the event date of dividend initiation. The result of BHAR supports the result of market model.

Dividend omission Events

The average abnormal return (AAR) and CAAR on the day of dividend announcement are statistically significant. This indicates that the dividend omission announcement has impact on market price of share. It is also observed that the AAR and CAAR are significant on the day-1 day -2, day-3, day-4, day 1 day 2, day 3. The dividend omission announcement negatively reacts on the share price around the event dates. It is observed that the average AAR and CAAR are negative in dividend initiation and omission events but the difference is that the negative reaction of dividend omission events is more than the dividend initiation events. The BHAR supports the result of market model.

Forms of dividend

The market reacts immediately for the cash announcement. It infers that the cash dividend announcement has impact on market before and after the event date. The earlier reaction indicates the information leakage in the market. The stock dividend and both (cash and stock) do not significantly react on the market price of share.

Dividend payment trends

The abnormal returns of dividend increasing trend around the event day are significant. The dividend increasing announcement reacts on the share price around the event dates. The no change event conveys information to market. The AAR, CAAR, BHAR of decreasing events of the days before and after the event dates are not statistically significant. So, there are no remarkable reactions of decreasing announcement of dividend on stock price. It implies that the dividend decrease massage does not convey information to the market.

Behavioral model

It is observed a common trend about the market reaction. The abnormal returns start to decline from day-5 and reach to lowest at day o or at day1 then further stating to increase. This result supports the signaling hypothesis of dividend.

Financial Sector

Dividend initiation events

The AAR, CAAR ,BHAR on the event day are statistically significant at 5% level. The AAR CAAR, BHAR around the event date are also significant. So, it is clear that the dividend initiation events impact on the market price of the share. But the earlier reaction indicates the information leakage in market.

Dividend omission Events

The AAR, CAAR, and BHAR on event day and on the days before and after the event date are not significant. So, it is inferred that the dividend omission announcements do not convey any significant information to the market.

Forms of dividend

In the events of cash dividend, the AAR, CAAR, BHAR of the days before and after the event dates are not statistically significant. So, there are no remarkable reactions of cash dividend announcement on stock price. It implies that the cash dividend does not convey information to the market. The both (cash and stock) dividend announcement events do not convey any significant information to the market. The stock dividend initiation events have impact on the market price of the share. But the earlier reaction indicates the information leakage in market.

Dividend payment trends

The dividend increasing announcement event of banking sector do not convey any significant information to the market and the dividend no change announcement events also do not convey any significant information to the market. But dividend decreasing event of banking sector has impact on the market price of share.

Behavioral model:

It is shown that the abnormal returns start to decline from day-4 and reach to lowest at event day(dayo) then further start to raise. The abnormal returns reach to peack at day 5 and further decline .

11.1.3 The Determinants of Divided Policy: An Analytical Study on Dhaka Stock Exchange

Non financial:

The 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. The SG (sales growth) is negatively significant. The growth in sales is used as proxies for the firm's future prospects since growing firms require more funds in order to finance their growth and therefore would typically retain greater proportion of their earnings by paying low dividend. The Sponsor ownership is positively significant. The Sponsors play vital role in dividend decision making. The dividend payouts can play a useful role in reducing the conflict between inside and outside owners. The Risk is positively influence on DPR which implies that the investors expects higher return from their risky investment. The ROA is positively significant. If the company can make more profit, they will pay more dividends to the shareholder. The liquidity position is positively related to dividend payment. The leverage is negatively related to DPR.

Financial Sector

The DPR is negatively related to RE/TE because a firm that plans to finance future investment opportunities from retained earnings would distribute lesser profits as dividends. Thus, retained earnings of the current year are negatively associated with dividend paid. The positive relationship of dividend payout to Lagged DPR and firm size is found in this study which is supported by a growing number of other studies. The coefficient of leverage is positively significant. The deposits are the liabilities of banks.

11.1.4 Factors Influencing Dividend Policy in Bangladesh: Survey Evidence from Listed Companies with DSE

Non Financial sector: Among the significant variables, level of current earnings, liquidity level, pattern of past dividend, stability of earnings, desire to maintain a constant payout ratio are the top significant determinants in dividend decision. Others factors are relevant but the companies mainly consider these significant factors.

