Project Report

on

Determinants of Dividend Policy: A Case Study on the Listed Commercial Banks in Bangladesh

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LETTER OF TRANSMITTAL

June 10, 2023

Muhammad Enamul Haque

Assistant Professor

United International University

Subject: Determinants of Dividend Policy: A Case Study on the Listed Commercial Banks in Bangladesh

Honorable Sir,

I would like to inform you with great pleasure that I am submitting my internship report on "Determinants of Dividend Policy: A Case Study on the Listed Commercial Banks in Bangladesh"

This report is created through proper research under the supervision of the supervisor. Also, all the information mentioned in this report is collected from authentic sources.

Therefore, I am praying to be able to fulfill your expectation with proper clarification and recommendations. I would be honored to get any constructive feedback from you on this paper.

Sincerely,

Anika Tahsin

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Major: Finance

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First, I would like to express my gratitude to Allah for empowering me with the strength and skills needed to finish this report

Second, I am giving acknowledgment to the best of my knowledge to my supervisor of the academy Muhammad Enamul Haque, Assistant Professor, School of Business & Economics, United International University.

Third, I am giving acknowledgment to my family members, friends, and peers who were with me in my most stressful situations when I was researching information for the report.

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Abstract

The paper presents an extensive investigation into the determinants that are used in the identification of dividend policy in enlisted commercial banks. These banks are collected from the list of the Dhaka Stock Exchange. Through comprehensive analysis utilizing a large dataset and advanced econometric techniques, this paper explores different corners of the issue. The multifaceted factors have been identified here that influence dividend decisions in the banking sector in our country. The findings reveal the substantial impact of various variables. Some of them are profitability, firm size, leverage, growth opportunities, stock market performance, dividend policy, etc. The results of the paper offer valuable insights. It dived into the intricate dynamics of dividend decision-making by shedding light on the specific drivers of dividend payouts in the enlisted commercial banks. The research will assist the informing investors, managers, and policymakers in their decision-making processes. The implications of the study extend beyond enlisted commercial banks, serving as a valuable resource for the broader financial industry in Bangladesh.

Keywords: dividend policy, Enlisted Bank, Dhaka Stock Exchange, profitability, firm size, leverage, growth opportunities, stock market performance, econometric analysis.

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Chapter 1:

Introduction of the Report

1.1 Overall Introduction

Bangladesh's banking sector is applying a crucial role in the overall economy. The paper has taken into account the enlisted commercial bank of Bangladesh to evaluate its dividend policy. It has taken several variables to find out their impact related to the decision of dividends provided to shareholders of this commercial bank. This study has taken data from five years and analyzed the pattern to find the breakthrough.

Dividend policy is a critical decision for any company, as it affects the allocation of resources between shareholders and the company itself. In this dissertation report, I will investigate the determinants of dividend policy in enlisted banks in Bangladesh. I will use a large dataset and advanced econometric techniques to analyze the impact of various factors, including profitability, firm size, leverage, growth opportunities, stock market performance, and dividend policy.

The findings of this study will provide valuable insights into the intricate dynamics of dividend decision-making in the banking sector in Bangladesh. The research will assist investors, managers, and policymakers in their decision-making processes. The implications of the study extend beyond enlisted banks, serving as a valuable resource for the broader financial industry in Bangladesh.

In the following chapters, I will first provide a brief overview of dividend policy and the factors that influence it. I will then discuss the methodology used in this study and present the results of the analysis. Finally, I will discuss the implications of the findings and provide recommendations for future research.

1.2 Objectives of the Report

The Study on the determinants of dividend policy of listed commercial banks in Bangladesh has a core objective to fulfill as well as several supplementary objectives to explore also. Here are they-

- **Main Objective:** The main objective of the study of the paper is to examine the determinants to the factors of dividend policy of the listed commercial banks in Bangladesh.
- **Supplementary Objectives**: In addition to the objective mentioned, this paper will also investigate the impact of dividend policy on the cost of capital, the relationship between dividend policy and shareholder value, the role of dividend policy in signaling management's confidence in the company's future prospects, and the factors that influence dividend policy decisions in the banking sector in Bangladesh. This will provide a more comprehensive understanding of dividend policy and its implications for the banking sector in Bangladesh.

1.3 Data and Methodology

Quantitative Data has been used that has been collected from secondary sources. An Empirical approach has been used to analyze the data and to derive findings and recommendations.

1.4 Limitations of the Study

The study is limited in a number of ways.

- First, the study is limited to a specific sample of banks, and the findings may not be generalizable to other banks or other countries.
- Second, the study uses a quantitative approach, and it is possible that some of the findings are due to chance.
- Third, the study is limited by the availability of data.

Despite these limitations, the study is expected to make a number of important contributions to the literature on dividend policy.

1.5 Scope of the study

The scope of the study is to investigate the factors that influence the dividend policy of banks listed in the Dhaka Stock Exchange (DSE). The study will use a quantitative approach, using panel data analysis to examine the relationship between dividend policy and a number of factors.

