Indonesian Journal of Banking and Financial Technology (FINTECH)
Vol. 3, No. 4, 2025 : 443 - 462

The Effect of Leverage, Investment Opportunity Set, Business Risk, Asset Growth, Institutional Ownership and Female Director on Dividend Policy in Energy Sector Companies Listed on the Indonesia Stock Exchange for the Period 2019-2023

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A R T I C L E I N F O

Keywords: Dividend Policy, Female Director, Firm Characteristics, Institusional Ownership

Received : 01 September 2025
Revised : 26 September 2025
Accepted: 29 October 2025

A B S T R A C T

This study aims to examine the effect of leverage, investment opportunity set, business risk, asset growth, institutional ownership, and female directors on dividend policy in energy sector companies listed on the Indonesia Stock Exchange during 2019–2023. The sample consists of 30 companies selected using purposive sampling. Panel data regression analysis was conducted using STATA 17. The findings reveal that asset growth has a significant negative impact on dividend policy, indicating that companies with higher asset growth tend to distribute lower dividends. Meanwhile, leverage, investment opportunity set, business risk, institutional ownership, and female directors have no significant effect. The results suggest that energy sector companies should consider asset growth when making dividend policy decisions.

INTRODUCTION

In 2022, Coronavirus Disease-2019 (COVID-19) cases began to show a decline; however, the global situation continued to face various post-pandemic challenges and geopolitical issues that significantly affected Indonesia's economy, particularly in the capital market (OJK, 2023).The current economic conditions have led to an increasingly competitive business environment (Togatorop & Susan, 2022). This is reflected in data from the Indonesia Stock Exchange, which shows that 79 companies conducted initial public offerings (IPOs) throughout 2023. This figure represents a sharp increase from 2022, which recorded 59 issuers. Indonesia's number of IPOs ranked sixth globally, accounting for 6% of total global IPOs. In comparison, 2021 recorded 54 companies, 2020 saw a decrease to only 51 companies, and 2019 recorded 55 companies.

The primary objective of the capital market is to support national development, promote equity, drive economic growth, and improve public welfare (Sihite *et al.,* 2024). By making investments, investors expect to receive returns, either from dividend income or from capital gains derived from the difference between the selling and purchase prices of shares (Alawiyah *et al.,* 2021). Dividends are cash flows (cash payments) that investors expect to receive (Gordon, 1959). Dividend distribution must take into account important aspects, as it is related to investors' decisions to invest in a company. Dividends are adjusted through optimal policies to increase share value (Hartono *et al.,* 2021).

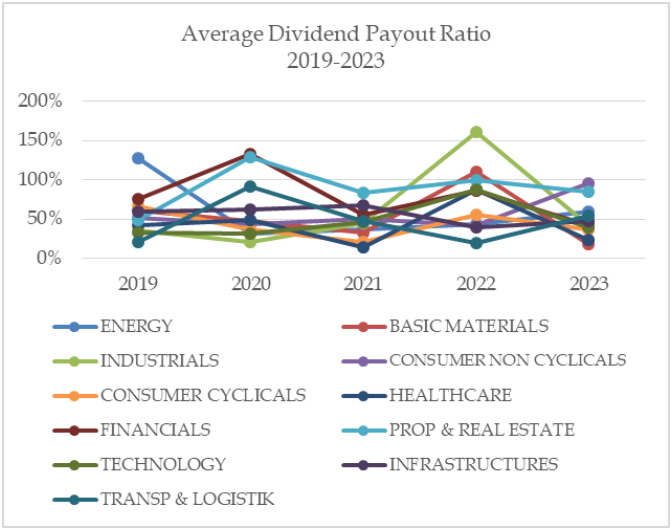

Figure 1. Average Dividend Payout Ratio Graph for 2019-2023
Source: IDX Statistics (Data processed by the researcher, 2024)

Based on the average dividend payout ratio data across all sectors listed on the Indonesia Stock Exchange from 2019 to 2023, according to the IDX Industrial Classification (IDX-IC), the sector with the most significant increase in the average dividend payout ratio is the energy sector. In 2019, it stood at 128%, decreased in 2020 to 32%, rose in 2021 to 37%, increased again in 2022 to 43%, and continued to rise in 2023 to 59%. Meanwhile, the average dividend payout ratio in other sectors fluctuated (was unstable). The increase in the average dividend

payout ratio became noticeable after the pandemic, from 2021 to 2023. This cannot be separated from the impact of the COVID-19 pandemic that occurred in 2020. During that period, several companies in the energy sector also underwent delisting, including PT Cakra Mineral Tbk (CKRA), PT Borneo Lumbung Energi & Metal Tbk, and PT Leo Investment Tbk (Aji *et al.*, 2024).