Financial sector: The important determinants of dividend decision are Level of current earnings, Liquidity level, desire to maintain a constant payout ratio, pattern of past

dividend, legal rules and constraints. The companies mainly consider the current earnings and liquidity position of the company. They also maintain to follow the pattern of previous years dividend payment.

11.1.5 Dividend Practices in Listed Companies of Bangladesh: Analytical Study on Dhaka Stock Exchange

Non Financial sector: The miscellaneous sector provides the highest payout. The DPS, EPS, MPS of the large size firm is better than small and medium size firms. The payout of the older firms is more than the newly listed firms. The highest payouts are in medium leveraged firm, low risk's firm, medium PE ratio's firm. The survey results reveal that the both shareholders and companies prefer the cash dividend most. The most of the companies pay cash dividend with stable payout. The majority companies follow increasing trend in dividend payment but no satisfactory researches are conducted to justify the investors' preference.

Financial Sector: The maximum payouts are in large size firm, earlier listed bank, low leveraged firm, high risk's firm, medium PE ratio's firm. The survey results reveal that the shareholders prefer stock dividend most. The most of the companies follow stable payout with increasing trend in dividend payment but no satisfactory research are conducted to justify the investors' preference.

11.1.6 Application of Dividend Models in the Stock Market of Bangladesh

Nonfinancial Sectors: Decision makers should be responsive to its shareholders' preferences regarding dividends (catering theory). It is the top most issues in dividend policy. The second issue is signaling theory of dividend which indicates that the dividends convey information to the market. This is the rejection of MM irrelevancy theory. The third important theory of dividend is relevance theory which tells that the dividend has effect on the market value of the firm. Other theories are Residual and Agency Theory , Bird –in-the Hands Policy and Life cycle Theory , Lintner Model and Clientele theory which carry less importance in the capital market of Bangladesh.

Financial Sector: Dividends disclose important information to shareholders about company's performance. It is the top most issue in dividend policy. The second issue is Bird- in- the Hands Policy and Lintner Model. The third important theory of dividend is

Residual policy and Life cycle theory which indicates the investment policy from retained earnings and the preference of the investors. Other theories are Agency Theory, Catering and Clientele theory which carry less importance in the capital market of Bangladesh.

11.1.7 Flaws with the Existing Dividend Practices of Corporate Firm

The important problems are 'Cash dividends affects on liquidity', Higher expectation of shareholders, Imperfect capital market, Regulatory changes, Ambiguity of dividend, Unanticipated economic change, Insider trading. The other related problems are previous non Payment Culture, Lack of Study on dividend policy, Lack of dividend policy, Investors' attitude toward dividend.

11.2 Contributions of the study

11.2.1 The Impact of Dividend Policy on the Value of the Firm

Agreement: Nonfinancial sector: The result found that the dividend has impact on market price of share which infers the relevance theory of dividend policy. It is supported by many other researchers' finding like Myers and Frank (2002), Friend and Puckett (1964), John and Willians(1985), Richardson and Thompson(1986). **Financial sector:** The result also supports the findings of Ambarish and other (1987), Liaonly(2009) ,Gul and other(2012).

Disagreement: Many researchers like Chen, Firth, & Gao (2002), Denis & Osobov (2008) and Adesola & Okwong (2009) provided the strong evidence in favor of dividend irrelevance theory and did not consider it relevance to the stock prices.

Contribution: The DPR is the significant factor for market price determination which supports the relevance theory and against the irrelevance theory. The pioneer of irrelevance theory, Miller and Modigliani (1961) assumed that the market should be perfect, there will be no tax, no floatation cost which are absent in our market. So, the dividend relevance theory is present in emerging market. I developed a theoretical model based on panel data analysis.

11.2.2 The Announcement Effects of Dividend on Share Price

Agreement:

The results of manufacturing sector support the findings of the Pettit(1972,1976), Asquith and Mullins(1996), Lee and Rayan(2002), Travlos(2001), Gurjul and ohters(2003) etc. and Asimakopoulos et al.(2007), Hossain (2006) etc. ,Brennan(1970), Brennan and Thakor(1990) etc. ,Fernando and Guneratne (2010) ,Akber and Baig(2010), Ali and Chowdhury(2010). The results of Banking Sector support the studies of Lee and Ryan (2002), Yilmaj and others (2006) etc., Eades and Harris (1995),Abeyratna and Power(2002) etc., Akbar and Baig(2010), Sing and Sapna(2011).

