World Review of Business Research
Vol. 4. No. 3. October 2014 Issue. Pp. 14 – 34

Relationship between Ownership Structure and Dividend Policy: Empirical Evidence from Chittagong Stock Exchange

Nusrat Huda[1] and Mohammad Nayeem Abdullah[2]

Dividend policy and ownership structure have generally been studied as two separate and distinct areas in the field of corporate finance. Very few studies have attempted to combine these two significant and highly crucial subject matters to understand one in relation to the other. This study attempts to do so, by using a set of cross-sectional time series data of companies listed on the CSE-30 index over the period 2006-2010. The dividend per share of the firms for the various years was studied in relation to director's ownership and institutional ownership, while controlling for leverage, return on equity (ROE) and firm size. A hierarchical multiple regression and correlation analysis were conducted to arrive at the results. It was found that director's ownership has a significant positive effect whereas, institutional ownership showed a significant negative effect on the dividend per share. Furthermore, ROE showed a significant positive effect and leverage had a significant negative effect on the dividend policy of a firm.

Field of Research: Corporate Finance and Corporate Governance

1. Introduction

Ever since Lintner (1956) raised the important question "what choices made by managers affect the size, shape and timing of dividend payments?" the area of corporate dividend policy has attracted attention of management scholars and economists across the globe, culminating into innumerable theoretical modeling and empirical examination. Yet scholars have not been able to solve what is known as the classic 'dividend puzzle' (Black, 1976).

Corporate dividend payout is not only the source of cash flow to the shareholders but it also provides information regarding firm's current and future performance (Afza & Mirza, 2010). Every single investment is done with the purpose of earning an expected return that will definitely exceed the outflow of the investors. The decision of investing in shares of a particular company relies to a large extent on the amount of dividend paid by the company. A dividend is usually distributed in cash form to stockholders of a corporation approved by the board of directors. Dividend policy is equally important for managers and investors, as investors have to plan a return on their investment portfolio. Dividends are not only a source of income for investors but also a signal of company performance. So selecting a suitable dividend policy for a company is one of the most important decisions for the management and investors (Khan et al, 2011). Dividend policy of a company has great impact on the share price of a company. But the changes in the share price of a company are the result of influences by numerous factors. Effect of frictionless capital market, transaction cost, personal tax, corporate tax, announcement of dividend on share

[1] Nusrat Huda, Research Assistant, School of Business, Chittagong Independent University, Bangladesh, E-mail:nusrat.huda@gmail.com
[2] Mohammad Nayeem Abdullah, Assistant Professor, School of Business, Chittagong Independent University, Bangladesh, E-mail:nayeem30@yahoo.com

price movement - all these issues demand wide-spread and in-depth analysis and have been thoroughly and laboriously researched over the past few decades. Yet, the inconclusiveness of theories on perceived importance of dividend policy has made it among the most widely addressed issues in modern financial literature.

Among the various theories of dividend policy, the work of Lintner (1956), Miller and Modigliani (1961), Graham-Dodd (1951), Ross (1973) and Jensen & Meckling (1976) and Bhattacharya (1979) have been the most significant. The association of agency costs and dividend policy has been a current development in the corporate finance theory focusing on how dividend payout can be used to control the agency cost of the firm. The agency theory which was first propagated by Ross (1973) and later extended by Jensen & Meckling (1976), explains the conflict of interest between the corporate managers (agents) and shareholders (principles), and exposes that dividend mechanism provides incentives to managers to reduce costs relative to principle agent relationship. In firms where the top management holds a substantial number of shares, it is expected that these board members will use their power to influence the dividend policy decisions of the firm. Furthermore, institutional shareholders may also try to monitor or control managerial actions through dividend policy. Hence, it becomes extremely vital to study ownership structure in relation to dividend policy.

This study examines two types of ownership structure namely, director's ownership and institutional ownership in relation to the dividend per share of a firm. A total of 21 firms listed on the Chittagong Stock Exchange selective 30 (CSE-30) index for the period of 2006-2010 have been included. In order to analyze the results, a hierarchical multiple regression model is used.

The research findings are strikingly different from the findings of Hofler *et al* (2004), Chen et al. (2005), Naceur, Goaied & Belanes (2006), Jakob and Johannes (2008) and Elston, Hofler & Lee (2011), all of whom stated in their studies that ownership structure does not significantly affect the dividend policy of a firm.

The results are however consistent with those of previous studies conducted by Shleifer and Vishny (1986), Stouraitis & Wu (2004), Kumar (2003), Cook & Jeon (2006) and Gill & Obradovich (2011) all of whom have shown in their studies that there is a significant relationship between ownership structure and dividend policy of a firm.

The remaining part of this paper is structured as follows: Section Two introduces an overview of Bangladesh's institutional setup and ownership structure. Sections Three, Four and Five present the problem statement, limitations and objectives of the study respectively. Section Six provides a comprehensive review of relevant literature and Section Seven presents the methodology and hypothesis development. Section Eight presents the empirical results and Section Nine concludes the study.

2. Institutional Setup and Ownership Structure in Bangladesh

Bangladesh has two Stock Exchanges, the Dhaka Stock Exchange (DSE) and the Chittagong Stock Exchange (CSE). As of 2012, 515 securities were listed on the DSE and 255 on the CSE. Many companies are listed on both exchanges. Compared to other countries in the region, the capital market of Bangladesh is small, the market capitalization to GDP ratio being 21.29 percent in 2012 (Trading Economics, 2013). The following tables provide a summary of last five years' index and market information of CSE and DSE:

Table 1: Five years index and market summary of CSE

	2008	2009	2010	2011	2012
Annual Turnover (Mn. Tk.)	100,747.1	162,019.3	340,929.3	186,336.5	116,905.22
Market Days	238	244	244	235	238
Daily Average Turnover (Mn Tk.)	423.3	664	1397.3	792.9	491.2
Securities Traded	972,811,000	1,338,780,000	2,129,129,000	2,515,182,000	2,863,509,674
Trades(No.)	2,805,138	4,403,202	7,415,220	6,059,995	4,375,574
Number of new Listings	15	16	23	14	14
Securities Listed	238	217	225	241	255
Market Capital (Mn. Tk.)	807,875	1,470,807	2,983,929	1,972,423	1,795,716
CSE All Share Price Index	8,692.75	13,181.38	23,448.99	14,880.37	12,854.7972
CSE-30 Index	7,566.95	10,306.87	20,988.17	13,826.94	11,021.9794
No. of Companies Declared Dividend	176	192	210	223	91
No. of Companies Issued Bonus Shares	53	64	100	22	23

Source: Chittagong Stock Exchange

Table 2: Five years index and market summary of DSE

	2008	2009	2010	2011	2012
Annual Turnover (Mn. Tk.)	667,965	1,475,301	4,009,913	1,560,912.09	1,001,084.9
Market Days	237	244	244	235	238
Daily Average Turnover (Mn Tk.)	2,818	6,046	16,434	6,642	4,206
Securities Listed	412	415	445	501	515
Market Capital (Mn. Tk.)	1,043,799	1,903,228	3,508,006	2,616,731	2,403,556
DSE General Index	2795.34	4,535.53	8,290.41	5,257.61	4,219.31

Source: Dhaka Stock Exchange

Corporate ownership in Bangladesh is concentrated and companies are often controlled by a small number of related shareholders. A few companies have dispersed ownership. Most securities in Bangladesh are held by individuals-the controlling family or members of the public-rather than institutions or other companies. 43 percent of the market is held by sponsors, who are from the founders' families, and 38 percent is held by the public at large. Sponsors often have management and or board positions in companies (World Bank, 2009). Family-based board ownership has its costs in the form of potential expropriation of small shareholders' wealth in the firm by owners/board members representing founding families. However, some other ownership types, in particular, institutional shareholders, are capable of offsetting such costs of board ownership through their large shareholdings and ability to monitor managerial behavior (Farooque et al., 2007).