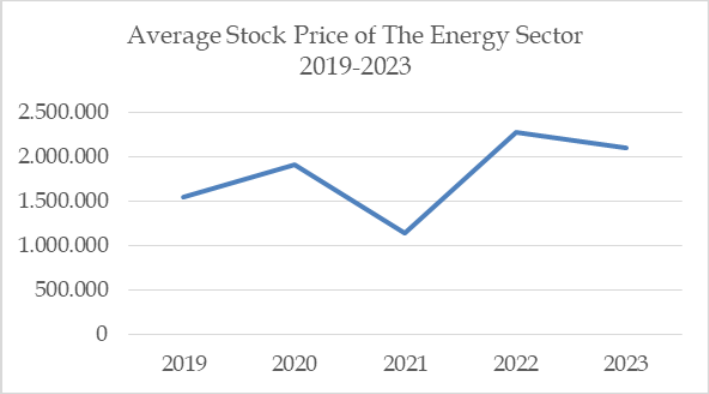

Figure 2. Average Stock Price Movement of the Energy Sector 2019–2023
Source: IDX Statistics (Data processed by the researcher, 2024)

Figure 2 presents a chart of the average stock price movement in the energy sector from 2019 to 2023. Despite the increase in the average dividend payout ratio, the stock prices in the energy sector fluctuated during the 2019–2023 period and experienced a decline in 2023. The energy sector was one of six main sectors that pushed the Indonesia Composite Index (IHSG) into the red zone, alongside the basic materials sector, which recorded the largest drop of 2.36%. The transportation and logistics sector shrank by 1.54%, followed by the infrastructure sector, which contracted by 1.28%. The energy sector weakened by 0.48%, while the financial sector and the property and real estate sector each fell by 0.35% and 0.33%, respectively (Rahmawati, 2023).

Dividend policy is considered one of the most controversial issues in the field of financial management (Alhileen, 2020). This is because dividend policy is one of the three main functions of financial management in financial decision-making, alongside investment decisions and financing decisions (Barros *et al.*, 2020). Therefore, dividend policy becomes the most important financial function of a company, as it affects various stakeholders, including investors, managers, and creditors (Thakur & Kannadhasan, 2018). The urgency of the dividend policy issue has become increasingly important in today's business environment, as it relates to the rules and guidelines for determining dividend distribution to shareholders (Alhileen, 2020).

The dividend policy of a company can be influenced, among other factors, by leverage, which indicates the ability of a business entity to meet its obligations, both long-term and short-term. The Debt to Equity Ratio (DER) is used to measure the extent to which a company uses debt in its capital structure compared to shareholders' equity (Wahjudi, 2020). Basri (2019) research found that leverage has a negative effect on dividend policy. However, in contrast to these findings, Aryani & Fitria (2020) and Junior *et al.* (2024) found that leverage has a positive effect on dividen policy. On the other hand, Azizah & Paramita

(2024), Abadiyah & Kusumaningrum (2023), and Farooq *et al.* (2024) found that there is no effect of leverage on dividend policy.

Another factor that influences dividend policy is the investment opportunity set. The Investment Opportunity Set (IOS) refers to the collection of investment opportunities available to a company. The Market to Book Value of Equity (MBVE) is used as a proxy for investment opportunities, calculated as the market value of equity divided by the book value of equity (Labhane, 2019). According to Indarti *et al.* (2024) and Yusof & Ismail (2016), the investment opportunity set has a positive effect on dividend policy. In contrast, the findings of Dewasiri *et al.* (2019) and Labhane (2019) indicate a negative effect on dividend policy. On the other hand, Abadiyah & Kusumaningrum (2023), Christiningrum & Rahman (2023), and Rizal & Triyanto (2021) found no effect between the investment opportunity set and dividend policy.

Dividend policy can also be influenced by business risk. Business risk often represents the uncertainty faced by a company. This uncertainty makes it difficult for the company to achieve its objectives, thereby increasing the potential for losses or even failure (Mnune *et al.,* 2019). According to Jao *et al.* (2022) and Mnune *et al.* (2019), business risk has a negative and significant effect on dividend policy. Based on the findings of Labhane (2019) and Christiningrum & Rahman (2023), business risk has a positive effect on dividend policy. However, Azizah & Paramita (2024), Ayuningtias & Surjandari (2023), and Dewasiri *et al.* (2019) stated that there is no effect of business risk on dividend policy.