Disagreement: The findings donot not support the findings of Ahsan and Bashar (1997), Uddin and Chowdhury (2005), Sabur Mollah(2007) who found no impact of dividend announcement.

Contribution: The results found that the abnormal returns are negative bafore and after the announcement date in the both dividend initiation and omissions events. This result supports the signalling hypothes. The earlier reaction of the market indicates the information linkage which supports the market inefficiency.

Common behavioral model: I have got an uniform behavior of the market for dividend announcent. The abnormal returns begin to decline from day-5 and reach to lowest at day o or at day1 then further start to increase and reach to previous stage at day 5.

11.2.3 The Determinants of Divided Policy: An Analytical Study on Dhaka Stock Exchange

Agreement

Nonfinancial sector: Lagged dividend payout ratio: 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.

Sales growth: The result supports the result of the Amidu and Abor who (2006) also stated that growth in sales were found to have statistically significant and negative associates

with dividend payout ratios. In addition, Jeong (2008) also supported Amidu and Abor where sales growth is expected to be negatively related to the degree of dividend smoothing in term of dividend payout. Higgins [1972] argued that payout ratio is negatively related to a firm's need for funds to finance growth opportunities. Rozeff [1982], Lloyd *et al.* [1985], Collins *et al.* [1996], and recently Amidu and Abor [2006] showed a significantly negative relationship between historical sales growth and dividend payout.

Ownership (Sponsor): This result supports that the ownership structure in large firms may influence dividends and other financial policies (Desmetz, 1983; Desmetz and Lehn, 1985; Shleifer and Vishny, 1986; Morck et al., 1988; Schooley and Barney, 1994; Fluck, 1999; La Porta 2000; Gugler and Yurtoglu, 2003). Risk: Mollah (2002) found that firms listed on the Dhaka Stock Exchange paid a large dividend, even though the beta for their stock was high. Profitability: Several studies have documented a positive relationship between profitability and dividend payouts (see, for example, Jensen et al, 1992, Han et al., 1999, and Fama and French, 2002). Evidence from emerging markets, Al-Malkawi also supports the proposition that profitability is one of the most important factors that determines dividend policy (see, for instance, Adaoglu, 2000, Pandey, 2001, and Aivazian et al., 2003). Liquidity: The liquidity is positively related to dividend payout ratio. This result also supports of findings of Kinfe(2011). Leverage: The leverage is significant determinant of dividend payout. The coefficient is negative in nature.

Nonfinancial sector:

The positive relationship of dividend payout ratio to lagged DPR 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). Mollah et al. (2001) examined an emerging market and found a direct relationship between financial leverage and debt-burden level that increases transaction costs.

Disagreement: The determinants of dividend decision vary from market to market.

Contribution: This research identified the lagged DPR, leverage, growth of the company, profitability, liquidity, risk, insider ownership are the major determinants of dividend policy of manufacturing sector. In the banking sector, the major determinants are lagged DPR, retained earnings ratio, size of the company and leverage. I developed a dividend determinants model based on structural modeling.

11.2.4 Factors Influencing Dividend Policy in Bangladesh: Survey Evidence from Listed Companies of DSE

Agreement: The result supports the findings of Mizuno (2007) ,Khan et al. (2011) ,Alshammari (2012) ,Baker and Powell (2012),Naser et al. (2013) ,John (2013) ,Manandhar (2002) ,Shah (2009) ,Akinyomi(2013) ,Rana and Rashed(2013) , Baker, Dutta and Saadi (2010) , Archbold and Elisabete and Simões (2009) .

Disagreement: All the factors of dividend decision are not unique over the counties. So, all significant determinants of this study are not same as the existing studies. But the important factors are found common in the mentioned referred studies.

Contribution: I have found the important influencing factors of dividend decision from the managers' opinion through questionnaire survey. The significant factors are earnings and liquidity, past dividend payment which are supported by the findings of secondary data analysis. A theoretical model on factors of dividend decision is the outcome of the study which will be pioneer model in our country.