The Factors are profitability, leverage, growth opportunities, and shareholder ownership. The study will also consider the impact of government policies on dividend policy. The study is expected to make a number of contributions to the literature on dividend policy. First, it will provide new insights into the factors that influence dividend policy in the context of the Bangladeshi banking sector. Second, the study will help to fill a gap in the literature on the impact of government policies on dividend policy. Third, the study will provide valuable information for policymakers and managers of banks in Bangladesh.

1.6 Relevance & Importance of the Study

The relevance and importance of this study are to understand the factors that are being considered by our industry while making decisions related to the policy of dividends in Bangladesh's banking industry. It needs to be acknowledged that the performance of the banking sector is essential for the country's overall economic development. This research will provide insight into factors that influence dividend policy in the banking industry. This research will help to understand the effects of the macroeconomic and industry-specific factors on the dividend policy of Bangladesh's banking industry. It will also provide an understanding of the dividend policy in Bangladesh banking sectors and its effects on the overall performance of the banking industry.

1.7 Benefits of the Research

1. This research provides us with a current analysis of the financial health of the BD banking sector.

2. It will help the upcoming researcher gather data for their work.

3. We can see how to improve our current dividend policy with the help of this study.

4. It will demonstrate the benefits and drawbacks of our dividend policies.

Chapter 2:

Background of the Report

2.1 Background of the Report

The Banking Industry is a significant player in any country's economy, and Bangladesh is no exception. It is a vital sector in the country and a crucial part of the gross domestic product (GDP). Bangladesh’s banking sector is playing a significant in the country’s economic flourishment (Rahman, 2012). Also, a bank’s condition can be judged by analyzing its dividend payout trend. Therefore, it is imperative to explore the factors that influence dividend payouts by banks in Bangladesh, including macroeconomic and firm-specific variables. Dividend determination for banks in Bangladesh is a complex process that involves careful consideration of various laws and regulations. The Bangladesh Bank, the apex regulator of the banking sector, sets policies and standards that govern the sector and influences the dividend policies of banks in Bangladesh (Chowdhury, 2014). Banks must also consider the impact of dividend payments on their capital requirements, liquidity, and credit rating. They must also consider the competitive landscape of the sector. Also shares perceived value can be influenced by this. Additionally, banks must also consider the impact of dividend payments on their relationships with their customers, creditors, and other stakeholders.

Internal determinants such as the financial performance of the company, including profitability, liquidity, and capital structure, influence dividend decisions in Bangladesh (Tuovila, 2022). Profitability is the most important factor in the dividend decisions of companies in Bangladesh. Companies that are more profitable are more likely to pay higher dividends. Liquidity is also a crucial factor, as companies with more cash on hand are more likely to pay higher dividends. Capital structure, which refers to the ratio of debt to equity, also plays an important role in dividend decisions. Companies with higher debt-to-equity ratios are more likely to pay higher dividends to shareholders.

External determinants, such as macroeconomic conditions, industry characteristics, and the regulatory environment, also influence dividend decisions in the banking sector. Macroeconomic factors have a direct impact on dividend decisions. Also, the banking sector has its own characteristics which also create impact their decision related to dividends. The regulatory environment of Bangladesh, including the rules and regulations governing dividend payments, also has an impact on dividend decisions (Tuovila, 2022).

The Bangladesh Bank exerts significant influence on the dividend decisions of banks in Bangladesh. Through its rules, regulations, and directives, the Bangladesh Bank has to minimum 9% capital adequacy and a minimum liquidity ratio of 25%, which implies that banks must have adequate capital and liquidity in order to pay dividends (Masum, 2014). In addition, the Bangladesh Bank may impose restrictions on the size of dividends that can be paid, as well as any other conditions that must be met before dividends can be paid. All of these regulations are designed to ensure that banks in Bangladesh remain financially sound and continue to provide the services that their customers need.

Therefore, the banking industry’s performance not only indicates its progress but also indicates the whole nation’s progress. The banking industry’s dividend-related decision depends on macroeconomics, microeconomics, and competitiveness. That’s why this research paper’s outcome will shed light on a more significant matter and helps others to understand this particular topic much more deeply (Islam M. S., 2018).

The banking sector's performance, in turn, depends on various factors, including dividend policies. The purpose behind this research work is to explore the dividend determinants of Bangladesh's banking industry. (Rahman, 2012). The research is performed with the motive of looking into the variables that are influencing the dividend policy. Including macroeconomic and firm-specific variables. It will delve into the historical trends of dividend payouts by banks in Bangladesh and discuss their implications for the banking sector. Additionally, it will examine the impact of the regulatory environment on dividend payouts by banks in Bangladesh. The research will analyze relevant literature on dividend determinants in the banking industry and will undertake a detailed empirical analysis of the dividend payouts of banks in Bangladesh. The empirical analysis will use panel data from several sources, including the Bangladesh Bank, the central banking authority, the DSE market, and Brokers in Bangladesh, to analyze the dividend policies of banks in the country.