Dividend policy can also be influenced by asset growth. One of the indicators of a company's growth is asset growth, which refers to the change in the total assets owned by a company, whether in the form of an increase or a decrease. The value of asset growth is expressed as the percentage change in assets over a specific period compared to the previous year (Alfianita & Santosa, 2022). The findings of Widiantari & Candradewi (2021) and Nai *et al.* (2022) show that asset growth has a positive and significant effect on dividend policy. However, according to the findings of Linh *et al.* (2024), Patricia & Septiyani, (2024), and Hardianto, (2021), asset growth has a negative and significant effect on dividend policy. In contrast, Basri (2019) and Fitriyah (2024) revealed that asset growth has no effect on dividend policy.

One important consideration believed to influence dividend policy is institutional ownership. Generally, institutional ownership plays a supervisory role in monitoring management activities (Singla & Samanta, 2019). According to the findings of Farooq *et al.* (2024), Kaur & Kaur (2024), Khan (2022), and Wiyanto & Artini (2024), institutional ownership has a significant positive effect on dividend policy. In contrast, Widiari & Putra (2017) found that institutional ownership has a significant negative effect on dividend policy. Opposite to these findings, Patricia & Septiyani (2024), Tyas & Bandi (2021), and Hardianto (2021) reported that institutional ownership has no effect on dividend policy.

Meanwhile, female directors in a company also play a role in determining dividend policy. Based on the findings of Ismiyanti *et al.* (2018), (Syahfitri & Risfandy (2023), and Pokhrel *et al.* (2024), female directors have a significant

positive effect on dividend policy. However, according to the study by (Rifandy *et al.* (2021), female directors have a significant negative effect on dividend policy. In contrast, the findings of Maftucho & Khoiruddin (2018), Khan (2022), and Darusman & Widiasmara (2024) indicate that there is no relationship between female directors and dividend policy.

Based on the phenomenon gap and the differences in previous research findings regarding the factors influencing companies' dividend policies, the author is therefore motivated to conduct a study entitled "The Effect of Leverage, Investment Opportunity Set, Business Risk, Asset Growth, Institutional Ownership, and Female Directors on Dividend Policy in Energy Sector Companies Listed on the Indonesia Stock Exchange (IDX) for the 2019–2023 Period."

LITERATURE REVIEW

Agency Theory

This theory reveals that conflicts often arise between principals (shareholders) and agents (management) due to differences in (Jensen & Meckling, 1976). The agency problem emerges because the ownership and control functions of the company are separated. Managers often misuse their positions for personal gain rather than in the interest of shareholders. To reduce agency conflicts, companies need to incur certain costs known as agency costs. This theory introduces the concept of agency cost, which refers to expenses incurred to ensure that agents act in accordance with the principals' objectives. In this context, companies with limited investment opportunities the risk of agency costs becoming greater due to the accumulation of free cash flow that is not efficiently allocated. To minimize potential conflicts of interest between managers and shareholders, companies will pay larger dividends to shareholders (Yusof & Ismail, 2016).

Pecking Order Theory

The pecking order theory, proposed by Myers (1977), explains that under conditions of information asymmetry, compared to external investors, company managers have broader access to information regarding the company's operations and future prospects. Companies will follow a preference order in selecting funding sources to minimize the negative impact of information asymmetry. According to this theory, there is a financing hierarchy, which begins with retained earnings, subsequently the use of debt, and finally the issuance of new shares as the last option.

Firm Life Cycle Theory

The firm life cycle theory, proposed by Mueller (1972), explains that a firm's dividend policy should be adjusted according to its stage in the life cycle. In the early phase, a company should ideally retain earnings to grow and develop investment opportunities. At this stage, companies tend to retain profits rather than distribute them as dividends. According to DeAngelo *et al.* (2006), as the company grows, it begins to generate greater profits, enabling it to pay dividends. However, dividend payments are still relatively small, the reason is

that to finance its growth, the company still needs funds. At the maturity stage, reliance on retained earnings to finance growth decreases. Mature companies have greater potential to pay dividends, as reflected in their financial life cycle. In the decline stage, companies are more likely to suspend dividend payments as an effort to maintain the company's sustainability.

