The Effect of Dividend Policy, Leverage and Liquidity on Firm Value (Study on Stock of Companies Actively Listed in LQ-45 in The Indonesian Stock Exchange (IDX) for The Period 2010-2019)

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Abstract

This was a quantitative study which aims to determine the effect of Dividend Policy as measured by Dividend Payout Ratio, Leverage as measured by Debt Ratio and Liquidity as measured by Current Ratio on firm value as measured by Price to Book Value. The data used in this study were analyzed using Panel Data Regression Random Effect Model which was processed with Eviews 12. The research object used was stock of companies actively listed in LQ-45 in the Indonesian Stock Exchange (IDX) for the period 2010-2019.

The results of the study showed that: 1) Dividend Policy has no significant effect on Firm Value with a probability value of 0.9941; 2) Leverage has no significant effect on Firm Value with a probability value of 0.0968; and 3) Liquidity has a significant positive effect on Firm Value with a probability 0.0322. The R-Squared value in this study is 0.255911, it means that the contribution of all independent variables in explaining the variable is 25.59%.

Keywords: *are used to retrieve documents in an information system such as an online journal or a search engine. (Mention 4-5 keywords)*

INTRODUCTION

Background To The Study

The capital market is a place where investors and issuers meet, where investors are parties who have funds and issuers are parties who need capital. The capital market facilitates the trading of financial instruments such as stocks and bonds (debt securities). The capital market operating in Indonesia is known as the Indonesia Stock Exchange (IDX). The capital market plays an

important role in driving economic growth, because it can help companies obtain the funds needed for expansion, innovation and/or development.

In order to mitigate fluctuating market conditions and maintain the performance and stability of the capital market, the Government through the Financial Services Authority (OJK) has prepared a roadmap for the Indonesian capital market 2023-2027. In addition, OJK also synergizes and collaborates with all stakeholders, both Ministries and Government Institutions, Bank Indonesia, Self-Regulatory Organizations , associations of institutions and professions supporting the capital market so that the direction of capital market development can be aligned with the development of the financial services sector and encourage the role of the private sector in financing government development programs as stated in the National Medium-Term Development Plan (RPJMN) 2020-2024.

Based on IDX data in 2023, the number of companies selling shares was recorded at 903 companies. In addition, there was an increase in public interest in investing in stocks, bonds and mutual funds by 12.6 million investors. The Composite Stock Price Index (IHSG) in 2023 closed at 7,272.80 or increased by 6.62% from the closing of trading the previous year. The average daily transaction value (RNTH) reached IDR 10.75 trillion and was followed by a daily transaction volume of 19.8 billion shares, and a daily transaction frequency of 1.2 million times. In terms of investors, it also experienced a growth of 17.95% from 10.31 million at the end of 2022 to 12.16 million in December 2023.

Based on data obtained from www.ojk.go.id it can be seen that market capitalization in Indonesia has tended to increase over the last 13 (thirteen) years. This can be seen from the following table 1.1:

Table 1. Market Capitalization Development in Indonesia (in Trillions)

Period	IDX	LQ45
2010	3,247.10	2,125.55
2011	3,537.29	2,332.67
2012	4,126.99	2,552.25
2013	4,219.02	2,547.06
2016	5,753.61	3,796.30
2017	7,052.39	4,688.93
2018	7,023.50	4,461.49
2019	7,265.02	4,759.64
2020	6,970.01	4,260.98
2021	8,255.62	4,515.32
2022	9,499.14	5,390.36
2023	11,674.06	5,721.49

Source: Processed data, 2024

Table 1.1. shows that market capitalization tends to be stable and increase in 2010 to 2019. In 2020 there was a slight decline due to the Covid-19 pandemic which weakened economic activities. In 2021 to 2023 there was a very significant increase. The end of 2023 closed with the highest record of market capitalization on the

IDX, reaching 11,674.06 trillion. This reflects the optimism of market players and stakeholders in the Indonesian capital market to start 2024.

The development of the IHSG in Indonesia from 2010 to 2023 tends to increase, this can be seen from the following table 1.2:

Table 2. Development of the Composite Stock Price Index in Indonesia

Period	IHSG			
	Highest	**Lowest**	**End**	**Δ (%)**
2010	3,789.10	2,475.57	3,703.51	46.13
2011	4,193.44	3,269.45	3,821.99	3.2
2012	4,375.17	3,654.58	4,316.69	12.94
2013	5,214.98	3,967.84	4,274.18	-0.98
2016	5,472.32	4,414.13	5,296.71	15.32
2017	6,355.65	5,250.97	6,355.65	19.99
2018	6,689.29	5,633.94	6,194.50	-2.54
2019	6,547.88	5,826.87	6,299.54	1.7
2020	6,325.41	3,937.63	5,979.07	-5.09
2021	6,723.39	5,760.58	6,581.48	10.08
2022	7,318.02	6,568.17	6,850.62	4.09
2023	7,303.89	6,565.73	7,272.80	6.16

Source: Processed data, 2024

Table 1.2 shows that at the end of 2023, the IDX recorded the highest IHSG record in history with. IHSG is the average of stock prices on the stock exchange in real time so it can be used as an indicator of the latest capital market movements. The IHSG trend which tends to increase shows that stock prices in the capital market have also increased.

One of the companies that investors are interested in is a company listed on the LQ-45 BEI. Companies listed on the LQ-45 BEI always change every year and are selected based on certain criteria such as market capitalization, trading frequency and transaction value. Companies listed on the LQ-45 are companies that have high liquidity and good fundamentals. A company with high liquidity means that the stock price can be bought or sold easily so that investors can manage their portfolios quickly according to current market conditions. In addition, companies listed on the LQ-45 tend to have good fundamentals, reflecting the health and growth potential of the company, as well as its ability to provide long-term returns for investors. The companies listed on the LQ-45 index come from various industrial sectors such as manufacturing, finance, and mining. This can help investors diversify their portfolios and reduce investment risk if only in one sector.

In a public company, Firm Value is very important because it can influence investors' decisions to invest or not. Firm Value is an estimate of the value of a company in the market based on certain factors. The first factor that is thought to influence Firm Value is Dividend Policy. Dividend Policy is a policy made by the company to decide whether the profits obtained by the company will be distributed as dividends or remain as retained earnings. Dividend Policy can influence investors' perspectives in assessing the

company. The size of the dividend can affect the stock price. Large dividends will increase Firm Value. This will increase the Company's Value in the eyes of investors. Research conducted by (Dessriadi et al., 2022 ; Hidayat & Triyonowati, 2020 ; Mispiyanti & Wicaksono, 2020 ; Oktaviarni, 2019 ; Mispiyanti & Wicaksono, 2020 and Maggee, 2018) obtained significant positive results that Dividend Policy has a positive effect on Firm Value. In contrast to the research conducted by (Mubyarto, 2019 ; Muslichah & Hauteas, 2019; and Ginting, 2018) which obtained the results that Dividend Policy has no effect on Firm Value. Meanwhile, research conducted by (Sondakh, 2019) stated that Dividend Policy has a negative effect on Firm Value.

The second factor that is thought to affect Firm Value is Leverage. Leverage is an estimate of the risk inherent in a company. The higher the Leverage Ratio, the higher the risk that will be borne by the company, especially if the company cannot fulfill its obligations. According to (Chen & Chen, 2011), in general, Leverage has a negative effect on Firm Value. This opinion is in line with the results of research (Mubyarto, 2019) which states that Leverage has a significant negative effect on Firm Value. Meanwhile, research (Annisa et al., 2023 and Dessriadi et al., 2022) provides different results Leverage has a positive effect on Firm Value. Meanwhile, according to Oktaviarni (2019) , Leverage has no effect on Firm Value.