The outcome of this research works is to enlighten us about the dividend policies of banks in Bangladesh and their implications for the banking sector and the economy as a whole. The findings can also be used by policymakers to develop suitable strategies for managing the dividend policies of banks in Bangladesh. The outcome will enable others to take it’s an authentic source of information for their future work. (Islam M. S., 2018-12-19)

Chapter 3:

Literature Review

A written summary of authentic resources is known as a literature review. The literature review describes paraphrases and assesses each source. In a study, the literature review can be useful in four different ways. It narrows the scope of a study problem. It also improves the way we conduct research. Additionally, it deepens our understanding of the topic area of our research and contextualizes our findings last but not least.

3.1 Previous Studies on Dividend Policy in Bangladesh Banking Industry

[1] Determinants of Dividend Payout Policy

Abu, S. T. (2012) in the paper focuses on the Potential for dividend payment policy as a factor in the company's ability to do business successfully and should be taken into account. Profitability creates an impact on a company's decision to pay out dividends, along with other crucial criteria. Therefore, identifying the elements affecting a company's dividend payment strategy becomes crucial. This paper provides suggestions on processes that should be considered while making decisions related to the policy-making of distributing dividends to any enlisted company in the DSE market of our country. The author of the paper indicates that enterprises may decide their payment policy based on current earnings and liquidity. (Abu, 2012)

[2] Private Commercial Banks Determinants Dividend Payout Policy

Hosain, Md. Z. (2016) in his study the authors look for the factors which affect the policy of dividends in the private banking sector of our country. Eight variables are considered potential dividend distribution policy determinants in this study. They have taken ten listed private commercial banks of the DSE market and they use pooled and panel regression models for the eleven-year period from 2005 to 2015. (Hosain, 2016)

[3] Factors That Affect the Dividend Payout Policies

Khan, S. H. (2009) conducted a study on private commercial banks of Bangladesh and their dividend policy, they have taken ten listed private commercial banks of the DSE market. They use pooled and panel regression models for the eleven-year period of 2005-2015. The study revealed that just five of the eight variables could adequately explain the dividend policy.

[4] Comparative Study on Dividend Policy

ALAM, M. Z. (2012) in his article analyzes the dividend policy. It is a case study on UK-based businesses. The authors of the paper wanted to find out the dividend policies of UK-based companies. They wanted to know the factors surrounding the issue. All these companies are listed on the London stock exchange.

Also, they are companies that are truly doing well in the market. The study's goal is to critically analyze the dividend policies of UK-based companies that are listed on the London Stock Exchange, including organizational dividend policy theories, justifications for and against dividends, and other factors that influence dividend policy.

Additionally, the study investigates how the dividend rate is affected by liquidity, leverage, profitability, etc. The study demonstrates that a dividend is a domestic-type payout that doesn’t affect the firm’s value in the long run. The authors studied some factors like Leverage and profitability. They also studied market capitalization.

At the end of the conducted study, they discovered that those factors positively affect the rate of dividend for UK-based companies, whilst liquidity and growth negatively affect the ratio of payout for the dividend of the company. If we look at Bangladesh’s situation, we will see that those mentioned factors have an adverse effect on our policy of dividends in the companies. On the other hand, the growth has opposite impact. (Md. Zahangri Alam, 2012)

[5] Assessing the Dividend Policy

Mamun1, S. A., Uddin, Md. M., & Mia, Md. S. (2020) in their study intend to investigate various factors that affect Bangladeshi banking organizations' dividend policies. The current study examines the relationship between the dividend payment ratio and profitability, investment opportunities, company risk, and ownership concentration. Except for business risk, the study's findings do not support a substantial significance for these drivers in the dividend policies of Bangladeshi banks. The significant and favorable correlation between company risk and dividend pay ratio is a result of Bangladeshi banks' "milking the property" strategy. (Syed A.Mamun, 2020)

[6] Dividend Policy influence on Stock Price

Al Masum, A. (2014) in his study, the excess stock market returns are empirically estimated for each of the 30 banks listed on the DSE from 2007 to 2011.It is an attempt is made to investigate the connection between two things, one of them is dividend policy and other one is the stock market returns of these banks. Diverse dividend policy theories are tested around the world, with varying outcomes and conclusions. The study findings point to a strong favorable impact of dividend policy on stock prices. (Masum, 2014)

[7] Dividend Practices in Listed Bank

Islam, M. S. (2018 in his research, the author focuses on the many perspectives that specialists in the field of financial literacy have on corporate dividend behavior. The study focuses on the common practice adopted by banks in Bangladesh. To do that they take the aid of secondary sources for information. The outcome is inferred using 3 tests. One is the parametric test. Another one is a non-parametric test. There is another one that is percentile. The largest payouts in the banking industry are made by major companies, formerly listed banks, low-leveraged companies, high-risk companies, and companies with a medium PE ratio. The survey's findings show that while the majority of shareholders prefer stock, banks prefer both cash dividends and equity dividends.(Islam M. S., 2018)

[8] Factors of Influence on Dividend Policy

Islam, M. S. (2018) in his study outlines the dividend decision-making elements that are taken into account before deciding on a payout policy. When determining how much dividend to pay shareholders, firms primarily take into account dividend payment records from prior years. When deciding on a dividend policy, a company should take a number of elements into account, according to the author.