Signalling Theory

The signalling theory, proposed by Lintner (1956), explains that investors often respond to changes in dividend amounts. The signalling theory, frequently known as the information effect, states that dividends serve as a signalling mechanism from company managers to investors regarding the company's financial performance, particularly under conditions of information asymmetry—an imbalance of information between management and investors. In this case, managers have more complete information about the company's performance compared to investors. The distribution of dividends can help reduce information asymmetry between management and investors (Boshnak, 2023). When a company distributes dividends, it demonstrates good performance, thereby sending a positive signal to the market. Conversely, a decrease in dividends triggers a negative market reaction, as it is perceived as an indication of declining future prospects for the company (Bhattacharya, 1979).

Leverage refers to when a company relies on external financing to supported investment activities projected that are expected to be profitable in the future. Companies with high leverage often face lower agency costs Wahjudi (2020). In such a condition, information asymmetry can also be reduced, thereby encouraging management to implement a dividend policy as a mechanism to lessen the imbalance of information. (Kim *et al.,* 2021). This drives companies to choose to pay higher dividends due to their greater dependence on creditors (Junior et al., 2024). Leverage enables companies to secure sufficient funds to maintain consistent dividend distribution to investors (Aryani & Fitria, 2020).
H1: Leverage has a significant influence on dividend policy.

The investment opportunity set (IOS) refers to future investment options that reflect a company's potential for asset and equity growth. Profits can either be distributed as dividends or reinvested to support growth (Yudha *et al.,* 2024). Companies often distribute large amounts of dividends even when their investment opportunities are high. This is because they have substantial access to external financing, allowing them not to rely entirely on retained earnings to fund future investment needs (Yusof & Ismail, 2016). Stable and growing companies tend to retain more earnings to fund investments. An increase in investment potential tends to enhance the company's ability to distribute dividends (Indarti *et al.,* 2024).
H2: Investment opportunity set has a significant influence on dividend policy.

Business risk refers to the potential for unexpected losses within a company (Putri *et al.,* 2023). To minimize its impact, companies implement mitigation strategies to avoid future losses. This is reflected in profits generated without relying on debt (Brigham & Houston, 2009). This is considered by

investors as a risk signal affecting how they evaluate the company's capacity to distribute dividends. (Jao *et al.*, 2022). Even when risks are high, companies often pay large dividends to reduce information asymmetry and send positive signals to the market (Labhane, 2019). The higher the risk, the greater the likelihood that management will distribute profits as a positive signal and an effort to maintain investor confidence (Christiningrum & Rahman, 2023).
H3: Business risk has a significant influence on dividend policy.

Company growth is an indicator that reflects a company's ability to develop sustainably (Mayliza & Suryadi, 2023). Company growth is generally measured by the increase in a company's total assets over a certain period (Basri, 2019). As the growth rate increases, the amount of dividends distributed also rises. (Nai *et al.,* 2022). Asset growth is followed by an increase in operational results and creditor confidence. Although additional funds are needed, companies continue to pay dividends because they have alternative funding sources beyond internal sources (Widiantari & Candradewi, 2021).
H4: Asset growth has a significant influence on dividend policy.

Institutional ownership refers to ownership by institutions, including banks, insurance companies, and investment firms (Farooq *et al.,* 2024). The involvement of institutional shareholders strengthens management oversight and protects minority shareholders. As the percentage of institutional ownership increases, both the dividends received and the company's ability to distribute dividends rise (Wiyanto & Artini, 2024). Institutional ownership also reduces conflicts of interest and agency costs, encouraging managers to act in accordance with shareholder interests through institutional monitoring (Farooq *et al.,* 2024).
H5: Institutional ownership has a significant influence on dividend policy.

Female director refers to the proportion of female members on a company's board of directors compared to the total number of board members (Gabriella & Rosmita, 2023). Diversity of backgrounds within the board allows for various perspectives in decision-making (Trinh et al., 2021). Female directors represent the interests of shareholders, particularly minorities, and maintain stakeholder balance, thereby playing a role in reducing agency problems (Syahfitri & Risfandy, 2023). This occurs due to their tendency to be collaborative, cautious, and participative (Nadia & Hanafi, 2023). A higher number of female directors promotes more generous dividend policies (Pokhrel *et al.,* 2024) and contributes to innovation, creativity, and company performance (Tahir *et al.,* 2020).
H6: Female director has a significant influence on dividend policy.