Institutional investors hold only 10 percent of the market but are sometimes represented on company boards. Bangladesh has improved its foreign investment legislation and foreign investment has increased. However, foreigners still hold only 1 percent of the market. Over 400 privatizations have taken place in Bangladesh since 1976, many in the early years of the program. Most of the privatized companies are small and are now closely-held by a single owner or family. The state retains ownership in a number of important enterprises, including listed companies, and holds about 8 percent of the market by capitalization (World Bank, 2009).

In general corporate boards in Bangladesh are one-tiered or are managements without the use of any supervisory board. Both executive and non-executive directors perform duties together in one organizational layer. This is not commonly seen in advanced systems of corporate governance. An indication of CEO duality in corporate board supervision is an example of such a one tiered structure. Similarly there exists CEO duality in some listed companies in Bangladesh (Rashid et al., 2010).

3. Statement of Problem

The inefficient regulatory system and a lack of transparency are major drawbacks of the Bangladeshi stock market. Sufficient basis for the analysis of stock market data is not available due to various anomalies. Investors mainly look at dividend information to assess the capital market and hence under such a scenario it becomes extremely crucial to understand the dividend policy of a firm and identify the factors that affect the same. One such important, but neglected factor to be considered when studying the dividend policy of a firm is the ownership structure. In Bangladesh, the ownership structure is highly dispersed and varies from firm to firm. Corporate ownership in most firms is concentrated and companies are often controlled by a small number of related shareholders. Thus in the context of a developing economy, such as Bangladesh, ownership structure can play a major role in understanding the dividend policy of a company and in mitigating agency problems. Very few studies have been conducted in this field in the developing markets and especially in Bangladesh, this research area is relatively new and almost unexplored. Hence, this study attempts to fill up this research gap by trying to establish a relationship between ownership structure and dividend policy of selected companies listed in the Chittagong Stock Exchange.

4. Limitations of the Study

- The study is mainly concentrated on the dividend policy and ownership structure of companies listed on the CSE-30 index for the years 2006-2010 and hence the results cannot be generalized for the overall stock market of Bangladesh.
- The result and the interpretation are completely rigid and from the view point of the researchers.
- Data for all the companies listed in the CSE-30 index were not available and hence only 21 companies were selected as a final sample. Furthermore, data for certain variables or years for a few companies among the 21 selected were not available in the Chittagong Stock Exchange database. Such anomalies may affect the final results and interpretation of the study.

5. Objective of the Study

The objective of this research is to examine whether there is any relationship between ownership structure and dividend policy of the selected companies listed in the CSE-30 index and if so, determine to what extent such a relationship is significant in influencing the dividend policy of a firm.

6. Literature Review

Corporate dividend payout is not only a source of cash flow to the shareholders but also provides information regarding a firm's current and future performance (Afza & Mirza, 2010). The most widely held view regarding corporate dividend policy is that, it is designed to reveal earnings prospects to investors as documented by Bhattacharya (1979; 1980), Linter (1956), Linter (1962), Miller and Rock (1985). Fama (1974) however believed that firms often set a target dividend level and try to maintain such level. Jensen and Meckling (1976) on the other hand proposed the agency theory of dividend policy according to which there may be interrelation between dividend payout and agency cost. Bhattacharya (1979; 1980) showed that dividends are signals for future cash flows while Gorden (1959) in his influential work proposed that in a world of uncertainty and imperfect information, dividend policy does affect the value of firm and market price of shares as investors always prefer secure and current income in the form of dividends over capital gains. Miller and Modigliani (1961) extended the Dividend Irrelevance theory according to which, in the absence of corporate and personal taxes, dividends have no overall effects on stock returns because price appreciation has a compensating effect on the dividend distribution.

Ownership structure on the other hand is a mechanism that aligns the interest of shareholders and managers (Eng and Mak, 2003; Haniffa and Cooke, 2002; Chau and Gray, 2002; Hassain, et. al.,1994). The agency theory suggests that where there is a separation of ownership and control of a firm, the potential for agency costs arises because of conflicts of interest between contracting parties. It is believed that agency problems will be higher in the widely held companies because of the diverse interests between contracting parties (Mohd, et.al.2006) (as stated in Rouf & Al-Harun, 2011).

Firm ownership can take various forms depending on the percentage of shares owned and the type of legal owners. Accordingly there are several types of ownerships such as management and/or board ownership, government, family, foreign, and institutional ownership. Usually not all owners are directly involved in managing the firm. However, they are involved in appointing the managers and board of directors to monitor the overall performance of the firm. (Almudehki & Zeitun, 2012).

The research conducted on the relationship between dividend policy and ownership structure dates back to the 1980's. Shleifer and Vishny (1986) were one of the first to study the effects of ownership structure on dividend payout policy and found a positive relationship between the two. Zeckhauser & Pound (1990) employed a sample of firms from 22 industries in the US and found no significant differences in dividend payout ratios in the presence and absence of large shareholders across all industries. Jensen *et al* (1992) found that high insider ownership firms prefer lower levels of both debt and dividends. In 1993, Eckbo & Verma studied Canadian firms where managers tend to own a large amount of voting stock. The empirical evidence in their research indicates that cash dividends decrease as the voting power of owner-managers increases, and are almost always zero when owner-managers have absolute voting control of the firm. Ali et al (1993) employed a two-step procedure involving factor analysis and multiple regressions to determine the factors affecting dividend policy and found positive relationship between institutional ownership and dividend policy. On the other hand, Agrawal & Jayaraman (1994) investigated a group of all-equity firms and found that within this group, firms with higher managerial holdings have lower dividend payout ratios. According to Burkart et al. (1997) the dividend policy reflects the allocation of effective control inside the firm and is determined by the cost of intervention and ownership concentration. Chen & Steiner (1999) made an important contribution to this field of research by examining how managerial ownership relates to risk taking, debt policy, and dividend policy. The results of the study supports the argument that managerial ownership helps to resolve the agency conflicts between external stockholders and managers but at the expense of aggravating the agency conflict between stockholders and bondholders.

La Porta et al.'s (2000) study was highly significant in that the dividend policy practices of large corporations in 33 countries were observed. The study concluded that, in countries with high legal protection, the minority shareholders receive higher dividends. Holderness & Sheehan (2000) showed that dividend payout is higher in firms with diffused ownership than in firms of similar size but with large shareholders. In the same year, Bebchuk et al. (2000) described the way in which arrangements such as stock pyramids, cross-ownership structures and dual class equity structures have the potential to create very large agency costs. In 2001, Fenn & Liang found that management stock ownership is associated with higher payouts by firms with potentially the greatest agency problems. They further observed that management stock options are related to the composition of payouts and that there is a strong negative relationship between dividends and management stock options.

Short et al. (2002) were the first to use well-established dividend payout models to examine the potential association between ownership structures and dividend policy. They used a UK panel data set to analyze the link between institutional ownership and dividend and found that not only is there a positive association between dividend payout policy and institutional ownership but institutional ownership may go beyond increasing the dividend payout ratio; it may, in fact, produce a positive and significant earnings trend component. They also found that a negative association exists between dividend payout policy and managerial ownership. Manos (2002) confirmed these results by providing evidence that institutional, public and insider ownership of shares have a positive impact on the target payout ratio of firms operating in the Indian environment. Maury and Pajuste (2002) conducted a study in Finland and concluded that dividend payout ratio is negatively related to ownership concentration particularly when the CEO also is a large shareholder of the firm. According to Grinstein and Michaely (2003), institutions avoid firms that do not pay any dividends but among dividend paying firms, they prefer firms that pay fewer dividends. Furthermore, their study, which examined the relation between institutional holdings and payout policy in U.S. public firms between 1980 and 1996, found that payout policy affects institutional holdings. Kumar (2003) however asserts that institutional ownership has inverse effect on dividends in comparison to corporate ownership. Harada and Nguyen (2003) conducted their study in the Japanese context and found that dividend payout is negatively related to ownership concentration, a result which supports the assumption that controlling shareholders extract private benefits at the expense of minority shareholders. Interestingly, Gugler and Yurtoglu (2003) found that larger holdings of the largest owner reduce, while larger holdings of the second largest shareholder increase the dividend pay-out ratio. They further claim that deviations from the one-share-one-vote rule of ultimate owners due to pyramidal and cross-ownership structures are also associated with larger negative wealth effects and lower pay-out ratios. In the same year, Wei et al. (2003) observed that there is a significantly positive correlation between the state ownership and cash dividends, and a significantly negative correlation between the public ownership and stock dividends of listed firms in

China. Hofler *et al* (2004) tried to establish a relationship between institutional ownership and dividend policy by studying a sample of German corporations and concluded that institutional ownership is not statistically related to dividend payout if endogeneity of corporate governance is controlled. On the contrary, Li & Huang (2004), using data from Chinese listed companies, showed that institutional ownership has positive relation with the payout of cash dividends. On similar lines, Stouraitis & Wu (2004) studied the effect of ownership structure on dividend policy of Japanese companies and showed that the effect of managerial ownership and bank ownership on dividend yield is positive particularly for the low growth firms.

