International Journal Management and Economic
IJME JOURNAL Vol. 5 No. 2 | May 2026 – pISSN: 2829-0399, eISSN: 2829-0526, Page 62-74

THE EFFECT OF PROFITABILITY, LIQUIDITY, AND LEVERAGE ON FIRM VALUE IN ENERGY SUB-SECTOR COMPANIES IN INDONESIA

Andrie Kurniawan[a*], Bryan Givan[b], Devi Sofyanty[c], Salma Rosyidah[d]
[a,c,d]Bina Sarana Informatika University, [b]Nusa Mandiri University

Article History
Received: April 29th 2026
Revised : May 2nd 2026
Accepted : May 9th 2026
Published : May 15th 2026

Corresponding author:
andrie.awn@bsi.ac.id

Cite This Article: Kurniawan, A., Givan, B., Sofyanty, D., & Salma Rosyidah. (2026). THE EFFECT OF PROFITABILITY, LIQUIDITY, AND LEVERAGE ON FIRM VALUE IN ENERGY SUB-SECTOR COMPANIES IN INDONESIA. *International Journal Management and Economic*, *5*(2), 62–74. https://doi.org/10.56127/ijme.v5i2.2706

DOI:
https://doi.org/10.56127/ijme.v5i2.2706

Abstract: This study aims to examine the effect of profitability, liquidity, and leverage on firm value in energy sub-sector companies listed on the Indonesia Stock Exchange. The research employs a quantitative approach using secondary data derived from corporate financial statements. The analysis is conducted using panel data regression to capture variations across firms and over time. The findings reveal that profitability has a positive and significant influence on firm value, indicating that companies with higher earnings performance tend to receive better market valuation. This result supports signalling theory, which suggests that strong financial performance serves as a positive signal to investors. In contrast, liquidity does not show a significant effect on firm value, implying that the ability to meet short-term obligations is not a primary consideration for investors in this sector. Similarly, leverage is found to have no significant impact on firm value, suggesting that the use of debt does not directly affect market perception in capital-intensive industries such as energy. Overall, the results highlight that profitability is the most dominant factor influencing firm value, while liquidity and leverage play a less critical role. This study contributes to the literature by providing empirical evidence from the energy sector and offers practical implications for management in enhancing firm value through improved financial performance.

Keywords: Profitability, Liquidity, Leverage, Firm Value, Energy Sector

INTRODUCTION

In recent years, the business environment has been confronted with rapid changes that are often unpredictable. Technological advancements, global economic dynamics, and shifts in government policies have compelled companies not only to focus on survival but also to continuously adapt and enhance their performance in a sustainable manner. In this context, firm value has become one of the most commonly used indicators to assess the extent to which a company is able to build investor confidence. Firm value is not merely a numerical figure; rather, it reflects how the market perceives the company's future prospects (Fatimah & Idayati, 2024).

For investors, investment decisions are not made arbitrarily. They carefully evaluate whether a company possesses the capability to grow, generate profits, and maintain financial stability. In this regard, firm value acts as a "mirror" that reflects the level of market expectations and confidence in the company. An increase in firm value is generally associated with enhanced shareholder wealth, which explains why companies continuously strive to maintain and improve their value (Ndruru et al., 2020).

One of the most critical factors attracting attention is profitability. In simple terms, profitability indicates a company's ability to generate earnings from its operational activities. Companies that consistently produce profits are more likely to gain investor trust, as profitability signals effective management and promising future prospects (Ratnasari & Utiyati, 2021). Furthermore, profitability is often interpreted as an indication that management is capable of utilizing resources efficiently (Dewi et al., 2023).

However, generating profits alone is not sufficient. Companies must also maintain financial balance, particularly in terms of liquidity. Liquidity refers to a company's ability to meet its short-term obligations. In practice, liquid companies are perceived as more secure because they can settle their debts on time, thereby enhancing investor confidence (Tumanan & Ratnawati, 2021). Nevertheless, excessively high

liquidity is not always favorable, as it may indicate that the company is not utilizing its assets efficiently to generate returns (Febriani, 2020).

On the other hand, companies cannot be separated from the use of debt, commonly referred to as leverage. In the business world, debt is often utilized as a strategy to accelerate growth. Additional external financing enables companies to expand their scale of operations. However, alongside these opportunities, there are significant risks. Higher leverage levels increase the financial burden borne by the company. Therefore, effective debt management becomes crucial, as it directly affects firm value (Santoso & Junaeni, 2022).

Interestingly, prior empirical studies have shown inconsistent results regarding the relationship between profitability, liquidity, and leverage and firm value. Some studies report that profitability has a positive effect on firm value, while others indicate contrasting findings. Similar inconsistencies are observed in liquidity and leverage, where the results vary depending on the research context, industry sector, and period of analysis (Sari & Purbowati, 2023; Wahyuningrum & Sunarto, 2023; Arifin & Fitriana, 2021). These inconsistencies suggest that further investigation is still necessary.

Most existing studies have primarily focused on manufacturing or consumer sectors, while the energy sector has received relatively limited attention. This is noteworthy, considering that the energy sector possesses distinct characteristics, such as high capital requirements, substantial operational risks, and strong sensitivity to global conditions and government policies.

