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The Influence of Specific, Macroeconomic and ESG Factors on Banking Liquidity Risk in Indonesia

Ridhan Azka Hani Fanu*[1], Elsa Agustine[1], Henny Setyo Lestari[1]
Universitas Trisakti, Indonesia[1]
*Coresponding Email: 122012401055@std.trisakti.ac.id

Abstract: Liquidity risk remains a critical challenge for the banking sector, as it affects financial stability and the ability to meet short-term obligations. In Indonesia, banking liquidity is influenced by internal performance, macroeconomic conditions, and the growing emphasis on Environmental, Social, and Governance (ESG) practices. This study aims to examine the impact of bank-specific factors, macroeconomic indicators, and ESG scores on banking liquidity risk in Indonesia. Using panel data from Indonesian banks, liquidity risk is measured through two proxies: the liquid asset ratio (LC1) and the loan-to-total-assets ratio (LC2). The findings show that bank performance, represented by Net Interest Margin (NIM), positively affects LC1, while inflation has a negative impact. Bank capital and size are positively related to LC2, whereas income diversification and bank performance reduce LC2. ESG scores do not exhibit significant effects on liquidity risk. These results provide important implications for policymakers, bank managers, and researchers in designing strategies to enhance liquidity resilience and guide future studies on ESG's role in liquidity management.

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INTRODUCTION

In the midst of the dynamics of the global financial system, liquidity risk is a major concern for banks, considering its nature that can bring systemic instability if not managed properly. In Indonesia, the role of the banking sector as the main driver of financial intermediation makes it an important highlight, especially in anticipating internal and external challenges (Bank Indonesia, 2024). Bank-specific factors such as bank size, profitability, funding structure, and asset quality (NPL) have proven to play a significant role (Ahmed et al., 2021). For example, research by Mohamad (2024) shows that ROA, total assets, and NPLs have different influences on LCR and NSFR ratios during the COVID19 pandemic (Mohamad, 2024). Specifically, in Indonesia, a study by Panjaitan & Lisdiono (2024) confirms that liquidity risk management in accordance with OJK standards contributes to bank resilience.

On the macro side, variables such as GDP growth, inflation, interest rates (BIRate), as well as foreign exchange reserves and the rupiah exchange rate clearly affect banking liquidity (Justiro & Irawati, 2023). At the end of 2024 and into mid-2025, Bank Indonesia implemented accommodative monetary measures, among them lowering the secondary reserve requirement from 5% to 4%, effective June. This action released approximately Rp78.45 trillion in additional liquidity flexibility for banks (Reuters, 2025). At the same time, BI's interest rate is maintained at the level of 5.50% on June 18, 2025, although room for downside is still open with inflation indicators flat at 1.6% and credit growth slowing to the

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range of 8–9% (Departemen Komunikasi Bank Indonesia, 2025). Macroprudential policies such as KLM, PLM, and RPLN have also been strengthened to stimulate credit disbursement to priority sectors and green economies (Agung & Harun, 2021).

In addition, the emergence of ESG (Environmental, Social, Governance) as an important dimension in the banking world has captured the attention of academics and practitioners. An empirical study by Sutopo (2025) found that bank size and CAR factors are positively correlated with ESG scores, although short-term profitability does not have a significant effect (Sutopo, 2025). More broadly, Ameliawati Mulyawan (2023) analysis shows that the social and governance pillars of ESG reduce banking risk (measured through NPLs, ZScore, RWA) in Asia, but the environmental pillar has not had a significant effect. In Indonesia, although research that explicitly focuses on ESG is still limited, OJK promotes green financial inclusion and the implementation of green banking, in line with global trends and international regulations.

Departing from these conditions, a research gap arises there has been no study that comprehensively examines the simultaneous influence of bank-specific factors, macroeconomic conditions, and ESG scores on banking liquidity risk in Indonesia. In fact, the combination of these three elements is expected to be able to provide a more complete and relevant understanding of the latest conditions. Phenomena such as the relaxation of mandatory reserves, green credit stimulus, the placement of funds in priority sectors, accompanied by evolving ESG practices, provide a rich empirical background to analyze from the 2020–2024 period.

