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The Effect of Profitability, Solvency, and Liquidity on Dividend Policy with Market Ratios as a Moderating Variable in Energy and Basic Materials Sector Companies Listed in the Kompas100 Index During the 2019–2024 Period

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Abstract. This study aims to analyze the factors that affect dividend policy in companies in the energy and basic materials sectors listed in the Kompas100 Index. The independent variables used are profitability, solvency, and liquidity, while the dependent variables are dividend policy, and the moderation variable is market ratio. This study uses a quantitative approach with 5 samples of companies in the energy and basic materials sectors listed in the Kompas100 Index for the 2019-2024 period. The sampling technique uses purposive sampling. This research uses secondary data, namely the company's annual financial statement data. The analysis method used was multiple regression analysis using Eviews12. The results of the study show that profitability, solvency, and liquidity both partially and simultaneously do not have a significant effect on dividend policy. In addition, the market ratio variable is not able to moderate the relationship between independent variables and dependent variables.

Keywords: Profitability; Solvency; Liquidity; Dividend Policy; Market Ratio

INTRODUCTION

Dividends are a form of return on investment received by shareholders from a company in exchange for their shareholding. The dividend policy is an important decision for the company's management because it is directly related to the interests of shareholders and the company's business continuity (Kanakriyah, 2020; Sihwahjoeni et al., 2020). The right dividend policy can increase the value of a company and give investors a positive signal about the company's future prospects. According to Brigham and Houston (2019), an optimal dividend policy is a policy that creates a balance between current dividends and future growth so that it can maximize the company's stock price.

The global financial landscape has witnessed significant volatility in dividend policies, particularly during recent crises (Ali Taher & Al-Shboul, 2023; Olaniyi & Shah, 2023). The COVID-19 pandemic (2020-2021) forced numerous multinational corporations to cut or suspend dividend payments, with global dividend distributions declining by approximately 12% in 2020 according to industry reports. Similarly, the commodity price volatility of 2020-2022, driven by geopolitical tensions and supply chain disruptions, created unprecedented challenges for resource-dependent sectors in managing shareholder returns. The energy sector experienced crude oil prices plummeting to historic lows in 2020 before surging to multi-year highs in 2022, while basic materials companies faced similar price swings in coal, minerals, and other commodities. These dynamics have intensified the "dividend policy puzzle"—the long-standing debate in corporate finance about what truly drives dividend decisions. While developed markets have shown relatively stable payout patterns, emerging markets like Indonesia present unique characteristics due to different institutional frameworks, ownership structures, and market maturity levels (Horne & Wachowicz, 2012; Kasmir, 2019; Lestari, 2018).

In the Indonesian context, the energy and basic materials sectors occupy strategic positions as major contributors to economic growth and export revenues. These sectors demonstrate distinctive characteristics that complicate dividend policy decisions: high capital

intensity requirements for exploration and infrastructure development, cyclical revenue patterns tied to global commodity prices, and exposure to regulatory changes in resource extraction and environmental policies. Companies in these sectors must carefully balance the competing demands of maintaining shareholder satisfaction through dividend distributions while preserving financial flexibility for capital-intensive investments and weathering commodity price downturns (Sarifah & Nahar, 2021).

The energy and basic materials sector is a sector that has unique characteristics in terms of its dividend policy (Nugraha et al., 2020; Sierpińska, 2022). Both sectors tend to have high capital requirements for operations and expansion, but on the other hand also have the ability to generate strong cash flow when market conditions are favorable. The characteristics of the energy sector that are cyclical and highly dependent on global commodity prices make companies in this sector must be careful in determining their dividend policies. Similarly, the basic materials sector, which includes mining companies and basic materials, also has high income volatility due to fluctuations in world commodity prices.

The Kompas100 Index is a stock index that includes 100 companies with high liquidity and large market capitalization listed on the Indonesia Stock Exchange. Companies included in this index are considered to have strong fundamentals and are a reference for investors in making investment decisions. Research on companies in the Kompas100 Index is important because these companies represent the overall performance of the Indonesian capital market. In addition, companies that are consistently in this index show performance stability and good management, so analysis of their dividend policies can provide valuable insights for academics and practitioners alike (Devi & Erawati, 2014).

