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Determinants of Dividend Policy in Oil, Gas, and Coal Companies Listed on the Indonesia Stock Exchange

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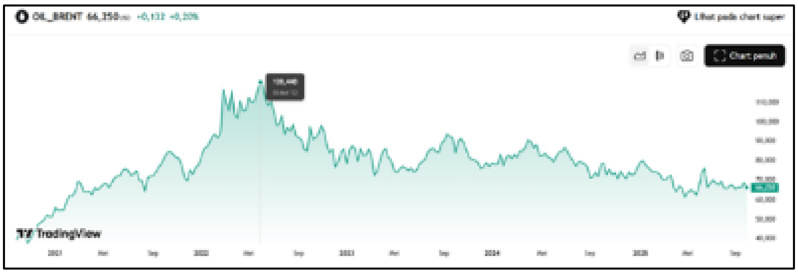
Abstract

Global economic uncertainty triggered by the Russia–Ukraine there is more uncertainty in the global economy, which has made energy prices more unstable. This has put pressure on the financial results of oil, gas, and coal companies in Indonesia. In this situation, how a company decides to pay dividends is important because it shows how stable the company is and helps reduce problems between different groups within the company. This study looks at how things like earnings management, investment opportunities, and the company's ability to pay debts affect dividend decisions. It also checks if the size of the company has any effect on these relationships. The study uses data from energy companies listed on the Indonesia Stock Exchange between 2022 and 2024. The study used a method called Partial Least Squares to analyze the data. The results show that earnings management has a strong negative effect on dividend policies, meaning that companies that manage their earnings more tend to pay fewer dividends. On the other hand, a company's ability to stay solvent has a positive and strong effect on its dividend policy. However, investment opportunities and the size of the company do not have a significant effect on how dividends are decided.

Keywords: Dividend Policy; Earnings Management; Solvency; Investment Opportunities Set; Firm Size

1. Introduction

The global energy industry has entered a period of structural uncertainty since 2022, marked by disruption of supply chains and sharp fluctuations in commodity prices. Indonesia as a producer of oil, natural gas, and coal is inevitably exposed to these dynamics. For companies listed on the Indonesia Stock Exchange, changes in external conditions influence not only profitability but also financial policies related to shareholder welfare, especially dividend decisions. Dividends remain an essential instrument because investors often interpret consistent payouts as evidence of stability amid turbulent markets.



source: www.tradingview.com

Figure 1 The Movement of World Oil Prices Based on Brent Crude Oil During 2021 To 2025

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The chart shows an extreme surge in mid-2022 when prices exceeded 120 USD per barrel following the escalation of the Russia–Ukraine conflict and international sanctions on Russia. After 2023, prices gradually corrected yet continued to fluctuate at a relatively high range compared to the pre-conflict period. This pattern reflects the high sensitivity of energy prices to geopolitical risk and indicates that Indonesian energy firms operate within an environment where revenue projections become increasingly difficult and uncertain.

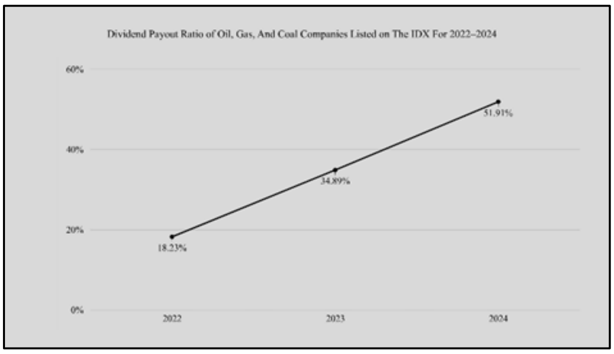

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Figure 2 The Movement of World Oil Prices Based on Brent Crude Oil During 2021 To 2025

Interestingly, the chart demonstrates a rising trend of DPR in the early years of the crisis. Several major issuers such as ADRO and MEDC increased dividend distribution despite unstable earnings. This tendency suggests that management deliberately prioritized cash returns to maintain investor confidence and to convey a message that the companies were still capable of rewarding shareholders even under global pressure.