The third factor that is thought to affect Firm Value is Liquidity. Liquidity is the company's ability to meet its short-term needs. The Liquidity Ratio is a measurement of the company's assets' ability to finance its short-term liabilities or debts. If a company has a high Liquidity Ratio, it will certainly attract the attention of investors, because it will be a signal to investors that the company has good performance and can increase stock prices, which means that the Company's Value also increases. This is in line with the results of research conducted by (Sondakh, 2019 and Oktaviarni, 2019) which states that Liquidity has a positive effect on Firm Value.

Research Problems
Based on the differences in research results mentioned in the background, further research is needed on the influence of Dividend Policy, Leverage and Liquidity on Firm Value. The formulation of the problem in this study is:

1. Does Dividend Policy Have an Influence on Firm Value?

2. Does Leverage have an impact on Firm Value?

3. Does Liquidity have an influence on Firm Value?

4. Leverage and Liquidity Policies Affect Firm Value?

Porpose of The Study
Based on the problem formulation above, the objectives of this research are:

1. To analyze the influence of Dividend Policy on Firm Value;

2. To analyze the effect of Leverage on Firm Value;

3. To analyze the effect of Liquidity on Firm Value; and

4. To analyze the influence of Dividend Policy, Leverage and Liquidity on Firm Value.

Benefits of Research
Based on the formulation of the problem and research objectives above, the benefits of this research are as follows:

1. Theoretical Benefits

    a. It is expected to sharpen analytical thinking and increase knowledge for writers and readers regarding the theory of corporate financial management, especially the influence of Dividend Policy, Leverage and Liquidity on Firm Value in companies listed on the LQ-45 BEI index for the 2010-2019 period.

    b. It is expected to provide empirical evidence to readers regarding the influence of Dividend Policy, Leverage and Liquidity on Firm Value in companies listed on the BEI LQ-45 index for the 2010-2019 period.

2. Practical Benefits

    a. For Investors

    It is hoped that this can be an additional reference for basing investment decisions.

    b. For Companies

    It is expected to be an additional foundation for managers, especially in the field of corporate financial management, in determining policy directions that focus on increasing Corporate Value.

    c. For Next Writers

    It is hoped that it can be a reference to enrich and sharpen research analysis so that it can develop scientific knowledge regarding this discussion in a more comprehensive and updated manner to suit existing phenomena.

LITERATURE REVIEW
Theoretical Study

1. Signaling Theory

According to Brigham and Houston (2006) a signal is "an action taken by a company to give investors an indication of how management views the company's prospects. This signal is in the form of information about what management has done to realize the owner's wishes". Signaling theory is used to understand management actions in conveying information to investors. Information presented by the company in the form of financial reports becomes a signal or announcement to investors regarding the company's financial condition which will later be used for investor investment decisions. Announcements about financial data and company conditions heard by investors will be processed and interpreted into good news or bad news. If the signal is good, there will be an increase in the company's stock trading volume. However, if the signal is bad, there will be a decrease in the company's stock trading volume. In this theory, the company's management as an internal party provides a signal in the form of a financial report to investors or external parties. Information issued by management is important because it can influence the investment decisions of investors who will invest their shares in the company. This information can change the decisions of investors and creditors in viewing the condition of the company. Signaling theory can be used for Firm Value, Dividend Policy, Leverage and Liquidity.

The relationship between signaling theory and Dividend Policy is that dividends are considered a signal that means the company has good prospects in the future. Dividends can increase investor interest in investing in the company so that the company's stock price can increase, which means that the Company's Value will also increase. Conversely, if there is a decrease in dividends, it can usually cause a decrease in stock prices, which means a decrease in Firm Value.

Signaling theory is related to the Leverage Ratio which is measured by the Debt Ratio. The Debt Ratio is used to determine the extent to which a company can pay off its debts, both short-term and long-term debts, or to measure the amount of funds derived from debt. The higher the use of debt, the more likely the company is to have difficulty returning or paying off debt. The lower the Debt Ratio level, the better the signal from the company to investors.

Signaling theory is related to Liquidity which is measured by the Current Ratio, where the higher the company's ability to pay its short-term obligations will provide a good signal or good news to investors. This shows that the company is able to solve its debt problems, the higher the Current Ratio value, the greater the company's chances of paying and solving its problems related to debt.

2. Firm Values

Firm Value is the price that is willing to be paid to buy a company. Firm Value also shows the net worth of the company owner. The main goal of the company owner is to increase the Firm Value. The size of the Firm Value can influence the investor's decision to invest because the Firm Value can reflect the company's financial performance which is summarized in the company's financial ratio analysis. Firm Value can describe the commitment, consistency and high professionalism of the company's management in an effort to maintain the company's financial performance in order to compete in the capital market. What can be used as an indicator of Firm Value is the stock price. The higher the stock price of a company, the higher the prosperity of the shareholders.

The indicators that can be used to measure Firm Value are as follows:

a. Price Earning Ratio (PER)

PER shows how much money investors are willing to spend to pay for each dollar of reported earnings (Brigham and Houston, 2006:110). The use of PER is to see how the market values the company's performance as reflected by earnings per share. PER shows the relationship between the common stock market and earnings per share.

b. Tobin's Q

Tobin's Q was discovered by a Nobel Prize winner from the United States, James Tobin. Tobin's Q is the market value of a company's assets at their replacement cost. According to the concept, the Tobin's Q Ratio is superior to the Market Value to Book Value Ratio because this Ratio focuses on how much the Company is currently worth relative to how much it costs to replace it currently. In practice, the Tobin's Q Ratio is difficult to calculate accurately because estimating the replacement cost of a company's assets is not an easy job (Margaretha, 2014:20).

c. Price to Book Value (PBV)

PBV is an assessment of an issuer against its book value, which is obtained from the total asset value divided by the number of shares. PBV can be used as a consideration for investors, whether the shares to be purchased offer a price that is in accordance with the actual value of the company. For companies that are running well, this ratio generally reaches above one, which indicates that the market value of the stock is greater than its book value. The greater the PBV ratio, the higher the company is valued by investors relative to the funds that have been invested in the company. A high PBV will make the market believe in the company's future prospects. That is also what the company owners want, because a high Firm Value indicates that shareholder prosperity is also high. According to (Brigham and Houston, 2006:112), Firm Value can be formulated as follows:

$$PBV = \frac{\text{Market Price Per Share}}{\text{Book Value Per Share}}$$

In this study, the author chose PBV as an indicator of Firm Value because PBV is widely used in investment decision making. In addition, there are several advantages of PBV, namely book value is a stable and simple measure that can be compared with market prices. PBV can also be compared between similar companies to show signs of expensive/cheap shares.

3. Dividend Policy

Dividend Policy is the distribution of the company's net profit distributed to shareholders with the approval of the General Meeting of Shareholders. Dividend Policy is basically the determination of the portion of profit that will be given to shareholders. The decision on dividend payment policy is important regarding whether cash flow will be paid to investors or will be retained for reinvestment by the company. The amount of dividends depends on the Dividend Policy of each company.

If dividends are paid well, the stock price tends to be high, so the Firm Value is also high. Conversely, if the dividends paid are small, the company's stock price is also low. The ability to pay dividends is closely related to the company's ability to generate profits. If the company generates large profits, the ability to pay dividends is also good. Therefore, with large dividends will increase the Firm Value

In dividend payments, companies can use certain forms, such as cash dividends, dividends in the form of other assets, dividends in the form of debt securities or dividends in the form of shares. According to Mulyawan (2015:257) There are several forms of cash dividends given by companies to shareholders. Some forms of Dividend Policy are as follows:

a. Stable dividend policy

Dividends have measurements that can be used as measuring tools in a company, namely as follows:

b. Dividend Yield

Dividend yield is the expected dividend divided by the current share price of a stock (Brigham and Houston, 2006). A stock's dividend yield is simply an estimate of the dividend as a proportion of the stock price. It can be useful to consider a company with a stable growth forecast on dividends. High dividends may indicate that investors expect low dividend growth or that they require a high rate of return (Brealey et al, 2007).

$$\text{Dividend Yield} = \frac{\text{Dividen Per Share}}{\text{Stock Price}}$$

c. Dividend Payout Ratio (DPR)

DPR is a comparison between dividends paid and net income earned and is usually presented as a percentage. The higher the

DPR will benefit investors but from the company's side it will weaken internal financial because it reduces retained earnings. But on the other hand, the smaller the DPR will harm shareholders (investors) but the company's internal financial will be stronger (Basri and Indriyo, 2012).

$$\text{Dividend Payout Ratio} = \frac{\text{Dividend Per Share}}{\text{Earning Per Share}}$$

In this study, DPR is used as an indicator of Dividend Policy because it reflects the percentage of each rupiah generated distributed to owners in cash; calculated by dividing cash dividends per share by earnings per share. With DPR, it can be seen whether the dividends for investors or shareholders are good enough compared to other companies in the same business sector. In addition, DPR can affect Firm Value.