From an empirical perspective, the energy sector in Indonesia is currently facing significant challenges. On one hand, it remains heavily dependent on fossil fuels such as coal and oil, making companies highly sensitive to global price fluctuations. Changes in energy prices can directly impact financial performance. On the other hand, Indonesia presents a unique condition as a coal exporter while still relying on oil imports, which indirectly increases operational costs.

Moreover, the energy sector is undergoing a transition toward renewable energy. Although the government has set targets for increasing the use of clean energy, the transition process is far from straightforward. Various challenges persist, including limited investment, unstable regulatory frameworks, and high costs associated with the development of new energy technologies. These conditions create uncertainty that ultimately affects company performance, particularly in terms of profitability and capital structure.

The substantial investment requirements in the energy sector further intensify these challenges. To support energy transition and infrastructure development, companies require significant funding, which often leads to increased reliance on debt financing. While this creates opportunities for growth, it also elevates financial risk. In this context, leverage plays a critical role in shaping firm value.

In addition, the energy sector is increasingly influenced by governance and sustainability issues. In recent years, environmental and social considerations have gained greater attention. Investors now evaluate not only financial performance but also how companies manage their environmental impact. Companies that fail to adapt to these demands risk losing market confidence.

Despite these challenges, the energy sector remains highly strategic for the national economy. Energy availability serves as a fundamental driver of industrial growth and economic development. However, increasing energy demand also imposes pressure on efficiency, profitability, and corporate financing needs.

Based on these conditions, it is essential to examine how financial factors such as profitability, liquidity, and leverage influence firm value, particularly within the energy sector in Indonesia. This study is expected not only to contribute to academic literature but also to provide practical insights for practitioners and investors in making more informed decisions amidst the dynamic evolution of the energy sector.

2. LITERATURE REVIEW

2.1 Signalling Theory

In capital market practices, the relationship between companies and investors is often characterized by information asymmetry. Management, as the internal party, possesses more comprehensive information compared to investors. Therefore, companies need to convey signals through financial statements, which serve as a basis for investors in evaluating corporate performance and future prospects.

One of the most important signals observed by investors is financial performance reflected in financial ratios. High profitability, stable liquidity, and a well-managed capital structure tend to create a positive perception among investors. Conversely, poor financial conditions may raise doubts regarding the company's sustainability. Therefore, signalling theory explains that financial ratios function as a crucial communication medium between the company and the market (Dewi et al., 2023).

2.2 Firm Value

Firm value represents investors' perceptions of a company's performance and future prospects. In the context of the capital market, firm value is closely associated with stock prices, as stock prices reflect market expectations regarding the company's future (Ndruru et al., 2020). According to Fatimah and Idayati (2024), firm value can be measured using the Price to Book Value (PBV) ratio, which is formulated as follows:

PBV = Market Price per Share / Book Value per Share

PBV indicates the extent to which the market values the company's book value. A higher PBV reflects greater investor confidence in the company. In addition, firm value can also be measured using Tobin's Q, formulated as:

Tobin's Q = (Market Value of Equity + Total Debt) / Total Assets

A Tobin's Q value greater than one indicates that the company is valued by the market higher than its asset value.

2.3 Profitability

Profitability describes a company's ability to generate earnings from its operational activities. This ratio is a key indicator in assessing the efficiency of asset utilization. One commonly used measure is Return on Assets (ROA), which is formulated as:

ROA = Net Income / Total Assets

ROA reflects how effectively a company generates profit from its total assets. The higher the ROA, the more efficient the company is in managing its assets. According to Ratnasari and Utiyati (2021), high profitability reflects strong corporate performance and enhances investor attractiveness. This is further supported by Dewi et al. (2023), who state that increasing profits will lead to higher stock prices and firm value.

2.4 Liquidity

Liquidity refers to a company's ability to meet its short-term obligations. This ratio is important in assessing the company's short-term financial security. Liquidity is commonly measured using the Current Ratio (CR), formulated as:

CR = Current Assets / Current Liabilities

The Current Ratio indicates a company's ability to settle short-term obligations using its current assets. According to Tumanan and Ratnawati (2021), companies with strong liquidity are perceived as less risky, thereby increasing investor confidence. However, Febriani (2020) emphasizes that excessively high liquidity may indicate unproductive asset utilization.

2.5 Leverage

Leverage reflects the extent to which a company uses debt in its capital structure. This ratio is important because it relates to both risk and potential returns. Leverage is commonly measured using the Debt to Equity Ratio (DER), formulated as:

DER = Total Debt / Total Equity

DER indicates the proportion of debt relative to equity. A higher DER implies greater reliance on external financing. According to Santoso and Junaeni (2022), leverage can increase firm value if managed optimally. However, excessive use of debt may increase the risk of financial distress. This is consistent with trade-off theory, which suggests that firms must find an optimal balance between the benefits and risks of debt (Febriani, 2020).