Financial decision-makers of representative banks have completed a questionnaire survey to examine the factors that critically influence the policy of dividends in this Bangladeshi region. Results are interpreted using factor analysis and a non-parametric test. When deciding whether to pay out dividends, the companies take into account some factors.

For example, the tax clientele factor. The 2^{nd} one is the factor of legal and capital ratio. There is also a liquidity factor. The earnings factor is also considered. Identifying them is the first step for any organization. Corporations always seek out opportunities to invest and grow their wealth. So, they rely on the information of ROI. In the next phase, a dividend choice is primarily based on the dividend payment pattern from the preceding year. (Islam M. S., 2018)

[9] Dividend Policy Impact on the Structure of Owner in a Firm

Hasan, M. B., Wahid, A. N. M., Amin, M. R., & Hossain, M. D. et al ;(2021) in their studies investigate the effect of ownership structure on different issues. The authors take the payouts of dividends as a representative form of the policy of dividends for firms that are nonfinancial in the Bangladeshi region. It’s a matter of surprise that the findings of this study revealed an interesting fact.

That is- when the ownership is public, it can create a significant and positively thought impact on the payouts of dividends. But, it is the opposite for the government and other private institutions that hold the ownership. They always bear a negative impact. (Md. Bokhtiar Hasan, 2021)

[10] Impact on the Company value

Rahman, Md. A., Ismat Ara Huq, Dr. B., & Kalam Azad, Md. A. (2012) created a paper that shows the relationship and impact of the policy of dividends in increasing farm value. Banks' annual report and website has been used for gathering authentic information. Using a structured, closed-ended questionnaire, also twenty-four banker has provided with various information. Every two-banker filled up a survey. The report's empirical study was based on four fiscal years spanning 2007 to 2010. The study's key findings are as follows: in total a number of 14 determinants were found to affect the policy of dividends. However, among these 14's there are main 6 determinants that represent something exclusive. The first one is the shareholder's choice. The 2nd one can be taken as a board decision. On the other hand dividend stability can stay at 3rd place. Inflation comes as one of the important 6. Cash flow is truly another important one. And, then, there is a condition of the capital market. Also, the majority of bankers believe that dividend policy affects the value of firms. That means it supports the likelihood to be looking at dividends and the study's results supported the relevance theory of dividends (Rahman, 2012)

Chapter 4:

Research Methodology

4.1 Data

When any information is organized in the form of numbers, words, images, or sounds which is collected through observations, surveys, and experiments, and is then analyzed and used to draw conclusions and make decisions are called data.

4.1.1 Data Source

We want to do the analysis of the selected variables. To do the analysis, we need data and there are many sources of data of Primary and Secondary Type. To do my analysis, I am going for secondary data and that has been collected from the respective annual reports of the commercial banks of Dhaka Stock Exchange.

4.1.2 Population

As a Population, we have selected the banks of Bangladesh that are operating in the Dhaka Stock Exchange. Currently, there are 36 banks' names enrolled in the Dhaka Stock Exchange from Bangladesh.

4.1.3 Sample

As the sample, we took 23 Banks from Dhaka Stock Exchange which have all the data publicly available according to our selected variables. (Rahman M. , 2018)

The sample for the research titled, "Dividend Determinants of Bangladesh Banking Industry" is comprised of selected banking institutions in the country from DSE. Relevant data on financial performance was taken from verified sources. The sample includes both public and private banks from the area. The sample size is good enough to cover the features of the overall population.

4.5 Method

This paper employs the following model to Anlyze the organized data.

$$Dividend\ Yield = \beta 0 + \beta 1 * Beta\ Coefficient + \beta 2 * Firm\ Size + \beta 3 * Return\ on\ Assests\ (ROA) + \beta 4 * Return\ on\ Equity\ (ROE) + \beta 5 * Debt - to - Equity\ Ratio\left(\frac{D}{E}\right) + \beta 6 * Price\ to\ Earning\ Ratio(\frac{P}{E})$$

Here:

β0 represents the intercept term

β1, β2, β3, β4, β5, and β6 are the coefficients associated with the respective independent variables

Beta Coefficient is the measure of systematic risk for each bank

Firm Size is the natural logarithm of the total assets of each bank

ROA is the return on assets, indicating the profitability of the bank

ROE is the return on equity, reflecting the bank's efficiency in utilizing shareholder equity

D/E Ratio represents the debt-to-equity ratio, indicating the bank's leverage

P/E Ratio represents the price-to-earnings ratio, reflecting market valuation

ε is the error term accounting for unobserved factors and random variations

The model aims to identify the significant factors among the independent variables that influence the dependent variable, Dividend Yield. The coefficients (β) estimate the direction and magnitude of the relationships between the independent variables and the dependent variable.

