

# ***DETERMINANTS OF DIVIDEND PAYOUT RATIO: EVIDENCE FROM ETHIOPIAN PRIVATE INSURANCE SHARE COMPANIES***

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## ***Abstract***

*This study examines the determinants of dividend payout ratio in the Ethiopian private insurance industry. The study used purposive sampling technique and it includes five years of data (2018 to 2022) from 16 private insurance companies. A multiple linear regression model with random effects was used to identify the factors that influence dividend payout decisions. The dependent variable was dividend payout ratio, and the independent variables were ROE, firm size, leverage, growth, EPS, market share, and GDP. The results of the regression analysis reveal that ROE, size, GDP and leverage have an inverse relationship with dividend payout ratio, while growth, market share, and EPS have a direct relationship with dividend payout ratio. ROE, leverage, and GDP were found to be insignificant, while the rest of the variables were significant in explaining the variation in dividend payout ratio. Based on the findings, it is recommended that private insurance companies should carefully consider the effect of EPS, firm Size, Growth and Market share.*

***Key Words: Dividend, dividend payout, Random effect, Profitability, Firm Size, Growth in revenue, leverage, Market share, earnings per share and GDP***

## Chapter one

### 1. Introduction

This chapter deals with the introductory part of the study. It includes: background information, statement of the problem, objectives, research hypothesis, scope, limitation, significance and structure of the study.

#### 1.1. Background of the study

Historical evidence indicates that the insurance business in its modern sense has been practiced in Ethiopia for more than a century. Since the mid-1990s, private insurance companies have emerged to serve the Ethiopian market, reducing the burden on the state-owned insurer, Ethiopian Insurance Corporation. In the last decade, these private insurance companies have become essential players in the economy. The latest (NBE, 2021/22) annual report shows that the total number of insurance companies operating in Ethiopia reached 18 in 2022, 17 of which are private sector insurers. Their total capital grew 20.9 percent from 11,066 billion of 2020/21 to Birr 13.4 billion in 2021/22, of which, the share of private insurance companies stood at 74.8 percent while that of state owned insurance company was 25.2 percent.

According to (Misrak & Kaur, 2023) Insurance companies provide individuals and businesses with a means to transfer risk and manage uncertainty. In essence, the insurer takes on the risk of events that could financially cripple the insured, protecting the latter's assets and livelihood. By spreading risk across multiple policyholders, insurance companies provide a safety net of financial protection that safeguards their policyholders from near-certain financial ruin.

Insurance, as a financial activity, plays an essential role in economic development, providing individuals and businesses with a means to transfer risk and manage uncertainty. Insurance is a critical element of any economy, and Ethiopia is no exception. Insurance companies has led to employment opportunities, reducing the ever-increasing unemployment rate within the country, it encourages loss mitigation, it enhances peace of mind and promotes financial stability, it helps relieve the burden on governments for providing all services of social protection to citizens via social security systems (Kahase, 2018)

According to (NBE, 2021/22) reports the private insurance share companies dominate the Ethiopian insurance industry, with 17 private insurance companies operating in the country. Private insurance companies differ from public insurance companies in that their shares are owned by private individuals or organizations rather than the government.

As a share company the board of directors and finance manager of insurance companies generally believed to make two operational decisions: capital budgeting and the financing decisions. The capital budgeting decision is a decision as to which real assets the firm should acquire while the financing decision is decision as to how to raise

the money to pay for investments in real assets which includes the corporate dividend payout decision (Daba, Eskezia, & Girma, 2023)

The dividend payout ratio is measures of how much of a company's earnings are paid out as dividends to shareholders. It is calculated by dividing the total dividends paid out by the company's net income. According to (Marfo & Agyei, 2011) the decision about the amount of earning it pays out to shareholders relative to its earnings is known as dividend policy. Companies with higher dividend policies tend to have higher stock prices, as investors are willing to pay a premium for stocks with higher dividends.

According to the studies made (Dewasiri & Weerakoon, 2016) the primary reason why firms pay dividends is to reward shareholders for their investment in the company. Dividends are a way for companies to share their profits with shareholders, who have taken on the risk of investing in the company. This is an important way for companies to show appreciation for their shareholders and to keep them invested in the company. Dividends can also be used as a way to raise capital for a company, as investors may be more likely to invest in a company if they know they will receive regular dividend payments.

Different scholars and researchers were attracted by the issue of dividend. (Brealey & Myers, 2005) Stated that the issue of dividend is one of the most important but unresolved issues in the corporate financial decision. Researchers established a number of theoretical models describing the factors that corporate managers should consider when setting dividend payout decisions. Black F. (1976) Argues that Dividend policy is a center of debate; he described as a *puzzle*, with pieces that do not fit together. To solve the dividend puzzle a number of theories were developed, different researches are conducted.

The (Miller & Modigliani, 1961)dividend irrelevance theory states that investors should not care whether they get their gains as cash (dividends) or as share price appreciation. They argued that investors are indifferent to dividend policy, since they can always reinvest their dividends in the same stock or in other stocks. The dividend relevance theory that was first proposed by (Gordon & Lintner, 1959) argued that the dividend policy of a company affects the value of its stock. This theory is based on the assumption that investors prefer cash dividends over stock price appreciation, as they can use the cash to invest in other stocks or use it for their own consumption. The Bird-in-the-Hand Theory presented by (Bhattacharya, 1979) argues that investors prefer to receive a smaller but certain return on their investments rather than a potentially larger return with more risk.

Even though many researches were conducted, numerous theories developed by several academicians, the issue of dividend policy determinants still stay vague. There are discrepancy between theories, conflicting hypothesis and inconsistent findings. Several investigations were made in developed countries market. However, additional understanding into the dividend policy can be gained by an analysis of developing countries, like our country. In recent years a lot of share companies are emerging in Ethiopia following the economic policy of the country. Resulting from economic policy change more than ten private insurance companies are established in the last



three decades. Investors are investing a huge amount of money in these companies and the companies also pay dividend as a return from their net income for shareholders, even though there is no stock market. But there is no common consensus on determining how much of companies earning is to be distributed as dividend. In Ethiopia while there have been some studies on the topic, most of them focus on banking sector. The research was tried to strength the existing literatures by investigating the determinants of dividend payout ratio of private insurance companies of Ethiopia.

## 1.2 Statement of the problem

Dividend is the portion of net income which is distributed for stock holders of the company. According to the theory of dividend which is contributed by (Miller & Modigliani, 1961) Dividend payout is irrelevance for the value of the firm. They believe that the amount which is distributed for owners does not affect the objective of the company that is wealth maximization. On the other side there are scholars against Modigliani and miller. (M. J. Gordon, 1959) proved that dividend payout is relevant for the valuation of the firm and hence the shareholders are realized to be not at all indifferent on ratio of dividend payout and on retained earnings. On the other hand, (Bhattacharya, 1979)suggests that investors are more risk-averse and prefer to receive a smaller but certain return on their investments rather than a potentially larger return with more risk.

Black F. (1976) illustrated the puzzle of dividend policy and quoted *“the harder we look at the concept of dividend policy the more it seems like an ending puzzle, with pieces that just do not fit together.”* Since then, the theoretical and empirical research on dividend policy has vividly incremented in number. Dividend policy is one of the most widely addressed and a controversial issue in modern corporate finance literature and still is a puzzle (Zameer, et al 2013).

In recent years the ‘dividend puzzle’ has been the focus of many investigators. A study of the developing markets could lean-to more light on the topic, contributing to the emergent body of research on dividend payout ratio (Habtamu, 2019) But still the puzzle is not solved. There no common consensus on the findings.

In developed economies, many studies have been done on the determinants of dividend payout ratio from developed economy viewpoint and provided empirical evidence. Some of scholars are (Lintner J. , 1956), (Miller & Modigliani, 1961), (Baker & Powell, 1999), , (Al-Kayed, 2017), (Fodio, 2009) (Al-Malkawi, 2007), (Denis & Osobov, 2008), (Tangjitprom, 2013) , (Botoc & Pirtea, 2014), (Al-Kayed, 2017) (Yang, 2018)and (Dewasir, et al., 2019) (Kabbani, Richter, & ElBannan, 2020). The decision whether paying dividends or keep as retained earnings has been taken very carefully by both investors and the management of the firm.

The question is does these findings apply to Ethiopia? According to (Jaara, 2018) dividend payout ratio is a cultural phenomenon that changes continuously with trends in the market and time. Therefore, dividend policies must necessarily be studied continuously with regards of the culture and time to capture the determinant factors

that are peculiar to a particular period and environment. Hence the researchers couldn't have a constant policy for all firms at all times.

In Ethiopia while there have been some studies conducted by (Danyew, 2009), (Kinfe T. , 2011), (Simegn, 2013), Elias (2015), (Demilie, 2016), Haleluya (2022), (Melkamu, 2022) and (Alem, 2022) on the topic most of them focus on the banking sector. Very few researches have been made in determinants of dividend payout ratio of insurance companies, as far as the researcher knowledge only (Nuredin, 2012), (Henok, 2016), (Temesgen, 2016), (Samuel, 2017) (Habtamu, 2019), (Hiwot, 2020), (Tewodros L. , 2020) and (Daba, Eskezia, & Girma, 2023) have study it.

However these researchers are conducted in different industries by incorporate firm specific and macroeconomic variables. But they fund different and inconsistent outcomes, which then require more research and different study method on the subject matter. (Kabbani, Richter, & ElBannan, 2020) In their study found that market share which is a proxy of market competition is among the most significant factors in determining the amount of dividends that it pays out. This variable is not included in any of prior research papers on dividend characteristics in Ethiopian insurance businesses. The research will be include this variable and sought to include other explanatory variables growth in revenue and size which have inconsistent results in prior studies. For firm size while (Kinfe T. , 2011), (Hiwot, 2020), (Tewodros L. , 2020) and (Temesgen, 2016) found positive effect, results of (Elias, 2015) and (Melkamu, 2022) shows negative significant relation. And also for growth in revenue while (Temesgen, 2016) found positive effect all other (Danyew, 2009), (Habtamu, 2019), (Hiwot, 2020), (Kinfe T. , 2011) (Samuel, 2017) (Alem, 2022) found a negative relationship between growth in revenue and dividend payout ratio.

Unlike prior studies, which sampled almost the same companies, this study includes all private insurance companies as a sample except Zemen insurance which have only three years financial statements. Additionally, this study includes both life and non-life insurance data, which was not possible in earlier studies due to unavailability of data for life insurance for the years preceding 2018. The study incorporates the most recent data available as per IFRS standards up to the year 2022.

Furthermore, this study introduces a new variable, market share as proxy of market competition among insurance companies, which has been shown to have a direct relationship with dividend payout ratio. By incorporating all factors, including firm-specific, industry-specific, and macroeconomic factors, this study provides a comprehensive analysis of the determinants of dividend payout ratio in the private insurance industry.

### **1.3. Objectives of the Study**

#### **1.3.1. General objectives**

The General Objective of the study is to examine the determinants of dividend payout ratio in selected Ethiopian private insurance companies.

### 1.3.2. Specific objectives

Based on the general objective the following specific Objectives are developed. The specific objectives of this study are:

1. To assess the impact of firm specific variables such as firm size, Growth in revenue, leverage, EPS and profitability on dividend payout ratio of Ethiopian private insurance companies.
2. To examine the effect of sectorial factor Market share on dividend payout ratio of Ethiopian insurance companies.
3. To investigate the effect of Macroeconomic factor GDP on dividend payout ratio of Ethiopian insurance companies.
4. To identify the degree and direction of relationship between dependent and independent variables

### 1.4 Literature driven Hypotheses

In order to achieve the objective of the study stated above and based on the available literatures, the following variables and hypotheses was examined i.e. Profitability, Firm Size, Growth in revenue, leverage, Market share, earnings per share and GDP.

#### Profitability

As shown by prior studies Profitability has a significant positive impact on dividend payout ratio (Al-Malkawi, 2007), (Al-Najjar & Hussainey, 2009), (Gupta and Banga, 2010), (Christopher & Rim, 2014), (Grullon & Mechaely, 2019), (Kabbani, Richter, & ElBannan, 2020) and (Raza, 2019) found dividend payout are the function of firm's profitability.

Fama & French, (2001) and (Al-Kayed, 2017) both found that evidence from developing countries supported the notion that profitability is one of the most significant factor that influences dividend payout ratio.

According to the findings of (Nuredin, 2012), (Henok, 2016), (Temesgen, 2016) and (Hiwot, 2020) on the factors that determine the dividend policies of Ethiopian insurance companies, a significant and positive relationship exists between profitability and dividend payouts.

To summarize the above explanation suggests that there is likely to be a positive relationship between a company's profitability and the amount of dividends it pays out. Based on this the following hypothesis is formulated:

***H1: There is significantly positive relationship between profitability and dividend payout ratio of Ethiopian private Insurance companies***



## Leverage

The higher the internal flows are given the investment requirements, the lesser will be the demand for borrowings and vice-versa. The empirical evidence regarding the effect of leverage on dividend payout is mixed. Some studies found that firms with high debt ratios are willing to pay fewer dividends (Dewasiri & Weerakoon, 2016) it is because of they are committed to fixed payments to service their debt, which restrict the distribution of dividends. Also a number of studies have found that the level of financial leverage negatively affects dividend policy Jensen et al. (1992), (Kinfe T. , 2011) and (Temesgen, 2016) and their studies inferred that highly levered firms look forward to maintaining their internal cash flow to fulfill duties, instead of distributing available cash to shareholders and protect their creditors. Furthermore, companies with higher leverage ratio are under regulatory pressure which puts a restriction on paying high dividends (Melkamu, 2022), (Daba, Eskezia, & Girma, 2023). In contrary, (Hiwot, 2020) have found insignificant positive relationship between leverage and dividend payout, that firms might use debt funds to pay dividends. As a result, the researcher formulates its hypothesis as follows:-

***H4: There is significantly negative relationship between Leverage and dividend payout ratio of Ethiopian private Insurance companies.***

## Firm size

Larger firms have an advantage in capital markets in raising external funds, and therefore depend less on internal funds (Higgins, 1981). Furthermore, larger firms have lower likelihood of bankruptcy and, therefore, should be more likely to pay dividends. This implies an inverse relationship between the size of the firm and its dependence on internal financing Gill, et al. (2009). Thus, larger firms are expected to pay more dividends.

Large organizations have a greater tendency to be more competitive when they have access to cash, an improved credit rating, and an increased number of clients; this will raise their profitability and their capacity to pay more dividends will also increase. (Kinfe T. , 2011), (Hiwot, 2020), (Tewodros L. , 2020) and (Temesgen, 2016) (Daba, Eskezia, & Girma, 2023) studies shows a positive relationship between firm size and dividend payout.

***H3: There is significantly positive relationship between firm size and dividend payout ratio of Ethiopian private Insurance companies.***

## Growth in revenue

According to Chen and (Dewasir, et al., 2019), firms that have growth in sales have a tendency to pay lesser dividends. The capacity of a corporation to create considerable amounts of positive cash flow or earnings is essential to the growth of a company. Rapidly growing firms require more financing sources because working capital needs normally exceed the incremental cash flows from new sales. In most, previous study of (Al-Najjar & Hussainey, 2009), (Gupta and Banga, 2010), (Amarjit et. al., 2010), (Shubiri, 2011), (Kinfe T. , 2011),

(Tangjitprom, 2013) and (Christopher & Rim, 2014) All show a significantly negative relationship between historical sales growth and dividend payout.

The research result of (Nuredin, 2012), (Tewodros L. , 2020) (Daba, Eskezia, & Girma, 2023) and (Melkamu, 2022) on determinant of dividend policy of Ethiopian insurance companies showed that growth in revenue has a statistically significant and negative relationship with dividend policy. As a result, the null hypothesis formulated as follows:-

***H4: There is significantly negative relationship between growth in revenue and dividend payout ratio of Ethiopian private Insurance companies.***

### **Market share**

The relationship between gross premium market share and dividend payout ratio has been studied in the insurance industry. Gross premium market share is a measure of an insurance company's market power, while dividend payout ratio is a measure of the proportion of earnings that are paid out to shareholders as dividends. (Kabbani, Richter, & ElBannan, 2020) They examined the relationship between market share a proxy of market competition and dividend payout ratio for a sample of the MENA banking industry. The study found a positive relationship between these two variables, indicating that companies with a larger market share tended to have a higher dividend payout ratio. Similarly, a study by (Raza, 2019) analyzed the relationship between gross premium market share and dividend payout ratio for a sample of Pakistani insurance companies and found a positive relationship between these variables as well.

