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THE EFFECT OF LIQUIDITY, LEVERAGE, AND BOPO ON PROFITABILITY IN ENERGY SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE (IDX) DURING HE 2022–2024 PERIOD

PENGARUH LIKUIDITAS, LEVERAGE, DAN BOPO TERHADAP PROFITABILITAS PADA PERUSAHAAN SEKTOR ENERGI TERDAFTAR DI BURSA EFEK INDONESIA (IDX) SELAMA PERIODE 2022–2024

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Abstract

This study aims to analyze the effects of liquidity, leverage, and BOPO on the profitability of energy sector companies listed on the Indonesia Stock Exchange (IDX) during the 2022–2024 period. Profitability is proxied by Return on Assets (ROA), liquidity by the Current Ratio (CR), leverage by the Debt to Equity Ratio (DER), and BOPO is measured by the ratio of Operating Expenses to Operating Income. This research employs a quantitative approach with an associative research design. The data used are secondary data in the form of companies' annual financial statements obtained from the official IDX website, with the sampling technique using purposive sampling based on predetermined criteria. Data analysis was conducted using multiple linear regression with the assistance of statistical software. The results show that liquidity does not always have a positive effect on profitability, leverage tends to have a negative effect on profitability, and BOPO has a negative effect on profitability. Simultaneously, liquidity, leverage, and BOPO significantly affect the profitability of energy sector companies during the 2022–2024 period. These findings indicate that optimal liquidity management, proportional use of debt, and operational cost efficiency are key factors in improving the profitability performance of energy sector companies.

Keywords : Liquidity, Leverage, BOPO, Profitability, ROA.

Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh likuiditas, leverage, dan BOPO terhadap profitabilitas perusahaan sektor energi yang terdaftar di Bursa Efek Indonesia (IDX) selama periode 2022–2024. Profitabilitas diukur dengan Return on Assets (ROA), likuiditas dengan Current Ratio (CR), leverage dengan Debt to Equity Ratio (DER), dan BOPO diukur dengan rasio Beban Operasional terhadap Pendapatan Operasional. Penelitian ini menggunakan pendekatan kuantitatif dengan desain penelitian asosiatif. Data yang digunakan adalah data sekunder berupa laporan keuangan tahunan perusahaan yang diperoleh dari situs web resmi IDX, dengan teknik pengambilan sampel menggunakan purposive sampling berdasarkan kriteria yang telah ditentukan. Analisis data dilakukan menggunakan

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regresi linier berganda dengan bantuan perangkat lunak statistik. Hasil penelitian menunjukkan bahwa likuiditas tidak selalu berpengaruh positif terhadap profitabilitas, leverage cenderung berpengaruh negatif terhadap profitabilitas, dan BOPO berpengaruh negatif terhadap profitabilitas. Secara simultan, likuiditas, leverage, dan BOPO berpengaruh signifikan terhadap profitabilitas perusahaan sektor energi selama periode 2022–2024. Temuan ini menunjukkan bahwa manajemen likuiditas yang optimal, penggunaan utang yang proporsional, dan efisiensi biaya operasional merupakan faktor kunci dalam meningkatkan kinerja profitabilitas perusahaan sektor energi.

Kata Kunci : Likuiditas, Leverage, BOPO, Profitabilitas, ROA.

1. INTRODUCTION

Indonesia's economic growth remains closely linked to the energy sector, which serves as a primary driver for industrial, transportation, and household activities. Energy is not only a fundamental input in production processes but also a strategic instrument shaping national development. Stable, efficient, and sustainable energy availability is essential to maintaining economic stability, enhancing industrial competitiveness, and strengthening national fiscal resilience. Due to the heavy dependence of various sectors on energy supply, the sustainability of this sector plays a critical role in supporting Indonesia's macroeconomic performance.

According to Statistics Indonesia (BPS), the mining and quarrying sector, including oil, gas, and coal, contributed approximately 9.34% to Indonesia's Gross Domestic Product (GDP) in 2024, while electricity and gas supply accounted for around 1.03%. Moreover, the Ministry of Energy and Mineral Resources (ESDM) recorded Non-Tax State Revenue (PNBP) from the energy sector reaching IDR 269.5 trillion, exceeding the national budget target. Despite its strategic importance, the energy sector experienced a significant decline in performance in 2023, reflected by a 10% drop in the IDX Energy Index, highlighting growing challenges faced by energy companies.