The error term (ε) accounts for the unexplained portion of the dependent variable not captured by the independent variables.

4.5.1 Variable Specifications

There are 2 types of variables used in the research. A short variable specification on them is given below:

A. Dependant variable

Dividend Yield

It is used as a key metric by investors to determine the return on investment when purchasing shares of a company. It is used to find out how many times a company has paid a dividend over a fixed period of time. In Bangladesh, the dividend yield is used to give investors a better idea of the return they will receive from their investments in a particular company. To determine the number of dividends has been distributed over a certain period of time one needs to divide a particular period by the current share price. The result is presented in percentage form which indicates the ratio of payment one has received as a dividend. Investors should use the dividend yield as a part of a broader evaluation of a company's financial health. (J.Brock, 2022)

Formula: Dividend Yield= (Annual Dividends per Share / Current Share Price) *100

B. Independent Variable

Beta Coefficient

Systemic risk is calculated by beta coefficient. It is shown by comparing with the total market. To determine this CAPM model is used . In the Bangladesh Banking industry, the Beta coefficient is used to assess the risk and return of various banks relative to the market as a whole. This measure is important for investors and analysts as it helps them identify which banks are more volatile than the market and therefore offer higher returns. By understanding this, investors will able to determine their appetite of reis taking for investment (Obaidullah Jan, 2020)

Formula: Beta Coefficient= Covariance (Sector, Market) / Variance (Market)

P/E Ratio (Price to Earnings Ratio)

This ratio is used to find out current share price. To determine this one company current stock will be divided by earnings per share.In Bangladesh, the banking sector's P/E ratio is usually higher than that of other sectors. This is due to the fact that the banking sector is considered higher risk and offers higher potential rewards to investors. The banking sector in Bangladesh has a P/E ratio of around 11.2, which is higher than other sectors such as telecom, energy, and pharmaceuticals. (Fernado, 2022)

Formula: P/E Ratio= Price of the Stock/ EPS

EPS (Earnings per Share)

Financial institutes use this to analyze their level of profitability. To determine this total net income is divided by number of shares outstanding. The high value of this calculation indicates the good health of the company. In Bangladesh, EPS is used as one of the primary measures of performance in the banking industry. Also, it is a competitive industry that keeps the banks on their foot to gain a competitive advantage through high EPS.(Team, 2022)

Formula: Earnings per Share= (Net Income – Dividend Payment) / Weighted Average Shares Outstanding

ROA (Return of Asset)

Bangladesh's banking industry uses this to measure efficiency and profitability. To determine the efficiency, one has to divide the net income by its total assets. A higher out of this calculation indicates better performance since it suggests that the bank's management is more efficient in utilizing the available resources to generate more income.

Formula: ROA= Net Income / Average Total assets

ROE (Return on Equity)

Its outcome indicates a company's profitability To determine this net income is divided by shareholder equity and the outcome is presented in percentage form. In Bangladesh, ROE is an important measure of a banking institution's performance since it helps to indicate how efficiently the bank is generating returns from the equity invested in its operations. A higher value of ROE indicates the proper utilization of capital to produce profits. (Furhamann, 2022)

Formula: ROE= Net Profit / Equity

D/E Ratio (Debt to Equity Ratio)

It measures a company's leverage, which is the amount of debt used to finance its assets relative to the amount of equity used. In our country, it is used to measure the ability of manage an organization’s debt in comparison to its equity capital The higher the ratio, the more debt is used to finance assets, and the higher the risk for the lender. When we see that the ratio is found to be 1.0 then it means a special case. In this situation, the lender uses only his equity while going for financing the firm. When this ratio is greater, it means, the lenders investing proportion bends more towards debt and vice versa. (Team, Debet Equity Ratio, 2022)

Formula: D/E Ratio = Total Debt / Total Shareholder’s Equity

Firm Size

Firm size generally refers to a measure of the size of a company or organization, usually expressed in terms of the number of employees, annual revenue, market value, or other metrics.

In the banking industry of Bangladesh, firm size is usually expressed in terms of total assets, total deposits, total loans, and capital adequacy. Banks with higher total assets, deposits, and loans are generally considered to be larger firms.

