



# Dividend Dynamics: Exploring Liquidity's Moderating Role in Indonesia's Energy-Listed Companies

Rita Rosiana<sup>1,2\*</sup>, Wing Keung Wong<sup>3</sup>

<sup>1</sup>Department of Business Administration, Asia University, Taiwan, <sup>2</sup>Department of Accounting, Universitas Sultan Ageng Tirtayasa, Indonesia, <sup>3</sup>Department of Finance, Asia University, Taiwan. \*Email: [rosiana\\_rita@untirta.ac.id](mailto:rosiana_rita@untirta.ac.id)

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## ABSTRACT

This paper investigates the potential reasons behind the inconsistencies in the factors that affect corporate dividend policy. In addition, it attempts to closely analyze the role of liquidity in the dynamics of these relationships and clarify the characteristics of the moderating variables involved. The analysis draws on financial and annual reports of a sample of publicly listed energy companies in Indonesia, utilizing moderating regression analysis as a methodological framework. This study encompasses 5 years of observations, from 2019 to 2023, and includes 60 firm-year observations across 12 companies. We find that neither profitability nor leverage significantly influences dividend policy, while asset tangibility demonstrates a negative impact. Furthermore, there is evidence that liquidity has a moderating effect on the relationships between both profitability and dividend payout and between leverage and dividend payout. However, liquidity variable does not have moderate impact on the association between asset tangibility and dividend policy. The findings emphasize the necessity of integrating asset tangibility and liquidity into the dividend payment strategies of listed energy companies in Indonesia. Proper management of these factors is essential to maintain sufficient liquidity for cash dividends and to facilitate corporate financing.

**Keywords:** Profitability, Leverage, Asset Tangibility, Liquidity, Dividend Policy

**JEL Classifications:** G10, G11, G32, G35

## 1. INTRODUCTION

Firms rely on capital to support their business activities, which is essential for financing various operational needs. As their business grows, alternative funding from external sources is required to meet financing needs. Therefore, investors are crucial in facilitating company growth by supplying capital for expansion and development initiatives. Investors frequently use dividend policy to indicate a company's financial performance. The increased dividend paid results in a more positive signal because investors expect to maximize the return on their investment (Stefanie and Yanti, 2023). A high dividend ratio conveys that most corporate profits are allocated to stockholders, reducing funds available for reinvesting or different purposes. On the other hand, a low payout

ratio indicates that the company prefers to use most of its profits to support corporate growth, reduce debt, or other strategic initiatives. Meanwhile, maintaining a consistent payout ratio allows the company to continue refinancing its operations and providing returns to its stockholders (Oniyide and Mojekwu, 2023). Investors expect stable dividend payments, as they indicate the company's prospects and reduce investment uncertainty. A dividend payout ratio reduction could influence investors to continue investing in the company and change its financial position (Fitriana et al., 2023). Accordingly, firms need to evaluate the primary factors influencing dividend policy.

Company profitability is frequently regarded as a critical indicator of firm performance, influencing dividend policy significantly (Januarsi and Sanusi, 2024). Prior research reveals mixed findings

on how profitability can influence corporate dividend distribution. Many studies suggest that profitability is positively correlated with dividend payments, indicating that higher profitability typically leads to increased dividend payouts, as it reflects a company's effective use of its capital to generate profits (Abebe Zelalem and Ali Abebe, 2022; Akbar and Ariefianto, 2023; Dewasiri et al., 2019; Januarsi and Sanusi, 2024; Karang et al., 2020; Louziri and Oubal, 2022; Pinto and Rastogi, 2019; Pradika and Rediyono, 2022; Widodo et al., 2021; Wirama et al., 2024). Nevertheless, several studies documented a reverse association between profitability and dividend payment. Firms typically pay dividends based on their net earnings. However, the available funds for dividends may decrease if the company uses profits to cover operational costs or reinvests them in the company, mainly for businesses that focus on growth or face substantial financial obligations (Susetyo et al., 2023; Tekin and Polat, 2021). Meanwhile, research by Kurniawan et al. (2019), Medyawati and Yunanto (2022), and Rahma Sari et al. (2023) demonstrates that profitability of the company cannot influence dividend payments.