4. Leverage

Leverage means the use of fixed costs in an effort to increase (or lever up) profitability. The decision to choose to use equity or borrowed capital must use several mature calculations. In this case, the Leverage Ratio is a ratio used to measure the extent to which a company's assets are financed by debt. This means the amount of debt used by the company to finance its business activities when compared to its own capital. The advantages of knowing this ratio are as follows:

a. Can assess the company's position capability in relation to obligations to other parties.

b. Assess the company's ability to meet fixed obligations.

c. Knowing the balance between the value of assets, especially fixed assets, and equity.

d. To make decisions on the use of funding sources in the future. (Kasmir, 2008:113)

In practice, if the calculation results show that the company has a high Leverage Ratio, this will result in a greater risk of loss. But there is also a chance of getting a big profit. On the other hand, if the company has a lower Leverage Ratio, it certainly has a smaller risk of loss, especially when the economy is declining. This impact also results in a low rate of return when the economy is high (Kasmir, 2008).

According to (Sawir, 2000:13) the ratio commonly used to measure leverage is as follows:

a. Debt Ratio (Debt to Total Asset Ratio)

This ratio shows the proportion between liabilities owned and total assets owned. The higher the percentage result, the greater the financial risk for creditors and shareholders.

$$\text{Debt Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

b. Debt to Equity Ratio (DER)

This ratio describes the comparison of debt and equity in company funding and shows the company's own capital ability to meet all its obligations.

$$\text{DER} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

c. Profit to Interest Expense Ratio or Times Interest Earned (TIE)

This ratio is also called the Coverage Ratio, measuring the ability to fulfill annual interest obligations with operating profit or Earning Before Interest and Taxes(EBIT), the extent to which operating profit can fall without causing failure to fulfill the obligation to pay interest on loans.

$$\text{TIE} = \frac{\text{Earning Before Interest and Taxes (EBIT)}}{\text{Interest Charge}}$$

d. Fixed Charge Coverage (FCC) Ratio

This ratio is similar to the TIE ratio, but this ratio is more complete because this ratio takes into account the company's obligations if the company leases (hire-purchases) assets and obtains long-term debt based on a hire-purchase contract.

$$\text{FCC} = \frac{\text{Income Before Taxes} + \text{Interest Charge} + \text{Lease Obligation}}{\text{Interest Charge} + \text{Lease Obligation}}$$

In this study, to measure the company's Leverage, the Debt Ratio (Debt to Total Asset Ratio) is used because this ratio can show how much of the company's wealth can be used to pay the company's debt. Company assets that come too much from debt will create a risk for the company because if the company uses more debt to finance its assets, it will affect the company's increasing liabilities both in the form of fixed liabilities and interest.

5. Liquidity

Liquidity is the company's ability to meet its short-term obligations. Liquidity can show the company's ability to generate net working capital from the total assets it owns and shows the company's sufficient funds for operational activities and dividend payments. If the company has a high level of Liquidity, it will certainly attract the attention of investors, because it will be a signal to investors that the company has good performance and can increase stock prices, which means that the Company's Value also increases.

According to Hery (2016:152), the following are the types of Liquidity Ratios that are commonly used to measure a company's ability to meet short-term obligations:

a. Current Ratio

Current Ratio is used to measure a company's ability to meet its short-term obligations that will mature by using the total current assets available. The Current Ratio describes the amount of available current assets compared to total current liabilities. Here is the formula used to calculate the Current Ratio:

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}}$$

b. Quick Ratio or Acid Test Ratio

A more precise scale of the company's Liquidity is found in the ratio called the Very Current Ratio, where inventory and advance costs are removed from the total current assets, leaving only liquid current assets which are then divided by current liabilities. The Quick Ratio is calculated using the following formula:

$$\text{Quick Ratio} = \frac{\text{Cash} + \text{Securities} + \text{Receivables}}{\text{Current Liabilities}}$$

c. Cash Ratio

It is a comparison of cash in the company and in the bank with total current liabilities. Shows the company's ability to meet its short-term obligations with cash and cheaply traded securities,

which are available within the company. Here is the formula for calculating the Cash Ratio:

$$\text{Cash Ratio} = \frac{\text{Cash and Equivalents}}{\text{Current Liabilities}}$$

In this study, to measure Liquidity, Current Ratio is used because it is the simplest ratio to measure the company's ability to pay off its current liabilities with its total current assets. Current Ratio shows the extent to which current liabilities are covered by assets that are expected to be converted into cash in the near future and shows how far the demands of short-term creditors are met by assets that are expected to become cash in the same period as the debt maturity. A good Current Ratio size for a company is 200% (2:1) (Kasmir, 2013: 134).

Previous Research

There are three independent variables used in this study, namely: Dividend Policy, Leverage, and Liquidity with Firm Value as the dependent variable. Previous studies that discuss the variables studied are presented in Appendix 1.

This study refers to Pratiwi's 2020 study which tested the influence of Capital Structure, Profitability and Company Size on Firm Value. The test was conducted on companies listed on the IDX that were classified as LQ-45 from 2014 to 2018. The results of the study were that Capital Structure and Profitability had an effect on Firm Value, while Company Size had no effect on Firm Value. In her research, Pratiwi suggested that further researchers use other independent variables to test their effect on Firm Value. Other determinant factors that can affect Firm Value are Dividend Policy, Leverage and Liquidity. So in this study, it will be tested how the influence of Dividend Policy ($X1$), Leverage ($X2$) and Liquidity ($X3$) on Firm Value (Y) will be.

Framework of Thinking

Based on previous theories and research, the following conceptual framework is prepared:

Figure 1. Conceptual Framework
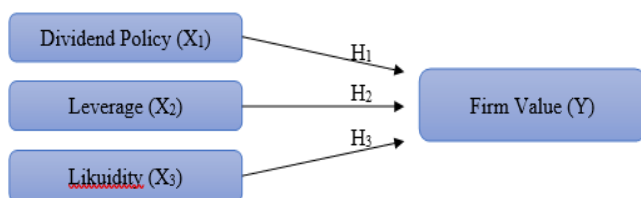
Source: Processed data, 2024

The independent variables in this study are Dividend Policy ($X1$), Leverage ($X2$) and Liquidity ($X3$). The dependent variable used in this study is Firm Value (Y).