4.6 Hypothesis

Hypothesis 1: Beta Coefficient has a positive and significant effect on dividend policy

Hypothesis 2: Dividend Yield has a positive and significant effect on dividend policy

Hypothesis 3: P/E Ratio has a positive and significant effect on dividend policy

Hypothesis 4: Earnings Per Share has a positive and significant effect on dividend policy

Hypothesis 5: ROA has a positive and significant effect on dividend policy

Hypothesis 6: ROE size has a positive and significant effect on dividend policy

Hypothesis 7: D/ERatio has a positive and significant effect on dividend policy

Hypothesis 8: Firm Size has a positive and significant effect on dividend policy

Chapter 5:

Analysis & Findings

The study used a panel dataset with 23 cross-sections and 115 total observations. The panel dataset included the variables (ROA), (ROE), debt to equity, beta coefficient, etc. The study employed a random effects statistical model to estimate the effect of these factors on dividend yield. Another test, named the Breusch-Pagan was conducted to test the hypothesis that is null (Greene, 2012) Additionally, the study conducted a statistical test, called the Hausman test to identify the best model of panels. (Hausman, 1978)

5.1 The Graphical Framework

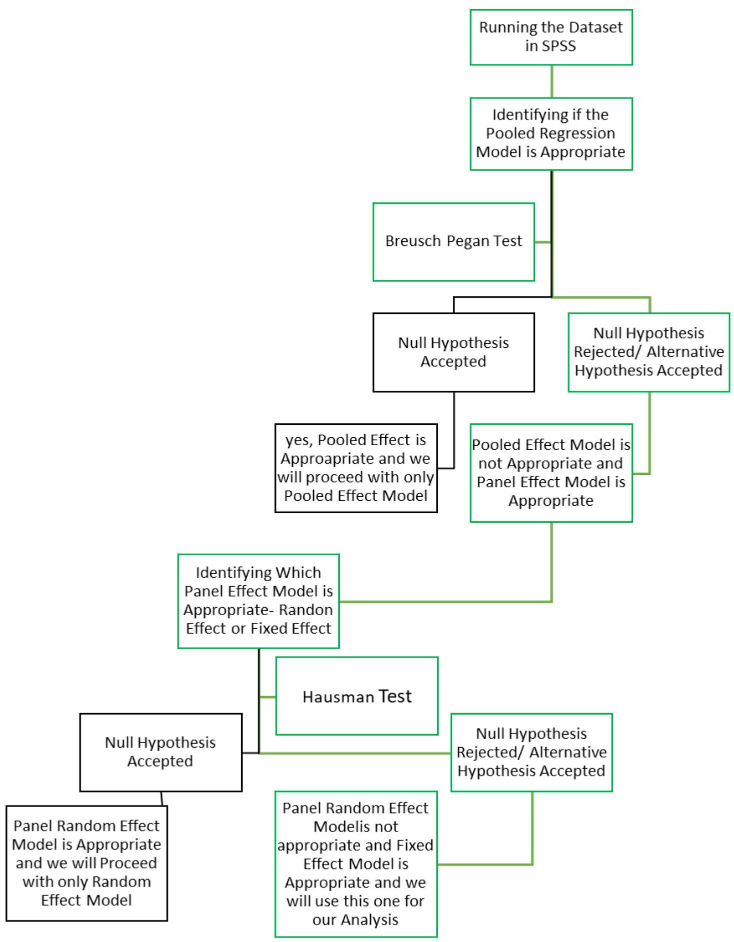

Figure 1 the Graphical Framework for the Paper

5.1.1 Descriptive Statistics

After running the data in the SPSS software, I found this result:

Table 02: Descriptive Statistics

Items	***Dividend Yield***	***ROA***	***ROE***	***Firm Size***	***Debt/ Equity***	***BETA Coefficient***
Mean	5.87	0.61	1.80	391252.70	1.08	0.24
Median	5.29	0.07	0.11	332463	1.09	0.26
Maximum	13.93	2.02	44.34	4979622	2.81	1.34
Minimum	0.38	-4.18	0.04	11240	-0.49	-2.13
Std. DEV	2.95	0.91	7.22	475540.90	0.67	0.42
Skewness	0.29	-3.75	4.77	8.10313	-0.07	-2.02
Kurtosis	24	18.44	24.94	77.22	2.93	12.18
Jarque-Bera	2.87	1413.04	2744.74	27657.86	0.11	482.35
Probability	0	0	0	0	0.94	0
Sum	675.79	70.90	207.97	44994065	124.33	27.60
Sum Square Deviation	992.26	95.26	5948.03	2.58	51.48	21.02
Observations Identified	115	115	115	115	115	115

The above table shows a summary of six variables for the dataset, namely dividend yield, return on asset, return on equity, firm size (measured by asset size), D/E ratio, and beta coefficient.

The average dividend yield is 5.88%, while the average return on asset and return on equity are 0.62% and 1.81%, respectively. The average firm size based on asset size is 391,252.7, the average D/E ratio is 1.08, and the average beta coefficient is 0.24.

Skewness values indicate that ROA and ROE are negatively skewed when the size of the firm and beta coefficient are positively skewed. The debt-to-equity ratio is symmetric. Kurtosis values for all variables are high, indicating the data is more peaked and have heavier tails compared to a normal distribution. Based on the Jarque-Bera test, all variables except the debt-to-equity ratio are not normally distributed. The number of observations for all variables is 115.