According to (Porta, 2002) Market competition can act as an enforcement mechanism that puts pressure on managers to distribute dividends instead of investing in non-profitable investments.

The positive relationship between gross premium market share and dividend payout ratio can be explained by the fact that larger insurance companies tend to have more stable earnings and cash flows which allows them to pay out a higher proportion of earnings as dividends.

***H5: There is significantly positive relationship between gross premium market share and dividend payout ratio of Ethiopian private Insurance companies.***

### **Earnings per share**

EPS is a ratio that shows how much profit (return) is obtained by investors or stockholders per share. The higher the EPS value, of course, makes stakeholders feel good because the greater the profit provided to stockholders (Dewasir, et al., 2019)

Kurnianto (2013) in his research describes Earning Per Share as the company's profitability which is reflected in each share. The higher the Earning Per Share (EPS) value, increasing the amount of dividends received by shareholders. Based on this, the hypothesis is formulated as follows:



***H6: There is significantly positive relationship between Earnings per share and dividend payout ratio of Ethiopian private Insurance companies.***

#### **GDP Growth Rate:**

Gross Domestic Product (GDP) is one of the macroeconomic factors that affect dividend payout ratio of Ethiopian private Insurance companies. Accordingly to (Henok, 2016) and (Habtamu, 2019) GDP have positive effect on Dividend payout ratio. Based on this, the hypothesis is formulated as follows:

***H7: There is significantly positive relationship between GDP and dividend payout ratio of Ethiopian private Insurance companies.***

#### **1.5. Significance of the Study**

The findings might serve as a reference for the management and board of directors of Ethiopian insurers to consider when determining the optimum payout ratio for the purpose of distributing dividends to their investors. The research findings was also create awareness in the minds of shareholders on the part of investors as to how they can assume and predict the pattern of dividend that will be paid from their invested capital on equity of private insurers in Ethiopia mainly and also in other companies in general.

The study advocates a significant contribution to existing theoretical and empirical knowledge regarding determinants of dividend payout. Moreover, the Study was supplies evidence whether factors identified by previous studies are the same as the ones found to be influential factors for dividend payout of Ethiopian insurance companies.

#### **1.6. Scope of the study**

Since it is not possible to incorporate all of the factors that determine dividend payout policy into a single study, the variables are limited to one dependent and seven independents, namely Profitability, Firm Size, Growth in revenue, leverage, Market share, earnings per share and GDP. The study paper shows the trend of private insurances, but it was not become the whole mirror for a wide period of time. For the purpose of analyzing the factors that influence private insurance firms' dividend payout ratios, the research was carried out using audited financial statements spanning the period of five years, from 2015 to 2022 for the study of determinants of dividend payout ratio of 16 private insurance companies (National Insurance Company of Ethiopia S.C., Awash Insurance Company S.C, Africa Insurance Company S.C, Nyala Insurance Company S.C, Nile Insurance Company S.C, Global Insurance Company S.C, The United Insurance S.C, NIB Insurance Company, Lion Insurance Company S.C, Ethio-Life and General Insurance S.C, Oromia Insurance Company S.C, Abay Insurance Company, Berhan Insurance S.C, Tsehay Insurance S.C, Lucy Insurance S.C and Bunna Insurance S.C) using purposive sampling methods.

### **1.7 Limitation of the study**

The research used secondary data sources (i.e., mostly on published annual financial reports) in order to draw its results. Both the dependent and independent variables were quantified using numbers derived from these secondary data sources. As a result, financial reports include only historical data; they may not accurately represent either the current or the future state of the economy.

Because there is no stock market in Ethiopia, the research can only concentrate on a selecting few variables that are really relevant to the situation. This is because comparable studies that were carried out in other countries included important proxies that were inappropriate here.

### **1.6. Organization of the paper**

The report was organized in to five chapters. Chapter one is introduction. It includes background of the study, statement of the problem; objectives of the study, formulated hypothesis, scope and limitation, and significance of the study were presented. Chapter two is review of literature in which theoretical and empirical evidence summarized. Knowledge gap is also identified. At last conceptual frame work which developed by the researcher was presented. Chapter three is about research methodology that is used to carry out the study. It consists, research design, data source, sampling frame and sampling size, data collection instrument, data analysis method and model specification. Chapter four focus on the results and discussion in which the findings results that are interpreted. The last one, chapter five presents the conclusions, summary of major findings and recommendations for future researches.

## **Chapter 2**

### **2. Literature Review**

#### **2.1. Introduction**

Chapter two includes reviewed literature on dividend and related aspects. The views of other authors and previous researches on dividend will be presented. The first part theoretical review, which discussed meaning and importance of dividend, Types of dividend, Different theory of dividend and dividend policy to have a greater understanding of aspects of dividend. The second part presents Empirical review of global and local empirical studies. The third part discussed the firm-specific factors identified as influential factors of dividend payout. The gaps in existing literature described in the fourth part and the conceptual framework pictorially illustrated in the final part.

#### **2.2. Theoretical review**

This section begins by discussing meaning and importance of dividends, and then goes to the different theories and types of dividends policies.

## Meaning of Dividend

Etymologically; the term “dividend” is derived from the Latin word “*dividendum*” which means “to divide” or “to distribute.” The term was first used in the context of finance in the late 16th century when it was used to refer to a portion of profits that were distributed to shareholders. The history of dividends dates back to the early days of modern capitalism. In the 17th century, companies began issuing shares in order to raise capital for their businesses. These shares were often accompanied by a dividend, which was a portion of profits that were distributed to shareholders. Over time, dividends became an important source of income for shareholders and an important tool for companies to reward their investors. In the 19th century, dividends became even more important as companies began issuing more shares and paying out larger dividends. This trend continued into the 20th century as companies began issuing even more shares and paying out even larger dividends. Furthermore, dividends have become increasingly important over time as companies have issued more shares and paid out larger dividends (Watson & Head, 2010). As such, it is clear that dividends are an integral part of modern capitalism and will continue to be so in the future.

Guizani, (2018) the primary reason why firms pay dividends is to reward shareholders for their investment in the company. Also (Pandey, 2001) defines dividend as Dividends are a way for companies to share their profits with shareholders, who have taken on the risk of investing in the company. This is an important way for companies to show appreciation for their shareholders and to keep them invested in the company. Dividends can also be used as a way to raise capital for a company, as investors may be more likely to invest in a company if they know they will receive regular dividend payments. Modern theories of dividend policy have shifted away from the traditional view that dividends should be used to reward shareholders. Instead, modern theories suggest that dividends should be used to signal information about the company’s prospects and performance. (Bhattacharya, 1979) and (Turner, Qing, & Zhan, 2013) suggest that, if a company pays out a large dividend, it can signal that the company is doing well and has strong prospects for future growth. On the other hand, if a company does not pay out a dividend or pays out a small dividend, it can signal that the company is not doing well and may be struggling financially.

### 2.2.1. Importance of propensity to pay and dividend payout

The importance of propensity in dividends payout is a new concept in the financial world. Propensity is the likelihood or tendency of something to occur. In the context of dividends, it is the likelihood or tendency for a company to pay out dividends. There have been some studies that have looked at the relationship between propensity and dividend policy. (Suesh & Pooja, 2020) Found that companies with higher propensity to pay dividends tend to have higher stock prices than those with lower propensity. Other studies have found that firms with higher propensity to pay dividends tend to have higher returns on equity than those with lower propensity.

The dividend policy serves as the foundation for all capital budgeting and capital structure design efforts. A company's dividend policy divides its net earnings into two categories: retained earnings and dividends. The retained earnings are used to fuel the company's long-term expansion. It is the most important source of funding



for a firm's practice investment. Cash dividends are paid. As a result, the earnings distribution makes use of the company's capital. A company that wants to pay dividends while simultaneously needing money to support its investment prospects will have to turn to other sources of funding, such as debt or stock offerings. The following are some of the reasons why a dividend policy is necessary in any corporation.

Turner, Qing, et al, (2013) When a company's net profit remains consistent, it maintains a steady market value and pays appropriate dividends. In such an organization, the shareholders are likewise confident in their investment choice. A great reputation in the financial industry comes with a fair policy. As a result, the business's strong market position attracts institutional investors who are willing to lend the company a larger sum. The fund sufficiency for the next project endeavor and investment prospects is planned, and the dividend policy is decided so that illiquidity is avoided. The value of a company's stock is largely defined by its dividend policy, which represents the company's growth and efficiency. Investors who are happy with the dividend policy are more likely to retain the stock for the long run. This results in stability and a beneficial influence on the market value of the equities. Along with equity shares, a corporation with a good dividend policy might borrow money by issuing preference shares and debentures in the market. And also it aids the corporation in maintaining effective financial control. If the corporation distributes the maximum profit as dividends, the company may run out of capital for future chances.

### **2.3. Types of Dividends**

The dividend payout ratio is a measurement that determines how much dividend investors are entitled to receive for each share of ownership that investors have. It is determined by dividing the yearly dividend paid out on each share by the earnings per share, also known as EPS. The earnings per share, or EPS, of a firm is a number that reflects the amount of profit made by the company per share.

Additionally, businesses have the responsibility of determining the type of dividend that will be distributed to shareholders. There are four different types of dividends. According to (Stice, Stice, et al, 2009), there are some types of dividends:

#### **2.3.1. Stock dividends**

The payment of dividends may take the form of the issuance of extra shares to shareholders who already possess those shares. Less than one-fourth of the business's already-issued shares may be distributed as dividends to shareholders by the corporation. This restriction may be exceeded, however, if the corporation decides to divide its shares of stock in order to distribute extra shares to its shareholders.

#### **2.3.2. Cash dividends**

A cash dividend is a payment made by a firm to its shareholders in the form of a predetermined amount for each share. Investors prefer to receive dividends in the form of cash more than any other kind of income.

### 2.3.3. Property dividends

Property dividends are one example of a non-financial dividend that may be distributed to shareholders by businesses. It is a type of dividend deals with distribution of shares of the subsidiary firm, which refers to an additional business operating under the umbrella of a parent brand. When determining the value of property dividend, the current market price of the asset is taken into consideration. For instance, A has a company called B that is a subsidiary of theirs. If A decides to give B's shares in the form of dividends, then such payouts will be known as property dividends.

### 2.3.4. Scrip dividends

When a corporation does not have enough money to pay out regular dividends, it may offer scrip dividends to its shareholders in the form of a promissory note instead. It is a promissory note that states the corporation will pay dividends to its shareholders at some point in the future. These dividends are often paid out in the form of cash.

In addition to these four categories, a corporation may also pay liquidation dividends to its shareholders when it is winding up its operations in order to repay the cash that the shareholders had put in the firm.

### 2.3.5. Interim and final dividend

Before its earnings are announced at its Annual General Meeting, a corporation may pay out an interim dividend to its shareholders. The retained profits of companies are used to pay out dividends at various intervals. The final dividend, on the other hand, is not distributed until after the firm has made an announcement on its financial performance. Both the interim dividend and the final dividend are announced by the board of directors of the corporation. During any portion of the fiscal year, a company is permitted to issue an interim dividend (one-two quarters). Nevertheless, the ultimate dividend is always calculated on a yearly basis. Once it has been announced, a corporation has the ability to withdraw the interim dividend, but they are unable to withdraw the final payout.

## 2.4. Dividend Theory

The decision of dividend payout is among a major corporate finance decision of a company and it should be guided by the shareholder's wealth maximization. There are conflicting assumptions on the impact of dividend on wealth maximization and firm's value. Some scholars believed that dividends are irrelevant so that the amount of dividends paid has no effect on firm valuation. On the other hand there are theories against the above argument. They consider that the dividend decision is relevant to firm's value.

### 2.4.1. Dividend irrelevance Theory

#### i. The Theory of Modigliani and Miller

According to (Miller & Modigliani, 1961), in a perfect capital market, a company's worth is determined only by the return on its assets and not by the decision of whether to pay out dividends or keep the money. Modigliani and Miller, in their known-famous M&M proposition, assumed the existence of a perfect capital market, in which all investors have access to the same information and have the same expectations about the future of the firm as its

managers; there are no corporate or personal taxes; there are no transaction costs on securities; investors are rational; and information is symmetrical.

Therefore, M&M's irrelevancy proposition states that it makes no difference how a company allocates its profits between internal use and dividend payments to shareholders. According to the dividend irrelevancy assumption, a company's payout policy shouldn't change its market value or its cost of capital. According to (Miller & Modigliani, 1961), shareholders have control over their investment return independent of the dividend paid on a stock. The additional dividend funds received by the investor might be used to purchase further shares of stock. Investors don't care about dividends since they can easily create their own homemade payout to get the same result

## ii. Residuals theory

According to (Dewasiri & Weerakoon, 2016) dividends will be distributed only if the firm has surplus cash after funding its current and planned initiatives. The rationale for this practice is that shareholders value reinvestment of profits above dividend payments when doing so promises a greater rate of return than they might get with a diversified portfolio of assets carrying the same level of risk.

This theory claims that dividend has no effect on the wealth of shareholders or the value of their shares, and hence adds no value to the valuation of the company. The dividend policy is seen as only a financial choice in this framework, since the available profits may be kept in the corporation for reinvestment. A dividend payment might be made if the company is not in need of the funds.

## 2.4.2. Dividend relevance Theory

### i. “Bird in the Hand” Theory

According (Gordon, 1963) and (Lintner J. , 1962) Investors prefer dividends from a stock above potential capital gains because of the inherent uncertainty involved with capital gains. According to the proverb, "a bird in the hand is worth two in the bush," the bird-in-hand argument posits that the concept of dividends as "the bird in the hand" and capital gains as "two in the bush". When weighting their stock options, (Gordon & Lintner, 1959) argued that dividends were more important to investors than capital gains. This is because of the future flow of income is uncertain. The core idea behind the bird in the hand dividend theory is that risk-averse shareholders value dividends more highly than potential capital gains.

### ii. The Life Cycle Theory

The life cycle theory is often brought up in discussions on possible causes for dividend payout. The formal notion that a company has a life cycle was suggested by (Dennis, 1972). This theory is an essential component of the business life cycle theory of dividends. According to this idea, as companies go through the several phases of their life, they have a tendency to change their dividend policy in accordance with the varying financial requirements of each stage. This idea makes reference to the observation that businesses in their growth phases are statistically less likely to increase their dividend payments when compared to businesses that have reached



their mature stage. It is reasonable to anticipate that older companies, which do not have a significant number of expansion possibilities to finance, would pay higher dividends.

### iii. Signaling theory

According to (Bhattacharya, 1979) and (John & Williams, 1985), dividends reduce the information gap between management and shareholders by giving shareholders access to confidential information on the company's potential future outcomes. Share prices, in accordance with the signaling theory, do not respond to changes in dividend payment rates in and of themselves; rather, they react to the information that investors think changes in dividend levels have for the company's future prospects. Investors from the outside have a limited understanding of the company's potential earnings. The level of dividend payments may be used as a proxy for the amount of cash flows that can be anticipated in the future, and a rise in dividend payments is consistent with the expectation of an increase in those cash flows. If dividend payments are to be read as a signal, then they need to be big enough that only prosperous businesses can afford to pay them. Only profitable businesses can send a signal like this.

According to (Akerlof, 1970), an increase in the dividend distribution may be regarded as the company having strong future profitability (which would be good news), and as a result, the share price would respond favorably. Similarly, the reduction of dividends may be seen as an indication that the company has poor future prospects (which is negative news), which may subsequently cause the share price to respond adversely. Investors utilize information signals regarding the success of a firm to make choices, and dividends are one such information signal.

According to (Li & Zhao, 2008) different investors have different perspectives on the significance of dividend fluctuations as a signal of management's profitability and share price projection. It has been observed that the price of a company's stock will normally increase when its dividend is raised, whereas the price will decrease when the Dividend is reduced. This is the opposite of what happens when the dividend is decreased. As a result, businesses are anticipated to increase their dividend payments if there is an anticipated increase in future profits. This is due to the fact that managers have access to more accurate information on the performance of the company than investors have. As a consequence of this, dividends serve as a signal to investors about the present and future success of the company. In most cases, an increase in dividend payment is considered to be a good signal. This is because it conveys positive information about the future earnings potential of a company, which ultimately results in an increase in the price of the company's shares. A drop in the dividend payout, on the other hand, is seen as a negative indication regarding future earnings prospects, which results in a decline in the price of the company's shares.

#### **iv. The Theory of Tax Preferences**

According to (Miller & Scholes, 1978) and (Gordon & Shapiro, 1956), Taxes are a major factor that investors need to take into account because of the differential tax treatment of dividends and capital gains. According to this argument, the reason investors choose modest dividend payouts over big payouts is that long-term capital gains are taxed at a lower rate in comparison to dividends, and investors do not have to pay taxes on capital gains until and until the stock is sold.