This decline was driven by both external and internal factors. Externally, fluctuations in global energy commodity prices significantly affected corporate revenues and profitability. Coal prices declined sharply in early 2023 due to weakening global demand, energy transition policies, and geopolitical uncertainties. Additionally, international conflicts and shifting global energy policies intensified market volatility, reducing export volumes and revenue stability. These dynamics forced companies to adopt more adaptive financial strategies to survive amid persistent uncertainty.

Internally, company performance was influenced by financial management efficiency, particularly liquidity, leverage, and operational efficiency (BOPO). Liquidity reflects a firm's ability to meet short-term obligations, while leverage indicates reliance on debt financing, and BOPO measures cost efficiency. Although high liquidity theoretically supports operational stability, excessive liquidity may indicate idle funds that reduce profitability. Empirical data from 2022–2024 show declining liquidity ratios in many firms, signaling growing financial pressure and increased reliance on short-term debt, which may weaken financial resilience.

Empirical evidence also reveals inconsistencies between liquidity and profitability. Several companies with relatively high liquidity experienced declining profits, suggesting that excessive current assets were not productively deployed. This finding highlights a mismatch between theoretical expectations and practical outcomes, reinforcing the need for empirical investigation of liquidity–profitability dynamics within energy companies.

Leverage plays a dual role by enabling expansion while increasing financial risk. Although optimal debt usage may enhance profitability, excessive leverage elevates interest burdens and financial vulnerability. Energy companies exhibited rising leverage levels during 2022–2024, reflecting growing dependence on debt amid declining revenues. Empirical data reveal that high leverage often coincided with reduced profitability, emphasizing the importance of prudent capital structure management.

BOPO reflects operational efficiency and significantly affects corporate performance. Rising operational costs, driven by increasing production, distribution, and administrative expenses, reduced

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cost efficiency across energy firms. Empirical findings indicate that increasing BOPO ratios often corresponded with declining profitability, although some firms managed to stabilize costs through efficiency improvements. This variation underscores that BOPO–profitability relationships remain context-dependent.

Overall, profitability trends among energy companies during 2022–2024 demonstrate widespread decline, with several firms recording consecutive losses. These outcomes suggest that weakening liquidity, rising leverage, and deteriorating operational efficiency jointly contributed to declining financial performance. The discrepancy between financial theory and empirical evidence highlights the complex dynamics within the energy sector and underscores the necessity for further empirical analysis of liquidity, leverage, and BOPO in explaining corporate profitability.

2. RESEARCH METHOD

This study employs a quantitative research approach. According to Sugiyono (2019), the quantitative approach is a research method based on the philosophy of positivism, used to examine specific populations or samples, with sampling techniques generally conducted randomly, data collection using research instruments, and data analysis carried out quantitatively or statistically to test predetermined hypotheses. This approach emphasizes objective measurement of variables and the use of numerical data to explain relationships among empirical variables, thereby producing findings that can be generalized.

The type of research used in this study is causal associative research. Sugiyono (2019) defines causal associative research as a study aimed at identifying cause-and-effect relationships between two or more variables, in which there are independent variables (influencing variables) and dependent variables (influenced variables). This study processes empirical data statistically without any treatment or manipulation of the research objects.

3. RESULT AND DISCCUSSION

Classical Assumption Test

A. Normality Test

One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			42
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		.05747816
Most Extreme Differences	Absolute		.111
	Positive		.111
	Negative		-.064
Test Statistic			.111
Asymp. Sig. (2-tailed)[c]			.200[d]
Monte Carlo Sig. (2-tailed)[e]	Sig.		.212
	99% Confidence Interval	Lower Bound	.201
		Upper Bound	.222

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.
e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

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b. Multicollinearity Test

Coefficients[a]

Model		Collinearity Statistics Tolerance	VIF
1	LIKUIDITAS (X1)	.847	1.180
	LEVERAGE (X2)	.788	1.269
	BOPO (X3)	.924	1.083

a. Dependent Variable: PROFITABILITAS (Y)

c. Heteroscedasticity Test

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.052	.013		4.070	.000
	LIKUIDITAS (X1)	-.003	.004	-.125	-.729	.470
	LEVERAGE (X2)	-.006	.004	-.243	-1.373	.178
	BOPO (X3)	.050	.049	.168	1.027	.311

a. Dependent Variable: ABS_RES

Based on the results of the heteroscedasticity test using the Glejser test in the Coefficients table, the significance value for the liquidity variable (X1) is 0.470, leverage (X2) is 0.178, and BOPO (X3) is 0.311. All significance values are greater than 0.05, thus concluding that there are no symptoms of heteroscedasticity in the regression model. This means that the residual variance in the study "The Effect of Liquidity, Leverage, and BOPO on Profitability in the Energy Sector Listed on the Indonesia Stock Exchange for the Period 2022–2024" is constant (homoscedasticity). Thus, the regression model meets one of the classical assumptions and is suitable for use in hypothesis testing and further analysis of the influence of independent variables on profitability.