Another noteworthy research conducted by Karathanassis and Chrysanthopoulou (2005), based on the Athens stock exchange, established that a strong presence of institutional portfolios and the high degree of concentration of managerial ownership has a statistically significant and inverse relationship with the dividend change between the two most recent time periods. Chen et al. (2005) however find that there is a significant negative relationship between dividend payouts and family ownership (of up to 10%) and a positive relationship between family ownership (of 10 -35%) and dividend policy for small firms. They further conclude that the composition of the board of directors has little impact on firm performance and dividend policy, particularly for small market capitalization firms. Renneboog & Trajanowski (2005) examined the payout policy of UK firms listed on the London Stock Exchange during the 1990s and found a strong relationship between the presence of block holders and the choice of the payout channel. They conclude that firms with concentrated ownership tend to opt for dividends rather than share repurchases, irrespective of the identity of the controlling shareholder. Both Mehar (2005) and Mitton (2005) assert that there is a significant relationship between ownership concentration and dividend policy. On similar lines, Mancinelli & Ozkan (2006) show that as the voting rights of the largest shareholder increases, companies make lower dividend payments. Naceur, Goaied & Belanes (2006), who conducted their study on Tunisian firms, however reported contradictory results as according to them ownership concentration does not have any impact on dividend policy of a firm. Khan (2006) found a negative relationship between dividends and ownership concentration for a panel of 330 large quoted UK firms. According to him, ownership composition also matters, with a positive relationship observed for shareholding by insurance companies, and a negative one for individuals. Cook & Jeon (2006) studied the interaction between institutional ownership and dividend policy by using the unique features of foreign ownership in Korea. Their study provides evidence that foreign ownership has significant and positive effect on dividends whereas domestic ownership has a negative impact on the dividend policy of a firm. In 2007, Jain showed that 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.

Wiberg (2008) and Jakob & Johannes (2008) both conducted their research in the European market but reported completely different results. Wiberg (2008) ascertained that a positive but marginally diminishing relation exists between institutional ownership and dividends whereas Jakob and Johannes (2008) established that ownership structure plays no role in whether a firm pays dividends or not. Bena & Hanousek (2008) find that the target payout ratio for firms with majority ownership is low but that the presence of a significant minority shareholder increases the target payout ratio. According to How et al. (2008) small to medium size family-controlled firms are significantly more likely to pay dividends and have higher dividend payouts than large family-controlled firms; however, this is moderated by the discrepancy between the controlling shareholder's cash flow rights and voting rights.

Sulong & Nor (2008) found that dividends among Malaysian listed firms can play an important monitoring role in reducing agency costs. El-Masry et al., (2008) reported that top performing Egyptian listed companies with higher block institutional ownership, paid higher dividends to attract capital during the period. Kim & Lee (2008) tried to investigate the effect of corporate governance on the dividend policy of Korean firms and found that firms with higher external financing constraints tend to decrease dividends and vice-versa, with an improvement in their corporate governance. Kouki & Guizani (2009) reported a negative relationship between dividend payout and ownership concentration.

In 2009, Amoako-Adu, Baulkaran & Smith analyzed a sample of dual class and single class closely-held S&P 1500 firms during the period 2001-2007 and found that dual class ownership structure is negatively associated with dividend policy. Weisskopf (2010) used logit and tobit panel data regressions to study Swiss companies and showed that founding family firms are more likely to use dividend and total pay-outs and pay higher dividends than non-family firms. According to a study conducted by Ramli (2010) companies make higher dividend payout as the shareholding of the largest shareholder increases. The magnitude of dividend payout is also larger when there is a presence of the substantial second largest shareholder in the company. Sharif, Salehi & Bahadori (2010) showed that there is a significantly positive correlation between the institutional ownership and the payout ratio whereas the relation between payout ratio and individual ownership is negative. Moreover, the ownership concentration measured by the five largest shareholders affects positively on payout ratio. Afza & Mirza (2010) conducted a study to investigate the impact of firm specific characteristics on corporate dividend behavior in Pakistan and found that managerial ownership, individual ownership, operating cash flow and size were the most significant determinants of dividend behavior.

In recent context, Elston, Hofler & Lee (2011) tried to investigate the relationship between institutional ownership and dividend payout behavior of firms in Germany. Although they did not find any significant relationship between institutional ownership and dividend payouts, they do provide evidence that the rights of management to retain a significant percentage of net profits and lack of tax incentives reduces the agency costs associated with conflicts between management and shareholder interests regarding use of the firm's free cash flow. Gill & Obradovich (2011) established that the decision to pay dividends is a positive function of board size, CEO duality, and internationalization of the firm, and a negative function of institutional ownership. Yarram (2011) on the other hand, found a significant relationship between board independence and average dividend payout of Australian firms for the period 2004 to 2009. The findings of the study imply that firms with highly independent boards contribute to corporate governance by allowing dividends to play significant disciplinary and monitoring roles. Mehrani et al. (2011) found negative association between institutional ownership and dividend payout and a positive relationship between dividend payout and concentrated institutional ownership. However, no significant relationship between managerial ownership and dividend payout was found. Shah, Ullah & Hasnain (2011) however found a significant positive relationship between ownership structure and dividend policy. Fagerland & Nilsen (2012), found that an increased ownership involvement leads to more aggressive dividend payout policies, and that, this positive relationship is a result of high involvement, strong attachment and power. Abdullah et al. (2012) found ownership concentration to be the only form of ownership that has a significant effect on dividend policy. Warrad et al. (2012) found a positive and significant relationship between foreign ownership structure and dividend payout policy whereas, Gharaibeh et al. (2013) found a negative relationship between managerial ownership and dividend policy. Al-Nawaiseh (2013) confirmed these results by establishing that insider ownership and family ownership have negative impact on the level of dividends paid whereas institutional ownership and foreign ownership are positively related to dividend policy.

In the context of Bangladesh, Imam & Malik (2007) examined all listed non-financing firms from the Dhaka Stock Exchange to study 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. They provide empirical evidence that firms with high institutional ownership and firms with concentrated ownership pay high and less dividend payout respectively. In another study, Mollah et. Al (2007) measured the effect of the percentage of insider ownership, dispersion of stockholders, free cash flow and degree of collateral assets on the dividend payout ratio and documented that under an extreme degree of insider ownership, agency costs have an insignificant effect on the dividend behavior of a firm. Apart from this, hardly any significant research work has been conducted in this field.

From the above review of literature it can be said that the research work carried out so far by various eminent scholars, though extensive, has not yet brought in a common conclusion in relation to the impact of ownership structure on dividend policy. In emerging markets very few reliable studies have been conducted in this field and especially in Bangladesh this research area is relatively new and almost unexplored. Thus, this research gap has motivated the authors to undertake this study entitled "Relationship between Ownership Structure and Dividend Policy: Empirical Evidence from Chittagong Stock Exchange".