2.6. Hypothesis Development

2.6.1. The Effect of Profitability on Firm Value

High profitability indicates that a company is capable of generating earnings effectively. This condition provides a positive signal to investors regarding corporate performance, thereby increasing investment interest and driving stock price growth. Studies conducted by Ratnasari and Utiyati (2021) and Wahyuningrum and Sunarto (2023) demonstrate that profitability has a positive effect on firm value. Therefore, higher profitability leads to higher firm value.

H1: Profitability has a positive effect on firm value.

2.6.2. The Effect of Liquidity on Firm Value

Good liquidity indicates a company's ability to meet its short-term obligations, thereby increasing investor confidence. However, excessively high liquidity may reflect inefficiency in asset utilization. Research by Ndruru et al. (2020) shows a positive effect of liquidity on firm value, while Fatimah and Idayati (2024) find no significant effect. Therefore, the relationship between liquidity and firm value still requires further investigation.

H2: Liquidity affects firm value.

2.6.3. The Effect of Leverage on Firm Value

Leverage provides opportunities for companies to increase returns through debt utilization. However, high financial risk may reduce firm value if not properly managed. Santoso and Junaeni (2022) find that leverage affects firm value, whereas Arifin and Fitriana (2021) report insignificant results. This indicates that the effect of leverage is context-dependent.

H3: Leverage affects firm value.

3. METHODOLOGY

This study employs a quantitative research approach aimed at examining the causal relationships between profitability, liquidity, and leverage on firm value. The quantitative approach is considered appropriate because the study focuses on hypothesis testing through numerical data analysis derived from corporate financial statements. Quantitative research, as defined by Sugiyono (2017), is a method used to analyze relationships among variables through statistical techniques applied to numerical data, enabling the generation of objective and measurable findings in explaining the relationships among the variables under investigation.

The population of this study consists of all energy sub-sector companies listed on the Indonesia Stock Exchange. This sector is selected due to its distinctive characteristics, including high capital requirements, significant operational risks, and strong sensitivity to fluctuations in global commodity prices as well as government policies. According to Sugiyono (2017), a population refers to the entire set of objects that possess specific characteristics determined by the researcher. The sampling technique applied in this study is purposive sampling, which involves selecting samples based on specific criteria relevant to the research objectives. Sekaran and Bougie (2016) explain that purposive sampling enables researchers to choose the most appropriate units of analysis to address the research problem. The selected sample includes companies that are consistently listed in the energy sub-sector during the observation period, publish financial statements consecutively, and provide complete data required for all research variables.

The study utilizes secondary data in the form of annual financial statements obtained from publicly accessible sources. Secondary data are considered reliable as they are collected and published by authorized institutions. Ghozali (2018) defines secondary data as information obtained indirectly through intermediaries such as financial reports, official publications, or available databases. In this study, the data are sourced from the official website of the Indonesia Stock Exchange as well as from the annual reports of each company.

In terms of variable operationalization, the study consists of one dependent variable and three independent variables. Firm value is treated as the dependent variable and is measured using Price to Book Value, which reflects market valuation of the company (Fatimah & Idayati, 2024). Profitability is proxied by Return on Assets, indicating the company's ability to generate profit from its total assets (Kasmir, 2019). Liquidity is measured using the Current Ratio, which represents the company's ability to meet short-term obligations (Tumanan & Ratnawati, 2021). Meanwhile, leverage is measured using the Debt to Equity

Ratio, reflecting the proportion of debt relative to equity in the company's capital structure (Santoso & Junaeni, 2022).

To analyze the data, this study applies both descriptive statistical analysis and panel data regression analysis. Descriptive statistics are used to provide an overview of the data characteristics, including minimum values, maximum values, means, and standard deviations. According to Ghozali (2018), descriptive statistics aim to summarize data without drawing general conclusions. Furthermore, panel data regression is employed as it combines time series and cross-sectional data, allowing for a more comprehensive analysis by capturing variations across both time and entities simultaneously. Gujarati and Porter (2012) state that panel data regression enhances the number of observations, reduces multicollinearity issues, and produces more efficient estimates. The data processing in this study is conducted using EViews 12 software, with the regression model specified as a linear equation incorporating the independent variables and an error term.

In determining the most appropriate panel data regression model, several model selection tests are conducted. The study considers three alternative models, namely the Common Effect Model, Fixed Effect Model, and Random Effect Model. The Chow test is used to compare the Common Effect Model and the Fixed Effect Model, while the Hausman test is applied to determine whether the Fixed Effect Model or the Random Effect Model is more suitable. Additionally, the Lagrange Multiplier test is used to evaluate whether the Random Effect Model is preferable to the Common Effect Model. Baltagi (2005) emphasizes that selecting the correct model is crucial to obtaining accurate and unbiased estimation results.

To ensure the validity of the regression model, classical assumption tests are also conducted, including tests for normality, multicollinearity, and heteroscedasticity. These tests are essential to confirm that the regression model does not produce biased estimates and that the results can be interpreted reliably. Ghozali (2018) highlights that fulfilling classical assumptions is necessary to ensure the robustness of regression analysis.