In most nations the taxes on dividends are greater than those on capital gains. As a result, investors prefer capital gains to dividends. The realization of capital gains does not occur until an investment is actually sold; hence, investors have control over when capital gains are realized; however, investors do not have control over dividend payments, which are under the management of the firm.

#### **v. The Pecking Order Theory**

The term "pecking order" refers to a hierarchy of finance that begins with retained profits. Debt is the cheapest and most attractive external option when compared to other methods of capital rising. According to (Fama & French, 2002) profitable businesses may use less debt than other companies. The pecking order is established when the expenses of issuing new securities become excessive in comparison to the other costs and advantages of debt and dividends. The transaction costs associated with new issues and the costs that arise because management has superior information about the firm's prospects and the value of its risky securities are examples of the financing costs that produce pecking order behavior. Other examples of these costs include the costs that result from the firm's risky securities having a higher value. When investments remain consistently big in comparison to profits, pecking order may help companies maintain a manageable level of debt. As a consequence, dividend payers are able to maintain their payment ratio. According to (Fama & French, 2001) research, companies that pay dividends are ones that have high profits in comparison to their investment. Therefore, the projection for dividend payers is that companies with higher planned investments would have less leverage in their operations right now.

#### **vi. Clientele Effect**

Fama & Babiak, (1968) Stated that the clientele effect takes place when some investors choose higher rewards than other investors' preferences for lower returns. Therefore, firms will be able to modify their payout policies in order to fulfill the wants of their investors for bigger dividend yields and other dividend yields that are lower provided those businesses are aware of the wishes of their investors. The dividend policy of a corporation has the potential to attract a certain kind of investor in the firm's stock. If a company decides to hand out dividends, investors should be able to make a profit off of such payments in order to compensate for the possibility of bad outcomes.

#### **vii. The Agency cost theory**

The agency's monitoring expenses and the risk aversion preference of its management are two important aspects that contribute to the agency costs. The payment of dividends to shareholders is one way that agency expenses might be lowered. Because managers are required to pay excessive free cash flows as dividends, dividends may

be seen as a weapon that can be used to lower agency costs. Agency costs rise when free cash flow rises, and managers are required to pay excessive free cash flows as dividends. The agency issue is also known as the principal-agent problem. In this scenario, the shareholders or stockholders act as the principal, while the management acts as the agent.

The idea behind agency theory is that ownership and management roles in organizations should be kept distinct. The owners of the company often give managers the authority to make decisions on their behalf. According to (Rozeff, 1982) the fundamental concept behind this theory is the existence of a fundamental conflict of interests between managers and owners. Such conflicts result in increased agency costs, which include the following: monitoring costs; other costs incurred by the agent in order to reassure the owners that their interests will not be harmed; and finally, any remaining loss resulting from differences between the actions taken by the agent and those taken by the owners in comparison to those if the owners themselves take such actions. The agency hypothesis, which originated from this line of reasoning, proposed that dividends serve as a kind of protection for investors since they lower the amount of extra cash that is accessible to management following the completion of investment and operational operations. The managers may, in good or bad faith, invest the surplus cash in less than acceptable investment options, which may have unfavorable risk or return characteristics for the investors. In other words, the managers may spend the funds in a way that is not in the best interest of the investors.

## **2.5. Dividend pattern**

The pattern of dividend distribution is established according to the dividend policy of a corporation.

### **i. Stable dividend**

In this kind of arrangement, stockholders are paid dividends of a predetermined amount at regular intervals. There is no correlation between the company's profits and the consistency with which dividends are paid out. Even if the business is incurring losses, this sort of dividend policy requires the corporation to continue paying dividends to its shareholders.

### **ii. Regular dividend**

Companies that adhere to a consistent payout pattern choose a portion of their annual earnings that will be distributed in the form of dividends. When the corporation has a larger profit, it will pay out a larger dividend, but when it has a reduced profit, it will pay out a smaller payout.

### **iii. Irregular dividend**

In this scenario, the business makes the decision to distribute a certain amount of dividend money to the shareholders on an individual basis. The corporation bases its decisions about dividends on its priorities. For instance, if the firm intends to grow, management may choose to reinvest the company's income instead of distributing dividends.



#### iv. No dividend

A corporation that adheres to a policy of not paying dividends keeps all of its earnings for itself rather than dividing them up among its shareholders. This type of policy is quite easy to operate and avoids all the costs associated with payment of dividends (Watson D. & Head, 2010).

### 2.6. Empirical review

Numerous studies have been carried out in order to determine the factors that influence dividend policy in various nations and throughout a variety of sectors of business. This section's examination of the empirical studies will be broken down into three parts: a review of the empirical literature pertaining to the world as a whole, a review of the empirical literature pertaining to Ethiopia, and a review of the empirical research pertaining to Ethiopia insurance company.

#### 2.6.1. Global empirical Literatures on dividend payout

Al-Yahyaee (2006) was conducted research on the dividend practices of Omani businesses engaged in both the financial and nonfinancial sectors. The results of his study show that the size of the firm, its profitability, and its risk profile have an impact on the dividend policy of both financial and non-financial enterprises. On the other hand, although having little influence on financial organizations, variables including age, debt, and government ownership had a considerable impact on the dividend policy of nonfinancial enterprises. Furthermore, he reached the conclusion that factors like growth, tangibility, and agency costs had little to no impact on dividend policy.

Amidu & Abor (2006) Conducted research on the factors that determine the dividend payment ratios of listed businesses in Ghana. The researchers gathered their information from the firms' financial statements over a period of six years. Based on their research, they came to the conclusion that there is a negative relation between dividend payout and risk and market to book value. There are also positive relationship between dividend payout ratios and profitability, cash flow, and tax.

Samy (2006) examined 48 companies trading on the Tunis Stock Exchange dividend policies. He analyzed secondary data of year between 1996 and 2002. He found that the high levels of financial debt or concentrated ownership have not any influence on Tunisia's dividend policy. In addition, dividend payment is negatively affected by the stock market's illiquidity and its relatively small size.

Al-Malkawi (2007) used a panel data model that included all publicly listed businesses on the Amman Stock Exchange between the years 1989 and 2000 in order to investigate the factors that determine the dividend policies of Jordanian corporations. He reached to the conclusion that the age, size, and profitability of the company had a positive significant impact on the dividend policy of the company, while leverage had an adverse impact on the dividend policy.

Denis & Osobov (2008) examine the determinants of the propensity to pay dividends. The propensity to pay dividends and its payout should both be included in studies, according to this research, since the determinants of dividend policy cannot be examined by focusing just on one dimension. By examining the determinants of both the propensity to pay dividends and its payout in a single research, the current study expands the body of knowledge on the factors that influence dividend policy.

David & Denis (2008) Larger, more valuable, and more retained earnings-heavy companies in the United States, Canada, the United Kingdom, Germany, France, and Japan are more likely to pay dividends. There does not seem to be a strong positive correlation between the relative prices of dividend paying and non-paying corporations and the tendency to pay dividends anywhere outside of the United States. When taken as a whole, these results are inconsistent with the signaling, clientele, and catering explanations for dividends, but consistent with agency cost-based lifecycle models.

Al-Najjar & Hussainey (2009) evaluated the link between dividend distribution and outside directorships. The objective of the study was to determine whether the number of outside directors on the board of directors and the dividend payout are substitutes or complements to one another in UK companies. Factors such as insider ownership, profitability, liquidity, asset structure, business risk, firm size, firms' growth rate, and borrowing ratio are included as independent variable. The authors used Tobit and Logit regression models and research conducted using a sample of 400 non-financial companies that were listed on the London Stock Exchange between the years 1991 and 2002. The findings of the research indicated that the amount of dividend payout has an inverse relationship with the number of outside directors that serve on the board of directors.

Moradi, Salehi, et al (2010) by including all of the firms that were traded on the Tehran Stock Exchange during the years 2000 and 2008 in the research. The purpose of the research is to develop a model that illustrates how dividends influence the profitability, size, and beta rate, rate of retained profits, price-to-earnings ratio, and debt ratio of a firm. The outcomes of the research indicate that there is a relation between dividends and increasing one's financial standing. The findings, however, also demonstrate that P/E ratio, beta rate, and debt ratio all have a negative relation with these characteristics.

Gill, Biger, et al (2010) Conducted their study on factors that determine dividend payout rates by looking at American service and manufacturing companies. They come to the conclusion that the dividend payout ratio is determined by the profit margin, sales growth, debt-to-equity ratio, and taxes. The dividend payout ratio is a function of a company's profit margin, sales growth, and debt-to-equity ratio for businesses that operate in the services sector.

Marfo & Agyei (2011) conducted an investigation on the variables that influenced the dividend payment choices of sixteen banks in Ghana over the course of a five-year period beginning in 1999 and ending in 2003. The findings revealed that factors such as a bank's profitability, leverage, changes in dividends, and collateral capacity

all had a positive and substantial influence on the dividend policies that were implemented by banks in Ghana. On the other hand, they discovered that growth and the level of maturity of the company both had a large and negative impact on the amount of dividends paid out. However, dividend policies exhibited a negative but small link with cash flow. This relationship was not substantial.

Kimutai P. (2012) conducted research to investigate the impact of liquidity on dividend distribution of firms that are listed on the Nairobi Securities Exchange. In the research, dividend payment served as the dependent variable, while factors such as profitability, cash flow, liquidity, leverage, corporation tax, sales growth, earnings per share, and industry served as the independent variables. According to the results, all of the independent factors, with the exception of cash flow and corporation tax, had a positive influence on the dependent variable. According to the findings, cash flow is a detrimental factor on dividend payment, in contrast to the fact that the dividend payout is unaffected by the corporation tax rate.

Olubukunol R. (2013) conducted research on the factors that determine dividend policies in the Nigerian Stock Exchange market by analyzing annual reports covering the years 2006-2011. The researcher investigated how the financial performance of the companies, the size of the firms, the level of financial leverage, and the independence of the boards of directors influenced the dividend payout decisions of listed companies that participated in the market of the Nigerian Stock Exchange. According to the findings, there is a substantial positive association between the dividend payout choice of listed corporations in Nigeria and the financial performance of the firms, the size of the firms, and the independence of the board of directors.

Agyemang E. (2013) investigated the factors that influence the dividend policies of listed financial institutions on the Ghana Stock Exchange by utilizing panel data that covered the years 2005-2009. According to the findings, there is a strong and positive association between age and liquidity, but there is no significant relationship between collateral, profitability, or dividend payment. According to the findings of the study, the most important factors that determine the dividend policy of financial institutions in Ghana are the age of the company, liquidity, and collateral.

Zipporah W. (2013) investigated that the extent to which dividend payouts of companies in Nairobi. Macroeconomic factors like as money supply, inflation, exchange rates, and interest rates over the period of time spanning from 2002 to 2012 are examined. Exchange rates had a negative effect on the dividend payments, while interest rates had no significant impact on the dividend payouts. The correlation between inflation rates and dividend payouts is significantly positive and significantly influenced by inflation rates. The amount of money in circulation has a favorable and hardly noticeable impact on the dividend distributions.

Eliasu N.(2014) examined factors that determined the dividend payment in Ghana from 2000 to 2009 and found some new correlations between them. The findings of the research showed that key factors that influence dividend payment in Ghana include profitability, board size, board independence, the square of profitability, leverage, and



audit type. The findings also suggested that a positive relationship exists between dividend payout ratio in Ghana and profitability, board size, and audit type, while a negative relationship exists between dividend payout ratio and the square of profitability.

Mirbagherijam (2014) uses the panel data technique to assess whether or not inflation has a non-symmetric influence on the decisions made by corporations over whether or not to keep, increase, or decrease their dividends. The findings indicate that inflation has a beneficial impact on the decisions made by corporations regarding increase of dividends. The choice of dividend policy makers may be significantly influenced by inflation, which takes into account the current financial situation of corporations and whether or not they are earning a profit.

Ahmed, S., & Murtaza, H. (2015) conducted a study which aims to reexamine some of the major factors that a firm takes into account when selecting whether or not to declare dividends. The State Bank of Pakistan's publication Financial Statement Analysis of Non-financial firms provided the necessary financial data. A total of 366 firm-year observations were obtained from the sample of sixty-one (61) firms with comprehensive six-year financial data from 2006 to 2011. The study found that, among the sample firms examined, Liquidity and Profitability were significantly related with the dividend payment policy of those firms. As a result, it can be said that the two above-mentioned factors are the major determinants of a dividend policy for firms.

Karthik, P. (2015) uses a fixed effects method in panel regression to analyze the variables that influence the dividend payment of Indian commercial banks. The research looks at nineteen banks that are part of the public sector as well as ten banks that are part of the private sector between the years 2007 and 2014. When determining dividend distribution, variables such as a company's profitability, size, liquidity, leverage, growth potential, and risk should be taken into consideration. They found that no relationship between dividend distribution and size, leverage, or growth opportunity among the listed Indian commercial banks.

Ahmed (2015) conducted a study on liquidity, profitability, and dividend payout policy. He examined the influence of liquidity and profitability on dividend payout policies in the UAE banking industry, as well as any differences between Islamic and conventional banks both before and after the financial crisis. The data from 18 of the 24 national banks in the UAE is used. Dividend payment was analyzed using six liquidity and profitability metrics. Multiple regression analysis and correlation analysis were used. The main finding was that, whereas the dividend payout ratio had a significantly positive relation with liquidity, it had insignificant negative relationship with profitability.

Do, T. (2016) investigates the factors that affect dividend payout ratio of 156 firms that were listed on the Vietnamese share market. The time frame was between 2009 and 2014. The study examined the effects of eleven independent variables, including free cash flow, sales growth, firm size, financial leverage, profitability, and liquidity. According to the findings of the study Earnings per share are not clearly correlated with the dividend

payout ratio, despite the fact that both the return on equity and the financial leverage ratio are statistically significant and adversely correlated with the dividend payout ratio.

Khan, R. (2017) investigated the factors that determine the dividend payout ratios of firms that are listed on the KSE in Pakistan. They utilized the data of 10 sectors of the cement industry, and these firms are listed on the Karachi stock market. The research is driven by 2003-2012, and it aims to expand the understanding on dividend payout policy. The findings were estimated using the panel regression model. The dividend payout ratio has been seen as being significantly influenced by corporate profitability. Taxes, cash flow, debt to equity ratio, and sales growth are factors that have an impact on a company's dividend choice in addition to corporate profitability. The research found significant positive relationship between dividend payout ratio and profitability, taxation, and cash flow. In contrast the relationship between dividend payout ratio and sales growth is insignificant.

Bostanci, F., Kadioglu, E., & Sayilgan, G. (2018) in their research, they investigate the firm-specific variables that influence the dividend payout policies of the firms whose shares are listed on the Borsa Istanbul stock market. In order to do this, the dynamic panel regression was used on 853 data representing the annual average of 106 firms that were listed on the Borsa Istanbul during the years 2009 and 2015. Their finding shows that dividend payout ratio has statistically significant positive relationship with previous year's dividend payout, the company's return on equity and the market return/book value ratio, liquidity, and the company's size. The demonstration of a positive relationship between dividend payout and return on equity supports the free cash flow hypothesis, and the positive relationship with the previous year's dividend payout ratio supports the dividend leveling hypothesis for Turkey.

Adams and Yusha'u (2018) investigated the impact of leverage on the dividend policy of listed consumers' goods firms in Nigeria. The study spans a period of 10 years from 2007 to 2016. Secondary source of data was utilized. Panel multiple regression methods was utilized to analyze the data. The study makes use of ex-post facto research design. Sampling of seventeen (17) listed consumers' goods firms was utilized. Two formulated study hypotheses were verified after testing. The findings from this study demonstrate that overall debt ratio and long-term debt ratio has negative and significant effects on the dividend policy of listed consumer's goods firms in Nigeria. Based on these findings, it therefore, concludes that leverage has significant negative effects on the dividend policy of listed consumer's goods firms in Nigeria. It is thus, advised that Managers should utilize financial leverage in a manner that creates value for their firm owners, that is, leading to an increase in returns to equity holders. Debt financing in the financial mix of the organization should be done at the optimum level so as to ensure effective usage of the firms' assets

Musaed S. et al (2019) investigate the effect of dividend policy on the market value of common stocks of insurance firms that are listed on the Kuwait Stock Exchange between the years 2009 and 2017. The unresolved problem of dividend policy in the existing body of financial management literature served as the foundation for this study. The study employs share prices as the dependent variable and dividend yield, earnings per share,

earnings per book value, and earnings yield to book value ratio as the independent variables. The results of the regression model revealed that dividend yield and dividend payout ratio had a statistically significant negative effect on the share prices, while earnings per share, earnings per book value, and earnings to book value ratio had a statistically significant positive effect on the share prices. Miller and Modigliani's (1961) theory of dividend irrelevance is supported by the results of this study.