Hypothesis

1. Dividend Policy on Firm Value

Dividend Policy will affect how investors view the company. When a company is able to distribute dividends to investors, investors will consider that the company has good performance. If dividends are paid well, the stock price tends to be high, so the Firm Value is also high. Conversely, if the dividends paid are small, the company's stock price is also low. The ability to pay dividends is closely related to the company's ability to generate profits. If the company makes a large profit, the ability to pay dividends is also good. Therefore, with large dividends will increase the Firm Value. This is in line with research conducted by

(Dessriadi et al., 2022 ; Hidayat & Triyonowati, 2020 ; Mispiyanti & Wicaksono, 2020 ; Oktaviarni, 2019 ; Mispiyanti & Wicaksono, 2020 and Maggee, 2018) which obtained significant positive results that Dividend Policy has a positive effect on Firm Value. Based on the description above, the second hypothesis to be tested in this study is as follows:

H_1: Dividend Policy has a positive effect on Firm Value

2. Leverage on Firm Value

The decision to choose to use equity or borrowed capital must be done with some careful calculations. In this case, Leverage is a ratio used to measure the extent to which a company's assets are financed by debt. Too much of a company's assets come from debt, which will create a risk for the company because if the company uses more debt to finance its assets, it will affect the company's increasing liabilities, both in the form of fixed liabilities and interest. This is in line with the results of research (Mubyarto, 2019) which states that Leverage has a significant negative effect on Firm Value. Based on the description above, the second hypothesis that will be tested in this study is as follows:

H_2: Leverage has a negative effect on Firm Value

3. The Influence of Liquidity on Firm Value

A company that has high Liquidity indicates that the company has the ability to pay its current debts on time with its current assets without disrupting the operational activities of the company. This is one of the applications of signaling theory where the company gives a positive signal to investors, so that investors are interested in investing their capital in the company. This is in line with the results of research conducted by (Sondakh, 2019 and Oktaviarni, 2019) which states that Liquidity has a positive effect on Firm Value. Based on the description above, the third hypothesis that will be tested in this study is as follows:

H_3: Liquidity has a positive effect on Firm Value

RESEARCH METHODS

Population and Sample

The population used in this study are companies listed on the LQ-45 Index of the Indonesian Stock Exchange. Sampling uses the purposive sampling method with the following criteria:

Table 1. Sampling Criteria

No	Criteria
1	Companies listed on the LQ-45 Index of the Indonesia Stock Exchange
2	Companies that are continuously listed in the LQ-45 Index on the Indonesia Stock Exchange during the 2010-2019 period
3	The company publishes audited financial statements using the fiscal year ending December 31.
4	Providing the data needed for research

Source: Processed data, 2024

Data Collection Techniques

The data source that will be used in this study is secondary data taken from the annual financial reports of companies listed on the LQ-45 for the period 2010 to 2019 on the IDX and accessed via the website www.idx.go.id . Secondary data is data obtained from

other sources that already existed before the research was conducted.

Operational Definition of Variables

Based on the research title above, the variables related to this research are:

Table 2. Operational Definition of Variables

No	Variables	Definition and Proxy
1	Firm Value (Y) using Price to Book Value (PBV)	PBV is a comparison between the stock price and the company's book value, where the company's book value is the comparison between common stock equity and the number of shares outstanding. $$PBV = \frac{Marker\ Price\ Per\ Share}{Net\ Book\ Per\ Share}$$ Source: (Brigham and Houston, 2006:112)
2	Dividend Policy (X_1) using Dividend Payout Ratio (DPR)	DPR is a comparison of the dividend value per share with earnings per share. $$DPR = \frac{Dividend\ Per\ Share\ (DPS)}{Earning\ Per\ Share\ (EPS)}$$ Source: (Basri and Indriyo, 2012)
3	Leverage (X_2) using Debt Ratio (DR)	Debt Ratio shows the proportion between liabilities owned and total assets owned. $$Debt\ Ratio = \frac{Total\ Debt}{Total\ Assets}$$ Source: (Sawir, 2000:13)
4	Liquidity (X_3) Using Current Ratio (CR)	Current Ratio describes the amount of current assets available compared to total current liabilities. $$Current\ Ratio = \frac{Current\ Asset}{Current\ Liabilities}$$ Source: (Hery, 2016:152)

Source: Processed data, 2024

Data Analysis Method

The data analysis method is a way of processing collected data to then be able to provide an interpretation of the results of data processing used to answer the problems that have been formulated, this study uses quantitative descriptive analysis and regression analysis to measure the effect of Dividend Payout Ratio (DPR), Debt Ratio (DR) and Current Ratio (CR) on Price to Book Value (PBV).

This study uses the panel data regression method. Panel data regression is used because the data used in this study is a combination of time series data and cross section data. The advantage of using panel data is that it can provide more informative data and is better at detecting and managing effects that cannot be observed in time series and cross section data. This research was conducted using multiple regression, which in its testing will be carried out with the help of the Eviews version 12 program. However, before the panel data regression analysis is carried out, it is first analyzed using descriptive statistics, panel data testing methods and hypothesis testing.

1. Descriptive Statistical Analysis

Determining the analysis technique is a series of processes connected in the research procedure. Data analysis is carried out to answer the formulation of the problem and the hypothesis that has been proposed. Then, the results of the data analysis are interpreted to make conclusions. Descriptive statistics are statistics that describe phenomena or data as in the form of tables, graphs, averages, frequencies or other forms. In descriptive statistics, analysis is carried out in the form of tables, graphs, columns, frequency calculations, measures of central tendency (mean, median, mode), measures of dispersion (range, standard deviation, variance) and so on (Hendryadi, 2018:234).

2. Panel Data Regression Method

Panel data is a combination of cross-section data consisting of several objects and time series data (series/time series) usually data in the form of a certain characteristic such as annually. Model selection in econometric analysis is an important step in addition to the formation of theoretical models and models that can be estimated, hypothesis testing estimates, forecasting, and analysis of the policy implications of the model. Estimation of an economic model is needed in order to know the actual condition of something observed. The panel data regression equation model uses the formula:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + e_{it}$$

Where:

Y_{it} : Firm Value measured by Price to Book Value (PBV)

β : Coefficient

X_{1it} : Dividend Policy as measured by Dividend Payout Ratio (DPR)

X_{2it} : Leverage is measured by the Debt Ratio (DR)

X_{3it} : Liquidity is measured by the Current Ratio (CR)

e_{it} : Standard Error

cross-section and time series data types. There are three approaches in estimating panel data regression that can be used, namely:

a. Common Effect Model (CEM)

Common Effect Estimation (fixed coefficients between time and individuals) is the simplest technique for estimating panel data. This is because it only combines time series data and cross-section data without looking at the difference between time and individuals, so that it can use the Ordinary Least Square (OLS) method in estimating panel data.

b. Fixed Effect Model (FEM)

Models that assume differences in intercepts are commonly referred to as fixed effect regression models. The fixed effect model technique is a technique for estimating panel data using dummy variables to capture differences in intercepts. The definition of fixed effects is based on differences in intercepts between companies but the intercepts are the same across time. In

addition, this model also assumes that the regression coefficient (slop) remains between companies and across time.

c. Random Effect Model (REM)

In the random effect model there is a deficiency, namely the reduction in degrees of freedom (Degree Of Freedom) so that it will reduce the efficiency of the parameters. To overcome this problem, we can use the random effect estimation approach. The constant writing in the random effect model is no longer fixed but is random.

3. Panel Data Testing Method
a. Chow Test

The Chow test is used to choose between CEM or FEM, with the following decision-making conditions:

Hypothesis:

H_0: CEM (pool method)

H_1: FEM

If the p-value of the Chi Square cross section $<\alpha = 5\%$, or the probability value (p-value) of the F test $<\alpha = 5\%$ then H_0 it is rejected or it can be said that the method used is FEM. If the p-value of the Chi Square cross section $\geq\alpha = 5\%$, or the probability value (p-value) of the F test $\geq\alpha = 57$ 5% then H_0 it is accepted, or it can be said that the method used is CEM.

b. Hausman test

The Hausman test is used to determine whether REM or FEM is in accordance with the following decision-making provisions:

Hypothesis:

H_0: REM

H_1: FEM

If the p-value of the random cross section $< \alpha = 5\%$ then H_0 it is rejected or the method used is FEM. Conversely, if the p-value of the random cross section $\geq \alpha = 5\%$ then H_0 it is accepted or the method used is REM.

c. Lagrange Multipler Test (LM Test)

The LM test is used to select REM or CEM. The test can also be called the REM significance test developed by Bruesch–Pagan (1980). The Bruesch–Pagan LM test is based on the residual value of the CEM method.