Hypothesis testing is carried out using several statistical approaches. The t-test is employed to examine the partial effect of each independent variable on the dependent variable, while the F-test is used to assess the simultaneous influence of all independent variables. In addition, the coefficient of determination is used to evaluate the explanatory power of the independent variables in explaining variations in the dependent variable. According to Ghozali (2018), a higher coefficient of determination indicates a stronger ability of the model to explain the dependent variable.

4. RESULTS

4.1. Descriptive Statistics

Table 1. Descriptive Statistics Results

Statistic	ROA	CR	DER	PBV
Mean	0.131077	2.635004	0.439614	0.887733
Median	0.0712	1.560568	0.412369	0.147286
Maximum	0.6669	27.3649	1.998263	45.2697
Minimum	-0.6487	0.200761	0.000137	4E-07
Std. Deviation	0.170554	3.404116	0.376226	3.825347
Skewness	0.677194	3.967572	1.488073	10.33757
Kurtosis	6.340598	23.47718	6.570653	118.7796
Jarque-Bera	83.91934	3114.734	139.5452	89334.03
Probability	0	0	0	0
Observations	155	155	155	155

The descriptive statistics indicate that the average Return on Assets is relatively low at 0.131077, suggesting that, on average, energy sector companies generate modest profitability relative to their total assets. The Current Ratio shows a mean value of 2.635004, indicating that firms generally maintain adequate liquidity to meet short-term obligations, although the high standard deviation implies substantial variation across companies. Meanwhile, the Debt to Equity Ratio has an average of 0.439614, reflecting a moderate reliance on debt financing. Firm value, as proxied by Price to Book Value, exhibits a mean of 0.887733, which indicates that, on average, the market valuation is below book value, although the extremely high maximum value suggests the presence of outliers. Furthermore, the skewness and kurtosis

values across all variables indicate non-normal data distribution, which is confirmed by the Jarque-Bera test results showing probability values below 0.05 for all variables.

4.2. Panel Data Regression Model

4.2.1. Common Effect Model (CEM) Results

Table 2. Common Effect Model (CEM) Estimation Results

Dependent Variable: Firm Value (PBV)
Method: Panel Least Squares
Date: April 17, 2026 Time: 18:59
Sample Period: 2020–2024
Periods Included: 5
Number of Cross-Sections: 31
Total Observations (Balanced Panel): 155

Variable	Coefficient	Std. Error	t-Statistic	Probability
Constant (C)	0.343372	0.649664	0.528537	0.5979
ROA	4.710004	1.784269	2.639739	0.0092
CR	0.05251	0.093738	0.560175	0.5762
DER	-0.48082	0.851301	-0.56481	0.573

Statistic	Value
R-squared	0.051836
Adjusted R-squared	0.032998
F-statistic	2.751719
Prob (F-statistic)	0.044711
Durbin-Watson Statistic	2.510645
Root Mean Squared Error	3.712847

The regression results reveal that profitability, proxied by Return on Assets (ROA), has a positive and statistically significant effect on firm value, as indicated by a probability value below the conventional significance level. In contrast, liquidity (CR) and leverage (DER) do not exhibit a significant influence on firm value, as their probability values exceed the threshold. The overall model is statistically significant based on the F-test, suggesting that the independent variables jointly affect firm value. However, the relatively low adjusted R-squared value indicates that the model explains only a small portion of the variation in firm value, implying the presence of other influential factors not included in the model.

4.2.2. Fixed Effect Model (FEM) Results

Table 3. Fixed Effect Model (FEM) Estimation Results

Dependent Variable: Firm Value (PBV)
Estimation Method: Panel Least Squares
Date: April 17, 2026 Time: 18:53
Observation Period: 2020–2024
Number of Periods: 5
Number of Cross-Section Units: 31 Firms
Total Observations (Balanced Panel): 155

Variable	Coefficient	Std. Error	t-Statistic	Probability
Constant (C)	-0.21319	0.967762	-0.22029	0.826
ROA	7.300361	2.765499	2.639799	0.0094
CR	0.073731	0.151319	0.487255	0.627
DER	-0.11435	1.585192	-0.07214	0.9426

Effects Specification
Cross-section fixed effects (dummy variables)

Statistic	Value
R-squared	0.251778
Adjusted R-squared	0.047717

F-statistic	1.233838
Prob (F-statistic)	0.205677
Durbin-Watson Statistic	3.145514
Root Mean Squared Error	3.298228

The regression results using the Fixed Effect Model indicate that profitability, measured by Return on Assets (ROA), has a positive and statistically significant effect on firm value, as evidenced by a probability value below the conventional significance level. In contrast, liquidity (CR) and leverage (DER) do not show a statistically significant influence on firm value. The model, however, is not statistically significant as a whole, as indicated by the probability of the F-statistic exceeding the significance threshold. Additionally, the relatively low adjusted R-squared value suggests that the explanatory power of the model is limited, implying that firm value is influenced by other factors beyond the variables included in this study.