Kabbani, Richter, & ElBannan, (2020) conducted a cross-country study on determinants of the payout policy in the banking sector on a sample of MENA countries during the period of 2011-2016. they found Competition is the most influential determinant of dividend payout in the MENA region,

Septiani, M. & Ispriyahadi, H. (2020) investigated the effect of stock prices, return on assets (ROA), and firm size on dividend payout ratio. The study used 5-year annualized panel data from 2014 to 2018 of 17 financial sector companies listed on the Indonesian Stock Exchange. According to the findings of an investigation that made use of three different regression estimations (pooled OLS, fixed effect, and random effect), stock price has a positive impact on DPR. The negative effect of ROA and firm size on DPR, on the other hand, is the opposite. These findings suggest that high-profit companies would rather keep their earnings for financing an investment as a growth opportunity rather than distribute their income as a dividend. This is because dividends are taxed at a lower rate than ordinary income. As a result, this is consistent with the theory of the pecking order.

Shabrina, W., & Hadian, N. (2021) conducted research to investigate if the current dividend payout, debt to equity ratio, and return on assets of mining firms that were listed on the Indonesia Stock Exchange during the period of 2016-2018 were impacted by these factors. An explanatory research method was used. This research used a non-probability sampling method in combination with a purposive sampling method, and the total sample size consisted of 34 mining firms that were listed on the Indonesia Stock Exchange throughout the time period of 2016-2018. In this research, panel data regression analysis using Eviews 9 was the analytic method that was used. The findings indicated that the dividend payout ratio was impacted by three different ratios: the current dividend payout ratio, the debt to equity ratio, and the return on assets. In addition, the findings of the research demonstrated that the extent of the effect exerted by the current dividend payout ratio, the debt to equity ratio, and the return on assets was 51.5%.

Jovković, B., Vasić, A. & Bogićević, J. (2021) conducted a study in the banking industry of the Republic of Serbia and found that one of the most highly controversial aspects of corporate finance is the practice of dividend policy. The research identifies the factors that influenced dividend policy in the banking industry in Serbia during the period of 2009–2018. They employed random effect multiple linear regression model. Their finding indicates that dividends paid out in prior years have a significant and positive effect on the dividends policy.



Noor S, & Syifa Aulia (2021) examine the factors that affect the dividend payout ratio and how they affect the firm value (Empirical Study on Food and Beverage Industry Issuer 2016-2019). 16 companies secondary data samples were taken from the financial statements of firms registered on the Indonesia Stock Exchange (IDX). Nine research hypotheses were developed for this study. The analytical design employed is quantitative data using panel data regression approach which is handled with Eviews 9 with a random effect model. F, T, and Sobel tests are used to test hypotheses. The findings shows that a firm's value was positively impacted by its financial performance directly, as measured by the current ratio, debt equity ratio, and return on assets, and partially.

Adelegan, O. (2021) examines factors that affected Nigerian corporations' dividend policy. They examine data on listed Nigerian manufacturing firms for 1,101 firm-years covering from 1984 to 2020 using a modified version of the Lintner model as the theoretical framework. Annual reports of firms were reviewed to get information on dividend, profit after tax, total distributable profits, leverage, turnover growth, firm size, and market to book value. The results of the research show that the dividend policies of manufacturing firms are dependent on profit after taxes, the dividend from the year before, the size of the firm, and the growth of the firm. The results also show that the manufacturing businesses' dividend payout is more dependent on the firm's overall goals, profit after tax, and previous dividend payout. And they discovered that firm profit after tax and prior dividend payment are important factors in determining dividend payment in Nigeria.

Khairunisa et al (2022) studies the factors that affect dividend policy in basic and chemical industrial businesses that are listed on the Indonesia Stock Exchange for the years 2016 to 2020. 13 businesses were used as samples in this study, by employing purposive sampling technique. Data is gathered from the annual report of the company. Their finding indicated that profitability is the factor that has the most impact on dividend policy, while growth has a negative impact on dividend policy. Liquidity also has a negative and significant impact on dividend policy.

Islam, M. S., Adnan, A. (2022) investigates the factors affect the choices made by financial institutions regarding dividend distribution. For the purpose of the study, a panel dataset that included 22 banks that were traded on the Dhaka Stock Exchange (DSE) from FY 1999 to 2018 was used. Inference of the findings is accomplished via the use of structural equation modeling (SEM). The findings shows that leverage, and size are important factors in determining dividend payouts. On the other hand, earnings per share, cash flow, sales growth, liquidity, institutional ownership, sponsor ownership, individual ownership, risk, age, relative tax, return on assets, investment opportunity, and retained earnings are not significant factors in deciding whether to pay dividends. The findings lend credence to the hypothesis that management makes use of dividend payouts as a kind of signaling device in addition to the fact that dividend payouts have been shown to lessen the agency issue. Furthermore, the findings show that the majority of dividend policy theories that are traditionally based on developed markets can be applied to emerging market countries like Bangladesh. This is due to the fact that the majority of the characteristics that were found to be important in determining dividend policies in Bangladesh are consistent with those that have been established in developed economies.

Nida. A, et al (2022) conducted a study on the factors that have a significantly positive impact on the dividend payout ratio of the companies that pay dividends and are included in the KSE-100 index. This research used a technique of selection known as purposive sampling, which involves establishing criteria in order to pick a sample. For the purpose of investigating panel data models using pooled OLS regression, secondary data is gathered from non-financial businesses using yearly financial reports obtained from the Pakistan Stock Exchange via the official KSE data site. The results indicated that profitability, firm debt, and sales growth positively significantly influenced dividend payout ratio, whereas asset growth, retained profits to total equity, and liquidity negatively significantly affected dividend payout ratio.

### **2.6.2. Empirical Literature on determinants of Dividend payout in Ethiopia Banking Sector**

Tewodros K. (2011) conducted an empirical research on the factors that determined the dividend payouts of six private banks in Ethiopia between the years 2006 and 2010, and he published his findings in 2011. Using Linter's model, the researchers came to the conclusion that there was a positive Relation between the size of the company and the dividend payout ratio; however there was a negative relation between liquidity and dividend payouts. There was no relation between the payout ratio and profitability, growth and leverage. He came to the conclusion that while deciding whether or not to pay dividends, banks in Ethiopia took into account agency costs, the lagged payout and liquidity.

Simegn, (2013) looks into the factors that determine the dividend policies of banks in Ethiopia by using panel data collected over a period of ten years (2002-2011) from five different banks. The data was analyzed by employing the ordinary Least Square method with a fixed effect model. The results of the regression show that current earnings, the dividend from the previous year, the age of the bank, and loan provisions have a positive and statistically significant impact on the dividend payments made by the bank. On the other hand, liquidity has a negative impact and leverage is not an important variable for the decision that the bank makes regarding its dividend payments.

Tadele (2017) Studies the determinants of dividend policy of Ethiopian private banks and employed explanatory and descriptive study by including data covered the period from 2000-2015 for the sample of six Ethiopian private banks. He used both secondary and primary data. Both bank specific and macroeconomic variables were analyzed by employing the balanced panel fixed effect regression model. He found that profit, leverage, and lagged dividend payment have positive and statistically significant impacts on dividend policy of Ethiopian private banks while retained earnings, loan loss provision, inflation have negative and statistically significant impact on dividend policy of Ethiopian private banks whereas liquidity and economic growth rate were found to be statistically insignificant and have no any impact on dividend policy of Ethiopian private banks.

Getaneh Moges et al (2020) investigate the impact of firm-specific and macroeconomic factors on Ethiopian private commercial banks' dividend distribution decisions. The random-effect regression model results using

panel data on eight private banks from 2008 to 2016 demonstrated that liquidity, bank size, and inflation have positive and statistically significant impacts on dividend payment decision. They found that the size and investment opportunities of the bank have a negative and statistically significant impact on dividend payment decisions in Ethiopian private banks.

Rehman, A., & Takumi, H. (2021) analyzed the factors that influence the dividend payout ratio of commercial banks in Ethiopia from 2010 to 2018. Data for the Panel was gathered over a period of nine years from the audited financial accounts of eight different commercial banks in Ethiopia. The study employed six independent variables, including financial leverage, profitability, age of the firm, corporation tax rate, operational cash, and the number of shares distributed, and one dependent variable, the dividend payout ratio. The results of the study were interpreted using both descriptive statistics and inferential statistics. The influence of determinant variables on the dividend payout policy of commercial banks in Ethiopia was examined using random effect regression. In order to better comprehend the relationship that exists between the dependent and independent variables, correlation was also carried out. According to the correlation output, the Dividend Payout Ratio has a negative relationship with Return on Equity, Corporate Tax Rate, and Number of Shares Distributed. Despite the other independent variables, including Debt Ratio, Age of Firm, and Cash to Total Assets Ratio all show positive relations with Dividend Payout Ratio. The study also found that the level of financial leverage is a significant variable at a level of 1% significance, whereas the corporate tax rate, cash balance, and number of shares distributed are significant variables at a level of 10% significance in determining the dividend payout ratio of commercial banks in Ethiopia. On the other hand age and profitability of the firm are not statistically significant variables.

Kumar, B. (2021) empirically investigates the impact of firm-specific and macroeconomic factors on the dividend payout decision of Ethiopian private commercial banks. The random-effect regression model results using panel data on eight private banks from 2008 to 2016 showed that liquidity, bank size, and inflation have statistically significant positive effects on dividend payout decisions. The regression results indicate that bank development and investment opportunities have a negative and statistically significant effect on dividend payout decisions in Ethiopian private banks.

Azmeraw, (2022) investigated the determinants of dividend payout in Ethiopian private banks by using ten years' data from eight private banks. The collected data were analyzed using panel data regression technique. The finding indicated last year dividend payout, growth, size and risk have statistical significant impact on dividend payout the rest liquidity, profitability and leverage have no statistically significant impact on dividend payment.

Alem, (2022) Investigated the factors determining dividend pay-out policy of Ethiopian private commercial banks by using 10 years secondary data from 12 purposively selected private commercial banks. The data was analyzed by employing Random effect panel regression technique. Dividend pay-out ratio was used as dependent variable and the regression result revealed that profitability, liquidity, leverage, lagged dividend pay-out and firm size



have positive significant effect on dividend pay-out ratio. Whereas, firm growth, inflation and GDP were found to be statistically insignificant and have no any impact on dividend policy of Ethiopian private banks.

### 2.6.3. Empirical Literature on determinants of Dividend payout in Ethiopia insurance Sector

Nuredin, (2012) The first researcher to study the determinants of dividend payout in Ethiopia insurance Sector used panel data that covered the nine years from 2003 to 2011, the main objective of the research was to determine factors that impact the dividend policy of insurance firms in Ethiopia. In this study, a sample of nine insurance firms that are active in Ethiopia is investigated using a mixed research technique. The findings indicate that dividend decision is important, and that profitability and liquidity are statistically significant variables that positively impact the dividend policy of insurance businesses in Ethiopia. Additionally, the results reveal that dividend decisions are relevance. On the other hand, growth has negative and significant influences on dividend policy and size of the company and its leverage have no significant effect on the dividend policy.

Temesgen (2016) Investigate the variables that determine the amount of dividends paid out by corporations operating in the Ethiopian private insurance business. The researcher used a mixed study technique in order to accomplish the objective, and data from a panel that spanned 12 years was gathered from seven different private insurance firms throughout the course of the years (2001-2012). The findings of the research indicated that a positive and statistically significant relationship exists between dividends and earnings per share, liquidity, the age of the firm in relation to its life cycle, and regulations governing the taxation of dividends.

Samuel (2017) used Ordinary Least Squares (OLS) Regression to examine the impact of profitability, liquidity, leverage, firm size, growth opportunity and previous year dividend and asset structure on dividend policy in the insurance sector over a period of nine years from 2007 to 2015. The study showed that profitability, leverage, liquidity, previous year dividend and asset structure have a positive relationship with dividend payout. In addition, the study found that firm size had a negative relationship with dividend policy. In the meantime, there is an inverse correlation between the size of the company and the growth opportunities and dividend payout.

Habtamu, (2019) Investigate determinants of corporate dividend payout in Ethiopian private insurance industry. The researcher used quantitative research method and explanatory research approach and 11 years panel data from annual audited report of ten private insurance companies for the years (2007-2017) are employed. To identify the most significant variable the study employed Random effect model. The study revealed that growth opportunity, liquidity, profitability, previous year dividend, GDP and inflation have statistically significant relation with the dividend payout. In opposing to this the study showed that Asset structure, Firm size and leverage have statistically insignificant relation with the dividend payout in Ethiopian private insurance industry.

Tewodros L. (2020) On his study tried to explore the determinants of corporate dividend payout in Ethiopian insurance companies on basis of data covers eleven years (2007-2017) period of nine private insurance companies.. Random effect model is used to identify the most significant variable. The result of the study shows that from key explanatory variables growth opportunity, liquidity, profitability, previous year dividend and inflation have found to have statistically significant relation with the dividend payout. While the remaining variables asset structure, firm size, leverage, and GDP found to have statistically insignificant relation with the dividend payout in Ethiopian insurance industry.

Hiwot, L. (2020) Investigated that determinant of dividend payout policy of private insurance companies in Ethiopia. She used panel pooled secondary source data of seven years (2013-2019) from the annual published report of selected seven insurance companies and from National bank of Ethiopia. She employed the OLS multiple regression to determine the effect of profitability, liquidity, firm size, corporate tax, company age, growth in revenue and tangibility of asset on dividend payout policy of insurance companies in Ethiopia. She found that corporate tax and growth in revenue have negative significant effect on dividend payout policy of Ethiopian insurance industry while liquidity, firm size and tangibility of asset relate positively and profitability, corporate tax, company age and growth in revenue relate negatively with dividend payout policy.

Daba, Eskezia, & Girma (2023) examined the determinants of dividend payout ratio of fourthen years, eight private insurance companies in Ethiopia. The study used secondary source of quantitative data which were collected from audited annual financial report of each selected insurance companies and random effect model is employed. They found that firm age, gross premium and lagged dividend have positive significant impact while leverage, growth opportunity and retained earnings have negative significant impact on dividend payout ratio. Profit and inflation rate have insignificant impact on dividend payout.

Author	Year	Sample size	Time range	Variables included	method	tools	Finding	
							significant	insignificant
Muhammed Nuredin	2012	9	2003-2011	Profitability, growth, liquidity, Size and Leverage	Random effect MLR	Interview and FS	growth-liquidity+ Profitability+	size leverage
Henok Tefera	2016	8	2007-2014	profitability, liquidity, leverage, firm's size, growth opportunity, lagged dividend and Business risk.	Random effect MLR	audited Financial statements	Profitability liquidity Growth opp. Lagged DPR	leverage, firm size business risk
Habtamu Dilnesa	2019	10	2007-2017	Asset structure, Firm size, Growth in revenue, leverage, liquidity, Profitability, previous year dividend, GDP and inflation	Random effect MLR	audited Financial statements	Growth opp. Liquidity Profitability previous DPR GDP inflation	Asset structure, Firm size, leverage,
Hiwot Lemu	2020	7	2013-2019	Profitability, Liquidity, firm size, corporate tax, company age, growth in revenue and tangibility	OLS MLR	audited Financial statements	liquidity+ firm size+ tangibility+ corp.tax-growth rev-Age- Profitability-	



Author	Year	Sample size	Time range	Variables included	method	tools	Finding	
							significant	insignificant
Samuel Getachew	2017	9	2008-2016	Profitability, Liquidity, Leverage, firm size, growth opportunity , previous year dividend and asset structure	Random effect model	audited Financial statements	Profitability Liquidity Growth opp Lag. DPR asset structure	leverage firm size
Temesgen Yohannes	2016	7	2001-2012	Last year's DPR, growth in sales, earnings per share, size, return on asset, liquidity, leverage, age , investment opportunity and regulation	Fixed effect	Interview and audited Financial statements	growth in sales+ Lag DPR+, earnings/share size, ROA liquidity leverage - age inv. opp- regulation	
Tewodros Lemma	2020	9	2007-2017	asset structure, firm size, growth in revenue, leverage, liquidity, profitability, previous year dividend, GDP and inflation	Random effect model	audited Financial statements	growth in revenue opportunity, liquidity, profitability, previous year dividend inflation	asset str. firm size, leverage, GDP

Even though many researches were conducted, numerous theories developed by several academicians, the issue of dividend payout determinants still stay vague. There are discrepancy between theories, conflicting hypothesis and inconsistent findings. Several investigations were made in developed countries market. However, additional understanding into the dividend policy can be gained by an analysis of developing countries, like our country. In recent years a lot of share companies are emerging in Ethiopia following the economic policy of the country. Resulting from economic policy change more than ten private insurance companies are established in the last three decades. Investors are investing a huge amount of money in these companies and the companies also pay dividend as a return from their net income for shareholders, even though there is no stock market. In Ethiopia while there have been some studies on the topic, most of them focus on banking sector. And also no study to date provides a comprehensive analysis on propensity in investigation of determinants of dividend payout.