Leverage plays a crucial role in shaping dividend policy. Companies with high leverage often rely on debt to finance their operations and growth, while those with low leverage typically utilize their resources. This reliance on debt can heighten financial risk, especially during economic downturns when revenues may decrease but fixed obligations remain unchanged (Widodo et al., 2021). Most studies consistently exhibit that increasing corporate leverage is associated with reduced dividend distributions (Abdullah, 2021; Abebe Zelalem and Ali Abebe, 2022; Hanifah et al., 2024; Jaara et al., 2018; Medyawati and Yunanto, 2022; Oniyide and Mojekwu, 2023; Puspitaningtyas, 2019a). However, (Chindengwike, 2024; Dwiatmanto et al., 2020; Nurcaqiqi and Suryarini, 2018; Temitope et al., 2020) show a positive correlation between leverage and dividend payments. Furthermore, Franc-Dąbrowska et al. (2020) and Nofitasari (2024) find that leverage could not enhance dividends paid.

Asset tangibility is another factor influencing dividend policy. Tangible assets can limit a company's liquidity, making it challenging to distribute dividends. Dividends tend to be lower for companies with more tangible assets. Therefore asset tangibility and dividend payouts are negatively correlated (Kilincarslan, 2018; Bello and Lasisi, 2020; Taiwo et al., 2022). However, Yousaf et al. (2019) depict that a positive correlation exists between the tangibility of assets and a company's dividend policy, which implies that companies with more tangible assets have lower external financing costs because they can be used as collateral to secure debt. Companies with significant tangible assets may require fewer cash reserves, affecting their dividend policy. However, Akbar and Ariefianto (2023) and Wahjudi (2020) demonstrate that dividend distribution does not influenced by asset tangibility.

Empirical research on the drivers of dividend payouts indicates mixed evidence. Therefore, this study uses liquidity as a moderating variable to address the identified gaps in the literature and provide a more comprehensive explanation of how factors like profitability, leverage, and asset tangibility impact dividend

policy. Strong liquidity allows a company to pay dividends and meet financial obligations. However, Firms with liquidity issues may reduce or eliminate dividend payments as the company prioritizes its earnings to meet more pressing financial objectives (Abebe Zelalem and Ali Abebe, 2022; Oniyide and Mojekwu, 2023). implying that liquidity provides financial flexibility to maintain a sustained dividend payout. Therefore, We attempt to investigate the predictors of dividend policy and examine how liquidity moderates the relationship between these variables. By examining these relationships, the research provides valuable insights into how firms can effectively manage their financial strategies and optimize shareholder value. Understanding these dynamics is essential for corporate decision-makers as they strive to balance growth, risk, and shareholder returns in an increasingly competitive environment. Moderation Regression Analysis (MRA) evaluates whether liquidity acts as a pure or quasi-moderator variable in the association between the examined variables.

This study examines Indonesia's listed energy companies for the period 2019-2023. The energy sector is a crucial driver of economic growth in Indonesia. Indonesian Ministry of Energy and Mineral Resources reported that non-tax export revenues from energy and mineral resources reached IDR 300 trillion, exceeding the target by IDR 259.2 trillion in 2023, contributing significantly to Indonesia's gross domestic product (Indonesia Ministry of Energy and Mineral Resources, 2023). In addition, Indonesia's energy demand is increasing due to its large population and rapid industrial expansion. Therefore, investment in the energy sector is critical to ensure sufficient supply for domestic consumption and exports, indicating its continued growth potential. Moreover, there is a gap in the literature as there are few studies conducted in Indonesia that examine the factors influencing dividend payout policies in the energy sector. Therefore, this study aims to understand better how profitability, leverage and tangible assets influence the dividend policy of listed energy companies.

## 2. LITERATURE REVIEW

### 2.1. Profitability and Dividend Policy

Firms pay dividends in proportion to their ability to yield profits. Therefore, the profitability ratio and the firm's dividend policy are closely related (Akbar and Ariefianto, 2023). A negative relationship between dividends paid and profitability was found by Susetyo et al. (2023). As firms become profitable, they prioritize using profits to offset past losses or reinvest in growth opportunities rather than paying dividends to shareholders, which is particularly common in firms with intensive investment opportunities. In support of this argument, Tekin and Polat (2021) have evidence of lower dividend payouts for firms with higher profitability. However, Widodo et al. (2021) claim that firms with high profit levels have flexibility in determining dividend distribution. Typically, higher-profitable firms pay larger dividends to shareholders than less-profitable firms because companies with low profitability frequently use their profits for firm financing and growth instead of paying dividends. Furthermore, Wirama et al. (2024) find that more profitable firms demonstrate solid financial health and distribute higher dividends, signalling favorable to the market and attracting additional external investment. Additionally, Januarsi and Sanusi (2024) conclude that