Hypothesis:

H_0: CEM

H_1: REM

The null hypothesis is the same intercept and slope (CEM). This LM test is based on the chi-square distribution with a degree of freedom equal to the number of independent variables. If the LM statistic value is greater than the critical value of the chi-square statistic then we reject H_0, meaning that a more appropriate estimate of the panel data regression is REM. Conversely, if the LM statistic value is smaller than the critical value of the chi-square statistic then we accept the null hypothesis which means that the CEM model is better used in regression.

4. Classical Assumption Testing

The panel data regression model can be said to be a good model if it meets the 51 Best Linear Unbiased Estimator (BLUE) criteria. BLUE can be achieved if it meets the classical assumptions.

Testing classical assumptions includes normality tests, autocorrelation tests, multicollinearity tests, and heteroscedasticity tests. However, according to Gujarati (2013), the equation that meets the classical assumptions is only the equation that uses the Generalized Least Square (GLS) method. In Eviews , the estimation model that uses the GLS method is only REM, while CEM and FEM use OLS. Thus, whether or not the classical assumption test is necessary in this study depends on the results of the selection of the estimation method. If based on the selection of the appropriate estimation method for the regression equation is REM, then there is no need to test the classical assumptions. Conversely, if the regression equation estimation method is more suitable using CEM or FEM, then a classical assumption test is necessary.

According to Ghozali (2014:105), testing classical assumptions on research data is carried out using a testing model, namely:

a. Normality Test

The normality test aims to test whether in the regression model the nuisance variables or residuals have a normal distribution. Like the t-test and F-test assume that the residual values follow a normal distribution. If this assumption is violated, the statistical test becomes invalid for small sample sizes.

b. Multicollinearity Test

The multicollinearity test aims to test whether there is a correlation between independent variables in the regression model. To find out whether or not there is multicollinearity, it can be seen from the correlation coefficient of each independent variable. If there is a correlation between independent variables that exceeds 0.80 (> 0.80), then multicollinearity occurs.

c. Heteroscedasticity Test

The heteroscedasticity test is used to test whether in the regression model there is inequality of variance from the residual of one observation to another, if the variance from one observation to another observation remains, then it is called homoscedasticity and if it is different it is called heteroscedasticity. A good regression model is homoscedasticity or does not occur heteroscedasticity.

d. Autocorrelation Test

The autocorrelation test aims to test whether in a linear regression model there is a correlation between the disturbance errors (residuals) in period t with the errors in the previous period t-1. To detect autocorrelation, Ghozali (2014) suggests using the Durbin-Watson test (DW test). This test requires an intercept (constant) in the regression model and no lag variables between the independent variables.

Decision making based on the Durbin-Watson test is:

1) If $1.65 < DW < 2.35$, then there is no autocorrelation.

2) If $1.21 < DW < 1.65$ or $2.35 < DW < 2.79$ it cannot be concluded.

3) $DW < 1.21$ or $DW > 2.79$ autocorrelation occurs.

5. Hypothesis Testing

Hypothesis testing in this study consists of three tests, namely Partial Test (t-Test) and Determination Coefficient Analysis, as follows:

a. Statistical t Test (Significance Test of Individual Parameters)

Partial Test (t-Test) is basically used to determine the effect of independent variables (free) on dependent variables (bound) individually (Ghozali, 2014). To find out the value of the t-statistic table value, the level of significance used is 5% with the decision-making criteria in this test as follows:

1) If the probability value < 0.05 and the calculated t value > t table then H0 is rejected, meaning that the independent variable affects the dependent variable.

2) If the probability value > 0.05 and the calculated t value < t table then H0 is accepted, meaning that the independent variable does not affect the dependent variable.

b. F Test

According to Gujarati (2013), the F statistical test aims to determine the effect of independent variables on dependent variables simultaneously. This test uses the F test with a confidence level of 95% and an error rate ( ) of 5% and a degree of freedom (df1) = k-1, a degree of freedom (df2) = nk. The decision-making criteria are as follows:

1) If F-count < F-table with a significant value of F < 0.05 then the hypothesis will be accepted. This means that there is a significant influence on the independent variable on the dependent variable.

2) If F-count > F-table with a significant value of F > 0.05 then the hypothesis will be rejected. This means that there is no significant influence on the variable.

c. Determination Coefficient Test (R^2)

According to Ghozali (2014) the coefficient of determination (R^2) is the ability to measure a model in interpreting dependent variables. If the value of the coefficient of determination is between zero and one where the value R^2 approaches 1 or 1, it means that the independent variable provides all the information needed to make predictions on the dependent variable. The higher the coefficient of determination, the higher the level of ability of the independent variable to explain variations in changes in the dependent variable

RESEARCH RESULTS AND DISCUSSION

Overview of Research Object

The population in this study were companies listed on the LQ-45 BEI during 2010–2019. The purpose of this study was to determine the effect of Dividend Policy, Leverage and Liquidity on Firm Value. The research data was obtained through the website www.idx.go.id. Sampling in this study used a purposive sampling method with certain criteria. Where from a total of 45 companies included in the LQ-45, there were companies that were not used as research samples because they did not meet the criteria. So the number of companies used as samples was 12 companies.

From 12 companies listed on the LQ-45 BEI during 2010–2019, we were able to obtain observation results for ten years of 120 analysis units. A total of 20 analysis units of observation results were indicated as outlier data because the data deviated too far from other data (extreme data). Variables that have extreme values can distort the regression coefficient estimates. Therefore, data with extreme values (outliers) need to be removed from the research data so that the observation data that became the processed sample was 100 analysis units. The following are the sample criteria and the number of companies that meet the criteria:

Table 1. Sampling Criteria

No	Criteria	Amount
1	Companies listed on the BEI LQ-45 Index	45 Companies
2	The company was not continuously listed on the LQ-45 Index on the IDX during the 2010-2019 period.	(26 Companies)
3	The company does not publish audited financial statements using the financial year ending December 31.	(0 Companies)
4	The company does not have the data needed for research.	(4 Companies)
5	Sample of companies that meet the criteria	12 Companies
6	Total number of samples for 10 (ten) years (2010–2029) 12 Companies x 10 Years	120 Samples
	Outlier Data	(20 Samples)
	Processed samples	100 Samples

Source: Processed data, 2024

From table 4.1 above, it can be seen that the number of samples to be processed is 100 samples consisting of 10 companies with 10 years of research. The following is a list of companies that are research samples:

Table 2. List of Sample Companies for Research

No	Company name	Company Code
1	Adaro Energy Tbk	ADRO
2	Astra International Tbk	ASII
3	Gudang Garam Tbk	GGRM
4	Indofood Sukses Makmur Tbk	INDF
5	Indocement Tunggal Prakasa Tbk	INTP
6	Jasa Marga (Persero) Tbk	JSMR
7	Kalbe Farma Tbk	KLBF
8	State Gas Company (Persero) Tbk	PGAS
9	Bukit Asam Coal Mine (Persero) Tbk	PTBA
10	Telecommunications Indonesia (Persero) Tbk	TLKM

Source: Processed data, 2024

Data analysis

Data analysis is part of the data testing process after the data selection and collection stage. This data analysis process is carried out on independent variables and dependent variables statistically and descriptively to test the data presented. The dependent variable used is Firm Value, while the independent variables used are dividend policy, Leverage and Liquidity. The tool used in this study is Eviews 12.