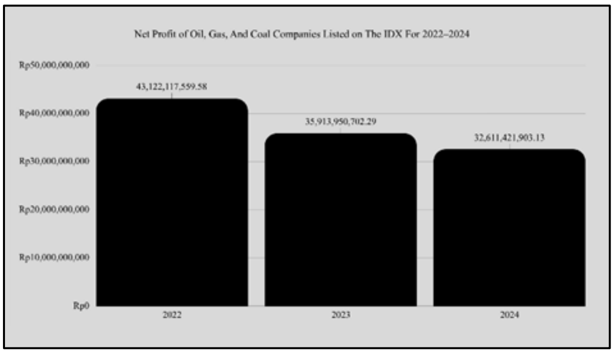

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Figure 3 The Average Net Profit of Oil, Gas, And Coal Companies Listed on The IDX For 2022–2024

Contrary to the DPR trend, the chart indicates a decline in corporate earnings from 2022 to 2024. The weakening profit shows that higher world energy prices were not fully transmitted into sustainable profitability due to cost escalation and market adjustment. This opposite direction between profit and DPR becomes a central phenomenon of the study, implying that dividend policy in this industry may not be determined by profit level alone but by other internal considerations.

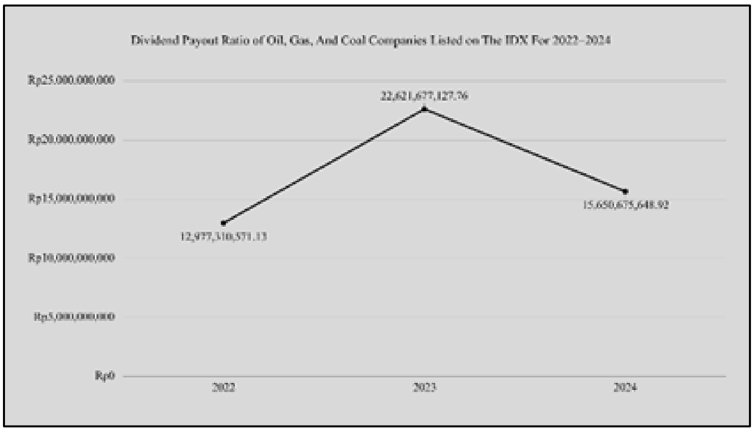

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Figure 4 The Average Cash Dividends of Oil, Gas, And Coal Companies Listed on The IDX For 2022–2024

The payouts increased from 2022 to 2023 as part of the companies' commitment to protect market perception, yet decreased again in 2024 when cash flow pressure and internal financing needs intensified. This fluctuation confirms that dividend decisions are closely related to capital structure management and long-term funding strategy rather than a simple reflection of annual income.

Those graphical phenomena lead to the argument that internal factors must be empirically tested. Earnings management practices may reduce earnings quality and affect the willingness to distribute dividends. Investment Opportunity Set represents competition between growth financing and cash payout, while solvency condition defines creditor constraints and financial flexibility. Previous research shows inconsistent findings regarding these relationships and about the moderating role of firm size. Therefore, this study aims to examine the effect of earnings management, IOS, and solvency on dividend policy in Indonesian oil, gas, and coal companies for 2021–2024, and to assess whether firm size alters those relationships within the context of global energy turbulence.

2. Hypothesis Development and Methods

2.1. Hypothesis Development

2.1.1. Earnings Management and Dividend Policy

The relationship between earnings management and dividend policy has been widely discussed within corporate finance literature. Dividend Policy, commonly measured using the Dividend Payout Ratio, is expected to reflect the firm's real earnings capacity and cash availability. However, reported income may not always represent fundamental performance because managers have discretion to adjust accrual components through earnings management practices [1]. Such discretion creates information asymmetry between managers and shareholders, which becomes the core concern of Agency Theory-Jensen & Meckling (1976).