4.2.3. Random Effect Model (REM) Results

Table 4. Random Effect Model (REM) Estimation Results

Dependent Variable: Firm Value (PBV)
Method: Panel EGLS (Cross-Section Random Effects)
Estimator: Swamy and Arora Estimator of Component Variances
Sample Period: 2020–2024
Number of Cross-Sections: 31 Firms
Total Observations: 155 (Balanced Panel)

Variable	Coefficient	Std. Error	t-Statistic	Probability
Constant (C)	0.312237	0.673314	0.463731	0.6435
ROA	4.850089	1.837087	2.640097	0.0092
CR	0.0542	0.096655	0.56076	0.5758
DER	-0.4619	0.882765	-0.52324	0.6016

The results of the Random Effect Model indicate that profitability, proxied by Return on Assets (ROA), has a positive and statistically significant effect on firm value, as reflected by a probability value below the significance level. In contrast, liquidity (CR) and leverage (DER) do not have a statistically significant impact on firm value, as their probability values exceed the threshold. These findings suggest that, within the energy sector, firm value is primarily influenced by profitability, while liquidity and capital structure play a less dominant role in determining market valuation.

4.3. Panel Data Regression Model Selection

4.3.1. Chow Test

Table 5. Chow Test Results (Redundant Fixed Effects Test)

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

Effects Test	Statistic	Degrees of Freedom	Probability
Cross-section F	1.077796	(30, 121)	0.375
Cross-section Chi-square	36.70823	30	0.1858

The results of the Redundant Fixed Effects Test (Chow Test) show that the probability values for both the cross-section F test and the chi-square test are greater than the conventional significance level. This indicates that the Fixed Effect Model is not statistically superior to the Common Effect Model. Therefore, the Common Effect Model is considered more appropriate for estimating the panel data regression in this study.

4.3.2. Hausman Test

Table 6. Hausman Test Results

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Square Statistic	Degrees of Freedom	Probability

International Journal Management and Economic
IJME JOURNAL Vol. 5 No. 2 | May 2026 – pISSN: 2829-0399, eISSN: 2829-0526, Page 62-74

Cross-section Random	1.536673	3	0.6738

The Hausman test results indicate that the probability value is greater than the conventional significance level, suggesting that the null hypothesis cannot be rejected. This implies that the Random Effect Model is more appropriate than the Fixed Effect Model for this study. Therefore, the Random Effect Model is preferred for panel data estimation, as it provides more efficient and consistent results under these conditions.

4.3.3. Lagrange Multiplier Test

Table 7. Lagrange Multiplier Test Results

Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

Test Statistic	Cross-Section	Time	Both
Breusch–Pagan	0.010917	1.033976	1.044893
Probability	-0.9168	-0.3092	-0.3067
Honda	0.104482	-1.01685	-0.64514
Probability	-0.4584	-0.8454	-0.7406
King–Wu	0.104482	-1.01685	-0.91932
Probability	-0.4584	-0.8454	-0.821
Standardized Honda	0.431965	-0.78405	-4.9692
Probability	-0.3329	-0.7835	-1
Standardized King–Wu	0.431965	-0.78405	-4.01133
Probability	-0.3329	-0.7835	-1
Gourieroux et al.	—	—	0.010917
Probability	—	—	-0.707

The Lagrange Multiplier test results indicate that the probability values across all test statistics, including Breusch–Pagan, Honda, King–Wu, and their standardized versions, are greater than the conventional significance level. This suggests that the null hypothesis cannot be rejected, implying that there are no significant random effects in the panel data model. Therefore, the Common Effect Model is more appropriate than the Random Effect Model for this study.

4.4. Classical Assumption Tests

4.4.1. Normality Test

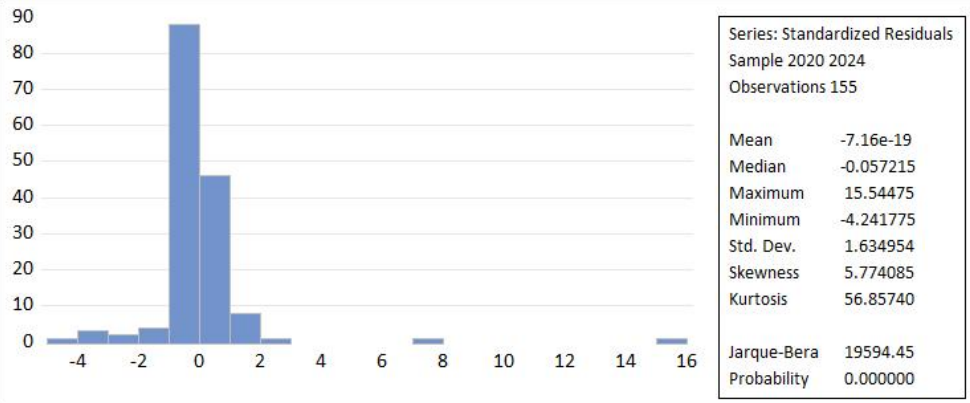

Figure 1. Normality Test Results

The histogram of standardized residuals indicates that the data are not normally distributed. Although the mean is approximately zero, the distribution is highly skewed to the right, as reflected by the large skewness value. The kurtosis is extremely high, suggesting a leptokurtic distribution with significant outliers. This is further confirmed by the Jarque–Bera test, which shows a probability value of 0.000000, indicating that the residuals do not follow a normal distribution.