To analyze the dataset, we can employ a statistical framework, such as regression analysis or correlation analysis. These methods will allow us to identify the connection of the variables and determine which factors pose an impact that is significant on the dividend yield.

5.1.2 The Selection of Panel Regression Model

The objective here is deciding whether we should use panel regression model or not.

Initially, I have examined the dataset using a Pooled Regression Model to determine its appropriateness. The Pooled Regression (PR) Model is a good statistical model that has a constant number of coefficients. This is also called linear RM. To conduct the Pooled Effect Model, I have formulated the following hypothesis.

Null Hypothesis is Pooled Regression Model is found to be Appropriate

Alternative Hypothesis is Panel Regression Model is found to be Appropriate

5.1.3 Breusch-Pegan Test

Objective of this test is to select among pooled, Random & Fixed Effect Model.

As part of my analysis, I conducted a Breusch-Pagan test to examine whether the error term variances are constant over time and firms. It checks my selected null hypothesis for the analysis part that the residuals' variances are constant across all levels of the variables that are independent.

Table 3: Breusch- Pagan Test

Test Hypotheses

Cross Effect	Time Effect	Both Effect
153.1005	1.037434	154.1379

During my test, the calculated test statistic was 153.1005 with a p-value of 0, indicating evidence of heteroscedasticity. As a result, I decided to use the cross-section random effects model for further analysis.

As Z statistics value, the probability was less than 5%, null hypothesis got rejected and at the same time the alternative hypothesis was accepted, which stated that the panel regression (PR) model is appropriate for our dataset.

There are various panel regression models available, including the Fixed Effects, and Random Effects from where the most suitable PE Model will be determined.

5.1.4 Random Effect Regression Model

As for the Random Effects Regression Model (REM), I will utilize this panel data regression model. It takes into account both fixed and random effects, where the former is time-invariant, while the latter varies with time. The intercept term represents the time-invariant effects while the coefficients on the independent variables represent the time-varying effects. The Random Effects Model is used when there is heterogeneity among individuals in the population and when the time-invariant individual effects cannot be explained by the available independent variables.

It offers unbiased estimates of the independent variable coefficients, but they may be less precise than those from the Fixed Effects Model. So, I will proceed with the Panel Regression Model to derive my findings.

Table 4: Random Effect Regression Model

Variables	***Coeffients***	***Standard Error***	***T-Statistics***	***Probability***
Constant/ Intercept	5.74	0.70	8.16	0.00
ROA	-0.87	0.46	-1.86	0.06
ROE	-0.09	0.07	-1.33	0.18
D/E	0.97	0.29	3.31	0.00
BETA Coefficient	-0.21	0.27	-0.78	0.43
Firm Size	-2.44	2.80	-0.87	0.38
P/E	-0.00	0.01	0.40	0.68

In this analysis, I have used the random effect regression model. The coefficient value for the constant term (C) shows that when all other independent variables' values are zero, the DY Variable would be 5.743791. The D/E ratio was found to create a statistically significant impact and a stable impact on the dividend yield. The C and P value shows them in the above table. However, the coefficients of some variables like ROA, ROE, beta coefficient, and firm size by a number of assets are negative but insignificant. The coefficient for the P/E ratio is also negative and insignificant. Also, only 12.07% of the identified variation in dividend yield, however, external factors may still affect the dividend yield. Nonetheless, the F-statistic is found significant when the p-value is found to be 0.028058.

Table 5: Effect Specification

EFFECT SPECIFICATION		
Items	**Standard Deviation**	**Rho (Correlation Coefficient)**
Cross-Section Random	2.31161	0.8486

Idiosyncratic Random	0.976289	0.1514

The effect specification provides information on the variance components of the random effects.

The cross-section random effect shows a substantial amount of variation in the intercepts across different cross-sections of the panel data, with an SD of 2.31161 and a good correlation of 0.8486. If we look on the other hand, we will find the the idiosyncratic random effect has less variation in the error term across individual observations within each cross-section, with a smaller standard deviation of 0.976289 and a correlation of 0.1514. These variance components play a very important role in estimating parameters and conducting statistical tests to check the model's assumptions.

Table 6: Weighted Statistics

R- Squared	0.12
Adjusted R- Squared	0.07
F- Staistics	2.47

Based on the weighted statistics, a percentage of 12.07% of variation found in the data can be clearly and unmistakably explained by the independent variables and we have also seen that at the 5 percent level, it’s found to be significant. However, there is no autocorrelation that is significant.

5.1.5 Housman Test

The objective of doing Housman Test is to decide whether we should use the fixed effect model or the random effect model. finding the appropriate model for the analysis is its true objective. Before conducting the test, I need to establish the hypothesis for the panel regression model.