From the perspective of Signaling Theory, managers may attempt to maintain or increase dividends after engaging in income-increasing earnings management to convey an image of stability to the market [2]. Investors often interpret higher dividends as good news, even when those payouts are supported by managed earnings rather than sustainable profit. In contrast, when managers apply income-decreasing earnings management, companies tend to preserve internal funds and show lower willingness to distribute dividends [3]. Therefore, the direction of the EM–DP relationship may depend on the motives and patterns of managerial accrual adjustment.

Empirical studies provide mixed evidence. Ben Amar et al. (2018) documented that discretionary accruals positively affect dividend policy in French firms, indicating the use of dividends as signaling tool [2]. Javaid et al. (2024) and Indrayati et al. (2021) also confirmed a positive association in emerging markets where governance supervision is relatively weak [4,5]. Conversely, Chandra & Junita (2021) found no significant effect of earnings management on dividend policy in Indonesian companies, suggesting that dividends were determined more by cash flow considerations than by accrual-based income [6].

The inconsistency of previous findings reveals a research gap, particularly in the Indonesian energy sector during 2022–2024 when net profits declined while DPR increased. This gap strengthens the argument that earnings management may have a positive influence on dividend policy. When investors rely heavily on accounting income, managed earnings become the primary reference in determining distributable profit, encouraging firms to maintain or even increase dividends despite temporary economic pressure [1]. Consistent with the signaling motive and empirical evidence in emerging markets [4,5], this study proposes that earnings management positively affects dividend policy, indicating that higher discretionary accruals lead to higher willingness to distribute dividends.
Hypothesis 1: Earnings Management has a positive effect on Dividend Policy.

2.1.2. Investment Opportunity Set and Dividend Policy

Investment Opportunity Set represents the firm's prospective growth alternatives that require substantial internal financing. In companies with higher IOS, earnings are viewed as a critical resource to fund new projects, acquisitions, and reserve replacement within the energy industry [7]. Financial theory predicts that growth-oriented firms prioritize retained earnings over cash distribution, because internal funds are cheaper and faster than external capital. Consequently, the expected Dividend Payout Ratio declines as IOS increases.

Agency Theory-Jensen & Meckling (1976) explains that high IOS intensifies the conflict between shareholders and managers regarding profit allocation. Shareholders seek dividends as immediate returns, while managers prefer to preserve cash to execute investment strategies under their control [8]. This preference encourages managers to reduce dividend payments in order to maintain financial flexibility and avoid breaching creditor covenants, particularly in leveraged energy firms. Therefore, the relationship between IOS and dividend policy is theoretically expected to be negative.

Most prior empirical studies support this argument. Yani & Maharani (2022) and Rifai et al. (2022) found that IOS negatively affected dividend policy in Indonesian public firms, indicating a trade-off between growth financing and shareholder payout [9,10]. Similar evidence was reported by Sinukaban et al. (2024) in energy-related sectors, showing that firms with higher MBVE ratios retained more profit and distributed fewer dividends [11]. Despite several opposite findings in developed markets [2], the phenomenon of Indonesian oil, gas, and coal companies during 2022–2024 where dividends were maintained while profits weakened suggests that IOS did not drive payout decisions. Based on the dominant theoretical reasoning and emerging market evidence, this study proposes that IOS tends to reduce dividend distribution.
Hypothesis 2: Investment Opportunity Set has a negative effect on Dividend Policy.

2.1.3. Solvency and Dividend Policy

Solvency describes the firm's ability to meet long-term obligations and maintain sustainable capital structure. In the oil, gas, and coal industry, solvency becomes crucial because operations are capital intensive and highly exposed to commodity cycles. This study uses Debt to Assets Ratio (DAR) as the proxy, where lower DAR indicates stronger solvency and lighter dependence on debt financing. Firms with stronger solvency have smaller interest burden and wider room to allocate profit for shareholder payout without violating creditor restrictions [3]. Financial flexibility theory explains that companies with stronger solvency generate more stable free cash flow after interest payments, enabling management to increase dividends. Creditors generally impose covenants limiting dividend distribution when leverage is high. Therefore, as DAR declines and solvency strengthens, firms face fewer constraints and show greater willingness to distribute dividends as a positive signal to investors [2]. This reasoning supports an expected positive relationship between solvency and DPR.