7. Methodology

7.1 Data

A set of cross-sectional time series data was used in this study for the companies listed on the CSE-30 index over the period 2006-2010. The period 2006-2010 was selected as data was consistently available for this period in CSE and DSE database for the firms included in the study. Initially the sample included all firms listed under the CSE-30 index. The CSE-30 Index is a well-diversified index accounting for 12 sectors of the economy. This index is created by selecting 30 stocks among the listed stocks in CSE based on important criteria used as benchmark of performance. These companies are quoted on Dhaka Stock Exchange (DSE) as well. However, data for certain companies in the CSE-30 index were not available in the CSE database and hence were omitted from the sample. Insurance companies were removed from the sample as well, as these companies follow different corporate governance regulations that might affect the results when studying the effect of the ownership-dividend policy relationship. The final sample includes 21 companies which are grouped into various sectors and a total of 105 observations were made for this study as shown in Tables 3 and 4. All the financial data used in this study were manually extracted from the annual reports of all the firms. The values for Dividend per share, director's ownership, institutional ownership, leverage and ROE were calculated in excel spreadsheet and SPSS version 10 was used to perform regression analysis and correlation analysis on the data.

Table 3: Sample Description

Year	No. of firms in the sample	Observed firm years
2006	21	21
2007	21	21
2008	21	21
2009	21	21
2010	21	21
Total Observations (Firm years)		105

Table 4: Industry Classification

Industry	No. of firms in the sample	Observed firm years
Bank	7	35
Cement	2	10
Energy	2	10
Engineering and Electrical	2	10
Leasing and finance	2	10
Miscellaneous	2	10
Pharmaceuticals and Chemicals	3	15
Textiles and Clothing	1	5
Total	21	105

7.2 Hypotheses

In order to study the effect of ownership structure on firm performance in the context of Bangladesh, two types of ownership have been considered: director's ownership and institutional ownership. The literature review illustrates that both institutional and director's ownership showed mixed results when studied in relation to dividend policy. However the widely held view is that, there exists a significant relationship, whether positive or negative between the two forms of ownership and dividend policy. The significant relationship between director's ownership and dividend policy has been confirmed by the studies of Shleifer and Vishny (1986), Stouraitis & Wu (2004), Afza & Mirza (2010) and Gharaibeh et al. (2013) among others. Similarly the relationship between institutional ownership and dividend policy has been established by Short et al. (2002), Kumar (2003), Grinstein & Michaely (2003) and Cook & Jeon (2006). Thus, in light of the above review of literature, it can be said that there exists a relationship between ownership structure and dividend policy and hence the following hypothesis are developed related to director's ownership and institutional ownership:

H1: There is a significant relationship between director's ownership and dividend policy.

H2: There is a significant relationship between institutional ownership and dividend policy.

7.3 Variables of the Study

The variables used in this study are classified as dependent, independent and control variables. The dependent variable used in this study is the cash dividend per share (DPS), whereas the independent variables comprises of two types of ownership structure: Director's and institutional ownership. Firm size, Return on equity (ROE) and leverage have been taken as control variables as based on previous studies, these variables may affect the result of the study as well.

The definitions for all the variables used in this study are as follows:

Independent variables:
- Director's Ownership (DO): measured as a percentage of shares held by the board of directors.
- Institutional ownership (INST): measured as a percentage of shares held by Bangladeshi financial institutions.

Dependent variable:

- Dividend per share (DPS): The percentage of cash dividend per share has been used as a proxy for dividend policy.

Control Variables:

- Firm Size (Firm_Siz): Size of the firm has been taken as a control variable. It has been estimated as the total number of directors present in the Board of Directors in the year under study.
- Return on Equity (ROE): Return on Equity has been calculated as Net Profit/ Share holders' equity.
- Leverage (LEVERAGE): Leverage may also affect firm's choice of payout policy and this variable is defined as Debt/ Equity.

7.4 Empirical Model

The Linear Regression Model is used to examine the hypotheses. From previous studies and past review of literature it is seen that this model has been widely used and fairly tested in order to examine the effect of organization structure on dividend policy. Consistent with this, the authors have developed the empirical model as follows:

$$DPS_{it} = \alpha + \beta 1DO_{it} + \beta 2\ INST_{it} + \beta 3FIRM\_SIZ_{it} + \beta 4ROE_{it} + \beta 5LEVERAGE_{it} + \varepsilon_{it}$$

Where,

- DPS_{it} = Divided Per Share of the *i*th firm at time *t*
- DO_{it} is the percentage of shares owned by directors for *i*th firm at time *t*
- $INST_{it}$ is the percentage of shares owned by Bangladeshi financial institutions for *i*th firm at time *t*
- $FIRM\_SIZ_{it}$ is the size of the *i*th firm at time *t*
- ROE_{it} is the Return on Equity of the ith firm at time *t*
- $LEVERAGE_{it}$ is the debt ratio for *i*th firm at time *t*
- α is the intercept and βi is the regression coefficient of *i*th variable and ε_{it} is the composite error term
- The subscript *i* represents the different firms and *t* represents the different years

8. Empirical Results

This section presents the findings and analysis of the study. Appendix (Section 11) provides a list of all the companies selected from the CSE-30 index for the study along with the calculated values of all the variables for the years under study. This section is divided into three subsections. The descriptive statistics and correlation of the sample are presented in section 8.1. The regression results are discussed in section 8.2.

8.1 Descriptive Statistics

Table 5 presents the mean, standard deviation, minimum and maximum value for each variable under study. As per the table, average dividend per share is 18% ranging from 0 to 120% cash dividend, implying that companies in Bangladesh follow a rather conservative dividend policy. The average ROE is found to be 19% ranging from -4.5% to a maximum of 48.8%, indicating that majority of the companies in the sample are moderately profitable. The average firm size calculated as the number of board of directors present in the company under study was found to be 9.71 or approximately 10 persons in the board of directors in each company. The average Debt to Equity (Leverage) ratio is an alarming 5.43, a figure which is mainly contributed by the banking sector, implying that majority of the banks in Bangladesh employ debt up to 5 times greater than their assets, a situation which is highly vulnerable for this sector and might ultimately lead to a liquidity crisis.

One of the most important variables under study DO (director's ownership), which represents the number of shares held by board of directors, ranged from 0 to 86.3%, the average being 14.7% with a standard deviation of 15.4%, meaning a small degree of dispersion from the mean. The average number of shares held by institutional shareholders (represented by INST) was found to be 18.7%, slightly higher than the shares held by the board of directors. The standard deviation was however larger, being 19.1 %, in this case. The low standard deviation of both DO and INST implies that these variables, along with ROE (with a standard deviation of 10.6%) contribute most significantly to the model.

Table 5: Descriptive statistics of the sample

	N	Minimum	Maximum	Mean	Std. Deviation
FIRMSIZE	105	0	21	9.710	3.790
ROE	105	-.045	0.488	0.190	0.106
LEVERAGE	105	.000	18.892	5.432	5.701
DO	105	.000	0.863	0.147	0.154
INST	105	.000	0.765	0.187	0.191
DPS	105	.000	1.200	0.180	0.234
Valid N(list wise)	105				

Table 6 presents the Pearson's correlation matrix for the variables used in the analysis. As can be seen from the table, the result of correlation between dividend per share and director's ownership showed a positive and significant correlation at 10% significance level. This result indicates that if the director's ownership of shares increases, then the dividend per share increases and vice-versa. A negative but significant correlation at 10% level was observed between institutional ownership and dividend per share, implying that as institutional ownership of shares in a firm increases, the dividend per share decreases and vice-versa.

Significant positive correlation ($p < .1$) was also observed between dividend per share and ROE implying a positive impact of ROE on dividend per share. A very highly significant negative correlation ($p < .01$) was observed between leverage and dividend per share, indicating that an increase in leverage negatively affects dividend per share distributed by the firm.