The research subject is the banking sector in Indonesia listed on the Indonesia Stock Exchange (IDX), focusing on conventional commercial banks that have consistently published annual financial reports during the research period. The study examines three main groups of factors influencing liquidity risk, namely bank-specific, macroeconomic, and ESG-related factors. Bank-specific factors include revenue diversification (DIV) to measure the extent to which a bank's revenue comes from various lines of business (Susanto et al., 2024), bank capitalization (EQTA) which shows the ratio of equity to total assets, bank size which describes the scale of operations (Al-Sharkas & Al-Sharkas, 2022), and bank performance which is measured by net interest margin (NIM) (Sukmadewi, 2020). Macroeconomic factors consist of gross domestic product (GDP) growth rate and inflation rate as indicators of national economic conditions (Mukhamediyev & Temerbulatova, 2020). Meanwhile, ESG-related factors are represented by ESG rating scores that reflect the bank's commitment to sustainability practices (Ramadhani & Andriani, 2025). Liquidity risk, measured using the LC1 and LC2 ratios, is a dependent variable for assessing the bank's ability to manage liquidity effectively (Snjawi & Essa, 2021). These variables are selected to comprehensively capture internal bank characteristics, external economic conditions, and sustainability practices that may affect banks' ability to manage liquidity risk effectively in Indonesia.

Based on these selected variables, this study aims to fill the identified gaps by using a panel data approach on banks in Indonesia, namely liquidity risk measured through two proxies: the liquid asset ratio (LC1) and the loan-to-total-assets ratio (LC2). Moreover, the analysis examines bank-specific indicators (ROA, NPL, CAR, total assets), macroeconomic indicators (GDP, inflation, bank interest rates, foreign exchange rates), and ESG indices obtained from sustainability reports by the OJK, Sustainalytics, and Bloomberg. This study examines the impact of bank-specific factors, macroeconomic indicators, and ESG scores on banking liquidity risk in Indonesia, with the hope that these findings will enrich academic literature and provide practical policy implications for regulators and banking practitioners in maintaining financial stability and promoting sustainable banking practices.

Based on the above background, the hypothesis of this study is as follows:

H1 : There is influence *Bank Capital* against *Liquidity Risk 1*
H2 : There is influence *Bank Capital* against *Liquidity Risk 2*
H3 : There is influence *Bank Size* against *Liquidity Risk 1*

H4 : There is influence *Bank Size* against *Liquidity Risk 2*
H5 : There is influence *Bank Performance* against *Liquidity Risk 1*
H6 : There is influence *Bank Performance* against *Liquidity Risk 2*
H7 : There is influence *Income Diversification* against *Liquidity Risk 1*
H8 : There is influence *Income Diversification* against *Liquidity Risk 2*
H9 : There is influence *GDP* against *Liquidity Risk 1*
H10 : There is influence *GDP* against *Liquidity Risk 2*
H11 : There is influence *Inflation Rate* against *Liquidity Risk 1*
H12 : There is influence *Inflation Rate* against *Liquidity Risk 2*
H13 : There is an influence of *ESG Score* on *Liquidity Risk 1*
H14 : There is an influence of *ESG Score* on *Liquidity Risk 2*

METHODS

This study is a quantitative research with a descriptive-verificative approach. The quantitative method is employed to measure the relationships and effects between variables using numerical data analyzed through statistical techniques. The research subject is the banking sector in Indonesia listed on the Indonesia Stock Exchange (IDX), focusing on conventional commercial banks that have consistently published annual financial reports during the research period.

The sampling technique employed was purposive sampling, selecting banks that met the predetermined criteria of being conventional commercial banks listed on the IDX and consistently publishing annual financial statements during the observation period. The research examines several variables, namely liquidity risk measured by the liquid asset ratio (LC1) and the loan-to-total-assets ratio (LC2), income diversification (DIV), bank capital (EQTA), bank size, bank performance represented by Net Interest Margin (NIM), gross domestic product (GDP), inflation rate, and ESG rating scores.

The research was conducted from February to July 2025, with the observation period covering 2020–2024. The study took place in Indonesia, and the secondary data were collected from the official website of the Indonesia Stock Exchange (www.idx.co.id) and other authorized publications. The type of data used in this study is secondary data, obtained from processing audited financial statements of banks listed on the IDX, macroeconomic data from Statistics Indonesia (BPS) and Bank Indonesia, and ESG data from banks' sustainability reports.

Data collection was carried out through documentation, which involved downloading audited annual financial statements, annual reports, sustainability reports, and relevant macroeconomic publications. A literature review was conducted by examining textbooks, academic journals, and lecture notes to obtain a theoretical foundation on Liquidity Risk, Income Diversification, Bank Capital, Bank Size, Bank Performance, GDP, Inflation, and ESG.

Data were analyzed using panel data regression to test the effect of independent variables on the dependent variable. The selection of the panel regression model (Common Effect, Fixed Effect, or Random Effect) was based on the Chow test, Hausman test, and Lagrange Multiplier test. Prior to hypothesis testing, classical assumption tests were conducted, including normality, multicollinearity, heteroscedasticity, and autocorrelation tests. The data processing was performed using EViews software.