## 2.7. Conceptual Frame work

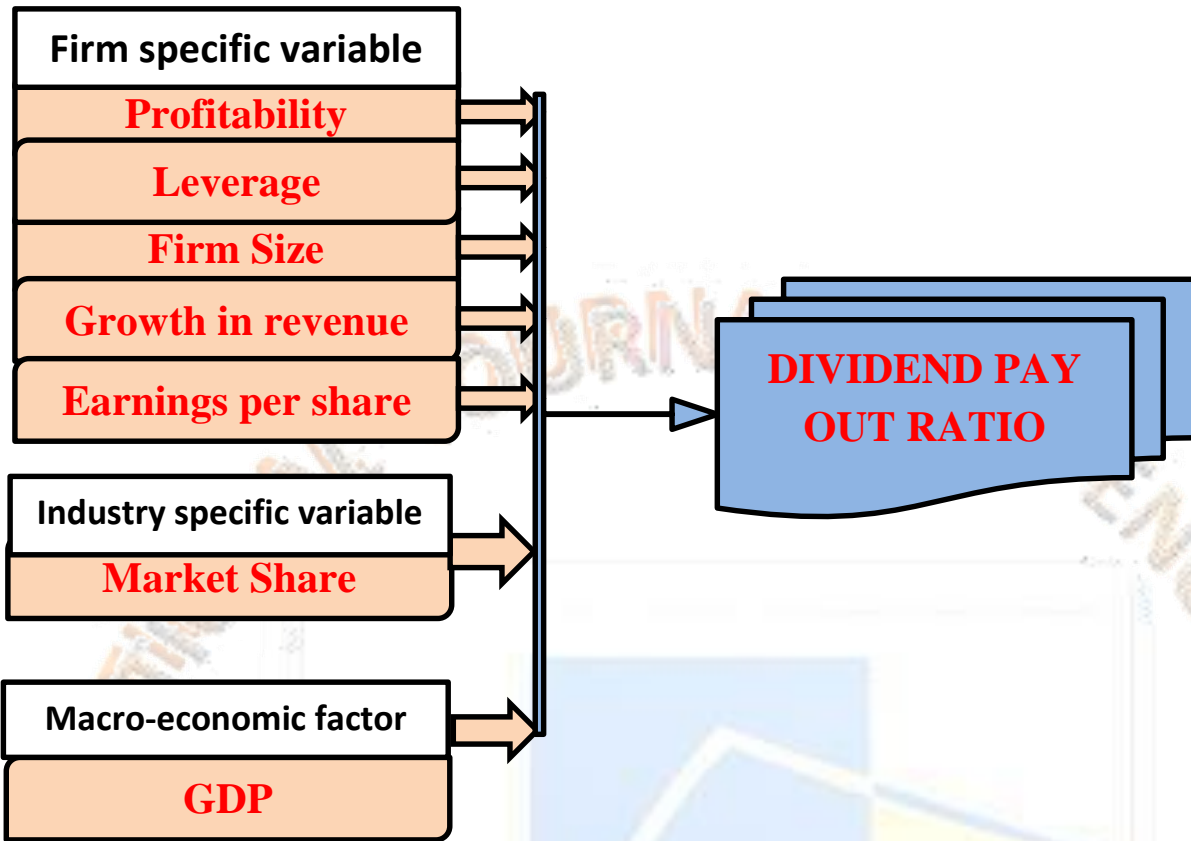
The following conceptual framework of the study is developed from the theoretical and empirical literature reviews,

The study was included the following seven determinants. These are Profitability, Firm Size, Growth in revenue, leverage, Market share, earnings per share and GDP. These factors were selected in the following criteria. Profitability was chosen because it was applied to all researchers' work and found consistent results. Firm size and growth in revenue are selected because of the inconsistencies in the findings of so many researchers. EPS and GDP are less studied in previous works. The last one Market share was not included in the previous studies. It is a new variable

Figure 1: conceptual framework

Independent variables

Dependent Variable



Source: Self extracted

### Chapter three

#### 3. Research design and methodology

This Chapter discussed the methodology that provided a detailed direction about the methods that the study was used. It enhanced good understanding of what methodology is used in the study. This chapter also explained the research design, research approaches, population and sample, data collection methods, data analysis methods, Data quality assurance and ethical issues.

##### 3.1. Research design

According to (Saunders, Lewis, et al, 2009) research design defined as an arrangement of conditions for collection and analysis of data in a manner that it aims to combine relevance to research purpose with economy in procedure. Research design is the program that guides the researchers in the process of collecting, analyzing and interpreting the data. Research design was usually a plan or blue print which specifies how data relating to a given problem should be collected and analyzed. The study was explanatory type of research design. It helps to identify the extent and nature of cause-and-effect relationships



## 3.2. Target population, Sample design and sample size

### 3.2.1. Target population

According to (Mike, Titsworth, et al, 2013), a population is a well-defined set of people, services, elements, and events, group of things or households that are going to be investigated. Target population in statistics is the specific population of interest to which information is desired. It is the population to be studied or to which the investigator wants to generalize his/ her results. Population is the aggregate number of people or individuals with similar features or characteristics. For the purpose of the study private insurance companies are target population. According to NBE, Currently in Ethiopia there is 1 government owned and 17 private insurance companies. Since only private insurance share companies are paying dividend, the study was carried out only on the private S.C. Even though there are 17 private insurance companies in Ethiopia this research captured 16 in order to collect five years financial data i.e. 2018-2022. This time span is selected for two main reasons. The first is starting from 2018 one is all Ethiopian insurance companies prepare their financial statements as per IFRS standards. Second all prior studies ignored the impact of data from life insurances, this because financial statements of life insurance companies prior to 2018 is not available. Only Zemen Insurance S.C is not included in this study that starts its operation in 2020. The following table shows the list of private insurance companies with their year of establishments.

**Table 2: List of insurance companies in Ethiopia**

Insurance companies	Abbreviations	Established Date:	License Number:	Ownership
Ethiopian Insurance Corporation	EIC	1975	011/06	Government
National Insurance Company of Ethiopia S.C.	NICE	23/09/1994	002/94	Private
Awash Insurance Company S.C	AIC	1/10/1994	1/10/94	Private
Africa Insurance Company S.C	AFRICA	1/12/1994	1/12/95	Private
Nyala Insurance Company S.C	NYALA	6/1/1995	6/1/95	Private
Nile Insurance Company S.C	NICE	11/4/1995	1/4/95	Private
Global Insurance Company S.C.	GLOBAL	11/1/1997	1/1/97	Private
The United Insurance S.C	UNIC	1/4/1997	1/4/97	Private
NIB Insurance Company	NIB	1/5/2002	1/5/02	Private
Lion Insurance Company S.C	LION	1/7/2007	1/7/07	Private
Ethio-Life and General Insurance S.C.	ELIG	23/10/2008	013/08	Private
Oromia Insurance Company S.C.	OIC	26/01/2009	015/10	Private
Abay Insurance Company	ABAY	26/07/2010	015/10	Private
Berhan Insurance S.C.	BERHAN	24/05/2011	016/11	Private

Tsehay Insurance S.C.	TSEHAY	28/03/2012	017/12	Private
Lucy Insurance S.C.	LUCY	1/10/2011	018/12	Private
Bunna Insurance S.C.	BUNNA	21/05/2013	019/13	Private
Zemen Insurance S.C	ZEMEN	17/1/2020	020/20	Private

Source: Extracted from NBE website

### 3.2.1. Sample design

The purposive sampling technique was employed to select the companies, the criteria being IFRS adoption and date of establishment. This technique is chosen because it helps to select samples those meet the requirement of the study.

### 3.2.2. Sample size

Sixteen private insurance companies who have adopted IFRS were selected for this study. All private insurance companies which operated for more than five years are included in this study except Zemen Insurance Company which started its operation after 2020 out of the 17 private Insurance Companies.

### 3.3. Data type and Data sources

For the successful completion of the study, the researcher used secondary data. And the data was collected from National Bank of Ethiopia, website of the insurance companies, annual reports, financial statements and other published and unpublished documents in quantitative forms. Accordingly, structured document review was used to collect the necessary data from the sources listed in the above.

### 3.4. Data analyzing procedure

Data analysis is the process of bringing order, structure and meaning to the mass of information collected (Ryan, 2022).

The collected data was analyzed using descriptive statistics and inferential (multiple linear regression) analysis. Descriptive statistics refers to the method of transforming raw data into a form that makes them easy to understand and interpret. Multiple linear regression analysis helps to determine the effect of independent variables on dependent variable; it was analyzed by using *E-views 12 student version*. To investigate factors influencing dividend payout ratio multiple linear regression analysis was employed. First Unit root test is conducted, then the multiple linear regression model assumptions/ diagnostic tests was checked. Hence, all assumptions (Errors have zero mean, Heteroscedasticity, Autocorrelation, Multicollinearity, and Normality) are valid then to decide which method is appropriate whether Fixed effect or Random effect Hausman test is used. Finally after descriptive statistics of both dependent and independent variables was calculated over the sample period the result of multiple linear regressions is analyzed and interpreted.

### 3.5. Variable Description, measurement and model specification

According to (Creswell, 2009) the variables need to be specified in quantitative researches so that it is clear to readers what groups are receiving the experimental treatment and what outcomes are being measured.

#### 3.5.1. Dependent variables

Dividend payout measures the dependent variable of the study.

##### i. Dividend payout Ratio (DPR)

A dividend is the distribution of a company's net income to its shareholders (Jain, 2007). Dividend pay-out ratio (DPR) will stand in as a proxy. It is measured by the ratio of dividend paid to profit after tax.

This formula is used to determine DPR.

$$\text{DPR} = \frac{\text{Total amount of dividend paid in the year}}{\text{Net income}} \times 100$$

#### 3.5.2. Independent variables

##### i. Profitability

Firm profitability is a crucial indicator of its capacity to pay dividends, a highly profitable company most likely will pay higher dividend and accompany with less or no profits will adopt conservative dividend policy. Profitability can be measured by different ratios such as return on assets (ROA), return on equity (ROE), Net profit Margin (NPV) and etc. in this study, ROE is used as independent variable

$$\text{Return on equity} = \frac{\text{Net income}}{\text{Owner's equity}} \times 100$$

##### ii. Firm size

As described by (Christopher & Rim, 2014) to account for the varying sizes of the companies, *the natural logarithm of their total assets* is the proxy that was used to calculate the businesses' sizes.

$$\text{Size} = \text{Natural logarithm of Total Assets}$$

##### iii. Growth in revenue

According to Chen and (Dewasir, et al., 2019), firms that have had recent growth in sales have a tendency to pay lesser dividends. The capacity of a corporation to create considerable amounts of positive cash flow or earnings is essential to the growth of a company. A negative relationship is expected between a growth in premium and dividend payout ratio. In this paper growth is considered as a proxy of a

$$\text{Growth in revenue} = \text{percentage change on premium.}$$

##### iv. Leverage

Leverage also called solvency considers capital structure of the firm and evaluation of the relative risk and return associated with liabilities especially long term debt and equity. Debt to equity is one of the most fundamental measures in corporate finance. Insurance leverage could be defined as reserve to surplus or debt to equity. The



risk of the insurer is increasing as a result of leverage increase (Lashetew (2020). Following (Habtamu, 2019) Leverage is calculated by using the formula which is

$$\text{Leverage ratio} = \frac{\text{Total debt}}{\text{Total Asset}}$$

**v. Earnings per share**

It shows the company's ability to earn profits and distribute the profits earned by the company to shareholders. Earnings per share (EPS) can be used as an indicator of the company's value level. Meanwhile, according to Van Horne and Wachowicz (2014) an earning per share is "Earning after taxes (EAT) divided by the number of common share outstanding" meaning that profit after tax is divided by the number of ordinary shares outstanding. Meanwhile, Tandelilin (2001) defines Earning per Share (EPS) as a comparison between the amount of profit (in this case net income that is ready to be distributed to shareholders) with the number of shares outstanding

$$EPS = \frac{\text{Earning after taxes (EAT) divided}}{\text{number of common share outstanding}} \times 100$$

**vi. Market share**

Gross premium market share is a measure of an insurance company's market competition, while dividend payout ratio is a measure of the proportion of earnings that are paid out to shareholders as dividends. The relationship between gross premium market share and dividend payout ratio has been not studied in our country as determinants of dividend ratio. In developed economy and where a secondary market exists several measurements are used to measure market competition. According to (OECD, 2021) market competition can be measured by concentration ratio, market share, HHI, Price competition, product differentiation and barrier to entry. But due to its conveniences to use following (Tihtena, 2018) the proxy gross premium market share is used in this study. It is calculated by dividing each insurance company's gross premium with the total gross premium of the industry

$$\text{Market share} = \frac{\text{Gross premium of each firm}}{\text{Gross premium of industry}}$$

**vii. GDP**

In this study, GDP was analyzed as a factor of dividend policy. It is explained as GDP is one of the determinants of dividend policy and a positive association between GDP and dividend decision. Annual GDP rate is used as proxy of DPR.

**Table3: Summery of Variable Description, measurement and expected result**

Variables	Notation	Measure	Expected Sign
Dividend payout ratio	DPR	$\frac{\text{Total amount of dividend paid in the year}}{\text{Net income}} \times 100$	
Profitability	ROE	$\text{Return on equity} = \frac{\text{Net income after tax}}{\text{Owners' equity}} \times 100$	+
Size	size	<i>Natural logarithm of Total Assets</i>	+
Growth in Revenue	GROW	<i>percentage change on premium</i>	-

Leverage	LEV	$Leverage\ ratio = \frac{Total\ debt}{Total\ Asset} \times 100$	-
Earnings per share	EPS	$EPS = \frac{Earning\ after\ taxes\ (EAT)\ divided}{number\ of\ common\ share\ outstanding} \times 100$	+
Market Share	MRT	$MRT = \frac{Gross\ premium\ of\ each\ firm}{Gross\ premium\ of\ industry} \times 100$	+
GDP	GDP	<i>Annual GDP of NBE</i>	+

### 3.6. Model Specification

To test the impact of the above independent variables on dependent variable multiple linear regression model (MLRM) was employed.

$$DPR_{it} = \alpha + \beta_1 Profit_{it} + \beta_2 Size_{it} + \beta_3 LEV_{it} + \beta_4 GROW_{it} + \beta_7 EPS_{it} + \beta_9 MRT_{it} + \beta_8 GDP_{it} + \epsilon_{it}$$

Where

DPR = Dividend payout Ratio

ROE = Profitability

Size = Firm size

GROW = Growth in revenue

LEV = Leverage

EPS= Earnings per share

MRT = Market share

GDP= Gross domestic product

$\beta_1 - \beta_9$  = coefficient of independent variables

$\alpha$  = constant of the regression of...i (intercept)

$\epsilon$  = Error term

i= Private Insurance company

## Chapter Four

### Analysis and Interpretation

#### 4. Introduction

The purpose of this chapter is to present results and analysis of data. The chapter has been organized as follow, first section deals about the preliminary Analysis, which is expected to presents Unit root test, descriptive and correlation analysis on variables of the study and then the second section presents the result of the fulfillment of the classical linear regression model (CLRM) assumptions and the third and final section lays down the results of regression analysis that constitute the main findings of this study.

## 4.1. Preliminary Analysis

### 4.1.1. Unit Root test

Before running regression model for panel data and time series data it is important to ensure that the data is stationary. Stationary refers to a property of the data where statistical properties such as mean and variance remain constant over time. Non stationary data can lead to spurious regression results.

One common way to test for stationary in panel data is to use unit root test. As shown on Table 4.1 the p value of all unit roots test is 0.0000 at level, which smaller than the significance level of 0.05. Therefore the null hypothesis that the data has a unit root is rejected. So that it is appropriate to use regression method.