11.2.5 Dividend Practices in Listed Companies of Bangladesh: Analytical Study on Dhaka Stock Exchange

Agreement: The result supports the findings of Farrelly and Edelman(1985), Brav et al. (2005).

Contribution: This section reveals the complete picture of the dividend performance of Bangladesh with both primary and secondary research. This scenario is the unique contribution from my study in the capital market of Bangladesh.

11.2.6 Application of Dividend Models in the Stock Market of Bangladesh

Agreement: The results support the findings of Lintner (1956), Baker et al. (1985, Baker and Phillips (1992), Baker and Powell (2000), Revista de Contabilidade(2004), Farrelly and Edelman(1985), Brav et al. (2005), Haleem,Rehman, and Javid (2011) , Adeymi and Adewale (2008).

Disagreement: All the theories of dividend are not unique over the counties. So, the significant models of this study are not same as the existing studies. But the important models are found common in the mentioned refereed studies.

Contribution: In the manufacturing sector, among the theories, the catering theory, signaling theory and dividend relevancy theory are important theories in the context of Bangladesh. In the banking sector, the banks follow the signaling theory, bird- in- the hand policy, Lintner dividend relevancy model most.

11.3 Policy Implications

The study has found the corporate dividend policy practices related findings such as regulatory problems, policy related problems, application of model related issues ect. Accordingly, the study suggested the following measures:

Corporate policy measures

i. 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 sector.

ii. The main determinants of dividend decisions are earnings and liquidity. So, company has to consider significantly earnings and liquidity position for paying smooth dividend.

iii. The dividend announcement has the signaling effect on the market price of share. The corporate dividend decision and investors' investing decision should consider this finding.

iv. The corporate dividend policy makers should consider the lagged DPR, ROA, Liquidity, Risk, Sponsor ownership, Sales growth, Leverage, Retained earnings ratio, size of the firm as determinants of dividend decision.

Strategic measures for corporate dividend payment practices

i. The corporate firms should follow non identical dividend policies depending on own characteristics, financing, and investing opportunities and expectation of market participants.

ii. The companies should make corporate dividend policies and undertake corporate dividend decision in line with the objective of maximizing share holders' wealth.

Model based suggestions

i. The PE is the substantial measure of depended variable for determining the dividend impact on firm value for higher R^2.

ii. The significant determinants of dividend policy have been followed by the companies for setting dividend decision.

iii. The catering theory, signaling theory, bird-in –the hand policy and dividend relevancy policy are the important dividend models in the capital market of Bangladesh.

Regulatory measures

i. The earlier reactions of dividend announcements indicate the linkage of information in the market. So, there should be taken the regulatory measures for preventing it.
ii. The financial data are found inconsistency, so the BSEC should take care of inconsistent discloser of financial information in order to make investors more informative.
iii. The Bangladesh Security and Exchange Commission (BSEC) should monitor the unexpected behavior of market participants.
iv. The BSEC should ensure the existing regulatory practices such as insider trading.

11.4 Limitations

There is no specific data bank in our country about the capital market related information. The company related data and market related data before the automation of DSE are not fully available. It is very difficult to collect the primary data from the top executives of the companies.

11.5 Conclusion

This study represents the picture of the dividend performance and dividend policy in the corporate sectors in the Bangladesh. This result will help the investors, policy makers, companies and related stakeholders. The influencing factors of dividend decision are identified through primary and secondary research. So, the management of the companies will be aware about the determinants of the dividend decision. The developed model of dividend decision from this study will be base model in the corporate sector of our country. There is lack of study on dividend policy in our country. This study is an intensive study on dividend practices. So, the academician will take the results of this study as a referred study. This research will explore the avenues of further research on dividend policy of an emerging market. The researcher expects that this study will help the

policy-making bodies, regulatory bodies, and law enforcing agencies to take prudent measures and to protect the interest of all the associated parties in the emerging markets and consequently that will guide the market towards the maturity.