RESULTS AND DISCUSSION

This section presents the results of data analysis and the interpretation of findings. Model 1 dan 2 aims to explain the relationship between the independent variables and the dependent variable by using panel data regression. Before conducting hypothesis testing, a model specification test is performed to determine the most appropriate estimation model, Common Effect Model (CEM), Fixed Effect Model (FEM), or Random Effect Model (REM).

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The selection is based on the results of the Chow Test, Hausman Test, and Lagrange Multiplier (LM) Test.

MODEL 1
Model Specification Test

Table 1. Results of Chow Test for Model 1

Effects Test	Statistic	d.f.	Prob.
Cross-section F	3.922119	(9,33)	0.0018
Cross-section Chi-square	36.369430	9	0.0000

Source: EViews Output, 2025

The probability value obtained from the Chow Test is 0.0000, which is lower than the significance level of 0.05. This result indicates that there is a statistically significant difference between the Common Effect Model (CEM) and the Fixed Effect Model (FEM).

Table 2. Results of Hausman Test for Model 1

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	7	1.0000

Source: EViews Output, 2025

The probability value obtained from the Hausman Test is 1.0000, which is greater than the significance level of 0.05. This means that there is no statistically significant difference between the coefficients estimated using the Fixed Effect Model (FEM) and those estimated using the Random Effect Model (REM).

Table 3. Results of Lagrange Multiplier Test for Model 1

	Cross-section	Time	Both
Breusch-Pagan	0.082086	1.628030	1.710116
	(0.7745)	(0.2020)	(0.1910)
Honda	0.286507	-1.275943	-0.699637
	(0.3872)	(0.8990)	(0.7579)
King-Wu	0.286507	-1.275943	-0.902723
	(0.3872)	(0.8990)	(0.8167)
Standardized Honda	1.191158	-0.529704	-3.227423
	(0.1168)	(0.7018)	(0.9994)
Standardized King-Wu	1.191158	-0.529704	-3.360624
	(0.1168)	(0.7018)	(0.9996)
Gourieroux, et al.	--	--	0.082086
			(0.6272)

Source: EViews Output, 2025

The Breusch-Pagan Lagrange Multiplier (LM) test produces a probability value of 0.7745, which is greater than the significance level of 0.05. This result means that we fail to reject the null hypothesis, which states that the Common Effect Model (CEM) is more appropriate than the Random Effect Model (REM). In other words, the test suggests that there is no significant variance in the data attributable to cross-sectional differences (for example, differences between entities such as banks) that would justify the use of REM.

Classic Assumption Test

The classical assumption test aims to test the condition of research data in the form of data processing. The classical assumption test in this study includes the normality test, the multicollinearity test, the heterogeneity test and the autocorrelation test.

1. Normality Test

The normality test can be done by several methods, namely residual histogram, kolmogrov smirnov, kurtosius skewness and jarquebera. The normality test in this study used the JB or jarquebera test in the form of a histogram graph.

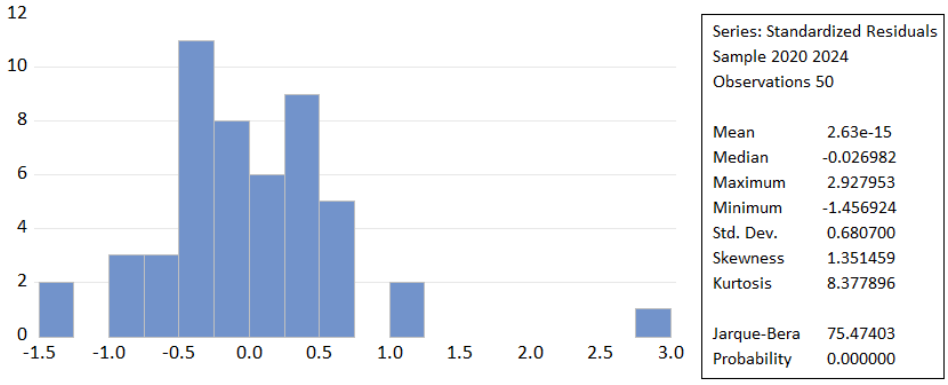

Figure 1. Histogram of Residual Normality Test Using Jarque-Bera
Source: EViews Output, 2025

Based on the above normality test, the significance value of jarquebera was obtained of 0.000 < 0.05, so it can be concluded that the data in this study is not normally distributed, which means that the normality assumption test is not fulfilled.