Overall, according to the Pearson's correlation matrix, dividend per share is positively correlated with director's ownership and ROE, and negatively correlated with institutional ownership and leverage.

Table 6: Correlation Matrix

	FIRMSIZE	ROE	LEVERAGE	DO	INST	DPS
FIRMSIZE	1					
ROE	0.168*	1				
LEVERAGE	0.408***	0.344***	1			
DO	0.168*	-0.240**	-0.149	1		
INST	0.003	-0.164*	-0.081	.210**	1	
DPS	-0.017	0.171*	-.340***	.184*	-.169*	1

Note. Statistical significance: *$p < .05$; **$p < .01$; ***$p < .001$

8.2 Regression Results

A Hierarchical multiple regression was performed using SPSS (The Statistical Package for Social Science) to investigate the impact of director's and institutional ownership on dividend per share of a firm, after controlling the effects of factors such as ROE, leverage and firm size. The regression results are presented in Table 7.

In the first step of hierarchical multiple regression, three predictors were entered: ROE, leverage and firm size. This model was statistically significant with $F = 9.770$; $p < .001$ and explained 22.4 % of variance in dividend per share (Table 2). After entry of director's ownership (DO) and institutional ownership (INST) at Step 2, the total variance explained by the model as a whole was 29.3% ($F = 8.190$; $p < .001$). The introduction of DO and INST explained additional 7% variance in dividend per share, after controlling for leverage, firm size and ROE (R^2 Change = .069; $F = 4.737$; $p < .01$).

In the final model, director's ownership showed a significant positive relationship (β= .223, $p<.01$) with dividend per share, hence we can accept the alternate hypothesis H1 that there is a significant relationship between dividend policy and director's ownership. Institutional ownership on the other hand showed a significant negative relationship (β= -.199, $p< .01$) with dividend per share, hence we accept alternate hypothesis H2, that there is a significant relationship between institutional ownership and dividend policy of a firm.

Other significant relationships were observed between ROE and dividend per share (β= .341, $p<.001$) and between leverage and dividend per share (β= -.474, $p< .001$) as well.

The results thus show that there is a significant relationship between ownership structure and dividend policy of a firm, be it institutional ownership or director's ownership. These results are consistent with the findings of Shleifer and Vishny (1986), Afza & Mirza (2010) and Stouraitis & Wu (2004) who showed a significant relationship between Director's ownership and dividend policy. The results also reflect the findings of Kumar (2003), Cook & Jeon (2006) and Gill & Obradovich (2011) who proved that institutional ownership has a significant effect on the dividend policy of a firm.

The results are however strikingly different from the findings of Hofler *et al* (2004), Chen et al. (2005), Naceur, Goaied & Belanes (2006), Jakob and Johannes (2008) and Elston, Hofler & Lee (2011), all of whom stated in their studies that ownership structure does not significantly affect the dividend policy of a firm.

Table 7: Hierarchical regression model for dividend per share

	R	R^2	R^2 *Change*	*B*	*SE*	*B*	*t*
Step 1	.474	.224***					
FIRMSIZE				.008389	.006	.136	1.415
ROE				.712	.206	.322***	3.454
LEVERAGE				-.0208	.004	-.506***	-5.023
Step 2	.541	.293**	.069**				
FIRMSIZE				.005077	.006	.082	.855
ROE				.754	.205	.341***	3.675
LEVERAGE				-.0194	.004	-.474***	-4.796
DO				.339	.140	.223**	2.427
INST				-.243	.107	-.199**	-2.281

Note. Statistical significance: *$p < .05$; **$p < .01$; ***$p < .001$

R^2 is amount of variance explained by the independent variables; R^2 Change is additional variance in dependent variable; B is unstandardized coefficient; β is standardized coefficient; SE is Standard Error; t is estimated coefficient (B) divided by its own SE. If |t| < 2 the independent variable does not belong to the model

9. Conclusion

This study examined the relationship between ownership structure and dividend policy of firms listed in the Chittagong Stock Exchange. Very few researches have attempted to study these two extremely crucial areas in the field of corporate finance in the context of an emerging market such as Bangladesh and this study mainly tries to fill this research gap.

The study is based on 21 highly traded blue-chip companies listed in the CSE-30 index during the period 2006-2010. Data was consistently available for the period 2006-2010 for the selected companies. A hierarchical multiple regression analysis and correlation analysis is conducted on the sample companies to test the hypothesis that there is a significant relationship between ownership structure and dividend policy. Two kinds of ownership structure namely, institutional ownership and director's ownership have been considered under the study. The regression and correlation results suggest that ownership structure is highly relevant in understanding the corporate dividend policy of Bangladesh. We find that the percentage of shares held by board of directors has a significant positive effect on the cash dividend per share. This indicates that the board of directors in the company uses its power and position to influence the dividend policy of the company. This helps in addressing agency conflict between shareholders and managers and helps develop trust and confidence between outsiders and shareholders of the company. We further find that institutional shareholders have a significant but negative impact on the dividend per share of a company. This implies that institutions do not monitor or control managerial actions through dividend policy. Rather, the firms where the institutional shareholding is large have a tendency to pay lower dividends to their shareholders. Our study has further revealed that both leverage and ROE play a very significant role in determining the dividend policy of a firm. Firms with high leverage, tend to pay lower dividends as implied by the highly significant negative relationship between leverage and dividend per share ratio. On the other hand ROE has a significant positive relationship with dividend per share, implying that firms that are profitable tend to distribute a larger portion of earnings as dividends to their shareholders.

Our results support the earlier work conducted by Shleifer and Vishny (1986), Stouraitis & Wu (2004), Kumar (2003), Cook & Jeon (2006) and Gill & Obradovich (2011) among others. The results are however strikingly different from the findings of Hofler *et al* (2004), Chen et al. (2005), Naceur, Goaied & Belanes (2006), Jakob and Johannes (2008) and Elston, Hofler & Lee (2011), all of whom stated in their studies that ownership structure does not significantly affect the dividend policy of a firm.

Our study contributes to the literature of dividend policy and corporate governance by combining these two highly noteworthy areas in the field of finance in case of an emerging economy, Bangladesh. The study is a clear indication that ownership structure is an important factor to be considered while formulating the dividend policy of a firm. The results will help policy makers understand the importance of corporate governance in structuring the dividend policy of a firm. Special importance must be given to how shares are distributed to various shareholders and in what proportion in order to balance out the effect of ownership structure on dividend policy.

The sample size of the study however was small and limited to a few industries in Bangladesh and hence the findings cannot be generalized for the entire Bangladesh capital market. The study would be more reflective of the Bangladesh capital market if all the listed companies in DSE and CSE can be included in the study. There is also a need for further analysis with respect to the influence of ownership structure on dividend policy. Further areas of research may involve studying other forms of ownership such as family, foreign and concentrated ownership in relation to dividend policy. Examining the influence of CEO duality, director's tenure and other such board characteristics on dividend policy also offer ample scope for further research.

References

Abdullah, NMH, Ahmad, Z & Roslan, S 2012, 'The Influence of Ownership Structure on the Firms Dividend Policy Based Lintner Model', *International Review of Business Research Papers,* vol. 8, no. 6, pp. 71-88.

Afza, T & Mirza, HH 2010, 'Ownership Structure and cash flows as determinants of corporate dividend policy in Pakistan', *International Business Research,* vol. 3, no.3, pp.210-221.

Agrawal, A & Jayaraman, N 1994, 'The dividend policies of all-equity firms: A direct test of the free cash flow theory', *Managerial and Decision Economics*, vol. 15, pp. 139-148.

Ahsan, A & Bashar, OKMR n.d., 'Security Price Reaction to Dividend Announcement: Evidence from Dhaka Stock Exchange Ltd', viewed 29 August, 2013, <www.bdresearch.org>.

Al mudehki, N & Zeitun, R 2012, 'Ownership Structure and Corporate Performance: Evidence from Qatar', viewed 29 August, 2013, <http://ssrn.com/abstract=2154289>.