1. Descriptive Statistical Analysis

The purpose of descriptive analysis is to provide an overview (description) of data in the study so that it can be more easily understood and informative. Descriptive statistics are used to show the amount of data used in the study along with the maximum value, minimum value, average value (mean) and standard deviation or level of data distribution of each variable used. The results of descriptive statistics with the Eviews 12 program can be seen as follows:

Table 4.33 Descriptive Statistics Results

	PBV	DPR	DR	CR
Mean	3.156300	0.433400	0.408500	2.317300
Median	3.020000	0.435000	0.430000	1.860000
Maximum	9.300000	2.410000	0.770000	6.990000
Minimum	0.360000	0.000000	0.130000	0.280000
Std. Dev	1.733638	0.316981	0.152252	1.417586
Skewness	1.000243	2.470971	-0.123976	1.089011
Kurtosis	4.318976	16.65640	2711794	3.583482
Jarquw-Bera	23.92353	878.8332	0.602261	21.18431
Probability	0.000006	0.000000	0.739981	0.000025
Sum	315.6300	43.34000	40.85000	231.7300
Sum Sq. Dev.	297.5447	9.947244	2.294875	198.9454
Observations	100	100	100	100
Observations	100	100	100	100

Eviews 12 output, processed in 2024

From table 4.3, the results of the descriptive statistical test show the number of 100 samples originating from 10 samples of companies listed in the LQ-45 in one year multiplied by the number of 10 years of research (2010-2019), then the results of the description of the related variables are obtained informatively. The results of the descriptive statistics in Table 4.3. above can be explained as follows:

a. The Firm Value measured by PBV shows a minimum value of 0.360000 owned by the company ADRO (2015). The maximum value of 9,300,000 is owned by KLBF (2014). Overall, the average value (mean) of the Firm Value variable is 3,156,300. The comparison between the market price per share and the book value per share is 3,156,300. It can be interpreted that the average market price per share of companies listed on the LQ-45 for the 2010-2019 period is traded 3,156,300 times its book value. This shows that the average company listed on the LQ-45 is considered a stock that is even.

b. The Dividend Policy variable measured by DPR shows a minimum value of 0.000000 owned by the companies ADRO (2017), GGRM (2017), INDF (2017), INTP

(2017), JSMR (2014 and 2017), KLBF (2017), PGAS (2014, 2015 and 2017), PTBA (2017), and TLKM (2014 and 2017). The maximum value of 2.410000 is owned by INTP (2018). Overall, the average value (mean) of the Dividend Policy variable is 0.4330400 with a standard deviation of 0.316981 which is smaller than the average value. This shows that the data deviation is relatively small. A mean value greater than the standard deviation indicates that the results to be measured are considered feasible. Because the standard deviation is a reflection of high deviation, so the distribution of data shows normal results and does not cause bias. In addition, the percentage of profit paid in the form of dividends in companies listed on the LQ-45 for the 2010-2019 period is 43.30400% which can be interpreted that every 1 rupiah of profit per share is able to generate dividends of 0.4330400 rupiah.

c. Leverage variable measured by DR shows a minimum value of 0.130000 owned by the INTP company (2016) and a maximum value of 0.770000 owned by JSMR (2019). Overall, the average value (mean) of the Leverage variable is 0.408500 with a standard deviation of 0.152252 which is smaller than the average value. This shows that the data deviation is relatively small. A mean value that is greater than the standard deviation indicates that the results to be measured are considered feasible. Because the standard deviation is a reflection of high deviation, so that the distribution of data shows normal results and does not cause bias. In addition, the comparison between total liabilities and total assets of the company recorded in the LQ-45 for the 2010-2019 period is 40.8500% which can be interpreted that creditors provide company funding of 0.408500 rupiah for every 1 rupiah of assets.

d. The Liquidity variable measured by CR shows a minimum value of 0.280000 owned by the JSMR company (2019) and a maximum value of 6.990000 owned by INTP (2011). Overall, the average value (mean) of the Liquidity variable is 2.317300 with a standard deviation of 1.417586 which is smaller than the average value. This shows that the data deviation is relatively small. A mean value that is greater than the standard deviation indicates that the results to be measured are considered feasible. Because the standard deviation is a reflection of high deviation, so that the distribution of data shows normal results and does not cause bias. In addition, the comparison between current assets and current liabilities in companies listed in the LQ-45 for the 2010-2019 period is 231.7300%, which can be interpreted that every 1 rupiah of current liabilities is guaranteed or covered by 2,317,300 rupiah of current assets. This shows that the average liquidity ratio of the company is in good condition because it is in accordance with the principle of prudence, which is 200% (200:1).

2. Panel Data Regression Model

Panel data regression can be done by testing three analysis models, namely CEM, FEM and REM. Each model has its own advantages and disadvantages. The choice of model depends on the assumptions used by the researcher and the fulfillment of the requirements for correct statistical data processing, so that it can be

statistically accounted for. Therefore, the first thing to do is to choose the right model from the three existing models.

Table 4. Results of CEM Panel Data Regression Test

Dependent Variable: PBV
Method: Panel Least Squares
Date: 11/21/24   Time: 12:38
Sample: 2010 2019
Periods included: 10
Cross-sections included: 10
Total panel (balanced) observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.422927	1.080927	3.166659	0.0021
DPR	0.003819	0.511846	0.007461	0.9941
DR	-2.727902	1.626823	-1.676828	0.0968
CR	0.365109	0.168004	2.173212	0.0322

R-squared	0.255911	Mean dependent var	3.156300
Adjusted R-squared	0.232659	S.D. dependent var	1.733638
S.E. of regression	1.518633	Akaike info criterion	3.712676
Sum squared resid	221.3996	Schwarz criterion	3.816883
Log likelihood	-181.6338	Hannan-Quinn criter.	3.754851
F-statistic	11.00563	Durbin-Watson stat	0.601679
Prob(F-statistic)	0.000003		

Eviews 12 output, processed in 2024

Table 5. Results of Panel Data Regression Test with FEM

Dependent Variable: PBV
Method: Panel Least Squares
Date: 11/21/24   Time: 12:39
Sample: 2010 2019
Periods included: 10
Cross-sections included: 10
Total panel (balanced) observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.208680	1.441261	0.838627	0.4040
DPR	0.415823	0.404428	1.028174	0.3067
DR	0.685465	2.840511	0.241318	0.8099
CR	0.641863	0.177992	3.606141	0.0005

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.601482	Mean dependent var	3.156300
Adjusted R-squared	0.546515	S.D. dependent var	1.733638
S.E. of regression	1.167455	Akaike info criterion	3.268268
Sum squared resid	118.5768	Schwarz criterion	3.606940
Log likelihood	-150.4134	Hannan-Quinn criter.	3.405334
F-statistic	10.94242	Durbin-Watson stat	1.224452
Prob(F-statistic)	0.000000		

Table 6. Results of Panel Data Regression Test with REM

Dependent Variable: PBV
Method: Panel EGLS (Cross-section random effects)
Date: 11/21/24   Time: 12:39
Sample: 2010 2019
Periods included: 10
Cross-sections included: 10
Total panel (balanced) observations: 100
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.838639	1.229173	1.495834	0.1380
DPR	0.368193	0.402100	0.915677	0.3621
DR	-0.469119	2.118120	-0.221479	0.8252
CR	0.582454	0.168772	3.451130	0.0008

Effects Specification

		S.D.	Rho
Cross-section random		0.982815	0.4148
Idiosyncratic random		1.167455	0.5852

Weighted Statistics

R-squared	0.176039	Mean dependent var	1.109901
Adjusted R-squared	0.150290	S.D. dependent var	1.272818
S.E. of regression	1.173280	Sum squared resid	132.1523
F-statistic	6.836790	Durbin-Watson stat	1.083494
Prob(F-statistic)	0.000318		

Unweighted Statistics

R-squared	0.238824	Mean dependent var	3.156300
Sum squared resid	226.4840	Durbin-Watson stat	0.632213

Eviews 12 output , processed in 2024

After the regression results using CEM, FEM and REM are obtained, the next step is to conduct a test to determine which estimation model is more appropriate between CEM, FEM or REM.

3. Determination of Panel Data Regression Model

In determining the best model, the Chow Test is used as a test for selecting a panel data regression model. The Chow Test is a test to determine between the CEM or FEM model which is more appropriate in estimating panel data. The Chow Test Hypothesis in the study is as follows:

a. If the chi-square probability <0.05 then FEM is chosen; And

b. If the chi square probability is > 0.05 then CEM is chosen.