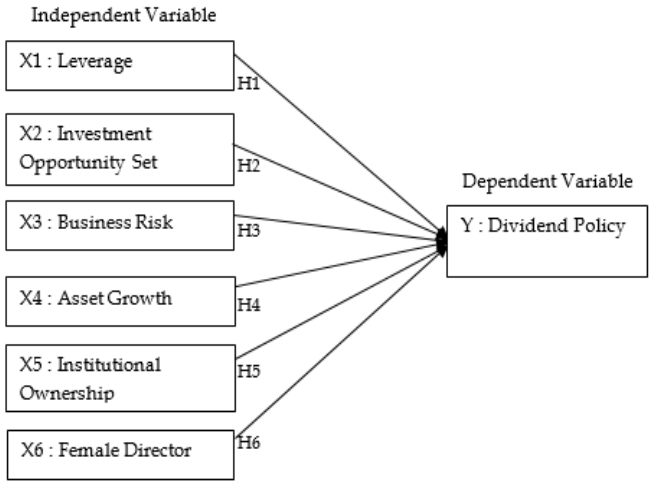

Figure 3. Conceptual Framework

METHODOLOGY

This research is a type of conclusive causal study that examines cause-and-effect relationships between two variables (Sugiyono, 2020). The study employs a quantitative approach, with data sourced from secondary data in the annual reports of energy sector companies listed on the Indonesia Stock Exchange for the 2019–2023 period. The population consists of all energy sector companies listed on the Indonesia Stock Exchange during 2019–2023. The sampling technique used in this study is purposive sampling, applied to select samples based on predetermined criteria. In this research, panel data regression analysis is conducted using STATA 17 software.

$$DPR_{it} = \alpha + \beta_1 LV_{it} + \beta_2 IOS_{it} + \beta_3 BR_{it} + \beta_4 AG_{it} + \beta_5 IO_{it} + \beta_6 FD_{it} + \varepsilon_{i,t} \ldots\ldots(1)$$

Where:

DPR = Dividend Policy; LV = Leverage; IOS = Investment Opportunity Set; BR = Business Risk; AG = Asset Growth; IO = Institutional Ownership; FD = Female Director.

Sample criteria:

Table 1. Purposive Sampling

No.	Description	Number of Companies
	Population: Energy sector companies listed on the Indonesia Stock Exchange during the 2019–2023 period	86
1.	Energy sector companies that were delisted from the Indonesia Stock Exchange (IDX) during the 2019–2023 period.	(3)
2.	Energy sector companies that were listed after 2019	(19)
3.	Energy sector companies that were suspended during the 2019–2023 research period	(7)
4.	Energy sector companies that did not distribute dividends during the 2019–2023 period	(27)
Final Sample Size		30
Number of Observations (n × 5 years)		150

Source: Data processed by the researcher, 2025.

Based on the predetermined sample criteria, this study selected 30 companies that met these criteria over a period of 5 years, resulting in a total of 150 research observations.

This study involves one dependent variable and six independent variables, each of which is operationally defined in the table below :

Table 2. Measurement of Variables

Variable	Measurements	Source
Dividend Policy	$\text{DPR} = \frac{Dividend\ Per\ Share\ (DPS)}{Earning\ Per\ Share\ (EPS)} x\ 100\%$	(Zainuddin & Manahonas, 2020)
Leverage	$\text{DER} = \frac{\text{Total Liabilities}}{\text{Total Equity}} \text{X } 100\%$	(Zainuddin & Manahonas, 2020)
Investment Opportunity Set	$\text{MBVE} = \frac{\text{Shares Outstanding} \times \text{Share Price}}{\text{Total Equity}}$	(Kallapur & Trombley, 2001)
Business Risk	$Business\ Risk = \text{STD}\ \frac{\text{EBIT}}{\text{Total Assets}}$	(Labhane, 2019)
Asset Growth	$Growth = \frac{\text{Total Assets}_t - \text{Total Assets}_{t-1}}{\text{Total Assets}_{t-1}}$	(Basri, 2019)
Institutional ownership	$\text{KI} = \frac{\text{Institutional Shareholding}}{\text{Shares Outstanding}} \times 100\%$	(Basri, 2019)
Female Director	$\text{FD} = \frac{\text{Proportion of Female Directors}}{\text{Total Directors}}$	(Syahfitri & Risfandy, 2023)

Source: Data processed by the researcher, 2025.

RESEARCH RESULT

Panel data regression analysis is used in this study. Panel data regression is a combination of time series data and cross-sectional data (Gujarati, 2004). The panel data regression equation model is written as follows:

DPR = 26,2311-90,5716AG

Table 3. Statistic Descriptive

Variabel	N	Mean	Std. Dev	Min	Max
DPR	150	38,8413	45,6469	0	236,1661
LV	150	118,4933	107,8179	5,5444	587,6616
IOS	150	1,9763	4,0143	0,0661	24,4488
BR	150	0,0224	0,0328	0,0010	0,2625
AG	150	0,0680	0,1573	-0,5137	0,5211
IO	150	81,0923	16,5474	28,7139	99,9751
FD	150	0,1106	0,1597	0	0,666

Source: Data processed using STATA by the researcher, 2025.