Previous empirical studies have produced inconsistent findings regarding dividend policy determinants, suggesting the presence of contextual factors and potential moderating variables. Arifin and Asyik (2015) examined manufacturing firms and found that profitability exerts a significant positive influence on dividend policy, implying that more profitable companies distribute higher dividends. Conversely, Shabrina and Hadian (2021) discovered that the debt to equity ratio negatively affects dividend payout ratios, supporting the notion that highly leveraged firms prioritize debt servicing over dividend distributions. However, Lestari (2018) reported contrasting results in her study of LQ-45 companies, finding that liquidity does not significantly influence dividend policy. Halim, Anshori, and Darmansyah (2024) investigated pharmaceutical companies and identified firm size as a significant moderating variable in the relationship between financial performance metrics and dividend decisions. These divergent findings across different sectors and time periods suggest that dividend policy determinants may be context-specific and influenced by industry characteristics, market conditions, and corporate governance structures.

The inconsistencies in existing literature reveal a critical research gap: the lack of comprehensive studies examining dividend policy determinants specifically within Indonesia's energy and basic materials sectors, which operate under unique conditions of commodity price volatility, capital intensity, and cyclical performance patterns. Furthermore, previous studies have predominantly focused on direct relationships between financial metrics and dividend policy, with limited investigation into moderating mechanisms that might strengthen or weaken these relationships. The role of market valuation, reflected in ratios such as Price to Book Value (PBV), as a potential moderating variable remains underexplored in the Indonesian context. Understanding whether market expectations moderate the relationship between financial performance and dividend policy is crucial for both corporate managers seeking to optimize capital allocation decisions and investors attempting to predict dividend behavior based on observable financial indicators.

Factors that are suspected to influence dividend policy in this study include profitability, solvency, and company liquidity. Profitability shows the company's ability to generate profits

and is the main indicator of the company's ability to distribute dividends. Solvency describes a company's ability to meet its long-term obligations and reflects the company's capital structure that may influence dividend distribution decisions. Liquidity reflects a company's ability to meet its short-term obligations and the availability of cash to distribute dividends. These three factors are important considerations for management in determining the amount of dividends to be distributed to shareholders.

In addition to the company's internal factors, market conditions reflected in market ratios can also influence dividend policy decisions. Price to Book Value (PBV) as one of the market ratios shows investors' assessment of the company and their expectations for the company's future growth. A high market ratio indicates that investors have high expectations for the company's performance, which can influence management's decisions in determining dividend policy. In this study, market ratio is positioned as a moderation variable that is suspected to strengthen or weaken the relationship between profitability, solvency, and liquidity to dividend policy.

This research offers several novel contributions to the existing literature. First, it provides sector-specific insights by focusing exclusively on energy and basic materials companies, sectors characterized by unique operational and financial dynamics that have received limited attention in Indonesian dividend policy research. Second, it introduces market ratio (PBV) as a moderating variable, extending beyond the traditional direct-effect models to examine conditional relationships—a theoretical advancement that addresses the contingent nature of dividend decisions. Third, it covers the 2019-2024 period, capturing the effects of major economic disruptions including the COVID-19 pandemic and subsequent commodity price volatility, thereby providing contemporary evidence on how dividend policies respond to crisis conditions. Fourth, by focusing on Kompas100 constituents, this study examines firms with superior fundamentals and market visibility, offering insights into dividend behavior among Indonesia's corporate elite.

The urgency of this research stems from several critical considerations. For investors, understanding the determinants of dividend policy in resource-based sectors is essential for portfolio construction and income generation strategies, particularly as Indonesia's capital market continues to attract growing domestic and foreign participation. For corporate managers, empirical evidence on what drives dividend decisions can inform more effective capital allocation strategies that balance shareholder expectations with long-term investment needs. For policymakers and regulators, insights into dividend patterns can contribute to efforts to deepen capital markets and enhance corporate governance practices. Finally, for academic researchers, this study addresses methodological and theoretical gaps by examining moderating effects and sector-specific dynamics, potentially opening avenues for future research on dividend policy in emerging markets.

Based on this background, this study aims to analyze the influence of profitability, solvency, and liquidity on dividend policies with market ratios as moderation variables in companies in the energy and basic materials sectors listed in the Kompas100 Index for the 2019-2024 period. This research is expected to contribute to the development of financial theory, especially regarding dividend policy, as well as provide useful information for investors and company management in making decisions related to dividend policy.

RESEARCH METHODS

Research Design

This study uses a quantitative approach with a type of causal associative research. This study aims to determine the influence of independent variables (profitability, solvency, and liquidity) on dependent variables (dividend policy) with moderation variables (market ratio) (Sugiyono, 2019). The data used is secondary data obtained from the company's annual

financial statements published through the Indonesia Stock Exchange website and the official website of each company.