firms with higher profits are more prone to pay dividends due to having more earnings available for distribution to shareholders. This discussion aligns with (Abebe Zelalem and Ali Abebe, 2022; Akbar and Ariefianto, 2023; Dewasiri et al., 2019; Karang et al., 2020; Louziri and Oubal, 2022; Pinto and Rastogi, 2019; Pradika and Rediyono, 2022), which indicates that greater profitability enhances larger dividend payments to shareholders. However, other studies prove that dividend distribution cannot be influenced by profitability (Kurniawan et al., 2019; Medyawati and Yunanto, 2022; Rahma Sari et al., 2023). Therefore, the study proposes the following hypothesis:

H<sub>1</sub>: Profitability positively influences the dividend policy of energy firms.

## 2.2. Leverage and Dividend Policy

Higher-leverage firms typically have better access to capital, enabling them to invest in profitable projects. Profitable investments raise a firm's profitability, leading to larger dividend payouts (Dwiatmanto et al., 2020). Chindengwike (2024) investigates the association between leverage and dividend payouts among manufacturing firms in Tanzania's stock market. The study concludes that financial leverage positively affects dividend payouts, where an increase in leverage contributes to enhanced dividend distributions. In addition, (Temitope et al., 2020) emphasize that higher leverage could result in increased dividend distributions among sub-Saharan African firms. This argument was supported by Nurchaqqi and Suryarini (2018) and (Sugiastuti et al., 2018), who found that higher debt levels increase dividend payments. In contrast, Abdullah (2021) finds that leverage negatively influences dividend payouts in Turkish financial institutions, implying that higher debt levels result in more outstanding fixed payment obligations, limiting a firm's ability to pay dividends. Besides, Puspitaningtyas (2019a) concluded that a high level of leverage decreases the dividend payments of banking firms in Indonesia. This argument aligns with (Jaara et al., 2018; Medyawati and Yunanto, 2022; Tekin and Polat, 2021), that raised leverage tends to result in smaller dividend payouts to shareholders. Additionally, Franc-Dąbrowska et al. (2020) and (Nofitasari, 2024) conclude that the level of leverage does not impact dividend policy. Thus, this study presents the following: Hypotheses

H<sub>2</sub>: Leverage negatively influences the dividend policy of energy firms.

## 2.3. Assets Tangibility and Dividend Policy

Asset tangibility is the presence of fixed assets that can be utilized as collateral when securing loans from creditors. These assets assure lenders, as they can be claimed in default (Akbar and Ariefianto, 2023). According to Yousaf et al. (2019), firms with more tangible assets maintain better access to financing, reducing reliance on internal funds and allowing for more flexible dividend payments. Their research reveals that asset tangibility positively impacts the dividend policy of non-financial companies in Pakistan, where higher asset tangibility frequently leads to more enormous dividends. However, Taiwo et al. (2022) proved that the relationship between dividend payments is negatively influenced by asset tangibility. According to the study, asset tangibility can support businesses and raise capital and debt levels. As a result,

companies with significant tangible assets may retain more earnings to meet capital needs and reduce financial risk, potentially resulting in lower dividend payments in Nigeria. Similarly, Bello and Lasisi (2020) investigate the link between asset tangibility and dividend policy in Nigeria's publicly traded consumer goods companies. The findings indicate that asset tangibility is inversely related to the distribution of dividends. In other words, companies that focus on asset growth tend to pay less to retain more resources to acquire the necessary fixed assets. However, a study by Akbar and Ariefianto (2023) found that asset tangibility was not associated with dividend payment for ASEAN non-financial firms. Another study by Wahjudi (2020) of Indonesian manufacturing public companies concludes that dividend policy is not affected by asset tangibility. Therefore, this study presents the following hypotheses:

H<sub>3</sub>: Assets tangibility negatively influences the dividend policy of energy firms.