Several Indonesian studies confirm this argument. Puspitasari (2022) found that DAR negatively affected dividend policy when interpreted as leverage measure, meaning that stronger solvency led to higher dividends [8]. Similar evidence was reported by Salim & Widoatmojo (2023) and Yani & Maharani (2022), indicating that firms with healthier debt proportion paid higher DPR [7,9]. However, Chandra & Junita (2021) documented no significant effect, suggesting industry differences [6].

The phenomenon shown in your draft graphs for 2022–2024 where average net profit weakened while average DPR and cash dividends increased in firms with relatively lower DAR indicates that solvency played an important role in sustaining payouts. Based on theoretical reasoning and emerging market evidence, this study proposes that stronger solvency (lower DAR) encourages higher Dividend Payout Ratio.
Hypothesis 3: Solvency has a positive effect on Dividend Policy

2.1.4. Moderating Role of Firm Size on Dividend Policy

Firm size represents more than the magnitude of total assets; it embodies corporate maturity, organizational complexity, bargaining power toward creditors, and the intensity of capital market scrutiny. In capital-intensive industries such as oil, gas, and coal, large firms usually operate multiple projects across upstream and downstream segments and have more sophisticated risk management systems. These features affect how managers determine the portion of earnings allocated to dividends versus internal financing. Prior literature documents inconsistent results regarding whether firm size weakens or strengthens internal determinants of dividend policy, indicating the need for a more comprehensive reasoning framework.

In relation to earnings management and dividends, corporate scale shapes the credibility of signaling motives. Large firms are closely supervised by institutional investors and reputable auditors, making opportunistic accrual manipulation more difficult to influence payout decisions [1]. Dividends in big companies tend to follow cash-flow based residual income rather than accounting-based managed earnings. Conversely, smaller firms face lighter supervision and higher dependence on reported income to maintain market reputation; discretionary accruals more easily translate into higher DPR.

Concerning the IOS and DP relationship, funding capacity differs substantially across firm scale. Large firms with high IOS enjoy wider access to bonds and bank loans so investment financing does not necessarily reduce dividends [2]. Smaller firms experience stronger trade-off because internal earnings are the only feasible source, causing higher IOS to sharply suppress DPR [9]. Nevertheless, empirical phenomena in Indonesian energy firms show dividends were maintained amid declining profits, suggesting that in this industry the moderating effect may not operate as predicted.

Regarding solvency as determinant, firm size interacts with creditor constraints and interest burden. Large firms with high DAR generally have formal covenants limiting dividend distribution and prioritize deleveraging strategies to protect credit rating. Smaller firms, although having higher relative DAR, are often pressured by shareholders to distribute dividends to signal survival. Therefore, the effect of solvency on DPR may move in opposite directions depending on firm scale: stronger solvency increases dividends in small firms but not in large firms [8].

Furthermore, the energy sector possesses unique characteristics exposure to commodity cycles, reserve replacement requirements, and government intervention on Domestic Market Obligation. Large firms are able to absorb those risks through diversification, while smaller firms are more vulnerable, which may cause moderation effects to become non-linear and industry specific. The conflicting findings of Ben Amar et al. (2018) and Smith & Pennathur (2019), and Indonesian studies Puspitasari (2022) and Yani & Maharani (2022) demonstrate that the moderating role of firm size on dividend policy[1,2,8,9].
Hypothesis 4: Firm Size moderates the effect of Earnings Management on Dividend Policy.
Hypothesis 5: Firm Size moderates the effect of Investment Opportunity Set on Dividend Policy.
Hypothesis 6: Firm Size moderates the effect of Solvency on Dividend Policy.