Population and Sample

The research population is companies in the energy and basic materials sectors listed in the Kompas100 Index for the 2019-2024 period. The sampling technique used purposive sampling with the following criteria: (1) companies that were consistently listed in the Kompas100 Index during the study period, (2) companies that distributed dividends during the study period, and (3) companies that had complete financial data during the research period. Based on these criteria, 5 sample companies were obtained with an observation period of 6 years so that the total observation was 30 (5 companies x 6 years). The list of research samples is presented in Table 1.

Table 1. Research Sample for the Period 2019-2024

No	Code	Company Name
1	ANTM	Aneka Tambang Tbk
2	ELSA	Elnusa Tbk
3	ITMG	Indo Tambangraya Megah Tbk
4	PGAS	Perusahaan Gas Negara Tbk
5	PTBA	Bukit Asam Tbk

Data Analysis Techniques

The data analysis technique used was multiple regression analysis with moderate variables (Moderated Regression Analysis) using Eviews12 software. Before the regression analysis is carried out, a model selection test is first carried out (Chow Test and Hausman Test) to determine the most appropriate model. Furthermore, a classical assumption test was carried out which included the normality test, the multicollinearity test, and the heteroscedasticity test. The regression model used is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 Z + \beta_5 X_1 Z + \beta_6 X_2 Z + \beta_7 X_3 Z + e$$

Where Y = Dividend Policy (DPR), X_1 = Profitability (ROA), X_2 = Solvency (DER), X_3 = Liquidity (CR), Z = Market Ratio (PBV), α = Constant, β_1-β_7 = Regression coefficient, and e = Error term. Hypothesis testing was carried out with a t-test (partial) to test the influence of each independent variable, an F-test (simultaneous) to test the influence together, and a determination coefficient (R^2) to measure the model's ability to explain the variation of dependent variables.

RESULTS AND DISCUSSION

Statistics Descriptive

The results of the descriptive statistical of the research variables are presented in Table 2. Based on the table, it can be explained that the average profitability value (ROA) is 0.163 or 16.3% with a minimum value of -0.073 and a maximum value of 0.615. A negative value indicates that there is a sample company that has suffered losses in a certain period. The standard deviation of 0.149 indicates a fairly high variation in profitability between sample companies.

The solvency measured by the DER has an average value of 0.724 with a minimum value of 0.223 and a maximum of 1.549. This shows that the average sample company has debt of 72.4% of its own capital. The standard deviation of 0.363 indicates that there is a significant difference in capital structure between the sample companies. The liquidity measured with CR has an average value of 2.069 with a minimum value of 1.211 and a maximum of 4.475. An

average score above 2 indicates that in general the sample company has a good ability to meet its short-term obligations.

The dividend policy measured by the DPR has an average value of 0.617 or 61.7% with a minimum value of -0.313 and a maximum value of 1.997. The average value shows that the sample company on average distributes 61.7% of its net profit as dividends. Negative values and values above 1 indicate that there are companies that continue to distribute dividends even though they suffer losses or distribute dividends that exceed the net profit of the current period. The market ratio measured by PBV has an average value of 1.051 with a minimum value of 0.500 and a maximum of 1.860. An average value above 1 indicates that the market is giving a positive assessment to the sample company.

Table 2. Descriptive Statistics

Variable	N	Min	Max	Mean	Std. Dev
Profitability	30	-0,073	0,615	0,163	0,149
Solvency	30	0,223	1,549	0,724	0,363
Liquidity	30	1,211	4,475	2,069	0,798
Dividend Policy	30	-0,313	1,997	0,617	0,555
Market Ratio	30	0,500	1,860	1,051	0,390

Model Selection Test

The Chow test is performed to choose between Common Effect or Fixed Effect models. The results of Chow's test showed an F-statistical probability value of 0.0000 (< 0.05), which means that the Fixed Effect model is more appropriate than the Common Effect. Next, the Hausman test was carried out to choose between the Fixed Effect or Random Effect models. The results of Hausman's test showed a chi-square probability value of 0.0012 (< 0.05), which means that the Fixed Effect model is more appropriate than the Random Effect. Based on the results of the two tests, the model used in this study is the Fixed Effect Model.

Classical Assumption Test

The normality test using the Jarque-Bera test showed a value of 2.634 with a probability of 0.268 (> 0.05). This indicates that the residual model is distributed normally and meets the assumption of normality. The multicollinearity test was carried out by looking at the correlation values between independent variables. The results show that there is no correlation between independent variables exceeding 0.8, so it can be concluded that the model is free from multicollinearity problems.