a. Autocorrelation Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.754[a]	.569	.535	.05970	1.515

a. Predictors: (Constant), BOPO (X3), LIKUIDITAS (X1), LEVERAGE (X2)

b. Dependent Variable: PROFITABILITAS (Y)

Multiple Linear Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.152	.022		7.020	.000
	LIKUIDITAS (X1)	-.005	.007	-.083	-.721	.476
	LEVERAGE (X2)	-.026	.007	-.432	-3.600	.001
	BOPO (X3)	-.395	.082	-.532	-4.802	.000

a. Dependent Variable: PROFITABILITAS (Y)

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Based on the results of the multiple linear regression analysis, it can be seen that the leverage and BOPO variables significantly influence the profitability of energy sector companies, while the liquidity variable has no significant effect. This study indicates that the profitability of energy sector companies is more influenced by the company's funding structure and operational efficiency than by the company's ability to meet short-term obligations. Therefore, energy sector companies need to prioritize optimal debt management and improve operational efficiency to enhance profitability.

Partial Hypothesis Test

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.152	.022		7.020	.000
	LIKUIDITAS (X1)	-.005	.007	-.083	-.721	.476
	LEVERAGE (X2)	-.026	.007	-.432	-3.600	.001
	BOPO (X3)	-.395	.082	-.532	-4.802	.000

a. Dependent Variable: PROFITABILITAS (Y)

coefficient of determination test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.754[a]	.569	.535	.05970	1.515

a. Predictors: (Constant), BOPO (X3), LIKUIDITAS (X1), LEVERAGE (X2)
b. Dependent Variable: PROFITABILITAS (Y)

Discussion

This study examines the effects of liquidity, leverage, and BOPO on the profitability of energy sector companies. The findings indicate that liquidity does not have a significant effect on profitability, as high liquidity in these firms is largely driven by excessive current assets such as idle cash, uncollected receivables, and accumulated inventories, which are not optimally utilized for productive activities. As a result, although companies are able to meet short-term obligations, these funds do not contribute effectively to profit generation. In addition, the capital-intensive nature of the energy industry makes long-term productive assets more influential on profitability than short-term liquidity.

Leverage is found to have a negative effect on profitability due to the companies' high dependence on debt financing. Elevated levels of trade payables, short-term provisions, and long-term liabilities increase interest expenses and financial obligations, thereby reducing net income. The higher the leverage, the greater the financial burden borne by the companies, which ultimately suppresses their ability to generate profits. These findings confirm capital structure and pecking order theories, which suggest that excessive reliance on debt increases financial risk and negatively impacts corporate performance.

Furthermore, BOPO has a negative and significant effect on profitability, indicating that rising operational costs are not balanced by corresponding increases in operating revenue. High general and administrative expenses lead to declining operational efficiency and reduced profits. Empirical evidence shows that companies with high BOPO ratios tend to experience low or even negative profitability, while firms with lower and stable BOPO ratios achieve better financial performance. Therefore, improving cost efficiency, strengthening operational management, and increasing revenue generation are essential strategies for enhancing sustainable profitability in the energy sector.

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4. CONCLUSION

Based on the results of the study on the effects of liquidity, leverage, and the ratio of Operating Expenses to Operating Income (BOPO) on the profitability of energy sector companies listed on the Indonesia Stock Exchange during the period 2022–2024, the following conclusions can be drawn:

1. Liquidity does not have a significant effect on profitability. The findings indicate that liquidity has a negative but insignificant effect on the profitability of energy sector companies. This suggests that a company's ability to meet short-term obligations does not directly enhance its ability to generate profits. High liquidity levels tend to reflect the presence of idle funds that are not optimally utilized for productive activities.
2. Leverage has a negative and significant effect on profitability. The results show that higher leverage leads to lower profitability. This is due to the increased interest burden and financial risk associated with excessive debt usage, which ultimately suppresses company profits. Therefore, the capital structure of a company plays a crucial role in determining the profitability performance of energy sector firms.

BOPO has a negative and significant effect on profitability. The findings indicate that a higher ratio of operating expenses to operating income leads to a decline in profitability. This demonstrates that operational efficiency plays a vital role in improving financial performance. Companies that are able to effectively control operational costs tend to achieve higher levels of profitability.

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