2.2. Methods

Table 1 Variable and Indicator

No	Variable	Indicator / Measurement
1.	Earnings Management (X1)	Discretionary Accruals (DA)
2.	Investment Opportunity Set (X2)	Market to Book Value of Equity (MBVE)
3.	Solvency (X3)	Debt to Assets Ratio (DAR)
4.	Firm Size (Z)	Natural Logarithm of Total Assets
5.	Dividend Policy (Y)	Dividend Payout Ratio (DPR)

This study uses a quantitative method to look at how earnings management, investment opportunities, and solvency affect a company's dividend policy. It also checks how the size of a company influences these relationships. The data used comes from the financial reports of oil, gas, and coal companies listed on the Indonesia Stock Exchange (IDX) for the years 2022 to 2024. The data was gathered by looking at official documents like annual reports, audited financial statements, and performance summaries from both the IDX website and the companies' own websites. To analyze the data, the Partial Least Squares (PLS) method was used with the help of SmartPLS version 3.0. The analysis first checked the outer model using tests for convergent validity, discriminant validity, and composite reliability. Then, the inner model was evaluated using R-square values and hypothesis testing, which looked at the original sample estimates and p-values to see if the relationships between the variables in the study model were statistically significant.

3. Results

3.1. Measurement Model Evaluation (Outer Model)

3.1.1. Convergent Validity

Table 2 Outer Loading and AVE Values

Variabel	Outer Loading	AVE
Earnings Management (X1)	**1.000**	**1.000**
Investment Opportunity Set (X2)	**1.000**	**1.000**
Solvency (X3)	**1.000**	**1.000**
Dividend Policy (Y)	**1.000**	**1.000**
Firm Size (Z)	**1.000**	**1.000**
Earnings Management*Firm Size	**0.938**	**1.000**
Investment Opportunity Set*Firm Size	**0.979**	**1.000**
Solvency*Firm Size	**1.039**	**1.000**

Looking at the results in Table 2, all the constructs in this study have Outer Loading and Average Variance Extracted (AVE) values that meet or go beyond the recommended standards. The Outer Loadings are all higher than 0.70, and the AVE values are all above 0.50. This shows that each indicator is closely connected to its related construct, which means the measurement model meets the necessary criteria for convergent validity.

3.1.2. Discriminant Validity

Table 3 Cross Loading Values

	DA	IOS	DAR	DPR	FS	FS*DA	FS*IOS	FS*DAR
X1	**1.000**	0.184	0.155	-0.255	-0.173	-0.456	-0.108	-0.229
X2	0.184	**1.000**	0.032	0.026	-0.286	-0.102	-0.148	-0.335
X3	0.155	0.032	**1.000**	-0.311	0.259	-0.207	-0.321	-0.090
Y	-0.255	0.026	-0.311	**1.000**	0.032	0.128	0.092	-0.044
Z	-0.173	-0.286	0.259	0.032	**1.000**	-0.050	-0.104	0.041
X1*Z	-0.456	-0.102	-0.207	0.128	-0.050	**1.000**	0.579	0.297
X2*Z	-0.108	-0.148	-0.321	0.092	-0.104	0.579	**1.000**	0.401
X3*Z	-0.229	-0.335	-0.090	-0.044	0.041	0.297	0.401	**1.000**

According to the results in Table 3, each construct has a loading value of 1.000, which is higher than its connections with other constructs in the model. This shows that all the constructs are clearly different from each other. So, it can be said that all the variables in this study meet the standards for discriminant validity.

3.1.3. Discriminant Validity

Table 4 Composite Reliability and Cronbach's Alpha Values

Variabel	Cronbach's Alpha	Composite Reliability
Earnings Management (X1)	**1.000**	**1.000**
Investment Opportunity Set (X2)	**1.000**	**1.000**
Solvency (X3)	**1.000**	**1.000**
Dividend Policy (Y)	**1.000**	**1.000**
Firm Size (Z)	**1.000**	**1.000**
Earnings Management*Firm Size	**1.000**	**1.000**
Investment Opportunity Set*Firm Size	**1.000**	**1.000**
Solvency*Firm Size	**1.000**	**1.000**

As shown in Table 4, all the constructs in this study have Composite Reliability and Cronbach's Alpha scores that are higher than the minimum standard of 0.70. This means the indicators within each construct are consistently measuring the same thing. So, it can be said that all the constructs meet the reliability standards and are trustworthy for further analysis.