If the test results determine the FEM used, then it is necessary to conduct a Hausman Test to determine between FEM or REM. The Hausman Test hypothesis in the study is as follows:

a. If the probability is <0.05 then FEM is chosen; And

b. If the probability is > 0.05 then REM is selected.

If the results of the Hausman Test determine which REM is used, then it is necessary to conduct a Lagrange Multiplier Test (LM-Test) to determine between CEM or REM. The Hausman Test hypothesis in the study is as follows:

a. If the probability <0.05 then REM is selected; And

b. If the probability is > 0.05 then CEM is selected.

a. Chow Test

Table 7. Chow Test Results

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	8.382368	(9,87)	0.0000
Cross-section Chi-square	62.440866	9	0.0000

Eviews 12 output , processed in 2024

The results in table 4.7 show the probability value of the cross section chi square is 0.0000, which is smaller than 0.05. According to the previously determined criteria, the model chosen is FEM. Because the Chow Test selected is FEM, further testing is needed. with the Hausman Test to determine the FEM or REM model.

b. Hausman Test Results

Table 8. Hausman Test Results

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	3.960391	3	0.2658

Eviews 12 output, processed in 2024

The results in table 4.8 show the probability value of the cross section is 0.2658 greater than 0.05. According to the previously determined criteria, the model chosen is REM. Because the

Hausman Test selected is REM, further testing is needed with the Lagrange Multipler test to determine the REM or CEM model.

    c.   Lagrange Multipler Test (LM Test)

Table 9. Lagrange Multipler Test Results

Lagrange Multiplier Tests for Random Effects
Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided
    (all others) alternatives

| | Test Hypothesis | | |
	Cross-section	Time	Both
Breusch-Pagan	65.64445 (0.0000)	5.624462 (0.0177)	71.26891 (0.0000)
Honda	8.102126 (0.0000)	2.371595 (0.0089)	7.406039 (0.0000)
King-Wu	8.102126 (0.0000)	2.371595 (0.0089)	7.406039 (0.0000)
Standardized Honda	9.734036 (0.0000)	2.791798 (0.0026)	5.274391 (0.0000)
Standardized King-Wu	9.734036 (0.0000)	2.791798 (0.0026)	5.274391 (0.0000)
Gourieroux, et al.	--	--	71.26891 (0.0000)

Eviews 12 output , processed in 2024

The results in table 4.9 show the probability value of the cross section is 0.0000 which is smaller than 0.05. According to the previously determined criteria, the LM test results choose to use REM.

    4.   Classical Assumption Test

Based on the selection results, the appropriate estimation method for the regression equation is REM. According to Gujarati (2013), the equation that meets the classical assumptions is only the equation that uses the GLS method. In Eviews , the estimation model that uses the GLS method is only REM, while CEM and FEM use OLS. Thus it is concluded that the classical assumption test does not need to be carried out.

    5.   Panel data regression equation

Panel data regression test is used to determine the relationship between independent variables consisting of Dividend Policy (DPR), Leverage (DR) and Liquidity (CR) with the dependent variable Firm Value measured by PBV.

Table 10. Panel Data Regression Equation Test Results

Dependent Variable: PBV
Method: Panel Least Squares
Date: 11/21/24   Time: 12:45
Sample: 2010 2019
Periods included: 10
Cross-sections included: 10
Total panel (balanced) observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.422927	1.080927	3.166659	0.0021
DPR	0.003819	0.511846	0.007461	0.9941
DR	-2.727902	1.626823	-1.676828	0.0968
CR	0.365109	0.168004	2.173212	0.0322

R-squared	0.255911	Mean dependent var	3.156300
Adjusted R-squared	0.232659	S.D. dependent var	1.733638
S.E. of regression	1.518633	Akaike info criterion	3.712676
Sum squared resid	221.3996	Schwarz criterion	3.816883
Log likelihood	-181.6338	Hannan-Quinn criter.	3.754851
F-statistic	11.00563	Durbin-Watson stat	0.601679
Prob(F-statistic)	0.000003		

Eviews 12 output , processed in 2024

$$Y_{it}= \beta_0+ \beta_1 X_{1it}+ \beta_2 X_{2it}+ \beta_3 X_{3it}+e_{it}$$

$$PBV = 3.423 + 0.004*DPR - 2.728*DR + 0.365*CR + e_{it}$$

The explanation is as follows:

    a.   The constant value of 3.423 means that without the DPR, DR and CR variables, the PBV variable will increase by 342.3%.

    b.   The beta coefficient value of the DPR variable is 0.004, which means that if the value of other variables is constant and the DPR variable increases by 0.4%, then the PBV variable will increase by 0.4%. Likewise, if the value of other variables is constant and the DPR variable decreases by 0.4%, then the PBV variable will decrease by 0.4%.

    c.   The beta coefficient value of the DR variable is -2.728, which means that if the value of other variables is constant and the DR variable increases by 272.8%, then the PBV variable will decrease by 272.8%. Likewise, if the value of other variables is constant and the DR variable decreases by 272.8%, then the PBV variable will increase by 272.8%.

    d.   The beta coefficient value of the CR variable is 0.365, which means that if the value of other variables is constant and the CR variable increases by 36.5%, then the PBV variable will increase by 36.5%. Likewise, if the value of other variables is constant and the CR variable decreases by 36.5%, then the PBV variable will decrease by 36.5%.

    6.   Hypothesis Test Results
    a.   t-test

The t-test aims to test the influence of each dependent variable on the independent variable. This test can be done by comparing the calculated t with the t table or by looking at the probability value. The influence of the independent variable on the dependent variable partially is as follows:

    1)   Relationship between Dividend Policy (DPR) and Firm Value (PBV)

H_0: There is no relationship between Dividend Policy (DPR) and Firm Value (PBV)

H_a: There is a positive and significant relationship between Dividend Policy (DPR) and Firm Value (PBV)

    a)   t table = 1.984467

    b)   t count = 0.007461

Based on the data in table 4.10, the DPR probability value is 0.9941 > 0.05 with a calculated t ratio of 0.007461 < t table, which is 1.984467 with a significance value of 0.9941. Thus, it can be concluded that $H_a$it is rejected and H_0accepted, meaning that Dividend Policy (DPR) has no effect on Firm Value (PBV).

    2)   Relationship between Leverage (DR) and Firm Value (PBV)

H_0: There is no relationship between Leverage (DR) and Firm Value (PBV)

H_a: There is a negative and significant relationship between Leverage (DR) and Firm Value (PBV)

a) t table = 1.984467

b) t count = 1.676828

Based on the data in table 4.10, the probability value of DR is 0.0968 > 0.05 with a comparison of t count of 1.676828 < t table of 1.984467. Thus, it can be concluded that H_a it is rejected and H_0 accepted, meaning that Leverage (DR) has no effect on Firm Value (PBV).