11.6 Suggestions for Future Researchers

I have covered both primary and secondary data for better out come from the research. But the area of dividend policy is vast. So, it is difficult to cover all the areas of dividend policy in a thesis paper. So, I am suggesting the following areas for further intensive research. i. the preference of the investors about the dividend. ii. effect of dividend announcement with earnings announcement. I have covered the banking sector from the financial sectors. But the insurance sectors and financial institutions should be taken with banking sector for future study. It is also suggested to conduct further research by taking other dividend behavior models, e. g., adaptive exception models, and integrated models into consideration. It is also suggested to conduct further studies on the legal aspects of the emerging markets, which will help to identify the levels of law enforcement in the emerging markets. I have covered the listed companies of Bangladesh. There is scope for study of the companies other than the listed companies.

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Appendix

1. Questionnaire:

Dividend Practices in Corporate Sector of Bangladesh: Study on Some Selected Listed Companies with Dhaka Stock Exchange

Section I: General Information

1.1 Personal Information of Respondent:

Name:	
Position:	
Date of Joining:	
Firm's name:	

1.2 General Information of Firm

Sl. No	Information			
1.2.1	Firm belongs to sector	a. Manufacturing	b. Service	
1.2.2	Tax status of firm	a. Tax payee	b. Not tax payee	
1.2.3	Year of establishment			
1.2.4	Year of listing			
1.2.5	Product and line of product			
1.2.6	Ownership structure(% as on 31.12.12)	a. Local:	b. Foreign:	
1.2.7	What percentage of your common stock is owned by corporate insiders?	a.<10%	b.11-20%	c.>20%
1.2.8	Forms of firm	a. Local	b. MNC	
1.2.9	Exposure of firm(% as on 31.12.12)	a. Local sales:	b. Foreign sales:	

Section II: Dividend Policies and its Practices

2.1 Instruct: Please tick mark on opinion

2.1.1Which type of dividend do you think is most important to shareholders?

a. Cash dividend	b. Stock dividend	c. Right Issue	d. Stock repurchases

2.1.2 Which type of dividend do you prefer to pay?

a. Cash dividend	b.Stock dividend	c. Cash & Stock dividend	d. Stock repurchases	e. No preference

2.1.3 Why do you prefer the above dividend type?

a. Easy to implement	b. More flexible	c. Maintaining consistency	d. Majority shareholders' expectation	e. Other

2.1.4 Dividend payment history:

a. Regular	b. Irregular	c. No dividend payment

2.1.5 What types of dividend policies do you follow?

a. Stable payout ratio	b. Constant DPS	c. Regular plus extra dividend	d. Residual dividend policy

2.1.6 What type of dividend payment pattern do you prefer?

a. Increasing trend	b. Decreasing trend	c. No change

2.1.7 When you make your dividend decisions, do you target?

a. Amount of dividend	b. Growth in dividend	c. Dividend yield	d. Dividend payout ratio	e. No target at all

2.1.8 Do you conduct (as a management) any study on shareholders' dividend preferences?

a. Yes	b. No

2.2 Question: Do these statements agree with your company's views?

Instructions: Please, put tick mark in the blank space corresponding to your level of agreement or disagreement with each statement (on scale , strongly agree=2, agree=1, indifferent=0, disagree=-1, strongly disagree=-2) .

Number	Statements	Strongly Agree =2	Agree=1	Indifferent=0	Disagree=-1	Strongly Disagree=-2
2.2.1	We try to avoid reducing dividends per share, because there are negative consequences of reducing dividends					
2.2.2	Rather than reducing dividends, we raise new funds to undertake a profitable project					
2.2.3	We make dividend decisions after taking investment plans					
2.2.4	We develop dividend policy for maximizing the company's market value					
2.2.5	We change dividends based on sustainable shift in earnings					
2.2.6	We try to maintain a smooth dividend stream from year to year					
2.2.7	We pay dividends for showing better performance compare to competitors					
2.2.8	We make dividend policy based on majority shareholders' expectation					

Section III: Determinants of Dividend Policy

Instructions: Please, put tick mark in the blank space corresponding to your level of importance of each factor in determining your firm's dividend policy.