## 2.4. Profitability, Liquidity, and Dividend Policy

Prior research documented a positive effect of liquidity on the payment of dividends. Increasing profitability leads to higher dividends, indicating that firms have a greater tendency to pay out dividends when they are financially strong (Hanifah et al., 2024; Fitriana et al., 2023; Louziri and Oubal, 2022; Pinto and Rastogi, 2019). Kilincarslan (2018) mentions that liquidity significantly impacts firms' dividend decisions. Companies with significant cash reserves or strong liquidity are more prone to distribute dividends than those with liquidity issues. Through the payment of dividends, companies with good liquidity show the market that they can comfortably meet their financial obligations, which indicates a lower risk of default. Investors receive dividends if the company has sufficient internal funds after the investment. The more internal funds are available, the stronger the liquidity position, allowing dividend payments to increase (Salsabilla and Isbanah, 2020). Fitriana et al. (2023) find that liquidity moderates the effect of profitability on dividend payout. Specifically, the more liquid a company is, the more profitability impact dividend payout. However, when profitability is low, robust liquidity may facilitate the continuation of dividend payments, albeit at a lower level. This argument aligns with studies by Hanifah et al. (2024), which demonstrate that liquidity moderates the impact of profitability on dividend distribution. However, the profitability effect on dividends paid remains unaffected by liquidity, indicating that liquidity cannot increase dividend payments during periods of high profitability or decrease dividend payments during periods of low profitability (Yunisari and Ratnadi, 2018). Thus, the study proposes the following hypothesis:

H<sub>4</sub>: Liquidity moderates the profitability-dividend policy relationship for energy firms.

## 2.5. Leverage, Liquidity, and Dividend Policy

Businesses with significant proportion leverage levels face significant fixed obligations due to interest payments on their debt. This situation limits the cash flow that can be distributed as dividends. As leverage increases, the priority shifts to meeting these financial obligations, often resulting in lower or suspended dividend payments (Medyawati and Yunanto, 2022). However,

as liquidity captures a company's capacity to cover current liabilities, companies with robust liquidity can deliver regular dividend payouts because they can firmly cover their financial obligations (Oniyide and Mojekwu, 2023; Gumelar et al., 2024). Therefore, liquidity may moderately leverage-dividend policy relationship. Specifically, while leverage negatively impacts dividend payouts, a strong liquidity position may alleviate this pressure by providing the necessary cash flow to support dividends even in leveraged firms. Nurmadi et al. (2023) find that firms with high liquidity are better positioned to meet their obligations, enabling them to maintain an optimal debt structure. Consequently, it helps the company's management determine dividend policy. Furthermore, Cahyono and Asandimitra (2021) conclude that dividend payments could increase if the firm's leverage ratio is low but its liquidity is sufficient. Abadiyah and Kusumaningrum (2023) find that dividend payments may decrease if the firm raises debt despite high liquidity because firms prioritize the availability of liquidity for debt payments. However, research by Maharani and Terzaghi (2022) proves that liquidity does not play a moderating role in the relationship between leverage and dividend distribution. Therefore, this study posits the following hypothesis:

H<sub>5</sub>: Liquidity moderates the leverage-dividend policy relationship between energy firms.

### 2.6. Assets Tangibility, Liquidity, and Dividend Policy

Firms with high asset tangibility often need help accessing cash since tangible assets, like machinery, cannot be quickly converted into cash. This constraint may hinder their ability to pay dividends, as they may prioritize retaining earnings to fund operations and investments (Kilincarslan, 2018). Taiwo et al. (2022) and Bello and Lasisi (2020) have evidence of an inverse relationship between the tangibility of assets and dividend payment in Nigeria. Correspondingly, Al-Najjar and Hussainey (2009) identified a negative relationship between tangibility and dividend policy in the UK. However, if firms are strongly liquid, as reflected by high cash reserves or high liquidity ratios, they can overcome the restraint. Therefore, high liquidity enables firms to meet their operating costs and obligations while having sufficient cash flow for dividend distributions (Franc-Dąbrowska et al., 2020; Labhane, 2019). Furthermore, effective liquidity management allows firms to navigate periods of financial uncertainty without sacrificing dividend payouts. Thus, while asset tangibility may hinder a company's capacity to pay dividends because of limited access to liquid funds, robust liquidity can offset this limitation by providing sufficient cash for distribution (Al-Najjar, 2009; Al-Najjar and Kilincarslan, 2018; Stereńczak and Kubiak, 2022). However, Chintya and Andrianantenaina (2020), argue that regardless of the firm's level of asset tangibility, fluctuations in liquidity have no impact on managerial decisions for adjusting or keeping dividend payments since businesses may still choose to use cash and assets for other financial commitments or investments. Thus, the study proposes the following hypothesis:

H<sub>6</sub>: Liquidity moderates the asset tangibility-dividend policy relationship between energy firms.