The heteroscedasticity test using the Glejser test showed that all independent variables had a probability value above 0.05. The profitability variable has a probability of 0.3889, solvency 0.1911, liquidity 0.9412, market ratio 0.3745, and the interaction variables X_1Z, X_2Z, and X_3Z have probabilities of 0.3993, 0.0859, and 0.8544, respectively. These results show that the model is free from heteroscedasticity problems, so the resulting regression model can be used for further analysis.

Hypothesis Test

The results of partial hypothesis testing (t-test) are presented in Table 3. Based on the table, it can be explained that the profitability variable (X_1) has a regression coefficient of 2.625 with a t-statistic value of 0.523 and a probability of 0.6072 (> 0.05). This shows that profitability does not have a significant effect on dividend policy. Although it has a positive coefficient that indicates a unidirectional relationship, the effect is not statistically significant.

The solvency variable (X_2) had a regression coefficient of -2.146 with a t-statistical value of -1.359 and a probability of 0.1911 (> 0.05). The negative coefficient indicates that there is

an inverse relationship between solvency and dividend policy, where the higher the company's debt level, the lower the dividend distributed. Nevertheless, the effect was not statistically significant at the 95% confidence level. The liquidity variable (X_3) has a regression coefficient of -0.131 with a t-statistical value of -0.167 and a probability of 0.8692 (> 0.05), which shows that liquidity also does not have a significant effect on dividend policy.

The market ratio variable (Z) has a regression coefficient of -0.104 with a t-statistical value of -0.055 and a probability of 0.9569 (> 0.05), which shows that the market ratio has no significant effect on dividend policy. For the interaction variable, X_1Z (profitability interaction with market ratio) has a coefficient of -2.981 with a probability of 0.4429, X_2Z (solvency interaction with market ratio) has a coefficient of 1.195 with a probability of 0.4135, and X_3Z (liquidity interaction with market ratio) has a coefficient of -0.118 with a probability of 0.8821. The three interaction variables are not significant, which suggests that market ratios are not able to moderate the relationship between profitability, solvency, and liquidity to dividend policy.

Table 3. Results of the t-test (partial)

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	2,148	1,189	1,139	0,2696
X_1 (Profitability)	2,625	5,016	0,523	0,6072
X_2 (Solvabilis)	-2,146	1,580	-1,359	0,1911
X_3 (Liquidity)	-0,131	0,786	-0,167	0,8692
Z (Market Rate)	-0,104	1,899	-0,055	0,9569
X_1Z	-2,981	3,800	-0,785	0,4429
X_2Z	1,195	1,428	0,837	0,4135
X_3Z	-0,118	0,798	-0,150	0,8821

The results of the F (simultaneous) test are presented in Table 4. The results showed an F-statistic value of 2.341 with a probability of 0.053 (> 0.05). This means that profitability, solvency, liquidity, and market ratios together have no significant effect on the dividend policy at the 95% confidence level. Nevertheless, a probability value close to 0.05 indicates that together these variables have a tendency to influence dividend policy even though they are not statistically significant.

Table 4. F Test Results and Coefficient of Determination

Remarks	Value
F-Statistic	2,341
Prob (F-Statistic)	0,053
R-squared	0,589
Adjusted R-squared	0,337

The value of the adjusted determination coefficient (Adjusted R-squared) of 0.337 or 33.7% shows that the variables of profitability, solvency, liquidity, and market ratio and their interaction variables are only able to explain 33.7% of the variation in dividend policy. While the remaining 66.3% is explained by other variables outside this research model. This relatively low Adjusted R-squared value indicates that there are other factors that are more dominant in influencing dividend policy in companies in the energy and basic materials sectors, such as industry conditions, management strategies, investment prospects, or other external factors.

Discussion

The Effect of Profitability on Dividend Policy

The results of the study show that profitability does not have a significant effect on dividend policies in energy and basic materials sector companies listed in the Kompas100 Index. This indicates that companies in the sector do not always distribute higher dividends despite having high profitability. This finding is not in line with the research of Arifin and Asyik (2015) which found that profitability has a significant positive effect on dividend policy.

This phenomenon can be explained by the special characteristics of the energy and basic materials sector which requires intensive capital for business expansion and development. Companies in this sector tend to require large investments for exploration, development of new mines, or maintenance of production facilities. Therefore, even if the company has high profitability, management may prefer to withhold profits for long-term investment purposes rather than distribute them as dividends. This is in line with the pecking order theory which states that companies prefer internal funding for investment.

In addition, the fluctuating nature of the business cycle in the energy and basic materials sectors makes management more cautious in determining dividend policies. The company tends to maintain dividend stability even though profitability has experienced significant fluctuations due to changes in global commodity prices. Management may implement a conservative dividend policy to maintain financial flexibility and anticipate uncertain market conditions in the future.