3) Relationship between Liquidity (CR) and Firm Value (PBV)

H_0: There is no relationship between Liquidity (CR) and Firm Value (PBV)

H_a: There is a positive and significant relationship between Liquidity (CR) and Firm Value (PBV)

a) t table = 1.984467

b) t count = 1.676828

Based on the data in table 4.10, the CR probability value is 0.0322 > 0.05 with a calculated t ratio of 2.173212 > t table of 1.984467. Thus, it can be concluded that H_0 it is rejected and H_a accepted, meaning that Liquidity (DR) has a positive and significant effect on Firm Value (PBV).

b. F Test

The F test aims to prove the relationship of independent variables simultaneously (together) with the dependent variable. This test can be done by comparing the calculated F with the F Table or by looking at the probability value. The following are the results of the F test:

Table 11. Hypothesis Test Results

R-squared	0.255911	Mean dependent var	3.156300
Adjusted R-squared	0.232659	S.D. dependent var	1.733638
S.E. of regression	1.518633	Akaike info criterion	3.712676
Sum squared resid	221.3996	Schwarz criterion	3.816883
Log likelihood	-181.6338	Hannan-Quinn criter.	3.754851
F-statistic	11.00563	Durbin-Watson stat	0.601679
Prob(F-statistic)	0.000003		

Eviews 12 output, processed in 2024

The following is a hypothesis of the relationship between Dividend Policy (DPR), Leverage (DR) and Liquidity (CR) with Firm Value (PBV):

H_0: There is no relationship between Dividend Policy (DPR), Leverage (DR) and Liquidity (CR) with Firm Value (PBV)

H_a: There is a positive and significant relationship between Dividend Policy (DPR), Leverage (DR) and Liquidity (CR) with Firm Value (PBV)

1) F table = 2.699393

2) F Calculate = 11.00563

Based on table 4.11 shows the statistical probability value F 0.000003 < 0.05. With the comparison of F count and F table, namely 11.00563 > 2.699393, it can be concluded that H_0 it is rejected and H_a accepted, meaning that Dividend Policy (DPR), Leverage (DR) and Liquidity (DR) simultaneously (together) have a positive and significant effect on Firm Value (PBV).

c. Coefficient of Determination (R-square) Test

The coefficient of determination is able to measure how far the model's ability to explain the variation of independent variables. A small coefficient of determination value indicates that the ability of the independent variables is very limited. If the coefficient of determination value approaches one, it means that the independent variables provide almost all the information needed to predict the variation of the dependent variable. The following are the results of the coefficient of determination test:

Table 12. Results of the Determination Coefficient Test

R-squared	0.255911	Mean dependent var	3.156300
Adjusted R-squared	0.232659	S.D. dependent var	1.733638
S.E. of regression	1.518633	Akaike info criterion	3.712676
Sum squared resid	221.3996	Schwarz criterion	3.816883
Log likelihood	-181.6338	Hannan-Quinn criter.	3.754851
F-statistic	11.00563	Durbin-Watson stat	0.601679
Prob(F-statistic)	0.000003		

Eviews 12 output, processed in 2024

Based on the data in table 4.12, the coefficient of determination value is 0.255911 or 25.5911%. The coefficient of determination value shows that the independent variables consisting of Dividend Policy (DPR), Leverage (DR) and Liquidity (DR) are able to explain PBV of 25.5911%. While the remaining 74.4089% (100-adjusted R-Squared value) is explained by other variables not examined in this study.

Discussion

1. Analysis of the Influence of Dividend Policy (DPR) on Firm Value (PBV)

The test results in this study indicate that Dividend Policy (DPR) has no effect on Firm Value. This is evidenced by a significance value of 0.9941> 0.05, with a t-statistic value of 0.007461, meaning that Dividend Policy has a positive but insignificant effect on Firm Value. So the first hypothesis H_1 stating that Dividend Policy has a significant positive effect on Firm Value is rejected. This is in line with the research of Hidayat & Triyonowati (2020) entitled the influence of Dividend Policy, debt policy and profitability on Firm Value which shows the results of Dividend Policy having an insignificant effect on Firm Value with a positive direction;

Dividend policy as measured by DPR shows the profit that will be paid to the company's shareholders. in the form of dividends. The influence of dividend policy on Firm Value shows that the dividend policy is distributed to shareholders increases then the company's value will increase but not significantly, this is because the higher the level of dividends distributed, the less profit can be reinvested so that it cannot have a big effect on the growth of the company's value. In addition, investors tend to prefer to get stock profits from buying and selling shares (capital gain). Investors consider that income from dividends is not more profitable when compared to capital gains in the future.

2. Analysis of the Influence of Leverage (DR) on Firm Value (PBV)

The test results in this study indicate that Leverage (DR) has no effect on Firm Value. This is evidenced by a significance value of 0.0968> 0.05, with a t-statistic value of -1.676828, meaning that Leverage has a negative but not significant effect on Firm Value. So the first hypothesis H_2 stating that Leverage has a significant negative effect on Firm Value is rejected. This is in line with Oktaviarni's research (2019) entitled the effect of profitability,

Leverage , Dividend Policy, and size on Firm Value which shows that Leverage results have no effect on Firm Value .

Leverage measured by DR shows a company's ability to pay off current debts and overall debts. The higher the DR value, the higher the company's financial risk and the possibility of financial distress. This is because companies with large DRs tend to use their assets to pay debts, making it difficult to meet their obligations. The influence of Leverage on Firm Value shows that the higher the Leverage, the company's value will decrease but not significantly. This is because investors tend to avoid companies that have high DR levels. In addition, in the Indonesian capital market, stock price movements in creating added value for companies are caused by market conditions. The size of the company's debt is not too much of a concern for investors, because investors look more at how the managerial side uses funds from the debt effectively and efficiently to achieve added value for the company's value. So Leverage does not affect Firm Value.

3. Analysis of the Influence of Liquidity (CR) on Firm Value (PBV)

The test results in this study indicate that Liquidity (CR) has an influence on Firm Value. This is evidenced by a significance value of 0.0322> 0.05, with a t-statistic value of 2.173212, meaning that Liquidity has a positive but not significant effect on Firm Value. So the first hypothesis H_3 stating that Liquidity has a significant positive effect on Firm Value is accepted. This is in line with research by Oktaviarni (2019) and Sondakh (2019) which shows that Liquidity has a positive and significant effect on Firm Value.

Liquidity measured by CR shows the company's ability to pay short-term liabilities with current assets as a whole. The higher the CR, the smaller the risk of the company's failure to meet short-term obligations. High liquidity will certainly attract the attention of investors, because it will be a signal to investors that the company has good performance and can increase stock prices, which means that the Company's Value also increases.

4. Analysis of the Influence of Dividend Policy (DPR), Leverage (DR) and Liquidity (CR) on Firm Value (PBV)

The test results in this study indicate that Dividend Policy (DPR), Leverage (DR) and Liquidity (CR) on Firm Value (PBV) simultaneously have an influence on Firm Value. This is evidenced by the statistical probability values F 0.000003 <0.05. With a comparison of F count and F table, namely 11.00563> 2.699393.

CONCLUSION

Dividend Policy, Leverage and Liquidity on Firm Value in companies listed on the LQ-45 BEI in 2010 - 2019. Based on the results of the analysis and discussion that have been described, the following conclusions can be drawn:

1. The influence of Dividend Policy on Firm Value is positive but not significant. This is because the higher the level of dividends distributed, the less profit can be reinvested so that it cannot have a major effect on the growth of Firm Value.

2. The influence of Leverage on Firm Value is negative but not significant. The size of the company's debt is not too much of a concern for investors, because investors look more at how the managerial side uses funds from the debt effectively and efficiently to achieve added value for the company's value.

3. The influence of Liquidity on Firm Value is positive and significant. The higher the level of company liquidity, the smaller the risk of company failure in meeting short-term obligations. High liquidity will certainly attract the attention of investors, because it will be a signal to investors that the company has good performance and can increase stock prices, which means that the Firm Value also increases.

SUGGESTION

Research on the influence of dividend policy, leverage and liquidity on Firm Value in companies listed on the LQ-45 BEI during the 2010–2019 period, it is hoped that further research will be able to provide higher quality research results by considering the following suggestions:

1. For investors/potential investors, liquidity variables can be used as a consideration in determining investments if Firm Value is one of the elements prioritized in investing.

2. For issuers in increasing the company's value, they can pay more attention to the company's liquidity. In addition, Dividend Policy, Leverage and Liquidity can also simultaneously affect the Company's Value positively. The company must pay attention to the company's value from the fundamental side, investor welfare, current debt and capital owned by the company.

3. For further researchers, it is hoped that they can add other independent variables that are tested against Firm Value, expand the research population so that it is not only limited to companies listed on the LQ 45 BEI, and use a more up-to-date research year.

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