**Table 4.1 Summary of unit root test**

Group unit root test: Summary  
 Series: DPR, EPS, GDP, GP, GROW, LEV, MRT, RISK, ROE, SIZE  
 Date: 06/11/23 Time: 06:32  
 Sample: 1 80  
 Exogenous variables: Individual effects  
 Automatic selection of maximum lags  
 Automatic lag length selection based on SIC: 0 to 10  
 Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob. **	Cross-sections	Obs
<b>Null: Unit root (assumes common unit root process)</b>				
Levin, Lin & Chu t*	-7.37223	0.0000	9	690
<b>Null: Unit root (assumes individual unit root process)</b>				
Im, Pesaran and Shin W-stat	-8.72580	0.0000	9	690
ADF - Fisher Chi-square	130.374	0.0000	9	690
PP - Fisher Chi-square	142.350	0.0000	9	711

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi square distribution. All other tests assume asymptotic normality.

*Source: own computation using Eviews 12(Student version)*

### 4.1.2. Descriptive Statistics

Table 4.2 shows a summary of the descriptive statistics of the dependent and independent variables for five insurance companies in Ethiopia from the year 2018 to 2022 with total observations of 80. The table shows the mean, minimum, maximum, standard deviation and number of observations for dependent (explained) variable dividend payout ratio (DPR) and independent (explanatory) variables (profitability (ROE), leverage (LEV), growth opportunities (GROW), firm size (Size), Gross premium (GP), Market share (MRT), Earning Per (EPS), Volatility of earning (Risk) and Economic growth (GDP)

**Table 4.2 Summary of Descriptive Statistics**

	DPR	ROE	SIZE	LEV	GROW	EPS	MRT	GDP
Mean	0.418824	0.174618	13.78655	0.652056	-0.064840	0.253393	0.040273	0.067413
Median	0.450343	0.188310	13.82608	0.642348	0.114729	0.279500	0.035290	0.065719
Maximum	0.892309	0.287056	15.24541	1.304993	0.547463	0.505000	0.121786	0.093705
Minimum	0.000000	0.023056	12.62225	0.513462	-0.998906	0.000000	0.009869	0.038000
Std. Dev.	0.262130	0.058025	0.670769	0.103257	0.487252	0.138625	0.024806	0.018417
Skewness	-0.106914	-0.560557	0.095684	3.115714	-1.230994	-0.320276	1.132044	-0.211979
Kurtosis	1.819691	3.056507	1.933306	21.04999	2.903408	2.390996	4.092121	2.202321
Jarque-Bera Probability	4.796175	4.200297	3.914861	1215.443	20.23572	2.603974	21.06273	2.720108
	0.090892	0.122438	0.141221	0.000000	0.000040	0.271991	0.000027	0.256647
Sum	33.50589	13.96946	1102.924	52.16447	-5.187218	20.27142	3.221809	5.393036
Sum Sq. Dev.	5.428249	0.265988	35.54459	0.842293	18.75574	1.518127	0.048613	0.026796
Observations	80	80	80	80	80	80	80	80



**Source: own computation using Eviews 12(Student version)**

As can be presented in the table 4.2, the mean values of all the variables ranges from minimum of -0.064 for Growth (GROW) measured by percentage change on premium to a maximum of 13.786 for SIZE measured by natural logarithm of total asset. Also the table shows that the mean value of the DPR during the study period (2018-2022) of sampled insurance companies is 0.418 indicating that on average Ethiopian insurance companies paid 41.8% their income as dividend. The standard deviation is 0.2621. This implies that the volatility of dividend payout ratio varies from the mean by 26.21%, suggesting that the dividend payout ratio was not highly dispersed.

The mean ROE (return on equity) value of 0.17 suggests that, on average, companies are generating a return of 17 cents for every dollar of equity invested in the company. The maximum ROE value of 0.28 indicates that there are some companies performing very well and generating a return of 28 cents per dollar of equity invested. The minimum ROE value of 0.18 suggests that there is a company that are not performing as well and generating a lower return of only 18 cents per dollar of equity invested.

The mean natural logarithm of total asset value of 13.78 suggests that, on average, the size of companies in the sample is moderate to large. The maximum value of 15.24 indicates that there are some very large companies in the sample, possibly due to high total assets. The minimum value of 12.62 suggests that there may be some smaller companies in the sample. The standard deviation of 0.67 indicates that there is a moderate amount of variability in the size of companies in the sample, with many companies falling within one standard deviation from the mean.

The mean market share is 0.04, which indicates that on average, companies in the market have a 4% share of the total market. The maximum market share is 0.12, meaning that some companies have a significant share of the market. The minimum market share is 0.009, indicating that there are companies with a very small presence in the market. The standard deviation of market share is 0.024, which indicates that there is a moderate amount of variation in market share among companies. Some companies have a market share that is significantly higher or lower than the average.

The mean leverage, as calculated by total debt/total assets, is 0.065. This means that, on average, 65% of a company's assets are financed through debt. The maximum leverage in the data set is 1.30, indicating that some companies have a higher level of debt relative to their assets. The minimum leverage in the data set is 0.51, suggesting that some companies have an average level of debt compared to their assets. The standard deviation of leverage is quite small at 0.10, indicating that the amount of leverage among companies is relatively consistent.

The mean EPS (earnings per share) of Ethiopian private insurance companies, as proxied by dividend paid in the year/outstanding share, is 0.25. The maximum EPS in this sample is 0.5, suggesting that there are some companies that are paying higher dividend per share. On the other hand, the minimum EPS in this sample is zero,

which means that some companies are not paying dividend. This highlights the importance of assessing the financial performance of private insurance companies before investing in them. The standard deviation of EPS in this sample is 0.13, indicating that there is some variability in the earning per share of Ethiopian private insurance companies.

The country's average GDP over the last five years has been 6%.The maximum inflation was 9% and the minimum was about 3%. The GDP was slowly dispersed over the periods under study towards its mean of 0.06, with a standard deviation of 0.03. This implies that the GDP in Ethiopia during the study period was somehow unstable, which may affect dividend payout ratio of insurance companies in Ethiopia.

### 4.1.3. Correlation Analysis

Before running regression, it is important to check the correlation between different variables on which the analysis is built (Wooldridge, 2016). According to Gujarati (2004), correlation analysis aims to measure the extent of linear correlation between two variables. Nonetheless, correlation does not necessarily imply a cause and effect relationship between variables since two theoretically unrelated variables could demonstrate a significant association. For this analysis, the study utilized Pearson correlation to evaluate the correlation degrees of the both dependent and independent variables. The following table 4.3 illustrates the correlation between independent variables and the dependent variable.

**Table 4.3 Correlation Coefficients**

Covariance Analysis: Ordinary  
 Date: 06/13/23 Time: 12:51  
 Sample: 2018 2022  
 Included observations: 80

Correlation	DPR	ROE	SIZE	LEV	GROW	EPS	MRT	GDP
DPR	1.000000							
ROE	0.257773	1.000000						
SIZE	0.148529	0.063199	1.000000					
LEV	-0.231917	-0.055003	-0.044256	1.000000				
GROW	0.192247	-0.153564	0.249910	-0.195465	1.000000			
EPS	0.670377	0.343298	0.310466	-0.129125	-0.103436	1.000000		
MRT	0.154367	0.065573	0.740907	0.094002	-0.282072	0.407811	1.000000	
GDP	-0.033329	0.049292	-0.309563	0.042657	-0.379120	0.010763	0.102474	1.000000

**Source: own computation using Eviews 12(Student version)**

According to correlation result in Table 4.3 leverage and GDP and leverage are negatively related to dividend payout ratio of Ethiopian insurance companies. This infers that when the increase in these factors leads in the decrease in dividend payout and in reverse decreases in these factors leads increases in dividend payout. Moreover, the coefficient estimates of correlation in the above table are -0.033, and -0.23 respectively. While Profitability, Firm Size, Growth in revenue, Market share and earnings per share are positively related with dividend payout with coefficient estimated in the above table 0.25, 0.14, 0.19, 0.15, and 0.67 respectively. These

figures implied that when the increase in these factors also leads to an increase in dividend payout of insurance companies in Ethiopia.

As detected from the table 4.3. the maximum correlation is exist between market share and size which is 0.74 so that due to the highest correlation coefficient is very close to 0.75 (Malhotra, (2004) another test of multicollianirity, variable inflation factor (VIF) is employed.

**4.2. Regression model tests (CLRM Assumptions)**

**Assumption 1: The errors have zero mean ( $\epsilon = 0$ )**

If a constant term is constituted in the regression equation, this assumption will never be violated, and the regression model of the study constitutes a constant term and the assumption is not violated, according to Brooks (2014).

**Assumption 2: Homoscedasticity (variance of the errors is constant (UT) =  $\sigma^2$**

Heteroskedasticity is a systematic pattern in the errors where the variances of the errors are not constant. The assumption of Classic linear regression model implies that there should be homoscedasticity between variables which means Variance of residuals should be constant otherwise Heteroskedasticity problem will be happened in our regression. The White test was applied to check the existence of Heteroskedasticity the result in table 4.4 shows, the absence of Heteroskedasticity. Since, as a rule of thumb if p- the value shows insignificant ( $p > 0.05$ ), the null hypothesis would be failed to reject and concluded that the variances of error terms are constant. Contrary to this, if the p- value is significant ( $p < 0.05$ ), the null hypothesis would be rejected and we can conclude that there is Heteroskedasticity concern in the model. For this study, the following test shows the nonexistence Heteroskedasticity problem in the model since the p-value is highly insignificant.

**Table 4.4: Heteroskedasticity test result: white test**

Heteroskedasticity Test: White

Null hypothesis: Homoskedasticity

F-statistic	1.458845	Prob. F(35,44)	0.1173
Obs*R-squared	42.97058	Prob. Chi-Square(35)	0.1668
Scaled explained SS	36.54128	Prob. Chi-Square(35)	0.3970

*Source: own computation using Eviews 12(Student version)*

For this study, the above table 4.4 test shows the nonexistence Heteroskedasticity problem in the model since the p-value is highly insignificant.

**Assumption 3: Test for absence of autocorrelation assumption ( $cov(u_i, u_j) = 0$  for  $i \neq j$ )**

According to this assumption, the covariance between the error terms over time and cross-section could be zero. In other words, it is assumed that the errors are uncorrelated to one another's. This is because the serial correlation of the error terms causes the standard errors of the coefficients to be smaller than they actually are and higher R-squared (Gujarati, 2004).



To check the absence or existence of autocorrelation the Breusch–Godfrey serial correlation LM test was run. Breusch–Godfrey tests area joint test for autocorrelation that will allow examination of the relationship between  $u^t$  and several of its 45 lagged values at the same time. According to Brooks (2008), The Breusch--Godfrey test is a more general test for autocorrelation up to the  $r^{th}$  order.

**Table 4.5 Breusch-Godfrey Serial Correlation LM Test**

Breusch–Godfrey Serial Correlation LM Test:

Null hypothesis: No serial correlation at up to 2 lags

F-statistic	1.200543	Prob. F(2,70)	0.3072
Obs*R-squared	2.653095	Prob. Chi-Square(2)	0.2654

*Source: own computation using Eviews 12(Student version)*

The null hypothesis states no serial correlation among error terms. Therefore, the researcher failed to reject the null hypotheses since **p.value** is greater than 0.05 significance level and conclude that the data does not have an autocorrelation problem.

**Assumption 4: Multicollianirity Test**

Multicollianirity indicates the degree of correlation between independent variables. The best regression models are those in which the predictor variables each correlate highly with the dependent variable but correlate at most only minimally with each other. There are many ways of testing for multicollianirity of independent variables. In this study, the VIF was used to detect any problem of collinearity recommended in the rule of thumb. As a par rule, if the value of variance inflation factor (VIF) on each variable is less than 10 and if the value  $1 / VIF$  is greater than 0.1 or 10%, multicollianirity is not a serious problem in the model.

**Table 4.6 Variance inflation factors (VIF) multicollianirity Test**

Variance Inflation Factors  
Date: 06/13/23 Time: 06:58  
Sample: 1 80  
Included observations: 80

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
EPS	0.030088	6.246606	1.425017
GDP	1.858230	22.62955	1.553392
GROW	0.004061	2.418740	2.376129
LEV	0.041491	45.11777	1.090254
ROE	0.147772	12.47165	1.226224
MRT	4.185834	23.29179	6.348132
SIZE	0.005595	2660.517	6.204746
C	1.048886	2617.785	NA

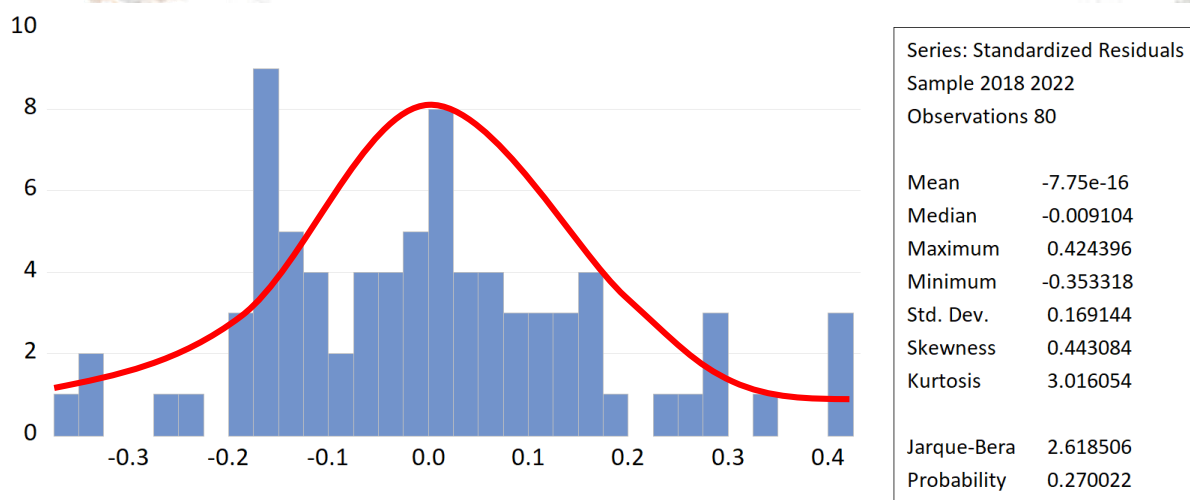
*Source: own computation using Eviews 12(Student version)*

As shown above, the individual value of VIF for each explanatory variable is very lower than 10, again the values of  $1/VIF$  are highly greater than 0.10 or 10%. Lastly, the cut-off or the mean value of variance inflation factor (VIF) is also significantly lower than 10. So, there is no evidence for the existence of a Multicollianirity problem in this data set. Therefore, the researcher concluded that multicollianirity is not a serious problem in this model.

**Assumption 5: Normality (Errors are Normally Distributed ( $ut \sim N(0, \sigma^2)$ ))**

To evaluate whether a data set is a normal distribution or not and to calculate the likelihood that an underlying random variable would be normally distributed, the histogram normality test was used. The histogram should be bell-shaped and the Jarque-Bera statistic would not be significant if the residuals were normally distributed. To support the null hypothesis that a normal distribution exists at the 5% level, the p-value indicated at the right bottom of the normality test figure must be larger than 0.05.

**Table 4.7 Normality graph and Test Result**



*Source: own computation using Eviews 12(Student version)*

Table 4.7 indicated that distribution of the panel observation is symmetric around its mean. The Jarque-Bera statistic has a P-value of 0.270022 implies that the p-value for the Jarque-Bera test is greater than 0.05 which indicates that there was no evidence for the presence of abnormality in the data. Thus, the null hypothesis that the data is normally distributed fail to reject since the p\_value was considerably in excess of 0.05.

**4.3. Model Selection (Random Effect versus Fixed Effect Models)**

The regression model test indicates that all CLRM assumptions are not violated, so the ordinary least square regression can be safely applied. However, since this study uses a panel data, there are two types of panel estimator approaches that are broadly used and can be employed, namely: fixed effects models (FEM) and random effects models (REM) Brooks, (2008). He recommended The Hausman specification test, to decide whether the fixed effect or random effect is employed

The following null hypothesis is formulated to for this purpose

**HO: Random effects model is appropriate**

**Table 4.8 Hausman test result**

Correlated Random Effects - Hausman Test  
Equation: Untitled  
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	6.934005	7	0.4358

*Source: own computation using Eviews 12(Student version)*

As shown on table 4.8 the correlated random effects Hausman Test shows, the P-value of a model is 0.4358, which is more than 5% level of significance. Hence, the null hypothesis of the random effect model is appropriate is failed to reject at 5 % of significant level. This implies that, random effect model is more appropriate than fixed effect model. Accordingly, the random effect model was employed to estimate the relationship between the dependent variable and the independent variables.