The Effect of Solvency on Dividend Policy

Solvency also does not have a significant effect on dividend policy even though it has a negative relationship direction as predicted in the hypothesis. Although the theory states that high debt levels can reduce the ability of companies to distribute dividends due to debt and interest payment obligations, the results of this study show that in sample companies, the level of debt is not the main consideration in determining dividend policy.

This is likely due to several factors. First, the companies in the research sample are large companies that are members of the Kompas100 Index and have good debt management. These companies have good access to funding sources and the ability to manage capital structures efficiently. Second, companies in the energy and basic materials sectors generally have large assets and can be used as collateral to obtain funding, so a relatively high level of debt does not necessarily reduce the company's financial flexibility.

In addition, the company may have had careful financial planning in place in balancing the payment of debt obligations with the distribution of dividends. Companies can leverage a variety of financial instruments and cash management strategies to ensure that they can meet their debt obligations while providing adequate returns to shareholders through dividends. This result is different from the findings of Shabrina and Hadian (2021) who found that DER has a significant negative effect on the dividend payout ratio.

The Effect of Liquidity on Dividend Policy

Liquidity has no significant effect on dividend policy, which indicates that the company does not solely consider cash position or liquidity in determining the amount of dividends. This finding is in line with the results of Lestari's (2018) research which also found that liquidity does not have a significant effect on dividend policy. Although the theory states that companies with high liquidity have a better ability to distribute dividends, in practice companies consider various other factors in determining dividend policies.

Companies in the energy and basic materials sectors may have alternative funding sources or cash management policies that allow dividend distribution without relying too much on liquidity levels. The Company can use credit facilities, bond issuance, or other short-term

funding sources to meet operational cash needs, so that the liquidity reflected in the current ratio does not become a limiting factor in dividend distribution.

In addition, the company may focus more on operating cash flow than liquidity in determining its ability to pay dividends. Operating cash flow provides a more accurate picture of a company's ability to generate cash from its key operational activities. Companies with strong operating cash flows can distribute dividends even though the level of liquidity reflected in the current ratio is relatively low.

The Role of Market Ratios as a Moderation Variable

The results show that market ratios are not able to moderate the relationship between profitability, solvency, and liquidity to dividend policy. This is shown by the insignificance of the three interaction variables (X_1Z, X_2Z, and X_3Z) in the study model. These findings indicate that the market valuation of companies reflected in PBV does not strengthen or weaken the influence of financial performance on dividend policy.

This phenomenon can be explained by the special characteristics of the energy and basic materials sector where the dividend policy is more influenced by the company's fundamental factors and industry conditions than market expectations. Companies in this sector tend to make dividend policy decisions based on long-term considerations such as investment needs, expansion strategies, and financial stability, rather than responding to short-term market valuation changes.

In addition, investors in the energy and basic materials sectors may have different expectations than investors in other sectors. Investors in this sector tend to focus more on long-term growth and dividend stability rather than high dividend payout ratios. They understand the characteristics of the sector's business cycle and value the consistency of dividend distribution more than the amount of dividends that fluctuate following changes in financial performance. Therefore, a high market valuation does not necessarily encourage management to increase the dividend payout ratio.

The findings of this study imply that in the context of the energy and basic materials sectors, dividend policy decisions are more complex and cannot be explained simply by financial factors and market valuations. There are strategic considerations, industry conditions, and other external factors that play an important role in determining dividend policy. This supports agency theory and signaling theory where management uses dividend policy as an instrument to manage investor expectations and maintain the company's reputation in the long term.

CONCLUSION

Based on the results of the research and discussion, it can be concluded that profitability, solvency, and liquidity both partially and simultaneously do not have a significant effect on dividend policies in energy and basic materials sector companies listed in the Kompas100 Index for the 2019-2024 period. In addition, market ratios are unable to moderate the relationship between profitability, solvency, and liquidity to dividend policy. This indicates that in this sector, dividend policy is more influenced by other factors such as company strategy, industry conditions, and future investment prospects than by the financial factors tested in this study. This research contributes to the understanding that the characteristics of different sectors require a different analytical approach in understanding the factors that affect dividend policy. For further research, it is recommended to add other variables such as company size, company growth, free cash flow, managerial ownership, and macroeconomic conditions that may have a stronger influence on dividend policy. In addition, longer research periods, a wider sample covering other sectors, and the use of different analysis methods can

provide more comprehensive results and provide deeper insights into the determinants of dividend policy in the Indonesian capital market.

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