## 3. METHODOLOGY

### 3.1. Data and Sample

The study analyzed variables using data from publicly traded energy companies' financial and annual reports in Indonesia's capital market covering the 2019-2023 period—the data collected from the official IDX Website and company websites. A purposive sampling method was employed to choose the companies, with criteria that included the publication of annual and financial reports during the specified period, a consistent history of dividend payments to investors, and no negative earnings reported throughout the observation period. Following these criteria, 12 companies were selected, resulting in 60 company-year observations within the energy sector over 5 years.

### 3.2. Variable and Measurement

We investigate factors influencing dividend policy and examine how liquidity acts as a moderating factor between these variables. The study identifies dividend policy as the dependent variable, measured through the dividend payout ratio (DPR) (Oniyide and Mojekwu, 2023; Stefanie and Yanti, 2023; Susetyo et al., 2023; Widodo et al., 2021). In this study, the independent variables are profitability, leverage, and tangibility of assets. Return on equity (ROE) is a proxy for profitability, measuring how profitable a business is. To calculate this, we divide net income after taxes by total equity (Dewasiri et al., 2019; Januarsari and Sanusi, 2024; Karang et al., 2020; Louziri and Oubal, 2022). Leverage is another independent variable measured by the ratio of total debt to total assets (DAR), according to (Abdullah, 2021; Abebe Zelalem and Ali Abebe, 2022; Jaara et al., 2018; Tekin and Polat, 2021). We assess asset tangibility (TANG) as the third independent variable. Asset tangibility is represented by the ratio of fixed assets to total assets (Bello and Lasisi, 2020; Taiwo et al., 2022; Yousaf et al., 2019). Finally, following (Franc-Dąbrowska et al., 2020; Hanifah et al., 2024; Kilincarslan, 2018; Nurmadi et al., 2023; Puspitaningtyas et al., 2019b). As a moderating variable, we included the liquidity ratio proxied by the current ratio (CR). This ratio, calculated by dividing total current debt by current assets, reflects the company's capability to meet short-term liabilities with its current assets (Pattiruhu and Paais, 2020).

### 3.3. Research Model and Data Analysis

We employ panel data analysis with moderated regression analysis to develop a model that established the interactions among the variables and test the hypothesis.

$$DPR = \beta_0 + \beta_1 ROE + \beta_2 DAR + \beta_3 TANG + \varepsilon \quad (1)$$

$$DPR = \beta_0 + \beta_1 ROE + \beta_2 DAR + \beta_3 TANG + \beta_4 CR + \varepsilon \quad (2)$$

$$DPR = \beta_0 + \beta_1 ROE + \beta_2 DAR + \beta_3 TANG + \beta_4 CR + \beta_5 ROE * CR + \beta_6 DAR * CR + \beta_7 TANG * CR + \varepsilon \quad (3)$$

Where:

DPR = Firm's Dividend payout ratio

ROE = Firm's Return on equity  
 DAR = Firm's Debt to asset ratio  
 TANG = Firm's Asset tangibility  
 CR = Firm's Current ratio  
 ROE\*CR = Moderation interplay between return on equity and a current ratio  
 DAR\*CR = Moderation interplay between debt to assets ratio and a current ratio  
 TANG\*CR = Moderation interplay between assets tangibility and a current ratio  
 $\beta$  = Constant  
 $\beta_1$ -  $\beta_7$  = Regression coefficients  
 $\varepsilon$  = Error

This study employs moderating regression analysis (MRA). To determine whether the variable serving as a moderator is pure or quasi-moderator, we examine equations (1) through (3). If there is a significant result from the interaction between CR and the independent variable (ROE, DAR, TANG), and CR acts as a moderator without being an independent variable, then CR is considered a pure moderator. But if CR acts as both an independent variable and a moderator and the interaction is significant, it's a quasi-moderator. Furthermore, when the interplay between the moderating and independent variables is not statistically significant, the current ratio (CR) is not a moderating variable (Sharma, 2003)