Ali, K, Khan, A & Ramirez, G 1993, 'Determinants of Dividend Policy: A Factorial Analysis', *Finance Review*, vol. *28*, pp. 523-47.

Al-Nawaiseh, M 2013, 'Dividend Policy and Ownership Structure: An Applied Study on Industrial Companies in Amman Stock Exchange.' *Journal of Management Research,* vol. 5, no. 2, pp. 83-106.

Amoako-Adu, B, Baulkaran, V & Smith, B 2009, 'Concentrated Control, Agency Problems and Dividend Policy*' Working paper*, viewed 29 August, 2013, <http://www.wlu.ca>.

Bebchuk, L., Kraakman, R. & Triantis, G., 2000. 'Stock pyramids, cross-ownership, and dual class equity: the creation of agency costs of separating control from cash flow rights', *NBER Working Paper No. 6951, viewed* 29 August, 2013, < http://papers.ssrn.com/sol3/papers.cfm?abstract_id=147590>.

Bena, J & Hanousek, J 2008, 'Rent extraction by large shareholders: Evidence using dividend policy in the Czech Republic Finance a úvěr: Czech', *Journal of Economics and Finance*, vol. *58, no.* 3, pp. 106-130.

Bhattacharya, S 1979, 'Imperfect Information, Dividend Policy, and "the Bird in the Hand" fallacy.', *The Bell Journal of Economics*, vol. 10, pp. 259-270.

Bhattacharya, S 1980, 'Nondissipative Signaling Structures and Dividend Policy.', *Quarterly Journal of Economics*, vol. *95, no.* 1, pp. 1-24.

Black, F 1976, 'The Dividend Puzzle', *The Journal of Portfolio Management*, vol. *2*, no. 2, pp. 5-8.

Burkart, M, Gromb, D, & Panunzi, F 1997, 'Large Shareholders, Monitoring, and the Value of the Firm.', *The Quarterly Journal of Economics*, vol. 112, no. 3, pp. 693 - 728.

Chen, CR & Steiner, TL 1999, 'Managerial ownership and agency conflicts: a non-linear simultaneous equation analysis of managerial ownership, risk taking, debt policy, and dividend policy.', *The Financial Review,* vol. 34, pp. 119-136.

Chen, Z, Cheung, Y, Stouraitis, A & Wong, A 2005, 'Ownership concentration, firm performance and dividend policy in Hong Kong.', *Pacific-Basin Finance Journal*, vol. 13, pp. 431-449.

Cook, DO & Jeon, JQ, 2006, '*Foreign Ownership, Domestic Ownership, and Payout Policy*.', *Working paper* series, Department of economics, University of Alabama.

Eckbo, BE & Verma S 1994, 'Managerial Share ownership, voting power and cash dividend policy', *Journal of Corporate Finance*, vol. 1, pp. 33-62.

El-Masry, AA, Abd-Elsalam, O & Elsegini, S 2008, 'Board composition, ownership structure and dividend policies in an emerging market: Further evidence from CASE 50', *Managerial Finance,* vol. 34, no. 12, pp. 953 – 964.

Elston, JA, Hofler, R & Lee, J 2011, 'Dividend Policy and Institutional Ownership: Empirical Evidence Using a Propensity Score Matching Estimator', *Journal of Accounting and Finance,* vol. 11, no. 1, pp. 89-102.

Fagerland, EA & Nilsen, KK 2012, '*The Effects of Ownership on Corporate Performance and Dividend Payout Policy.',* A Master's Thesis, Norwegian School of Economics, Bergen, Norway.

Fama, EF 1974, 'The Empirical Relationship between the Dividend and Investment Decisions of Firms. *The American Economic Review'*, vol. 64, no. 3, pp. 304-318.

Farooque, OA, Zijl, TV, Dunstan, K & Karim, AKMW 2007, 'Ownership Structure and Corporate Performance: Evidence from Bangladesh.', *Asia-Pacific Journal of Accounting and Economics,* vol. 14, pp. 127-150.

Fenn, GW & Liang, N 2001, 'Corporate payout policy and managerial stock incentives.', *Journal of financial economics,* vol. 60, no. 1, pp. 45-72.

Gharaibeh, M, Zurigat, Z & Harahsheh, K 2013, 'The Effect of Ownership Structure on Dividends Policy in Jordanian Companies', *Interdisciplinary Journal of Contemporary Research in Business*, vol. 4, no. 9, pp. 769-796.

Gill, AS & Obradovich, JD 2011, 'Corporate Governance, Institutional Ownership, and the Decision to Pay the Amount of Dividends: Evidence from USA.', *International Research Journal of Finance and Economics*, vol. 97, pp. 60-71.

Gorden, MJ, 1959, 'Dividends, Earnings, and Stock Prices.', *Review of Economics and Statistics*, vol. 41, pp. 99-106.

Graham, RE & Dodd, P 1951, *Security Analysis,* New York: McGraw-Hill Book Co.

Grinstein, Y & Michaely, R 2005, 'Institutional Holdings and Payout Policy', *The Journal of Finance*, vol. 60, pp.1389-1426.

Gugler, K, & Yurtoglu BB 2003, 'Corporate governance and dividend pay-out policy in Germany', *European Economic Review*, vol. 47, pp. 731-758.

Harada, K & Nguyen, P 2003, 'Ownership concentration, agency conflicts and dividend policy in Japan.', *Journal of Finance*, vol. 55, pp. 1–33.

Hofler, R, Elston, J & Lee, J 2004, *Dividend Policy and Institutional Ownership: Empirical Evidence using a Propensity Score Matching Estimator*, Discussion Papers on Entrepreneurship, Growth and Public Policy, No. 2004-27, Group for Entrepreneurship, Growth and Public Policy.

Holderness, CG, & Sheehan, DP 2000, '*Constraints on Large-Block Shareholders, in Concentrated Corporate Ownership*.' NBER paper series, University of Chicago Press, viewed 29 August, 2013, <http://www.nber.org/chapters/c9008.pdf.>

How, JCY, Verhoeven, P & Wu, CL 2008, 'Dividends and expropriation in Hong Kong.', *Asian academy of management journal of accounting and finance*, vol. 4, no. 1, pp. 71–85.

Imam, MO & Malik, M 2007. Firm Performance and Corporate Governance through Ownership Structure: Evidence from Bangladesh Stock Market. *International Review of Business Research Papers,* vol. 3, no. 4, pp. 88-110.

Jain, R 2007, 'Institutional and individual investor preferences for dividends and share repurchases.', *Journal of Economics and Business*, vol. 59, pp. 406–429.

Jakob, SH & Johannes, R 2008, 'Dividend Determinants in Denmark' *Management Working Paper 2008*, University of Aarhus, Denmark.

Jensen, GR, Solberg, DP & Zorn,TS 1992, 'Simultaneous determination of insider ownership, debt and dividend policies', *The Journal of Financial and Quantitative Analysis,* vol. 27, pp. 247-263.

Jensen, M & Meckling, W 1976, 'Theory of the firm: Management behavior, agency costs and ownership structure.', *Journal of Financial Economics*, pp. 305-316.

Karathanassis, GA & Chrysanthopoulou EC 2005, The Relationship between Ownership Structure and Corporate Dividend Policy- Evidence from the Athens Stock Exchange*, Working Paper Series*, viewed 29 August, 2013, <http://papers.ssrn.com/sol3/ papers.cfm?abstract_id=813024>

Khan, KI, Aamir, M, Qayyum, A, Nasir, A & Khan, MI 2011, 'Can Dividend Decisions Affect the Stock Prices: A Case of Dividend Paying Companies of KSE.', *International Research Journal of Finance and Economics,* vol. 76, pp. 67-74.

Khan, T, 2006. 'Company Dividends and Ownership Structure: Evidence from UK Panel Data', *The Economic Journal*, vol. *116, no.* 510, pp. 172-189.