International Journal Management and Economic
IJME JOURNAL Vol. 5 No. 2 | May 2026 – pISSN: 2829-0399, eISSN: 2829-0526, Page 62-74

4.4.2. Multicollinearity Test

Table 8. Multicollinearity Test Results

Variable	ROA	CR	DER
ROA	1	0.011069	-0.08668
CR	0.011069	1	-0.31198
DER	-0.08668	-0.31198	1

The correlation matrix shows that the relationships among the independent variables are relatively weak, as all correlation coefficients are below the commonly accepted threshold for multicollinearity concerns. This indicates that there is no strong linear relationship among profitability (ROA), liquidity (CR), and leverage (DER). Therefore, the model is free from multicollinearity issues, and each independent variable can be considered to provide distinct information in explaining firm value.

4.4.3. Heteroskedasticity Test

Table 9. Heteroskedasticity Test Results

Dependent Variable: Absolute Residuals (ABS(RESID))
Method: Panel Least Squares
Sample Period: 2020–2024
Number of Cross-Sections: 31 Firms
Total Observations: 155 (Balanced Panel)

Variable	Coefficient	Std. Error	t-Statistic	Probability
Constant (C)	0.613446	0.579608	1.058381	0.2916
ROA	6.370415	1.591862	4.001863	0.0001
CR	0.043551	0.08363	0.520753	0.6033
DER	-0.83775	0.759501	-1.10302	0.2718

Statistic	Value
R-squared	0.112071
Adjusted R-squared	0.09443
F-statistic	6.352857
Prob (F-statistic)	0.000438
Durbin-Watson Statistic	2.481062
Root Mean Squared Error	3.312473

The heteroskedasticity test results indicate that profitability (ROA) has a statistically significant effect on the absolute residuals, as reflected by its probability value below the significance level. In contrast, liquidity (CR) and leverage (DER) do not show significant effects. The overall model is statistically significant, as indicated by the F-statistic probability. These findings suggest the presence of heteroskedasticity in the model, as at least one independent variable significantly influences the residual variance, indicating that the assumption of constant variance is violated.

4.4.4. Multiple Linear Regression Analysis

Table 10. Multiple Linear Regression Analysis Results

Variable	Coefficient	Std. Error	t-Statistic	Probability
Constant (C)	0.343372	0.649664	0.528537	0.5979
Return on Assets (ROA)	4.710004	1.784269	2.639739	0.0092
Current Ratio (CR)	0.05251	0.093738	0.560175	0.5762
Debt to Equity Ratio (DER)	-0.48082	0.851301	-0.56481	0.573

The regression results indicate that profitability, proxied by Return on Assets (ROA), has a positive and statistically significant effect on firm value, as evidenced by its probability value below the conventional significance threshold. In contrast, liquidity (CR) and leverage (DER) do not show a statistically significant influence on firm value, as their probability values exceed the threshold. This suggests that, within the

energy sector context, investors place greater emphasis on profitability performance compared to liquidity and capital structure in determining firm value.

4.5. Hypothesis Testing

Table 11. Hypothesis Testing Results

Dependent Variable: Firm Value (PBV)
Estimation Method: Panel Least Squares
Date: April 17, 2026 Time: 19:46
Observation Period: 2020–2024
Number of Periods: 5
Number of Cross-Section Units: 31 Firms
Total Observations (Balanced Panel): 155

Variable	Coefficient	Std. Error	t-Statistic	Probability
Constant (C)	0.343372	0.649664	0.528537	0.5979
ROA	4.710004	1.784269	2.639739	0.0092
CR	0.05251	0.093738	0.560175	0.5762
DER	-0.48082	0.851301	-0.56481	0.573

Statistic	Value
Root Mean Squared Error	3.712847
R-squared	0.051836
Adjusted R-squared	0.032998
Mean of Dependent Variable	0.887733
S.D. of Dependent Variable	3.825347
S.E. of Regression	3.761702
Akaike Information Criterion	5.513088
Schwarz Criterion	5.591628
Hannan–Quinn Criterion	5.544989
Log Likelihood	-423.264
F-statistic	2.751719
Prob (F-statistic)	0.044711
Durbin–Watson Statistic	2.510645

The regression results indicate that profitability, measured by Return on Assets (ROA), has a positive and statistically significant effect on firm value, as reflected by a probability value below the significance level. In contrast, liquidity (CR) and leverage (DER) do not show statistically significant effects. The model is significant overall based on the F-statistic, suggesting that the independent variables jointly influence firm value. However, the relatively low adjusted R-squared value indicates that the explanatory power of the model is limited, implying that firm value is influenced by other factors not included in the model.

4.6. Research Discussion

4.6.1. The Effect of Profitability on Firm Value

The empirical results indicate that profitability, as proxied by Return on Assets (ROA), has a positive and statistically significant effect on firm value. This finding suggests that companies with higher profitability tend to be valued more favorably by the market. In the context of signalling theory, profitability serves as an important signal for investors regarding the company's performance and future prospects. A higher ROA reflects the company's efficiency in utilizing its assets to generate earnings, which increases investor confidence and ultimately leads to higher firm value.