## 4. RESULTS AND DISCUSSION

### 4.1. Descriptive Statistics

Table 1 presents the descriptive statistics for the research variables, focusing on energy companies in the Indonesian capital market from 2019 to 2023. For each variable, the table includes means and standard deviations and ranges from minimum to maximum values. The average dividend payout ratio (DPR) is 0.637, with a minimum of 0.122, a maximum of 1.720, and a standard deviation of 0.348. The average return on equity (ROE) stands at 0.311, with a standard deviation of 0.302 and a range from 0.003 to 124.9. The average debt-to-asset ratio (DAR) is 0.346, with a minimum of 0.003, a standard deviation of 0.151, and a maximum of 0.620. The average assets tangibility ratio (TANG) is 0.289, with a minimum of 0.050, a maximum of 0.853, and a standard deviation of 0.227. The current ratio (CR) averages 2.346, with a minimum of 0.680, a maximum of 7.880, and a standard deviation of 1.484. The relatively low standard deviations for DPR, ROE, DAR, TANG, and CR suggest a homogeneity in the data and indicate low variability.

### 4.2. Panel Data Regression Analysis

We use a panel regression model to explore the factors that influence dividend policy and to evaluate the effects of moderating

variables. To identify the most suitable analytical approach, we perform both the Chow and Hausman tests. The Chow test determines whether the Fixed Effect Model (FEM) or the Common Effect Model (CEM) is more appropriate for our analysis, while the Hausman test assesses the relative suitability of the Random Effect Model (REM) compared to the FEM. As indicated in Table 2, the results from the Chow test show a Chi-square  $P < 0.05$ , which suggests that the FEM is more suitable than the CEM. Following this, we conduct the Hausman test to differentiate between the FEM and REM. The results in Table 3 indicate that the Hausman test yields a Chi-square  $P > 0.05$ , signifying that the REM is the better option for our analysis. Thus, we proceed with the random effects model to interpret the regression estimation results.

### 4.3. Empirical Findings

The outcomes of the MRA are detailed in Table 4 below.

Hypothesis 1 asserts a positive relationship between profitability and dividend policies. The results presented in Table 4 show that profitability had a statistically insignificant negative correlation with dividend policy, as indicated by a coefficient of  $-0.056$ . Thus, Hypothesis 3 was not confirmed. The data indicates that the profitability ratio of the energy sector listed on IDX does not influence dividend distributions. Research conducted by Kurniawan et al. (2019) and Medyawati and Yunanto (2022) supports this study's findings. In this context, the present study suggests that the decision to distribute dividends is not always related to the company's profitability level. Instead of distributing dividends to shareholders, many companies choose to reinvest their profits to foster long-term growth, reflecting evolving management strategies and investment priorities in an increasingly competitive market. Our findings, however, the study in contradiction to those presented by (Abebe Zelalem and Ali Abebe, 2022; Akbar and Ariefianto, 2023; Dewasiri et al., 2019; Januarsi and Sanusi, 2024; Karang et al., 2020; Louziri and Oubal, 2022; Pinto and Rastogi, 2019; Pradika and Rediyono, 2022; Widodo et al., 2021; Wirama et al., 2024) who concluded a positive association between profitability and firm dividend policy. Susetyo et al. (2023) and Tekin and Polat (2021) also observed a negative impact of profitability on dividend policy.

Hypothesis 2 suggests an opposing association between dividend policy and leverage in the energy sector. According to the results from Table 4, leverage has a coefficient of 0.1476, indicating a positive relationship. However, the probability value 0.6091 suggests this relationship is not statistically significant. Therefore, Hypothesis 2 was rejected. Consequently, these findings indicate that leverage does not influence dividend payments among the listed Indonesian energy firms. In other

**Table 1: Descriptive statistics**

Variables	n	Minimum	Maximum	Mean	Standard deviation
DPR	60	0.122	1.720	0.637	0.348
ROE	60	0.003	1.249	0.311	0.303
DAR	60	0.003	0.620	0.346	0.151
TANG	60	0.050	0.853	0.289	0.227
CR	60	0.680	7.880	2.346	1.484
Valid N (listwise)	60				

words, leverage is not regarded as a critical determinant in these companies' decision-making process for dividend distributions. This result corroborates the findings of Franc-Dąbrowska et al. (2020) and Nofitasari (2024), which highlight that dividend payments cannot be significantly influenced by leverage. This study, however, contradicts the findings of (Chindengwike, 2024; Dwiatmanto et al., 2020; Nurchaqqi and Suryarini, 2018; Sugjastuti et al., 2018; Temitope et al., 2020), which indicated that leverage positively influences dividend policy. This suggests increased leverage leads to higher dividend payments from corporations to shareholders. This study also contradicts the findings of (Abdullah 2021; Abebe Zelalem and Ali Abebe, 2022; Jaara et al., 2018; Medyawati and Yunanto, 2022; Oniyide and Mojekwu, 2023; Puspitaningtyas, 2019a; Tekin and Polat, 2021), which identified that the dividend payout ratio is negatively affected by leverage.