Table 3 shows the sample size, mean, maximum, minimum, and standard deviation of each variable. The dividend policy has a mean of 38,84, a maximum value of 236,16, a minimum value of 0, and a standard deviation of 45,64. This indicates that the data distribution is heterogeneous because the standard deviation value is higher than the mean value. Leverage has an average value of 118,49, a minimum value of 5,54, a maximum value of 587,66, and a standard deviation of 107,81. Therefore, on average, companies have debts amounting to 118,49% of their total equity. The investment opportunity set has an average value of 1,97, a minimum value of 0,06, a maximum value of 24,44, and a standard deviation of 4.01. This means that the average market value of a company's equity is 1,97 times its book value. Business risk has an average value of 0,02, a minimum value of 0,001, a maximum value of 0,26, and a standard deviation of 0,03. This average shows that the sample companies had a business risk of 2% during the research period. The average asset growth value is 0,06, the maximum value is 0,52, the minimum value is -0,51, and the standard deviation is 0,15. This reflects that the company with the highest asset growth is 52% and the lowest asset decline is -0,51, and the average company has an asset growth rate of 6%, which means that on average, the company's assets have increased by 6% from the previous year. Institutional ownership recorded an average of 81,09, a maximum value of 99,97, a minimum value of 28,71, and a standard deviation of 16,54. This shows that the maximum percentage of company shares owned by institutions is 99,97% and the minimum percentage of share ownership by institutions is 28,71%. The mean value for female directors is 0,11, the maximum value is 0,66, the minimum value is 0, and the standard deviation is 0,15. The average number of female directors in the sample companies shows that women make up 11% of the total number of directors.

Estimation Model Selection Results

There are three stages of testing conducted for identifying the most suitable estimation model. The first stage is the Chow Test, which obtained a chi-square probability value of 0,0000 < 0,05, shows that the chosen model is the Fixed Effect Model (FEM). The second stage is the Hausman Test, which obtained a chi-square probability value of 0,3800 > 0,05, indicating that the selected model is the Random Effect Model (REM). The third stage is the Lagrange Multiplier (LM) Test, which obtained a chi-square probability value of 0,0000 < 0,05, indicating that the selected model is the Random Effect Model (REM). Based on the results of the panel data regression model selection test, the most suitable model to be applied in this study is the Random Effect Model (REM). This model employs random effects using the Generalized Least Squares (GLS) method, ensuring that the resulting estimations meet the criteria of the Best Linear Unbiased Estimator (BLUE) (Gujarati, 2004). Therefore, the classical assumption tests are no longer required.

T-Test Results

Table 4. Panel Data Regression

DPR	Coef.	P>|t|
LV	-0,0617	0,194
IOS	-0,3245	0,810
BR	119,2342	0,332
AG	-90,5716	0,000
IO	0,2812	0,360
FD	11,3173	0,701
constant	26,2311	0,293

Source: Data processed using STATA by the researcher, 2025.

In general, the t-test statistically assesses the extent to which independent variables, individually, can explain the variation in the dependent variable (Ghozali, 2018). If the significance value of t < 0,05, this indicates that the variable has an effect on the dividend policy. Based on Table 4, the results of the t-test for the variables leverage (0,194 > 0,05), investment opportunity set (0,810 > 0,05), business risk (0,332 > 0,05), institutional ownership (0,360 > 0,05), and female director (0,701 > 0,05) show probability values greater than 0,05, which means that leverage, investment opportunity set, business risk, institutional ownership, and female director do not have a significant effect on dividend policy.

Meanwhile, the asset growth variable has a probability value smaller than 0.05 (0.000 < 0.05) with a coefficient value of -90.5716, indicating that the asset growth variable has a significant negative effect on dividend policy.

F-Test Results

The F-test is used to determine whether the independent variables collectively have a significant effect on the dependent variable (Ghozali, 2021). Based on the test results the calculated F-value of 0,0006 < 0,05 indicates that Ha is accepted and Ho is rejected, meaning that the variables leverage, investment opportunity set, business risk, asset growth, institutional ownership, and female director simultaneously have an effect on dividend policy.