This result is consistent with previous studies conducted by Ratnasari and Utiyati (2021) and Wahyuningrum and Sunarto (2023), which found that profitability positively influences firm value. In the energy sector, this relationship becomes particularly relevant due to the capital-intensive nature of the industry. Companies that are able to generate stable profits are perceived as more capable of managing operational risks and market fluctuations, especially in an environment characterized by volatile energy prices. Therefore, profitability emerges as a key determinant in shaping market perception and enhancing firm value.

4.6.2. The Effect of Liquidity on Firm Value

The results show that liquidity, measured by the Current Ratio (CR), does not have a statistically significant effect on firm value. This finding implies that the company's ability to meet short-term obligations is not a primary factor considered by investors in determining firm value within the energy sector. Although liquidity is generally associated with financial stability, it does not necessarily translate into higher market valuation.

One possible explanation is that excessive liquidity may indicate inefficiency in asset utilization, as suggested by Febriani (2020). Firms that hold too many liquid assets may fail to invest these resources in more productive activities, thereby limiting their potential returns. This result aligns with the findings of Fatimah and Idayati (2024), who reported that liquidity does not significantly affect firm value. In the energy sector, investors may place greater emphasis on long-term profitability and growth potential rather than short-term liquidity conditions. Consequently, liquidity is not perceived as a critical factor influencing firm value.

4.6.3. The Effect of Leverage on Firm Value

The empirical findings reveal that leverage, proxied by the Debt to Equity Ratio (DER), does not have a statistically significant effect on firm value. This suggests that the proportion of debt in the company's capital structure does not directly influence how the market values the firm. From the perspective of trade-off theory, the use of debt can provide tax advantages and enhance firm value if managed optimally. However, excessive leverage increases financial risk and the potential for financial distress. The insignificant result in this study indicates that the benefits and risks of leverage may offset each other, leading to a neutral impact on firm value. This finding is consistent with Arifin and Fitriana (2021), who also found no significant relationship between leverage and firm value. In the context of the energy sector, the use of debt is often unavoidable due to the high capital requirements of the industry. As a result, investors may perceive a certain level of leverage as normal and not necessarily a negative signal. Therefore, leverage does not play a dominant role in influencing firm value compared to profitability.

4.6.4. Simultaneous Effect of Profitability, Liquidity, and Leverage on Firm Value

The results of the F-test indicate that profitability, liquidity, and leverage simultaneously have a statistically significant effect on firm value. This finding suggests that, collectively, these financial variables contribute to explaining variations in firm value, even though not all variables are significant individually. However, the relatively low adjusted R-squared value indicates that the explanatory power of the model is limited. This implies that a substantial portion of the variation in firm value is influenced by other factors not included in the model, such as firm size, growth opportunities, corporate governance, and macroeconomic conditions. In the energy sector, external factors such as global commodity prices, regulatory changes, and sustainability issues may also play a crucial role in shaping firm value.

5. CONCLUSION

This study examines the influence of profitability, liquidity, and leverage on firm value within energy sub-sector companies in Indonesia. The findings reveal that profitability plays a significant role in enhancing firm value, indicating that companies with stronger earnings performance tend to gain higher market appreciation. This result reinforces the importance of profitability as a key signal for investors, reflecting managerial efficiency and the firm's ability to generate sustainable returns. In contrast, liquidity does not demonstrate a significant relationship with firm value, suggesting that the ability to meet short-term obligations is not a primary consideration for investors in evaluating companies within this sector. This may be attributed to the nature of the energy industry, where long-term performance and capital efficiency are prioritized over short-term financial flexibility.

Furthermore, leverage is found to have no significant effect on firm value, implying that the proportion of debt in the capital structure does not directly influence market perception. This condition indicates that investors may view a certain level of leverage as normal in capital-intensive industries such as energy, where external financing is often necessary to support large-scale investments. The simultaneous analysis shows that these financial variables collectively influence firm value, although the overall explanatory power of the model remains limited. This suggests that firm value is also shaped by other factors beyond financial performance, including external economic conditions, regulatory dynamics, and sustainability considerations.

Overall, the study highlights that profitability is the most dominant factor influencing firm value, while liquidity and leverage play a less critical role. These findings provide important implications for management and investors in emphasizing the importance of improving operational performance and long-term value creation strategies.

BIBLIOGRAPHY

Anggraeni, M. D. P. (2020). *Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan dengan kebijakan dividen sebagai variabel moderasi: Studi pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia tahun 2016–2018* (Doctoral dissertation, Universitas Islam Negeri Maulana Malik Ibrahim).

Arifin, A., & Fitriana, M. F. (2022). Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan dengan kebijakan dividen sebagai variabel moderasi (Studi empiris pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia tahun 2018–2020). In *Prosiding Seminar Nasional Hukum, Bisnis, Sains dan Teknologi* (Vol. 2, No. 1, pp. 1083–1083).

Baltagi, B. H. (2005). *Econometric analysis of panel data* (3rd ed.). John Wiley & Sons.

Chynthiawati, L., & Jonnardi, J. (2022). Pengaruh profitabilitas, leverage, pertumbuhan perusahaan, dan likuiditas terhadap nilai perusahaan. *Jurnal Paradigma Akuntansi, 4*(4), 1589–1599.