3.2. Structural Model Evaluation (Inner Model)

3.2.1. R-Square

Table 5 R-Square Value (R^2)

	R Square	R Square Adjusted
Dividend Policy (Y)	**0.166**	0.083

According to the results in Table 5, an R-Square analysis was done to see how well the independent variables explain the research model. The results show that the R^2 value for Dividend Policy (Y) is 0.166. This means that Earnings Management (X1), Investment Opportunity Set (X2), Solvency (X3), and Firm Size (Z), which acts as a moderating variable, together explain 16.6% of the changes in Dividend Policy. The other 83.4% of the changes are due to factors that are not included in the model.

3.2.2. Hypothesis Testing

Table 6 Path Coefficients Values

	Original Sample (O)	Sample Mean(M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
X1 → Y	**-0.237**	-0.231	0.098	2.409	**0.016**
X2 → Y	0.074	0.072	0.111	0.665	0.506
X3 → Y	**-0.301**	-0.299	0.099	3.047	**0.002**
X1*Z → Y	-0.025	-0.004	0.127	0.193	0.847
X2*Z → Y	0.054	0.031	0.156	0.349	0.727
X3*Z → Y	-0.126	-0.135	0.137	0.926	0.355

Based on the results of data in Table 6, the findings are as follows:

- The link between Earnings Management (X1) and Dividend Policy (Y) shows a sample coefficient of -0.237 with a p-value of 0.016. This means there is a negative and significant relationship, suggesting that Earnings Management has a adverse impact on Dividend Policy. As a result, Hypothesis 1 is not supported.
- The impact of the Investment Opportunity Set (X2) on Dividend Policy (Y) has an original sample coefficient of 0.074 and a p-value of 0.506, which means there is no significant connection. So, the Investment Opportunity Set does not affect Dividend Policy, and Hypothesis 2 is not supported.
- The connection between Solvency (X3) and Dividend Policy (Y) shows a sample value of -0.301 with a p-value of 0.002, which means there is a statistically significant link between DAR and DPR. Since DAR is a reverse indicator of solvency, a lower DAR means better solvency. This suggests that stronger solvency leads to higher DPR. Therefore, the hypothesis that solvency has a positive and significant effect on dividend policy is supported.
- The effect of Firm Size (Z) and Earnings Management (X1) on Dividend Policy (Y) has a coefficient of -0.025 with a p-value of 0.847, which means firm size does not affect how earnings management influences dividend policy. So, Hypothesis 4 is not supported.
- The effect of Firm Size (Z) on how Investment Opportunity Set (X2) affects Dividend Policy (Y) has a coefficient of 0.054 and a p-value of 0.727, showing that firm size does not change the relationship between investment opportunities and dividend policy. Thus, Hypothesis 5 is not supported.
- The effect of Firm Size (Z) on the relationship between Solvency (X3) and Dividend Policy (Y) has a coefficient of -0.126 and a p-value of 0.335, indicating that firm size does not influence how solvency affects dividend policy. Hence, Hypothesis 6 is not supported.

4. Discussion

4.1. Effect of Earnings Management on Dividend Policy

The results show that earnings management has a strong negative impact on dividend policy. This means that when companies use fewer earnings management techniques, especially those that lower reported income, they are more likely to increase their dividend payout ratio. In the Indonesian energy sector, paying dividends is a way to keep investors confident and show that the company is financially stable, even if its reported earnings are not strong. This matches what research shows that companies often keep paying dividends even when their profits are not doing well.

From an Agency Theory-Jensen & Meckling (1976) perspective, the negative relationship reflects information asymmetry between managers and shareholders. Managers may reduce reported earnings for internal considerations, yet increase dividend payments to mitigate agency conflict and maintain shareholder trust. This result is consistent with prior studies by Khan & Shah (2019), Kore (2016), and Srikanth & Prasad (2015), which document that higher discretionary accruals are associated with lower dividend payouts [3,12,13]. Overall, the findings confirm that dividend policy functions as a governance mechanism in response to conservative financial reporting.