Coefficient of Determination Test Results

The coefficient of determination test was conducted using the Adjusted R-Square method, approach was employed to measure how effectively the regression model explains the dependent variable, while considering the number of independent variables included in the model. (Ghozali, 2021). Based on the *Adjusted* R^2 the resulting value is 0,1571, implying that 15,71% of the variation in dividend policy is interpreted by the six independent variables, which include leverage, investment opportunity set, business risk, asset growth, institutional ownership, and female director. The remaining 84,29% (100%-15,71%) is explained by other variables outside the model.

DISCUSSION

The Effect of Leverage on Dividend Policy

The findings of this study indicate that the leverage variable was found to have no effect on dividend policy. This indicates that changes in the level of debt held by a company do not influence its decision to distribute dividends. This reflects that dividend distribution decisions are not entirely dependent on the company's capital structure or debt level, but may be more influenced by other factors such as funding availability after considering liquidity needs and operational efficiency. Therefore, the results of this research align with those of Azizah & Paramita (2024), Fitriyah (2024), and Farooq *et al.*(2024), who revealed that leverage has no effect on dividend policy. These findings are not in line with the pecking order theory, which suggests that companies prefer external financing through debt before considering equity issuance as a last resort if debt remains insufficient. The implication of this finding is that company management can maintain or even increase dividend payments as a strategy to preserve investor loyalty and strengthen the company's reputation, without being significantly affected by fluctuations in leverage levels.

The Effect of Investment Opportunity Set on Dividend Policy

The findings of this study indicate that the Investment Opportunity Set variable was found to have no effect on Dividend Policy. This indicates that the magnitude of future investment opportunities available to the company does not influence the decision made by management regarding the distribution of dividends to shareholders. Consequently, the high or low market value of the company's equity relative to its book value has not become the main determinant in deciding profit distribution to shareholders. This could be caused by other factors such as market sentiment, liquidity levels, or future funding needs. The results of this research align with those of Rizal & Triyanto (2021) and Abadiyah & Kusumaningrum (2023), who revealed that the investment opportunity set has no effect on dividend policy. These findings are not consistent with agency theory, which explains that companies with limited investment opportunities tend to encounter increased agency costs because the accumulation of free cash flow that is not allocated efficiently. The implication of this finding is that, although the investment opportunity set does not affect dividend policy, it remains important for companies to maintain a balance between investment needs and shareholders' expectations regarding dividend policy.

The Effect of Business Risk on Dividend Policy

The findings of this study indicate that the business risk variable was found to have no effect on dividend policy. The level of volatility in a firm operating profit, which reflects the uncertainty in generating revenue from its core business activities, was not proven to influence decisions regarding the total dividends paid out to shareholders. This indicates that even when a company faces uncertainty in risk, management still makes decisions to establish a dividend policy. The findings of this study are consistent with those of Azizah & Paramita (2024), Ayuningtias & Surjandari (2023), and Theliya *et al.* (2024), who revealed that business risk has no effect on dividend policy. Based on the findings

of this research are not consistent with signaling theory, which, as an information effect, suggests that dividends can serve as a signal from company managers to investors and the market regarding the firm's financial performance. In reality, the amount of dividends distributed does not indicate any relationship with the level of business risk faced by the company, nor is it influenced by the presence of business risk. The implication of this finding is that companies should continue to manage risks by taking consider external factors that may affect the firm, as a form of risk mitigation against potential changes in industry dynamics.

The Effect of Asset Growth on Dividend Policy

The findings of this study indicate that the asset growth variable was found to have a negative effect on dividend policy. This indicates that as a company's assets grow, the potential for distributing dividends decreases. Companies experiencing asset growth tend to retain their earnings to finance expansion or internal investments, thereby reducing the proportion of profits distributed as dividends to shareholders. The findings of this study are consistent with those of Wahjudi (2020), Linh *et al*. (2024), and Hardianto (2021), who revealed that asset growth has a negative effect on dividend policy. This is in line with the firm life cycle theory, which states that companies in the growth stage generally require substantial internal funding to finance their expansion and operations. As a result, the profits available are limited and inadequate for dividend distribution. Therefore, mature companies have a greater potential to pay dividends, whereas high-growth companies tend to retain their earnings. The implication of this finding is that it is important for companies to manage the composition of funding (capital) used to finance operational and investment activities proportionally, so that expansion needs are not solely dependent on retained earnings.