#### **4.4. Panel Data Regression Result and its Discussion**

##### **4.4.1. Operational Model**

As it was mentioned in chapter three the operational panel regression model used to find the significant determinants of dividend payout ratio of private insurance companies in Ethiopia measured by dividend payout ratio (DPR) is:

$$DPR_{it} = \alpha + \beta_1 Profit_{it} + \beta_2 LEV_{it} + \beta_3 Size_{it} + \beta_4 GROW_{it} + \beta_5 EPS_{it} + \beta_6 MRT_{it} + \beta_7 GDP_{it} + \epsilon_{it}$$



### 4.5. Interpretations on regression results

**Table 4.9 Random effects model regression results**

Dependent Variable: DPR  
 Method: Panel EGLS (Cross-section random effects)  
 Date: 06/13/23 Time: 13:52  
 Sample: 2018 2022  
 Periods included: 5  
 Cross-sections included: 16  
 Total panel (balanced) observations: 80  
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.392026	1.131119	2.998823	0.0037
ROE	-0.081463	0.423517	-0.192348	0.8480
SIZE	-0.234592	0.082195	-2.854106	0.0056
LEV	-0.219522	0.189816	-1.156500	0.2513
GROW	0.262501	0.057994	4.526311	0.0000
EPS	1.219942	0.168009	7.261153	0.0000
MRT	5.209570	1.912168	2.724431	0.0081
GDP	-1.239091	1.191053	-1.040333	0.3017

Effects Specification		S.D.	Rho
Cross-section random		0.120246	0.4144
Idiosyncratic random		0.142944	0.5856

Weighted Statistics			
R-squared	0.523140	Mean dependent var	0.196602
Adjusted R-squared	0.476778	S.D. dependent var	0.198588
S.E. of regression	0.143647	Sum squared resid	1.485672
F-statistic	11.28394	Durbin-Watson stat	1.938971
Prob(F-statistic)	0.000000		

The overall Adjusted R squared of the random effect regression model is 0.4767. This result indicates that 47.67% of the variation in dividend payout ratio of Ethiopian private insurance companies has been explained by independent variables, whereas the remaining percent of variation will be explained by other variables which couldn't be included in this study, This indicated that the model is a good fit. For panel data, According to (Cameron and Trivedi, 2009) cited by (Nyamsogoro, 2010) R-Squared greater than 20% is still large enough for reliable conclusions. The overall reliability and validity of the model was also further enhanced by the fact that the Prob (F-statistic) value is 0.000000 which less than 0.05 significance level indicates strong statistical significance.

Among the independent variables size has negative coefficient and significant relationship, growth in premium has positive coefficient and significant relationship, Market share positive coefficient and significant relationship, profitability negative coefficient and insignificant relationship, earning per share have a positive coefficient and significant relationship with dividend payout of private insurance share companies in Ethiopia, whereas leverage and GDP both have a negative coefficient on dividend payout of private insurance share companies and are

statistically insignificant. Hence, the p-value of F-statistics is zero, shows that the independent variables were jointly significant or insignificant causing variation in insurance companies profitability. Thus, based on the above regression output, the Panel linear regression model for this study could be written as follows:

$$DPR = 3.392 - 0.0814*ROE - 0.234*SIZE - 0.219*LEV + 0.262*GROW + 1.219*EPS + 5.209*MRT - 1.239*GDP_{it}$$

The remaining results of the analysis were used to assess the link to hypothesis that exists between the determinants of dividend payout ratio of insurance company of Ethiopia from 2018 up to 2022 on the following way

## 4.6. Discussion on Findings

### 4.6.1. Profitability (ROE)

This part is shows that the hypothesized and the actual relationship of the independent variables with profitability (ROE) of Ethiopian insurance company during the study period of 2018-2022.

VARIABLE	COEFFICIENT	Prob
ROE	-0.0814	0.848

*H1: There is no significantly positive relationship between profitability and dividend payout ratio of Ethiopian private Insurance companies*

As shown above, the coefficient of profitability (ROE) measured by net income to equity ratio is -0.0814 and its corresponding P-value 0.848. Meaning that holding the other independent variables constant, when profitability (ROE) increase by 1%, dividend payout ratio (DPR) of Ethiopian insurance companies will decrease by -0.08(-0.8%) and statistically insignificant at 10% of significance level. Therefore, the researcher fail to rejects the null hypothesis leverage has negative and insignificant relationship with dividend payout ratio. Which implies the more the profitable the insurance company are the less the probability of paying dividend. This insignificant value & relationship is inconsistent to the stated hypothesis. The finding is against to the signaling theory, which claims, in order to signal that the company is doing well, profitable firms should pay dividend.

The finding of this study agrees with (Hiwot, 2020), (Temesgen, 2016), they find profitability have negative relation with the dividend payout. Furthermore, several studies have documented a positive relationship between profitability and dividend payouts of the firm (Amidu & Abor, 2006), (Nuredin, 2012), (Habtamu, 2019), (Melkamu, 2022) and (Samuel, 2017)confirm positive association between profitability and dividend payout.

The study fails to reject the null hypothesis that there is no significant positive relationship between dividend payout ratio and ROE. This suggests that there no sufficient evidence to support the idea of a positive relationship between dividend payout ratio and ROE. Therefore, the study does not support the notion that ROE is the most important factor to consider when determining dividend payout ratio.

#### 4.6.2. Leverage

**H2: There is no significantly negative relationship between Leverage and dividend payout ratio of Ethiopian private Insurance companies**

VARIABLE	COEFFICIENT	Prob
LEVERAGE	-0.2195	0.2513

As shown above the coefficient of leverage (LEVG) measured by debt to asset ratio is -0.2195 and its corresponding P-value 0.2513. Meaning that holding other independent variables constant, when leverage (LEV) increase by one percent, dividend payout ratio (DPR) of Ethiopian insurance companies will decrease by 21.95% and statistically insignificant at 10% of significance level. Therefore, the researcher failed to reject the null hypothesis leverage has negative and insignificant relationship with dividend payout ratio.

The negative relationship is in line with the agency theory and could be explained in a way that insurance companies“ with low debt ratio tend to pay high dividends and increasing leverage is associated with decrease in dividend payout.

The research finding is consistent with the findings of (Nuredin, 2012), (Tewodros L. , 2020), (Habtamu, 2019), (Henok, 2016), (Danyew, 2009), (Kinfé T. , 2011), (Simegn, 2013) and (Alem, 2022). However, contradict to the findings of (Samuel, 2017) who conclude that, the probability of paying dividends increases with leverage.

#### 4.6.3. Firms Size

**H3: There is no significantly positive relationship between firm size and dividend payout ratio of Ethiopian private Insurance companies.**

VARIABLE	COEFFICIENT	Prob
SIZE	-0.2345	0.0056

As shown in the regression output presented in Table 4.8, the coefficient of Firm Size (FS) proxied by the natural logarithmic of firms' total asset -0.2345 and its corresponding P-value 0.0056. Meaning that holding other independent variables constant, when Firm Size (FS) increase by one percent, dividend payout ratio (DPR) of Ethiopian insurance companies will decrease by 0.23% and the relationship is statistically significant at 1% of significance level.

The regression analysis confirmed the hypothesis of this study. There is a statistically significant and negative relation between the DPR of insurance and their size. Therefore, the researcher failed to reject the null hypothesis. Therefore, this study supports the relevance of firm size as most important consideration of dividend payout ratio.

The research finding's sign is consistent with the findings of (Nuredin, 2012), (Tewodros L. , 2020), (Habtamu, 2019), (Henok, 2016) and (Samuel, 2017) but they all found insignificant. However, contradict to the findings of (Hiwot, 2020) and (Temesgen, 2016) who conclude that, the probability of paying dividends increases with firm size.



Size is found to have a significant but a negative impact on dividend payout against the theory of agency cost. (Elias, 2015) and (Melkamu, 2022) found the same negative significant result. The possible reason for negative significant outcome could be larger firms may retain their net income instead of paying out a higher dividend. Since larger firms have larger total assets, which can include a significant proportion of liabilities, they need to prioritize paying off their debts before distributing earnings as dividends to shareholders. This could result in a lower dividend payout ratio for larger firms, despite their larger size. The other reason could be larger firms may have a more diverse range of shareholders with varying preferences for dividend payouts. Some shareholders may prefer that the company reinvest its earnings for growth, while others may prefer to receive dividend payments. The company may need to balance these preferences when deciding on its dividend payout ratio

**4.6.4. Growth in revenue**

*H4: There is no significantly negative relationship between growth in revenue and dividend payout ratio of Ethiopian private Insurance companies.*

VARIABLE	COEFFICIENT	Prob
GROWTH	0.2625	0.0000

The study rejects Ho since growth and Ethiopian private insurance companies have negative and statistically significant relationship at 1% significance level. The Eviews12 output showed that the coefficient of growth is positive. According to the regression result, the coefficient of growth in revenue 0.2625 and it is statistically significant at 1 % level of significant. This means that an increase of growth in income of Ethiopian private insurance companies by 1% on average will result in 26.25% increment in dividend payout ratio, holding all other variables remain equal.

According to Chen and (Dewasir, et al., 2019), firms that have growth in sales have a tendency to pay lesser dividends. The capacity of a corporation to create considerable amounts of positive cash flow or earnings is essential to the growth of a company. (Tangjitprom, 2013), (Christopher & Rim, 2014) and (Kabbani, Richter, & ElBannan, 2020) All show a significantly negative relationship between growth in revenue and dividend payout.

The findings sign was consistent with (Temesgen, 2016) and contradicts with (Danyew, 2009) (Habtamu, 2019) (Hiwot, 2020) (Kinfe T. , 2011) (Samuel, 2017) most prior studies conducted in Ethiopian Insurance sector.

Based on regression result there is positive relationship between growth in sales and dividend payout ratio in the insurance industry. This means that as a company’s sales growth increases, its dividend payout ratio tends to increase as well. Companies with strong sales growth could have a higher profitability margin, which can increase their overall cash flow and ability to pay dividends to shareholders. This can create a positive cycle of growth, as higher dividends can attract more investors, which can in turn increase a company’s sales growth and profitability. This may allow them to pay higher dividends to shareholders without sacrificing their ability to invest in growth opportunities.

#### 4.6.5. Earnings per share

*H6: There is no significantly positive relationship between Earnings per share and dividend payout ratio of Ethiopian private Insurance companies*

VARIABLE	COEFFICIENT	Prob
EPS	1.2199	0.0000

The other objective of the study was to examine the extent to which EPS impacts on the dividend payout ratio of Ethiopian private insurance companies. The above box present that the coefficient of EPS is 1.2199 with significant value of 0.0000. Holding all other independent variables constant when EPS increase by 1% dividend payout ratio (DPR) of sampled insurance companies Increases. The result suggests that higher the EPS, the higher will be dividend payments and the estimated positive relation between dividend and EPS is consistent with (Temesgen, 2016). The finding is statistically significant at 1% significant level therefore, the researcher reject the null hypothesis and conclude that EPS significantly affect the dividend payout ratio of Ethiopian insurance industry.

A positive regression coefficient between EPS (earnings per share) and dividend payout ratio would suggest that as EPS increases, the dividend payout ratio also increases. One possible justification for this relationship is that a company with higher earnings may have more flexibility to pay out a higher percentage of its earnings as dividends.

Investors often look at a company's dividend payout ratio as a way to assess the company's financial performance and future prospects. According to signaling theory (Bhattacharya, 1979) a higher dividend payout ratio may indicate that the company is confident in its ability to maintain its current level of earnings or to grow earnings in the future. This may lead to increased investor confidence, which could potentially drive up the company's stock price.

Overall, a positive relationship between EPS and dividend payout ratio could be seen as a sign of financial strength and stability, and could potentially lead to increased investor confidence and a higher stock price.

#### 4.6.6. Market share

*H5: There is no significantly positive relationship between gross premium market share and dividend payout ratio of Ethiopian private Insurance companies.*

VARIABLE	COEFFICIENT	Prob
MARKET SHARE	5.2095	0.0081

The study rejects  $H_0$  since market share and dividend payout of Ethiopian private insurance companies have positive and statistically significant relationship at 1% significance level. The Eviews12 output showed that the coefficient of market share is positive. According to the regression result, the coefficient of market share is 5.2095 and it is statistically significant at 1 % level of significant. This means that an increase of market share of Ethiopian private insurance companies by 1% on average will result in 5.2095 increments in dividend payout ratio, holding all other variables constant. This means that insurance companies with highest market share in Ethiopia are more likely to pay high dividends for their shareholders

The finding was consistent with (Kabbani, Richter, & ElBannan, 2020) and (Grullon & Mechaely, 2019) and contradicts the finding of (Muhammad, et al., 2018). Because of this variable is not studied before, local researches are not included or unable to strengthen the findings by relating with prior studies. According to prior studies companies with a higher market share may have more funds available for dividend payouts, since they have a larger share of the market and are generating higher revenues. Additionally, companies with a larger market share may be better positioned to weather economic downturns and may have more stable cash flows which could allow them to sustain higher dividend payments over time.

Market share is a measure of a company's competitive position in the market. According to signaling theory, companies may use dividend payouts as a signal to investors about their financial strength and future prospects (Bhattacharya, 1979). In this context, a company with a higher market share may be seen as a competitive, stronger and more stable company, as it has a larger share of the market compared to its competitors. Additionally, a high market share can be seen as an indication that a company has a competitive advantage over its competitors, which can further enhance the company's reputation and credibility with investors. Therefore, in the context of signaling theory, a company with a higher market share may be more likely to pay dividends as a way to signal its strength and stability to investors. Overall, market share can be seen as an important factor in signaling theory, as it provides information about a company's competitive position and can contribute to the company's reputation and credibility with investors.



**4.6.7. GDP Growth Rate:**

*H7: There is no significantly positive relationship between GDP and dividend payout ratio of Ethiopian private Insurance companies.*

VARIABLE	COEFFICIENT	Prob
GDP	-1.239	0.3017

The study failed to reject Ho since GDP and Ethiopian private insurance dividend payout ratio has negative and statistically insignificant relationship. The coefficient of GDP is -1.239 with p-value 0.3017 which is statistically in significance at 10% level of significance. This indicates that there is no statistically significant negative relationship between dividend payout and GDP.

The finding supports (Habtamu, 2019) and (Tewodros L. , 2020), but contradicts with findings of (Alem, 2022) who conclude that, the probability of paying dividends increases with increment in GDP.

The study fails to reject the null hypothesis that there is no significant positive relationship between dividend payout ratio and GDP. This suggests that there no sufficient evidence to support the idea of a positive relationship between dividend payout ratio and GDP. Therefore, the study does not support the notion that GDP is the most important factor to consider when determining dividend payout ratio.

**4.7. Summary of the Analysis**

*Table 4.10: Comparison of the Test Result with the Expectation*

Variables	Notation	Expected Sign	Actual result	Status (Null hypotheses)	Statistical decision
Profitability	ROE	+	-	Fail to reject	Insignificant
Size	size	+	-	Rejected	Significant
Growth in Revenue	GROW	-	+	Rejected	Significant
Leverage	LEV	-	-	Fail to reject	Insignificant
Earnings per share	EPS	+	+	Rejected	Significant
Market Share	MRT	+	+	Rejected	Significant
GDP	GDP	+	-	Fail to reject	Insignificant

## Chapter Five

### 5. Summary of Findings Conclusions and Recommendations

The preceding chapter presented the results and discussion, while this chapter deals with conclusions and recommendations based on the results of the study. Accordingly, this chapter is organized into two subsections. Section 5.1 is about Summary of findings 5.2. Presents the conclusions and section 5.3 presents the recommendations.

#### 5.1. Summary of findings

The aim of this study was to investigate the factors that determine the dividend payout ratio for private insurance companies in Ethiopia. The study employed a quantitative research approach and utilized secondary data obtained from the National Bank of Ethiopia (NBE) and published annual reports of selected insurance companies. Data from sixteen insurance companies covering the period from 2018 to 2022 were analyzed and seven hypotheses were formulated and tested. The independent variables measured in the study included profitability, leverage, firm size, growth in revenue, earnings per share (EPS), market share, and GDP, while the dependent variable was the dividend payout ratio.

The analysis was conducted by using panel data with Eviews12 (student version) statistical software. Descriptive, correlation, and regression analyses were performed to analyze the data. The results showed that growth in revenue, firm size, market share, and EPS significantly influenced the dividend payout ratio for private insurance companies in Ethiopia. The relationship between growth in revenue, market share, and EPS with the dividend payout ratio was positive, while the relationship between firm size and the dividend payout ratio was negative. This suggests that larger size insurance companies in Ethiopia tend to retain their profits for future investments. When market share, revenue, and EPS increase, the dividend payout ratio of insurance companies also increases. However, the remaining variables, such as profitability, leverage, and GDP, were found to have an insignificant relationship with the dividend payout ratio. The independent variables explained approximately 47.67% of the variation in the dependent variable after adjusting for the number of independent variables in the model.