Number	Statements	Very Important=4	Important=3	Moderate=2	Low Important=1	Not important=0
3.1	Pattern of past dividend					
3.2	Desire to maintain a constant payout ratio					
3.3	The dividend policies of competitors or other companies in the same industry					
3.4	Stability of earnings					
3.5	Level of current earnings					
3.6	Anticipated level of future earnings					
3.7	A sustainable change in earnings					
3.8	Attracting institutional investors to purchase the stock					
3.9	The influence of institutional shareholders					
3.10	Attracting individual investors to purchase the stock					
3.11	Concern about the stock price					
3.12	Liquidity level					
3.13	Tax positions of shareholders					
3.14	Category of shareholders and their expectations					
3.15	Preference for dividends rather than risky reinvestment					
3.16	Cost of raising external funds					
3.17	Availability of profitable investment opportunities for the firm					
3.18	Availability of alternative source of capital					
3.19	Investors opportunities for investing in another projects					
3.20	Concern that a dividend change may provide a wrong signal to investors					
3.21	The future state of the economy					
3.22	Inflationary Consideration					
3.23	Concern about maintaining a target capital structure					
3.24	Legal rules and constraints					
3.25	Contractual constraints such as dividend restriction in debt contracts					
3.26	Accessibility to capital market					
3.27	Dilution of control & Dilution of earnings					
3.28	Internal rate of return consideration i.e. reinvestment rate					

Section IV: Issues Involving Dividend Policy

Instructions: Please, put tick mark in the blank space corresponding to your level of agreement or disagreement with each statement.

Number	Statements	Strongly Agree =2	Agree=1	Indifferent=0	Disagree=-1	Strongly Disagree=-2	Model
4.1	Dividends disclose important information to shareholders about company's performance						Signaling effect/ Informational contents
4.2	Reasons for dividend policy changes should be disclosed to investors						
4.3	The market adjusts dividend announcements for setting security price						
4.4	A dividend decrease always refers to a reduction in company's earnings						
4.5	Dividend distributions should be made after financing desired investments from available earnings						Residual Policy
4.6	Expenditures on new plans affect the dividend						
4.7	Provide a bonding mechanism to encourage managers to act for the best interest of the shareholders						Agency Theory
4.8	The company prefers funding from retained earnings before resorting to external financing						Life cycle Theory
4.9	Different dividends in different stages of life cycle of the company						
4.10	Decision makers should be responsive to its shareholders' preferences regarding dividends						Catering Theory
4.11	A stockholder is attracted to firms which have dividend policies appropriate to the stockholder's particular tax bracket						Clientele Theory
4.12	Director shareholders have different dividend preferences than general shareholders						
4.13	Stock price increases when dividends unexpectedly increase						Value of the firm
4.14	Dividend payout affects the price of the common stock						
4.15	There should be balancing between future growth of the company and current dividend payment						
4.16	The company distributes cash dividends because of investors' preference for certainty						Bird in hands policy
4.17	Paying dividends makes the stock of a firm less risky than retained earnings to shareholders						
4.18	The company has a target payout ratio and periodically adjust its payout toward the target						Lintner Model
4.19	A firm should avoid making changes in dividends that might have to be reversed in a year ago.						
4.20	Investors are indifferent between receiving dividends and capital gains						MM Model
4.21	The dividend decision is important like financing and investment decisions in determining firm's value						

Section V: Problems Involving Dividend Policy

Instructions: Do you face Problems in making dividend decisions? No or Yes, If yes, Please, Please put your opinion about problems on scales (strongly agree=2, agree=1, indifferent=0, disagree=-1, strongly disagree=-2).

Number	Statements	Strongly Agree =2	Agree=1	Indifferent=0	Disagree=-1	Strongly Disagree=-2
5.1	Dividend increases are ambiguous because they can indicate either lower future growth or lack of investment opportunities					
5.2	Cash dividends will weaken the company's liquidity position					
5.3	Inconsistency in dividend practices (within the company)					
5.4	Higher expectation of investors					
5.5	Unanticipated change in inflation					
5.6	Imperfect capital market					
5.7	Regulatory changes					
5.8	Absence of incentives for dividend					
5.9	Insider trading					
5.10	Complicated regulation practices					
5.11	Inconsistency in dividend within industries					
5.12	Other problems(if any, please write down)					

Signature and seal