The Effect of Institutional Ownership on Dividend Policy

The results of this study indicate that institutional ownership has no effect on dividend policy. This finding indicates that the proportion of institutional ownership does not influence dividend distribution decisions. This reflects that institutional investors are more oriented towards profit reinvestment and have their own preferences regarding dividend policy. In this study, institutional ownership averaged 81,09%, indicating that the majority of the company shares in the sample were dominated by institutional investors. However, the test results indicate that this level of institutional ownership did not significantly influence dividend policy. This situation illustrates that the presence of institutional investors does not always lead to pressure on management to distribute profits as dividends. Although institutional ownership has the potential to increase the effectiveness of corporate management oversight, institutional investors tend to pursue long-term corporate goals through profit reinvestment. These findings are consistent with those of Hardianto (2021), Tyas & Bandi (2021), and Patricia & Septiyani (2024), who revealed that institutional ownership has no effect on dividend policy. Based on the findings of this research are not consistent with agency theory, which shows that institutional investors play an important role in minimizing agency costs by optimally monitoring

managers and exerting pressure to distribute free cash flow as dividends. The implication of this finding is that companies can consider other more relevant and influential fundamental aspects, such as internal factors like cash flow, liquidity, and available profitability, to determine an optimal dividend policy.

The Effect of Female Director on Dividend Policy

The findings of this study indicate that the female director variable was found to have no effect on dividend policy. This reflects that the characteristics of women on the board of directors tend to be risk-averse and cautious, especially in risky conditions, which encourages female directors to be more conservative in making financial decisions, thereby maintaining liquidity by holding cash for company's financial stability, thus impacting the amount of dividends distributed to shareholders. Supported by the results of this study, the average female director, women only cover around 11% of the total members of the board of directors in the sample companies, thus explaining that the representation of women in the board structure is still quite small and the effectiveness of the role of female directors is still limited in making strategic financial decisions and reducing agency problems through dividend distribution, also explaining the insignificant influence of female directors on dividend policy. The findings of this study are consistent with those of Khan (2022), Darusman & Widiasmara (2024), and Maftucho & Khoiruddin (2018), who revealed that female directors have no effect on dividend policy. According to the findings of this study, agency theory is not supported, which states that the board of directors acts as a key mechanism to monitor and align the interests of managers and shareholders. The implication of this finding is that companies can optimize the role of female directors in the strategic decision-making process, including the determination of dividend policy.

CONCLUSIONS AND RECOMMENDATIONS

The research findings indicate that asset growth has a negative effect on dividend policy in energy sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019–2023 period. High asset growth in a company reduces the likelihood of dividend distribution because most of the profits tend to be retained for internal funding of business expansion and long-term investments. Meanwhile, variables such as leverage, investment opportunity set, business risk, institutional ownership, and female director have no effect on dividend policy.

Companies are advised to optimize their capital structure management by utilizing external funding sources, which can serve as an alternative to maintaining consistent dividend distribution without disrupting expansion plans. Furthermore, investors intending to invest in companies, particularly in the energy sector, are advised to consider asset growth as a factor in assessing the company's dividend prospects. In decision-making, it is important to take into account that companies with high asset growth often choose to focus on reinvestment to support expansion, which may reduce the amount of dividends distributed or the dividends that shareholders should receive.

ADVANCED RESEARCH

This study uses the measurement of the dividend payout ratio (DPR) in companies listed on the Indonesia Stock Exchange (IDX) during the 2019-2023 period, focusing solely on companies in energy sector. Therefore, the findings of this study cannot be generalized to all companies lissted on the IDX. Future researchers are advised to consider other sectors in the LQ45, IDX BUMN 2O, IDX80 index, or to add other variables, such as foreign ownership, board size, ownership concentration, tangibility asset, earnings management, so as to obtain more comprehensive results.

Future studies could also extend the research period beyond 2023 to capture the impact of recent economic and policy changes on dividend payout behavior in the energy sector and other industries. Considering external factors such as global energy price fluctuations, government regulations, and environmental sustainability initiatives may provide deeper insights into how macroeconomic conditions influence corporate dividend decisions. In addition, applying comparative analyses between pre- and post-pandemic periods could highlight structural shifts in dividend policies due to global economic disruptions.

Moreover, future researchers are encouraged to adopt different methodological approaches, such as panel data regression with dynamic models or structural equation modeling, to capture complex interrelationships among financial and governance variables. Incorporating qualitative methods, such as interviews with corporate executives or investors, could also enrich the understanding of managerial perspectives behind dividend policies. These enhancements would not only improve the robustness of findings but also contribute to a more holistic view of dividend policy determinants within Indonesia's evolving corporate landscape.

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