**Table 2: Chow test**

Fixed effect test	Statistic	d.f.	Prob.
Model 1			
Cross-section F	1.956097	(11,44)	0.057
765edsx Cross-section Chi-square	23.887267	11	0.013
Model 2			
Cross-section F	2.128547	(11,45)	0.037
Cross-section Chi-square	25.134911	11	0.008
Model 3			
Cross-section F	1.661774	(11,41)	0.117
Cross-section Chi-square	22.121498	11	0.023

**Table 3: Hausman test**

Test summary	Chi-square statistic	Chi-square d.f.	Prob.
Model 1			
Cross-section random	6.857267	3	0.076
Model 2			
Cross-section random	7.673870	4	0.104
Model 3			
Cross-section random	11.166016	7	0.131

**Table 4: Panel data regression random effect model**

Model	Variables	Coefficient	Std. Error	t-Statistic	Prob.
1	(Constant)	0.862511	0.151519	5.692412	0.000
	ROE	-0.056143	0.147362	-0.380985	0.704*
	DAR	0.147596	0.287016	0.514244	0.609*
	TANG	-0.895050	0.186340	-4.803311	0.000***
	Adjusted R-squared		0.200866		
2	(Constant)	1.050527	0.275124	3.818373	0.000
	ROE	-0.048645	0.147338	-0.330160	0.742*
	DAR	-0.109077	0.440956	-0.247366	0.805*
	TANG	-0.965362	0.235478	-4.099584	0.000***
	CR	-0.034642	0.044749	-0.774146	0.442*
3	Adjusted R-squared		0.201245		
	(Constant)	0.788378	0.269763	2.922488	0.005
	ROE	0.630347	0.291944	2.159134	0.035**
	DAR	-1.079705	0.514404	-2.098942	0.040**
	TANG	-0.437554	0.382107	-1.145108	0.257*
	CR	0.016574	0.062019	0.267247	0.790*
	ROE*CR	-0.333456	0.140321	-2.376385	0.021**
DAR*CR	0.680187	0.237987	2.858088	0.006***	
TANG*CR	-0.176605	0.203037	-0.869818	0.388*	
Adjusted R-squared		0.309069			

\*\*\* and \*\* indicate levels of statistical significance: 1%, 5%, and 10%

Hypothesis 3 claims an inverse association between asset tangibility and dividend policy in the Indonesian energy sector. The findings in Table 4 indicate a coefficient of  $-0.965$  for asset tangibility, accompanied by a probability value of  $0.000$ , which supports the acceptance of Hypothesis 3. This means that with increased tangible assets, energy companies tend to distribute lower dividends to shareholders. Such a trend suggests that companies prioritizing asset growth prefer to issue smaller dividends to assign increased funds for essential investments. This strategic choice reflects a broader trend in the industry, where long-term asset development is preferred to immediate shareholder returns. The findings align with the research conducted by Bello and Lasisi (2020) and Taiwo et al. (2022), confirming asset tangibility's adverse effect on dividend policy. These results emphasize the critical role of asset investment strategies among Indonesian publicly listed energy firms. These results emphasize the critical role of asset investment strategies among Indonesian publicly listed energy firms.

Hypothesis 4 predicts that the liquidity of a company moderates the interplay between profitability and dividend policy for Indonesian publicly traded energy firms. As indicated in Table 4, the interaction between profitability and liquidity (ROE\*CR) shows a negative coefficient of  $-0.333$  and a probability value of  $0.021$ . This allows us to accept Hypothesis 4, suggesting that liquidity significantly moderates the link between profitability and dividend distribution among publicly listed energy companies in Indonesia. Companies that enjoy profitability alongside ample liquidity have a greater capacity to pay dividends than those with less liquidity. In situations where low profitability, strong liquidity enables firms to provide dividends to their shareholders as compensation. The findings corroborate the study by Fitriana et al. (2023) and Hanifah et al. (2024), which found that high profitability and robust liquidity which found that high profitability and robust liquidity potentially support higher dividend payouts. Conversely, strong liquidity can help maintain dividend payments during reduced profitability, although at lower amounts.