Detama, G. R., & Laily, N. (2021). Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan (Pada perusahaan farmasi yang terdaftar di BEI). *Jurnal Ilmu Dan Riset Manajemen (JIRM), 10*(1).

Dewi, N. S. A., Khuzain, K., & Djawoto, D. (2023). Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan dengan kebijakan dividen sebagai variabel moderating (Studi pada perusahaan ritel di BEI). *Jurnal Bisnis Dan Manajemen, 10*(1), 109–120.

Febriani, R. (2020). Pengaruh likuiditas dan leverage terhadap nilai perusahaan dengan profitabilitas sebagai variabel intervening. *Jurnal Pendidikan, Akuntansi Dan Keuangan, 3*(2), 216–245.

Fatimah, F., & Idayati, F. (2024). Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia. *Jurnal Ilmu Dan Riset Akuntansi (JIRA), 13*(5).

Fatimah, S., & Idayati, F. (2024). Pengaruh kinerja keuangan terhadap nilai perusahaan. *Jurnal Ilmu dan Riset Akuntansi, 13*(1), 1–15.

Ghozali, I. (2018). *Aplikasi analisis multivariate dengan program IBM SPSS 25* (9th ed.). Badan Penerbit Universitas Diponegoro.

Gujarati, D. N., & Porter, D. C. (2012). *Basic econometrics* (5th ed.). McGraw-Hill.

Humairah, T. P., Hakim, M. Z., & Abbas, D. S. (2021, June). Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan. In *Prosiding Seminar Nasional Ekonomi Dan Bisnis* (pp. 339–351).

Kasmir. (2019). *Analisis laporan keuangan* (Revisi). Rajawali Pers.

Ndruru, M., Silaban, P. B., Sihaloho, J., Manurung, K. M., & Sipahutar, T. T. U. (2020). Pengaruh likuiditas, leverage, dan profitabilitas terhadap nilai perusahaan pada perusahaan manufaktur tahun 2015–2017. *Jurnal Manajemen, Ekonomi dan Akuntansi, 4*(3), 390–405.

Nugroho, C., & Arifin, A. (2022). Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan dengan kualitas laba sebagai variabel moderating (Studi kasus pada perusahaan manufaktur sektor makanan dan minuman yang terdaftar di Bursa Efek Indonesia periode 2019–2021). *Eqien: Jurnal Ekonomi dan Bisnis, 11*(2), 32–41.

Nugroho, W. A. (2013). *Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan (Studi pada perusahaan sektor manufaktur di Bursa Efek Indonesia periode 2008–2011)* (Doctoral dissertation, Universitas Muhammadiyah Surakarta).

Pratama, G., & Nurhayati, I. (2022). Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan dengan kebijakan dividen sebagai variabel moderasi. *JIMAT (Jurnal Ilmiah Mahasiswa Akuntansi) Undiksha, 13*(2), 647–659.

Rachman, M. R., & Priyadi, M. P. (2022). Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan dengan corporate social responsibility sebagai variabel pemoderasi. *Jurnal Ilmu dan Riset Akuntansi (JIRA), 11*(1).

Rahma, A. N., & Munfaqiroh, S. (2021). Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan dengan corporate social responsibility sebagai variabel moderasi. *Jurnal Manajemen Dirgantara, 14*(2), 196–203.

Ratnasari, F., & Utiyati, S. (2021). Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan pada perusahaan makanan dan minuman yang terdaftar di BEI. *Jurnal Ilmu dan Riset Manajemen (JIRM), 10*(2).

Santoso, B. A., & Junaeni, I. (2022). Pengaruh profitabilitas, leverage, ukuran perusahaan, likuiditas, dan pertumbuhan perusahaan terhadap nilai perusahaan. *Owner: Riset dan Jurnal Akuntansi, 6*(2), 1597–1609.

Sari, D. N., & Purbowati, R. (2023). Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan. *Journal of Economics and Business UBS, 12*(4), 2087–2099.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). John Wiley & Sons.

Sugiyono. (2017). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.

Trisnayanti, N. M. Y., Gama, A. W. S., & Astiti, N. P. Y. (2025). Pengaruh profitabilitas, likuiditas, dan leverage terhadap nilai perusahaan indeks LQ45 yang terdaftar di BEI periode 2020–2022. *EMAS, 6*(3), 753–766.

Tumanan, N., & Ratnawati, D. (2021). Pengaruh likuiditas, profitabilitas, leverage terhadap nilai perusahaan dengan CSR sebagai pemoderasi. *E-Bisnis: Jurnal Ilmiah Ekonomi dan Bisnis, 14*(1), 123–136.

Tumanan, R., & Ratnawati, T. (2021). Pengaruh likuiditas terhadap nilai perusahaan. *Jurnal Manajemen dan Bisnis, 5*(2), 45–56.

Wahyuningrum, A. D., & Sunarto, S. (2023). Pengaruh likuiditas, profitabilitas, leverage, dan ukuran perusahaan terhadap nilai perusahaan. *Jurnal Riset Akuntansi Politala, 6*(1), 122–136.