Kim, S & Lee, E 2008, 'Corporate Governance and Dividend Policy under External Financing Constraints and Agency Problems.', *Asia-Pacific Journal of Financial Studies,* vol. 37, no. 5, pp. 949-981.

Kouki, M & Guizani, M 2009. 'Ownership Structure and Dividend Policy Evidence from the Tunisian Stock Market', *European Journal of Scientific Research*, vol. *25, no.* 1, pp. 42-53.

Kumar, J 2003, 'Ownership Structure and Dividend Payout Policy in India.', *Journal of Emerging Market Finance,* vol. 5, no. 1, pp. 15-58.

La Porta, Lopez, F, Shleifer, A & Vishny, R, 2000, 'Agency Problems and Dividend Policies Around the World.', *Journal of Finance*, viewed August 26, 2013, <http://faculty.tuck.dartmouth.edu/rafael-laporta/research-publications>

Li, Q & Huang, G 2004, Influence of Institutional Ownership on Cash Dividend Policy of China Listed Companies. The Sixth Wuhan International Conference on E-Business International Finance Track, China, viewed 28 August, 2013, <http://www.docstoc.com/docs/ 3418631/Influence-of-Institutional- Ownership-on-Cash-Dividend-Policy -of- China>

Linter, J 1956, 'Distribution of Incomes of Corporations among Dividends, Retained Earnings and Taxes.', *The American Economic Review*, vol. 46, pp. 97-113.

Lintner, J 1962, 'Dividends, Earnings, Leverage, Stock, Prices and the Supply of Capital to Corporations.', *Review of Economics and Statistics*, vol. 44, no. 3, pp. 243-269.

Mancinelli, L & Ozkan, A 2006, 'Ownership structure and dividend policy: Evidence from Italian firms', *The European Journal of Finance*, vol. 12, pp. 265-282.

Manos, R 2002, 'Dividend Policy and Agency Theory: Evidence on Indian Firms', *Working Paper No. 41*. Institute for Development Policy and Management, University of Manchester.

Maury, CB & Pajuste, A 2002, 'Controlling Shareholders, Agency Problems, and Dividend Policy in Finland', *Working Paper*. Stockholm School of Business, Stockholm School of Economics.

Mehar, A 2005, 'Corporate Governance and Dividend Policy', *Pakistan Economic and Social Review,* vol. 1, no. 43, pp. 115-128.

Mehrani, S, Moradi, M & Eskandar H 2011, 'Ownership structure and dividend policy: Evidence from Iran', *African Journal of Business Management*, vol. 5, no. 17, pp. 7516-7525.

Miller, MH & Modigliani, F 1961, 'Dividend Policy, Growth, and The Valuation of Shares.', *The Journal of Business*, vol. 34, no. 4, pp. 411-433.

Miller, MH & Rock, K 1985. Dividend Policy under Asymmetric Information. *The Journal of Finance*, vol. 40, no. 4, 1031-1070.

Mitton, T 2005, 'Corporate governance and dividend policy in emerging markets.', *Emerging Markets Review,* vol. 5, pp. 409-426.

Mollah, AS, Rafiq, RB & Sharp, PA 2007, 'Relevance of agency theory for dividend policy in an emerging economy: The case of Bangladesh', *The IFCAI Journal of Applied Finance*, vol. 13, pp. 5-15.

Naceur, S, Goaied, M & Belanes, A 2006, 'On the Determinants and Dynamics of Dividend Policy.', *International Review of Finance*, vol. 6, pp. 1–23.

Ramli MN, 2010, 'Ownership Structure and Dividend Policy: Evidence from Malaysian Corporations', *International Review of Business Research Papers*, vol. 6, no. 1, pp. 170-180.

Rashid, A, Zoysa, AD, Lodh, S & Rudkin, K 2010, 'Board Composition and Firm Performance: Evidence from Bangladesh.', *Australasian Accounting Business and Finance Journal,* vol. 4, no. 1, pp. 76-95.

Renneboog, L & Trojanowski, G 2005, 'Patterns in Payout Policy and Payout Channel Choice of UK Firms in the 1990s', *ECGI Working Paper Series in Finance*, viewed 29 August, 2013. < http://papers.ssrn.com.>

Ross, SA 1973, 'The economic theory of agency: The principal's problems.' American *Economic Review*, vol. 62, no. 2, pp. 134-148.

Rouf, A & Al-Harun, A 2011. Ownership structure and voluntary disclosure in annual reports of Bangladesh. *Review of economic and business studies,* vol. 4, no. 1, pp. 239-251.

Shah, SZA, Ullah, W & Hasnain, B 2011, 'Impact of ownership structure on dividend policy of a firm (evidence from Pakistan).', *The International Conference on E-business, Management and Economics.* IACSIT Press: Hong Kong.

Sharif, SJS, Salehi, M & Bahadori, H 2010, 'Ownership Structure of Iranian Evidence and Payout Ratio.', *Asian Social Science*, vol. 6, no. 7, pp. 36-42.

Shleifer, A & Vishny, R 1986, 'Large Shareholders and Corporate Control', *Journal of political Economy,* vol. 94, pp. 461–488.

Short. H, Zhang H & Keasey K 2002, 'The Link between Dividend policy and Institutional Ownership', *Journal of Corporate Finance*, vol. 8, no. 2, pp. 105-122.

Stouraitis, A, & Wu, L 2004, 'The Impact of Ownership Structure on the Dividend Policy of Japanese Firms with Free Cash Flow Problem.' *Working paper*, viewed 29 August, 2013. <www.affi.asso.fr/>

Sulong, Z & Nor, FM 2008, 'Dividends, ownership structure and board governance on firm value: Empirical evidence from Malaysian listed firms.', *Malaysian Accounting Review,* vol. 7, no. 2.

Trading Economics, 2013. *Market Capitalization of Listed Companies (% of GDP) in Bangladesh,* viewed 23 August 2013. <http://www.tradingeconomics.com/bangladesh>

Warrad, L, Abed, S, Khriasat, O & Al-Sheikh, I 2012, 'The Effect of Ownership Structure on Dividend Payout Policy: Evidence from Jordanian Context.', *International Journal of Economics and Finance,* vol. 4, no. 2, pp. 187-195.

Wei, G, Zhang, W, & Xiao, JZ 2003, July. 'Dividends Policy and Ownership Structure in China', *EFMA 2004 BASEL meetings paper*, viewed 25 August, 2013. <http://papers.ssrn.com.>

Weisskopf, J-P, 2010. 'Do not wake the sleeping dogs: Payout Policies in Founding Family Firms', *Working Paper*, University of Fribourg, Switzerland.

Wiberg, D 2008, 'Institutional Ownership –The Anonymous Capital', Dissertation Series No. 048, Jönköping International Business School (JIBS), Jönköping University, Sweden.

World Bank, 2009. Corporate Governance Country Assessment. Bangladesh.

Zeckhauser, RJ & Pound, J 1990, 'Are Large Shareholders Effective Monitors? An Investigation of Share Ownership and Corporate Performance.', *Asymmetric Information, Corporate Finance, and Investment,* R.G. Hubbard ed., Chicago, University of Chicago Press (1990), pp.149 - 180.