Hypothesis 5 states that the liquidity of a company moderates the interplay between leverage and dividend policy for Indonesian publicly traded energy firms. The outcome in Table 4 indicates that the interaction of leverage and liquidity (DAR\*CR) presents a positive coefficient of 0.680, with a  $P = 0.006$ , supporting Hypothesis 5. The findings suggest that the liquidity ratio significantly impacts how leverage interacts with dividend policy. More specifically, higher liquidity is associated with increased leverage and elevated dividend payouts among energy companies listed on the IDX. Firms that maintain robust liquidity positions can continue distributing dividends even with manageable debt levels. The study aligns with (Abadiyah and Kusumaningrum, 2023; Cahyono and Asandimitra, 2021; Nurmadi et al., 2023), who assert that companies with robust liquidity are better positioned to satisfy their financial commitments, thereby allowing them to sustain an optimal debt structure. As a result, this dynamic enables corporate management to formulate effective dividend policies, particularly in Indonesia's energy sector, where they can manage debt effectively while maintaining a favourable dividend payout ratio.

Hypothesis 6 proposes that the liquidity of a company moderates the interplay between asset tangibility and dividend policy of the Indonesia Stock Exchange (IDX) energy sector. The outcome in Table 4 indicates that the interaction of asset tangibility and liquidity (TANG\*CR) presents a positive coefficient of 0.176 and a  $P = 0.388$ . Therefore, hypothesis 6 rejected. These findings indicate that liquidity does not serve as a moderator in the relationship between asset tangibility and dividend policy. The study is consistent with Chintya and Andrianantenaina, (2020), who argue that regardless of the firm's level of asset tangibility, fluctuations in liquidity do not affect managerial decisions to adjust or maintain dividend payment because businesses may still opt to use cash and assets for other financial commitments or investments. However, this study contrast with (Al-Najjar, 2009; Al-Najjar ad Kilincarslan, 2018; Stereńczak and Kubiak, 2022), who claim that effective liquidity management enables firms to handle financial uncertainty without compromising dividend payouts. While asset tangibility might limit a firm's ability to distribute dividends because of limited access to liquid assets, robust liquidity can mitigate this limitation by ensuring enough cash is available for distribution.

## 5. CONCLUSION

This study reveals the moderating role of liquidity in the relationships between profitability, leverage, asset tangibility, and dividend policy for publicly traded Indonesian energy firms. Using MRA, we identify the tangibility of assets as an adverse factor that impacted dividend payments. Furthermore, the study indicates that liquidity functions as a pure moderator both for profitability and dividend policy and leverage and dividend policy. However, liquidity does not impact asset tangibility related to dividend policy. The findings also demonstrate that profitability and leverage do not significantly influence dividend policy.

This study also offers management and investors several dividend policy implications. First, more tangible assets limit a firm's debt capacity, forcing it to use internal resources and signalling to

investors that management might lower dividends. Furthermore, as a pure moderator for profitability and dividend policy, low liquidity may impede dividend payments despite high profitability. In contrast, high liquidity may allow firms to distribute dividends despite low profitability. In other words, management of companies with robust liquidity positions may elect to distribute dividends to their shareholders regardless of their profitability levels. As a pure moderator for leverage and dividend policy, liquidity also enables management financial flexibility and signals to investors that it may keep dividend payments even as debt levels rise. The study highlights the crucial need for effectively organizing asset tangibility and liquidity for Indonesian listed energy firms that issue dividends. By ensuring that these factors are well-managed, firms can better support cash dividends and overall financing. Asset tangibility provides a cushion for creditors and can enhance borrowing capacity, while liquidity ensures that firms can meet short-term obligations. A balanced approach to both can lead to sustainable dividend policies and more robust financial health, benefiting shareholders and the company. Liquidity serves as a significant moderator in the interplay between profitability and dividend policy. Companies must strategically manage their liquidity to optimize dividend payouts while ensuring sufficient funds for growth and operational stability. Firms should focus on enhancing liquidity through effective cash management practices while being mindful of their asset composition when formulating dividend policy.

The study has several limitations that could be the subject of future research. First, the emphasis on energy firms may limit the applicability of the findings. Further investigations could examine data across various industries. Second, we used a single proxy for dividend policy: the dividend payout ratio (DPR). Future studies could use more proxies, such as dividend yield and dividend per share (DPS). Furthermore, future research could consider other independent variables, such as corporate governance, which may have a more significant impact when investigating the determinant of dividend policy.

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