#### 5.2. Conclusion

The main focus of dividend payout decision is about how much to withdraw to investors and for future company needs how much to be retained. Therefore, making of the correct dividend payout decision is advantageous for a mutual benefit for the company and for the investors. As per the data obtained from secondary source (National bank of Ethiopia) of the respective companies' annual reports and macroeconomic variables and reached up on conclusions. It was explained that the dividend payout is relevant in the industry in contrary to the MM's irrelevancy theory and for deciding what amount to be paid they give much consideration.

Based on the regression analysis findings outlined in the above chapter three, the researcher concludes with some recommendations and provides insight on Ethiopian insurance company's influential factors of dividend payout decisions. However, it should be emphasized that the absence of active secondary stock market in the country has limited the scope of the study and limited research on this specific topic. Therefore, as the idea of dividend is controversial area in finance and one of a relatively broad concept, the research finding in somehow is different from other research's done in developed and emerging market countries case.

The influential factors of dividend payout decisions of insurance companies in Ethiopia over the period 2018 to 2022 were investigated. The aim was to identify influential factors that significantly influence dividend payout. There existed the knowledge gap that was not reached by other researchers in the country which most doesn't include the variable market share, exclude life insurance from statistical computation and exclude some of insurance company. The sampled companies are redundant in most of prior studies. Sixteen insurance companies were selected out of currently operational eighteen companies and collected secondary data from National Bank of Ethiopian. Many variables have been identified as influential factors of dividend payout policies in other empirical literature.

Against this background, in this study the relationship, relative importance and significance in dividend payout policy decision of Ethiopian insurance companies, for econometric analysis of the data regression analysis was identified as the most appropriate tool.

The descriptive statistics revealed the data to be normal. Also, the assumptions needed to be fulfilled for ordinary least square method (OLS) were tested; the data was found to be homoskedastic, free of autocorrelation free of Multi-collinearity and normally distributed.

In conclusion, this study examined the determinants of dividend payout ratio in the private insurance industry, incorporating firm-specific, industry-specific, and macroeconomic factors. The dependent variable was dividend payout ratio and the independent variables were ROE, size, leverage, growth, EPS, market share, and GDP.

The results of the regression analysis revealed that ROE, size, GDP, and leverage had an inverse relationship with dividend payout ratio, while growth, market share, and EPS had a direct relationship with dividend payout ratio. ROE, leverage, and GDP were found to be insignificant, while the rest of the variables were significant in explaining the variation in dividend payout ratio. The adjusted R-squared value was 0.4767, indicating that the model explained 47.67% of the variation in dividend payout ratio.

This study has made several contributions to the literature on dividend payout ratio in the private insurance industry. First, it included all private insurance companies as a sample, including both life and non-life insurance data. Second, it incorporated the most recent data available, providing up-to-date insights into the determinants of dividend payout ratio. Third, it included a new variable, market share, which has been shown to have a direct



relationship with dividend payout ratio. Fourth, the study incorporated all factors, including firm-specific, industry-specific, and macroeconomic factors providing a comprehensive analysis of the determinants of dividend payout ratio.

Based on the results, the researcher recommend that private insurance companies carefully consider their financial position growth opportunities and market conditions when making dividend payout decisions. While factors such as growth, market share, and EPS may signal financial strength, companies should also take into account their investment opportunities and future growth prospects before deciding on the appropriate dividend payout ratio. Additionally, it is important to consider other factors that may influence the decision to pay dividends, such as the level of debt and macroeconomic conditions.

### **5.3. Recommendations**

#### **Recommendation for the companies' manager and owner:**

Based on the findings of the study, the researcher recommend that private insurance companies managers and owners carefully consider their financial position, growth opportunities and market conditions when making dividend payout decisions. Companies should prioritize retaining earnings for growth and investment opportunities, even if they have high ROE, market share, or EPS. Additionally, companies should be mindful of their leverage levels and overall debt position as these factors can impact their ability to pay dividends over the long term. Moreover, it is important to consider the potential impact of macroeconomic conditions on dividend payout decisions. By taking a strategic approach to dividend policy, companies can maximize long-term value creation for their stakeholders.

#### **Recommendation for policy makers:**

The results of this study suggest that policy makers should prioritize creating a stable macroeconomic environment that enables companies to make informed dividend payout decisions. Additionally, policy makers may consider implementing regulations that encourage companies to retain earnings for growth and investment opportunities, rather than paying out high dividends. This could help to promote sustainable growth and stability in the private insurance industry over the long term.

#### **Recommendation for future researchers:**

Future researchers should consider expanding the scope of their studies to include additional factors that may influence dividend payout decisions such as tax policies regulation, and ownership structure. Additionally, future studies should incorporate the finance sector as a whole, as opposed to focusing solely on the private insurance industry or banks. This could provide a more comprehensive understanding of the factors that determine dividend payout decisions across the broader financial sector. Moreover, future researchers recommended exploring the

impact of dividend payout decisions on shareholder value as well as the potential impact of dividend payout decisions on corporate governance.

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Appendices

ID	year	DPR	Size	ROE	LEV	EPS	GROW	MRT	GDP
1	2018	0.458	14.686	0.101	0.566	0.460	-0.997	0.107	0.077
1	2019	0.665	14.731	0.098	0.534	0.380	0.182	0.088	0.094
1	2020	0.651	14.869	0.123	0.540	0.400	0.120	0.080	0.066
1	2021	0.694	15.085	0.167	0.546	0.360	0.427	0.092	0.063
1	2022	0.724	15.245	0.176	0.546	0.350	0.383	0.107	0.038
2	2018	0.114	12.622	0.145	0.513	0.098	-0.997	0.014	0.077
2	2019	0.873	12.828	0.103	0.554	0.176	0.243	0.012	0.094
2	2020	0.682	12.952	0.190	0.538	0.254	0.076	0.011	0.066
2	2021	0.285	13.113	0.175	0.529	0.125	0.237	0.011	0.063
2	2022	0.450	13.282	0.166	0.514	0.290	0.112	0.010	0.038
3	2018	0.770	13.927	0.259	0.590	0.272	-0.998	0.070	0.077
3	2019	0.518	14.140	0.199	0.575	0.327	-0.004	0.048	0.094
3	2020	0.714	14.256	0.205	0.562	0.269	0.095	0.043	0.066
3	2021	0.660	14.496	0.190	0.642	0.279	0.243	0.043	0.063
3	2022	0.604	14.776	0.199	0.620	0.339	0.217	0.044	0.038
4	2018	0.738	13.112	0.278	0.700	0.497	-0.999	0.041	0.077
4	2019	0.892	13.150	0.257	0.683	0.443	0.094	0.031	0.094
4	2020	0.835	13.155	0.265	0.667	0.455	0.044	0.026	0.066
4	2021	0.685	13.327	0.247	0.631	0.493	0.108	0.023	0.063
4	2022	0.679	13.523	0.269	0.616	0.486	0.077	0.021	0.038
5	2018	0.730	13.930	0.141	0.681	0.334	-0.998	0.092	0.077
5	2019	0.330	13.898	0.182	0.710	0.334	-0.048	0.061	0.094
5	2020	0.000	14.159	0.151	0.745	0.000	0.031	0.052	0.066
5	2021	0.000	14.179	0.140	0.746	0.000	0.050	0.044	0.063
5	2022	0.000	14.142	0.023	0.729	0.000	-0.040	0.035	0.038
6	2018	0.000	14.445	0.195	0.831	0.124	-0.997	0.076	0.077
6	2019	0.093	14.244	0.223	0.694	0.164	-0.052	0.050	0.094
6	2020	0.103	14.366	0.237	0.647	0.177	0.033	0.042	0.066
6	2021	0.431	14.487	0.212	0.643	0.352	0.213	0.041	0.063
6	2022	0.739	14.617	0.177	0.610	0.298	0.249	0.043	0.038
7	2018	0.357	14.357	0.199	0.595	0.496	-0.998	0.122	0.077
7	2019	0.159	14.426	0.287	0.543	0.349	-0.361	0.054	0.094
7	2020	0.298	14.559	0.192	0.577	0.295	0.150	0.051	0.066
7	2021	0.185	14.711	0.189	0.587	0.303	0.199	0.049	0.063
7	2022	0.194	14.903	0.179	0.569	0.335	0.341	0.055	0.038
8	2018	0.460	14.236	0.135	0.573	0.505	-0.996	0.075	0.077
8	2019	0.682	14.233	0.048	0.532	0.338	0.127	0.059	0.094
8	2020	0.617	14.301	0.075	0.516	0.299	0.120	0.054	0.066
8	2021	0.565	14.409	0.190	0.577	0.316	0.224	0.053	0.063
8	2022	0.549	14.585	0.197	0.572	0.371	0.304	0.058	0.038
9	2018	0.469	13.726	0.228	0.657	0.410	-0.995	0.063	0.077
9	2019	0.696	13.948	0.232	0.671	0.390	0.135	0.050	0.094
9	2020	0.837	14.173	0.202	0.623	0.230	0.117	0.045	0.066
9	2021	0.491	14.462	0.186	0.633	0.290	0.355	0.050	0.063
9	2022	0.535	14.753	0.209	0.619	0.350	0.379	0.057	0.038





10	2018	0.279	13.313	0.204	0.760	0.009	-0.991	0.056	0.077
10	2019	0.090	13.491	0.222	0.733	0.010	0.074	0.042	0.094
10	2020	0.000	13.644	0.221	0.711	0.010	0.025	0.035	0.066
10	2021	0.522	13.794	0.206	0.708	0.362	0.024	0.029	0.063
10	2022	0.501	14.096	0.185	0.747	0.341	0.174	0.028	0.038
11	2018	0.171	13.325	0.273	0.608	0.010	-0.998	0.037	0.077
11	2019	0.033	13.506	0.199	0.647	0.008	0.071	0.027	0.094
11	2020	0.758	13.665	0.174	0.612	0.280	0.085	0.024	0.066
11	2021	0.410	13.865	0.168	0.632	0.250	0.338	0.026	0.063
11	2022	0.470	14.205	0.200	0.658	0.310	0.135	0.025	0.038
12	2018	0.096	12.664	0.188	0.654	0.220	-0.997	0.017	0.077
12	2019	0.662	12.924	0.189	0.684	0.240	0.169	0.013	0.094
12	2020	0.652	12.996	0.211	0.640	0.290	0.147	0.013	0.066
12	2021	0.718	13.241	0.198	0.621	0.280	0.121	0.011	0.063
12	2022	0.749	13.507	0.189	0.639	0.260	0.547	0.015	0.038
13	2018	0.284	13.117	0.223	0.736	0.370	-0.992	0.045	0.077
13	2019	0.447	13.304	0.203	0.731	0.340	0.051	0.033	0.094
13	2020	0.370	13.442	0.123	0.680	0.210	0.076	0.029	0.066
13	2021	0.183	13.858	0.137	0.692	0.180	0.321	0.031	0.063
13	2022	0.176	14.088	0.140	0.713	0.180	0.372	0.035	0.038
14	2018	0.133	12.893	0.161	0.631	0.235	-0.996	0.021	0.077
14	2019	0.333	13.086	0.089	0.675	0.214	0.215	0.018	0.094
14	2020	0.358	13.303	0.136	0.710	0.164	0.294	0.019	0.066
14	2021	0.304	13.480	0.122	0.739	0.144	0.367	0.021	0.063
14	2022	0.000	13.531	0.160	0.689	0.000	0.224	0.021	0.038
15	2018	0.461	12.770	0.238	0.698	0.301	-0.992	0.026	0.077
15	2019	0.402	12.950	0.192	0.668	0.270	0.229	0.022	0.094
15	2020	0.451	13.360	0.135	0.728	0.133	0.221	0.022	0.066
15	2021	0.482	13.552	0.159	0.716	0.192	0.345	0.024	0.063
15	2022	0.361	13.896	0.179	0.768	0.201	0.433	0.029	0.038
16	2018	0.000	12.708	0.044	0.580	0.244	-0.996	0.021	0.077
16	2019	0.100	12.818	0.046	0.625	0.051	0.013	0.015	0.094
16	2020	0.103	12.816	0.065	0.606	0.075	-0.004	0.012	0.066
16	2021	0.000	13.016	0.084	0.744	0.000	0.172	0.012	0.063
16	2022	0.235	13.180	0.065	0.699	0.075	0.331	0.013	0.038

Regression output

Dependent Variable: DPR  
 Method: Panel Least Squares  
 Date: 06/19/23 Time: 06:22  
 Sample: 2018 2022  
 Periods included: 5  
 Cross-sections included: 16  
 Total panel (balanced) observations: 80

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.719960	1.024152	2.655818	0.0097
ROE	0.468335	0.384411	1.218318	0.2271
SIZE	-0.190246	0.074803	-2.543298	0.0131
LEV	-0.265763	0.203692	-1.304729	0.1961
GROW	0.250551	0.063725	3.931753	0.0002
MRT	4.058357	2.045931	1.983623	0.0511
EPS	1.256619	0.173460	7.244450	0.0000
GDP	-0.777363	1.363169	-0.570262	0.5703

R-squared	0.574835	Mean dependent var	0.418824
Adjusted R-squared	0.533500	S.D. dependent var	0.262130
S.E. of regression	0.179037	Akaike info criterion	-0.507812
Sum squared resid	2.307900	Schwarz criterion	-0.269609
Log likelihood	28.31247	Hannan-Quinn criter.	-0.412309
F-statistic	13.90659	Durbin-Watson stat	1.342872
Prob(F-statistic)	0.000000		

Fixed effect out put

Dependent Variable: DPR  
 Method: Panel Least Squares  
 Date: 06/19/23 Time: 06:24  
 Sample: 2018 2022  
 Periods included: 5  
 Cross-sections included: 16  
 Total panel (balanced) observations: 80

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.132112	2.356473	2.602242	0.0118
ROE	-0.728572	0.520055	-1.400951	0.1666
SIZE	-0.421340	0.166922	-2.524173	0.0144
LEV	-0.171009	0.206775	-0.827030	0.4117
GROW	0.311414	0.070620	4.409718	0.0000
MRT	6.324993	2.074857	3.048399	0.0035
EPS	1.169068	0.185077	6.316644	0.0000
GDP	-2.914932	1.741314	-1.673984	0.0996

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.785442	Mean dependent var	0.418824
Adjusted R-squared	0.702630	S.D. dependent var	0.262130
S.E. of regression	0.142944	Akaike info criterion	-0.816708
Sum squared resid	1.164675	Schwarz criterion	-0.131875
Log likelihood	55.66830	Hannan-Quinn criter.	-0.542139
F-statistic	9.484649	Durbin-Watson stat	2.387745
Prob(F-statistic)	0.000000		

HAUSMAN TEST

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	6.709845	7	0.4597

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
ROE	-0.728572	-0.081463	0.091091	0.0320
SIZE	-0.421340	-0.234592	0.021107	0.1986
LEV	-0.171009	-0.219522	0.006726	0.5542
GROW	0.311414	0.262501	0.001624	0.2248
MRT	6.324993	5.209570	0.648647	0.1661
EPS	1.169068	1.219942	0.006027	0.5123
GDP	-2.914932	-1.239091	1.613569	0.1871

Cross-section random effects test equation:

Dependent Variable: DPR

Method: Panel Least Squares

Date: 06/19/23 Time: 06:26

Sample: 2018 2022

Periods included: 5

Cross-sections included: 16

Total panel (balanced) observations: 80

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.132112	2.356473	2.602242	0.0118
ROE	-0.728572	0.520055	-1.400951	0.1666
SIZE	-0.421340	0.166922	-2.524173	0.0144
LEV	-0.171009	0.206775	-0.827030	0.4117
GROW	0.311414	0.070620	4.409718	0.0000
MRT	6.324993	2.074857	3.048399	0.0035
EPS	1.169068	0.185077	6.316644	0.0000
GDP	-2.914932	1.741314	-1.673984	0.0996

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.785442	Mean dependent var	0.418824
Adjusted R-squared	0.702630	S.D. dependent var	0.262130
S.E. of regression	0.142944	Akaike info criterion	-0.816708
Sum squared resid	1.164675	Schwarz criterion	-0.131875
Log likelihood	55.66830	Hannan-Quinn criter.	-0.542139
F-statistic	9.484649	Durbin-Watson stat	2.387745
Prob(F-statistic)	0.000000		