4.2. Effect of Investment Opportunity Set on Dividend Policy

The results show that the Investment Opportunity Set does not greatly affect dividend policy. This means that how much companies can invest does not really decide how much dividends they pay out to shareholders in the oil, gas, and coal industries. This lack of connection is because the energy sector is very sensitive to changes in global commodity prices. Because of this, companies in the energy industry usually focus more on stable cash flow, the need for long-term financing, and their own company rules when making decisions about dividends, rather than on their investment opportunities. In fact, many energy companies have kept high dividend payments even when their investment situations were changing a lot, showing that paying dividends is still possible without relying much on investment opportunities, especially during times of global uncertainty.

From an agency theory perspective, this finding highlights the divergence of interests between managers and shareholders. While managers may prefer to retain earnings to finance expansion and strengthen control over internal resources, shareholders expect dividends as a direct return on investment. However, because dividend decisions are largely determined by managerial discretion, dividend policy does not necessarily follow the level of investment opportunities but rather the funding strategy perceived as most beneficial in the long term. This result is consistent with prior studies by Adli et al. (2024), Sari et al. (2022), and Suleiman & Permatasari (2022) which also report that IOS does not significantly influence dividend policy, particularly in capital-intensive and volatile industries such as energy [14–16].

4.3. Effect of Solvency on Dividend Policy

The results indicate that solvency has a positive and significant effect on dividend policy. Firms with stronger solvency, reflected by a lower Debt to Assets Ratio, tend to have safer financial structures, lower default risk, and greater ability to maintain liquidity under varying market conditions. A low DAR also implies that corporate assets are primarily financed by equity, resulting in lighter interest burdens and higher financial flexibility to distribute earnings as dividends. Consistent with the 2022–2024 sample trend, improvements in solvency were followed by increases in the Dividend Payout Ratio. This phenomenon is also evident in Indonesian energy firms such as PTBA and ADRO, which were able to maintain high dividend payments due to low leverage and stable capital structures.

From an agency theory perspective, stronger solvency reduces agency conflict by lowering creditor pressure and allowing management greater discretion to allocate profits to shareholders. Dividend payments serve as a mechanism to limit free cash flow and reduce opportunistic managerial behavior, while simultaneously strengthening investor confidence in corporate governance quality. These findings are consistent with prior studies by Prastyo & Kusumawati (2021), Rajali et al. (2025), and Salim & Widoatmojo (2023) which conclude that firms with strong solvency and low debt levels possess greater financial capacity to distribute dividends [7,17,18].

4.4. Moderating Effect of Firm Size on the Relationship between Earnings Management and Dividend Policy

The results indicate that firm size does not moderate the relationship between earnings management and dividend policy. This finding suggests that company scale does not alter either the direction or the strength of the effect of earnings management on dividend decisions. Both large and small firms show similar tendencies in determining dividend policy when earnings management practices occur. Although large firms generally have wider access to external financing, stronger monitoring structures, and more stable reputations, these characteristics do not necessarily lead to different dividend responses when reported earnings are distorted. Likewise, smaller firms may still distribute dividends as a strategy to maintain investor confidence, indicating that firm size is not a distinguishing factor in managerial responses to earnings management practices.

From an agency theory perspective, the insignificant moderating role of firm size implies that corporate scale does not automatically reduce or intensify agency conflict arising from earnings management. Information asymmetry may persist even in large firms, as managers retain discretion over earnings reporting without materially adjusting dividend policy. In smaller firms, dividend decisions are more strongly influenced by cash conditions and strategies to retain investors. This result is consistent with prior studies by Dewi et al., (2017), Kosasih et al. (2021), and Wijayanti et al. (2016) which also conclude that firm size does not moderate the relationship between earnings management and dividend policy, indicating that dividend decisions are driven more by internal considerations than by firm scale [19–21].