Appendix

COMPANY	YEAR	FIRMSIZE	ROE	LEVERAGE	DO	INST	DPS
Square Pharma.	2006	9	.1777	.4301	.3930	.0000	.750
Square Pharma.	2007	9	.1642	.5092	.3437	.0000	.500
Square Pharma.	2008	9	.1900	.3319	.3301	.0000	.400
Square Pharma.	2009	9	.1807	.3008	.3301	.0000	.400
Square Pharma.	2010	9	.1832	.4072	.3303	.0000	.350
Beximco Textiles	2006	12	.0592	.4984	.0326	.3591	.050
Beximco Textiles	2007	10	.0428	1.2514	.0326	.3467	.050
Beximco Textiles	2008	8	.0522	1.1691	.0326	.4065	.100
Beximco Textiles	2009	10	.0574	.8273	.0326	.5097	.000
Beximco Textiles	2010	9	.0149	.3379	.0270	.5280	.000
Keya Cosmetics	2006	4	.1791	.9219	.0798	.0473	.205
Keya Cosmetics	2007	6	.1646	.7563	.0798	.0000	.300
Keya Cosmetics	2008	6	.1573	.8173	.0798	.0000	.300
Keya Cosmetics	2009	6	.2298	.6370	.0798	.0000	.150
Keya Cosmetics	2010	6	.1753	.8615	.1979	.0000	.150
ACI	2006	10	.1255	2.0317	.2654	.1549	.600
ACI	2007	10	.2461	2.7189	.2654	.1264	.850
ACI	2008	10	.4879	2.1366	.2651	.2118	1.000
ACI	2009	10	.3256	1.4833	.2648	.3054	1.050
ACI	2010	10	.1327	1.1727	.2648	.3118	1.200
Square Textiles	2006	10	.1970	.7323	.0000	.0000	.300
Square Textiles	2007	10	.1744	.7716	.0000	.0449	.250
Square Textiles	2008	10	.0798	.9182	.0834	.0650	.180
Square Textiles	2009	10	.0836	.7298	.1548	.0817	.160
Square Textiles	2010	10	.1581	.8186	.1548	.0817	.160
Hiedelberg Cement	2006	11	.2247	.7828	.0110	.1261	.160
Hiedelberg Cement	2007	11	.2176	.8036	.0109	.1296	.250
Hiedelberg Cement	2008	11	.1791	.7746	.0107	.0996	.330
Hiedelberg Cement	2009	11	.2142	.5181	.0089	.1816	.380
Hiedelberg Cement	2010	11	.2100	.5101	.0071	.1755	.430
Confidence Cement	2006	6	.0612	.4969	.1956	.3181	.150
Confidence Cement	2007	6	.0768	.6046	.1956	.3319	.150
Confidence Cement	2008	6	-.0453	.8369	.1956	.2536	.000
Confidence Cement	2009	6	.0767	.2435	.2444	.2142	.100
Confidence Cement	2010	6	.0923	.2378	.1971	.1466	.250
Aftab Auto	2006	6	.0672	1.5785	.3493	.3140	.200
Aftab Auto	2007	5	.0444	1.9493	.3493	.2238	.060
Aftab Auto	2008	5	.0796	2.1015	.3769	.2520	.000
Aftab Auto	2009	6	.3446	1.5957	.3540	.1962	.100
Aftab Auto	2010	6	.1940	.1785	.2782	.4100	.100
Meghna Petroleum	2006	9	.2863	13.9884	.0000	.0000	.000
Meghna Petroleum	2007	8	.3736	10.6457	.0000	.0000	.200
Meghna Petroleum	2008	10	.3108	9.3762	.0000	.0976	.250
Meghna Petroleum	2009	10	.3132	11.9132	.0000	.1656	.400
Meghna Petroleum	2010	10	.4038	9.0739	.0000	.1369	.450
AB Bank	2006	8	.2061	17.5806	.0372	.0372	.000
AB Bank	2007	10	.4219	13.0859	.0319	.0319	.000
AB Bank	2008	13	.0000	.0000	.0446	.0446	.150
AB Bank	2009	14	.3310	9.5253	.0446	.0446	.200
AB Bank	2010	14	.2665	8.5906	.0455	.0455	.100
Jamuna Oil	2006	9	.2918	8.3220	.0000	.0000	.000
Jamuna Oil	2007	10	.3452	5.9175	.0000	.0000	.150

COMPANY	YEAR	FIRMSIZE	ROE	LEVERAGE	DO	INST	DPS
Jamuna Oil	2008	9	.2722	5.6658	.0000	.0000	.400
Jamuna Oil	2009	9	.3002	5.7340	.0000	.0000	.400
Jamuna Oil	2010	10	.3814	4.5552	.0000	.0000	.300
National Bank	2006	14	.1550	13.2921	.0000	.0000	.000
National Bank	2007	14	.2710	11.3735	.0000	.0000	.000
National Bank	2008	14	.2477	10.7861	.0000	.0000	.000
National Bank	2009	14	.2322	9.3078	.0163	.0163	.000
National Bank	2010	14	.3591	.3428	.3915	.3915	.000
Dhaka Bank	2006	12	.2276	17.8433	.2646	.2646	.100
Dhaka Bank	2007	12	.2252	18.8922	.3593	.3593	.000
Dhaka Bank	2008	21	.2097	16.7864	.4347	.4347	.150
Dhaka Bank	2009	21	.1931	14.6600	.2986	.2986	.000
Dhaka Bank	2010	21	.2552	12.6993	.3785	.3785	.000
City Bank	2006	14	.0948	17.7466	.2301	.2301	.000
City Bank	2007	13	.1195	15.9621	.2201	.2201	.000
City Bank	2008	0	.0944	.0000	.0000	.0000	.000
City Bank	2009	0	.1397	.0000	.0000	.0000	.000
City Bank	2010	12	.1605	6.8911	.0000	.0000	.000
Prime Bank	2006	0	.2725	14.7775	.0527	.0527	.000
Prime Bank	2007	13	.2656	14.0928	.1158	.1158	.100
Prime Bank	2008	13	.1839	15.4911	.1186	.1186	.000
Prime Bank	2009	15	.2371	9.6261	.1142	.1142	.100
Prime Bank	2010	20	.1791	8.1121	.1894	.1894	.050
Eastern Bank	2006	11	.1548	9.8410	.0000	.0000	.200
Eastern Bank	2007	11	.1128	10.4546	.1709	.1709	.000
Eastern Bank	2008	10	.1687	10.4827	.0343	.0343	.000
Eastern Bank	2009	10	.1730	7.0933	.0343	.0343	.200
Eastern Bank	2010	10	.2007	5.7913	.0343	.0343	.000
Brac Bank	2006	7	.1579	13.1753	.0000	.0790	.000
Brac Bank	2007	8	.2013	14.0984	.0000	.5661	.000
Brac Bank	2008	7	.1790	12.3226	.0000	.5567	.000
Brac Bank	2009	7	.1599	10.6037	.0000	.5130	.000
Brac Bank	2010	6	.1768	11.6595	.0000	.5171	.100
Uttara Finance	2006	10	.1800	4.4446	.1023	.0929	.100
Uttara Finance	2007	0	.1763	2.0400	.0000	.1142	.300
Uttara Finance	2008	12	.1752	2.0200	.1405	.3308	.300
Uttara Finance	2009	12	.2396	1.3641	.0990	.4018	.000
Uttara Finance	2010	11	.0256	3.8544	.8631	.4409	.000
Lanka Bangla Fin.	2006	11	.1736	5.6205	.2286	.1714	.100
Lanka Bangla Fin.	2007	11	.2359	9.5486	.2286	.1714	.150
Lanka Bangla Fin.	2008	12	.2778	10.8079	.2078	.1584	.150
Lanka Bangla Fin.	2009	12	.3943	11.7223	.2152	.1044	.150
Lanka Bangla Fin.	2010	11	.3295	10.2160	.2152	.1235	.000
Beximco Ltd.	2006	7	.1260	.2777	.1291	.6457	.000
Beximco Ltd.	2007	7	.0487	.3671	.1291	.6457	.000
Beximco Ltd.	2008	7	.1905	.4031	.1174	.6321	.100
Beximco Ltd.	2009	7	.3748	.4984	.1111	.6744	.000
Beximco Ltd.	2010	7	.3914	.6426	.1012	.7645	.000
GQ Ball Pen	2006	9	.0184	.2806	.3963	.3070	.250
GQ Ball Pen	2007	13	.0928	.3304	.3891	.3258	.600
GQ Ball Pen	2008	11	.0059	.3261	.3940	.2866	.220
GQ Ball Pen	2009	10	.0726	.2908	.3813	.0232	.350
GQ Ball Pen	2010	8	.0474	.3915	.3784	.0107	.000