H0= Null hypothesis is Random Effect Regression Model is Appropriate

HA= Alternative hypothesis is Fixed Effect Regression Model is Appropriate

Table 7: Housman Test

Test Summary: Cross Section Random

Chi-Squared Statistics	Chi-Squared Distribution	Probability
10.99	5	0.05

Based on these results, I can see that the probability is less than 5%, which leads me to reject the Hypothesis that was Null, and then, I am accepting the Hypothesis that is alternative. It was found that FE Model is Appropriate, so I will proceed with this model.

5.1.6 The Fixed Effect Regression Model

I have implemented a panel data regression model for the analysis, which takes into account the variation within each individual entity over time. The model assumes that there is a time-invariant effect for each individual entity, which is estimated using dummy variables. This fixed effect is not captured by the variables that are independent in the model. The FE model is particularly useful when the time-invariant characteristics of the entities in the panel may have a significant effect on the outcome variable. This model is commonly used in social sciences, economics, and other fields for analyzing longitudinal data. After running the Fixed Effect Regression Model on our dataset, the below answer is obtained.

Table 8: Fixed Effect Regression Model

Variables	**Coeffients**	**Standard Error**	**T-Statistics**	**Probability**
Constant/ Intercept	5.82	0.55	10.64	0.00
ROA	-1.09	0.50	-2.19	0.03
ROE	-0.04	0.00	-0.58	0.56
D/E	0.95	0.31	3.06	0.00
BETA Coefficient	-0.54	0.29	-1.84	0.10
Firm Size	-2.62	2.89	-0.91	0.37

The analysis shows that only two variables are significant in explaining changes in dividend yield: (ROA) and (D/E). Specifically, I expect the dividend yield to decrease by 1.0883 units for every one-unit increase in ROA, holding all other variables constant.

Similarly, I expect the dividend yield to increase by 0.952489 units for every one-unit increase in the debt-to-equity ratio, holding all other variables constant.

The other variables, including return on equity (ROE), firm size by number of assets, and P/E, do not significantly explain changes in dividend yield.

The coefficient estimates for these variables are not statistically different from zero at conventional levels of significance. As a result, only a little variation can be explained.

The R-squared value is evident.

However, the F-statistic is statistically significant, indicating that the overall model is a better fit than a model with no independent variables.

Table 9: Effects Specifictations of Fixed Effect Regression Analysis

CROSS SECTION FIXED (DUMMY VARIABLES)

R Squared	0.91
Adjusted R Squared	0.89
F Statistics	34.54

Based on the results obtained from the fixed effects regression model with dummy variables representing the cross-section, I can conclude that the information I have collected through my research and converted to data fits the model perfectly, even though it has variations.

Also, the identified and selected model for this dissertation paper is statistically significant.

Aside from the Durbin-Watson, The Akaike and Schwarz information criteria and Hannan-Quinn criterion provide additional information on the model fit and indicate that this fixed effects regression model is an appropriate choice for analyzing the relationship between the independent variables and dividend yield.

5.2 Decision

Only Two Independent variables are statistically significant and others are statistically insignificant. The Significant independent variables are- Return on Asset & D/E ratio. The fact that the results obtained from the analysis part are significant suggests that there is a good correlation between changes in the free-moving variables and changes in the dependent variable. That means, there is a correlation between any changes in the Return on Asset and any changes in the Dividend Yield. Also, there is a correlation between any changes in the Debt to Equity and any changes in the Dividend Yield.

Chapter 6:

Conclusion & Recommendations

6.1 Conclusion

In the paper, I have worked to identify the dividend determinents policy in the banks of our country who are listed in the Dhaka Stock Exchange. In doing the paper I have taken some variables like- Dividend yield, ROA, ROE, Beta Coffecient, D/Eratio, firm size etc. dividend yield have been selected as the dependent variable and others are identified as independent variables. After doing thorough analysis on the collected data on these, we have identified which model is appropriate for the paper.

Finally, we have identified that only 2 independent variables have positive impact on the dependent variables. They are ROAand D/Eratio, who have significant impact on the dividend yield. It means Our Population banks should focus on managing their ROAand D/Eratio to improve their dividend yield.

6.2 RECOMMENDATIONS

Based on the analysis and outcome of the random effects panel regression model, the following recommendations can be made:

- The results indicate that the ratio of D/E has a positive and critical impact on dividend yield. Therefore, Our Population banks can focus on managing their D/E ratio to improve their dividend yield.

- The low R-squared value indicates that there are other unseen or external factors that affect the dividend yield but those factors are not included in the model. Therefore, population banks should consider other factors such as economic conditions, industry-specific factors, and company-specific factors when making decisions about dividend policy.

- While the results provide valuable insights, it is important to conduct further analysis to validate the findings. Population Banks can conduct sensitivity analysis and robustness checks to ensure the results are reliable.

- The effect specification provides important information on the variance components of the random effects in the model. Banks can monitor these effects to understand the variation in the intercepts across the different cross-sections of the panel data and the variation in the error term across the individual observations within each cross-section.

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