4.5. Moderating Effect of Firm Size on the Relationship between Investment Opportunity Set and Dividend Policy

The findings show that the size of a company doesn’t change how the Investment Opportunity Set affects dividend policy. This means that whether a company is big or small, its size doesn’t make the impact of investment opportunities on dividend decisions any stronger or weaker. Big companies with lots of growth options don’t always pay lower dividends, and small companies also don’t always change their dividends based on how many investment opportunities they have. Instead, dividend decisions are more influenced by how the company manages its finances, what it needs internally, and its overall corporate policies. So, company size isn’t a key factor in how the Investment Opportunity Set relates to dividend policy, because both factors act on their own when making dividend decisions.

From an agency theory perspective, this finding suggests that agency conflict related to profit allocation persists in both large and small firms, making firm size insufficient to alter dividend policy dynamics. Managers retain discretion to allocate earnings toward investment projects rather than dividend distribution when investment opportunities are perceived as more profitable, while shareholders continue to expect stable dividend payments. This result is consistent with prior studies by Arizal (2025), Dewi & Widanaputra (2021), and Puspitasari (2022) which also conclude that firm size does not moderate the relationship between investment opportunity set and dividend policy, as dividend preferences are primarily shaped by managerial policy and financial conditions rather than asset scale [8,22,23].

4.6. Moderating Effect of Firm Size on the Relationship between Solvency and Dividend Policy

The results indicate that firm size does not moderate the relationship between solvency and dividend policy. This suggests that company scale neither strengthens nor weakens the influence of debt structure on dividend decisions. Both large and small firms exhibit relatively similar dividend policy patterns in response to changes in solvency, as dividend decisions are primarily driven by risk management strategies, debt repayment priorities, and cash flow stability rather than by asset size. Consequently, firm size does not serve as a distinguishing factor in firms' responses to changes in solvency levels, since internal financial considerations remain the main basis for determining the Dividend Payout Ratio.

From an agency theory perspective, this finding implies that firm size is insufficient to either mitigate or intensify agency conflicts among managers, shareholders, and creditors in dividend-related decisions. In large firms, management may still retain earnings to preserve debt-servicing capacity and financial stability, while in smaller firms dividend distribution is constrained by higher financial risk. As a result, the relationship between solvency and dividend policy remains consistent regardless of firm size. This outcome is in line with previous studies by Anastassia & Setijaningsih (2024), Setyaningsih & Sucipto (2021), and Sinukaban et al. (2024), which similarly conclude that firm size does not moderate the effect of solvency on dividend policy, confirming that dividend decisions are mainly determined by capital structure and financial management practices [11,24,25].

5. Conclusion

Based on the analysis of data from oil, gas, and coal companies listed on the Indonesia Stock Exchange between 2022 and 2024, the study found that earnings management has a significant negative impact on dividend policy. This means that when companies reduce their use of income-decreasing accounting adjustments, they tend to pay out more dividends, which shows that the company is stable and wants to build trust with investors. The study also found that the investment opportunity set does not affect dividend policy, suggesting that opportunities for growth were not the main reason companies decided how much profit to share during uncertain times. Additionally, solvency has a positive and significant effect on dividend policy, meaning that when a company is more financially secure, it is more likely to pay dividends to its shareholders. However, the size of the company does not influence how earnings management, investment opportunities, or solvency relate to dividend policy, meaning that company size does not change the strength of these relationships.

Based on the research, companies should work on being more clear about their profits and improve their internal controls to reduce practices that might make their dividend policies less trustworthy. They should also think carefully about their debt when deciding on dividends to avoid problems with their long-term money situation. For investors, these findings can help them check the quality of a company's earnings and its ability to stay financially strong before making investment choices, especially in the energy industry, which often has big ups and downs. Future studies should look at other industries, check over longer periods, or use different methods to better understand what influences dividend policies in different economic times.

Compliance with ethical standards

Disclosure of conflict of interest

The author declared no potential conflicts of interest.

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