	X1	X2	X3	X4	X5	X6	X7
X1	1	-0.8088793...	0.64048781...	-0.6233297...	-0.0122335...	-0.0110460...	0.54557478...
X2	-0.8088793...	1	-0.5968427...	0.75566123...	0.10079476...	0.03007467...	-0.7409348...
X3	0.64048781...	-0.5968427...	1	-0.7949053...	0.00739497...	0.04916082...	0.41246263...
X4	-0.6233297...	0.75566123...	-0.7949053...	1	-0.0907266...	-0.0767506...	-0.5929651...
X5	-0.0122335...	0.10079476...	0.00739497...	-0.0907266...	1	0.43437319...	-0.0055852...
X6	-0.0110460...	0.03007467...	0.04916082...	-0.0767506...	0.43437319...	1	0.09588982...
X7	0.54557478...	-0.7409348...	0.41246263...	-0.5929651...	-0.0055852...	0.09588982...	1

Figure 2. Multicollinearity Test
Source: EViews Output, 2025

Based on the multicollinearity test above, it was found that all correlation values between variables were free < 0.85 so that it could be concluded that there was no problem of multicollinearity.

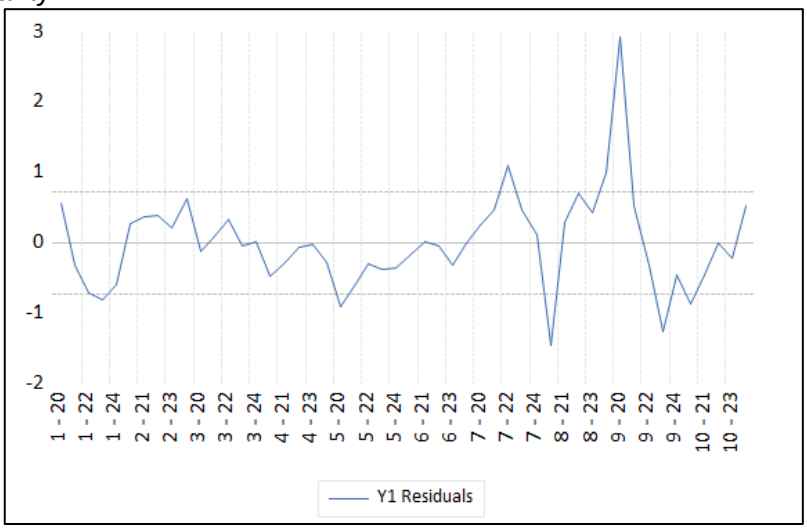

Figure 3. Heteroscedasticity Test
Source: EViews Output, 2025

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From the residual graph it can be seen that it does not cross the limit (500 and -500), meaning that the residual variant is the same. Therefore, there are no symptoms of heteroscedasticity or passing the heteroscedasticity test.

Based on the model specification tests (Chow Test, Hausman Test, and Lagrange Multiplier Test), the Common Effect Model (CEM) was selected as the most appropriate estimation method for Model 1. The regression results using the CEM approach are presented in Table 4 below.

Table 4. Results of Regressed Data Panel

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Liquidity Risk	-4.128870	3.518646	-1.173425	0.2472
Income Diversification (DIV)	-1.106713	1.475221	-0.750201	0.4573
Bank Capital (EQTA)	0.230186	0.155988	1.475667	0.1475
Bank Size	26.50938	4.350679	6.093161	0.0000
Bank Performance (NIM)	0.722980	1.769787	0.408512	0.6850
Gross Domestic Product (GDP)	-0.092163	0.043520	-2.117708	0.0402
Inflation Rate	-0.107995	0.162541	-0.664413	0.5101
ESG Rating Scores	0.008242	0.035631	0.231309	0.8182

Source: EViews Output, 2025

Based on the results of the regression data panel on, the regression model can be written as follows:

Y1 = -4.13 - 1.11*X1 + 0.23*X2 + 26.51*X3 + 0.72*X4 - 0.09*X5 - 0.11*X6 + 0.01*X7

Hypothesis

Partial tests (t-tests) are used to test whether each independent variable individually has a significant effect on the dependent variable (Y) in the regression model.

Table 5. Results of Partial Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Liquidity Risk	-4.128870	3.518646	-1.173425	0.2472
Income Diversification (DIV)	-1.106713	1.475221	-0.750201	0.4573
Bank Capital (EQTA)	0.230186	0.155988	1.475667	0.1475
Bank Size	26.50938	4.350679	6.093161	0.0000
Bank Performance (NIM)	0.722980	1.769787	0.408512	0.6850
Gross Domestic Product (GDP)	-0.092163	0.043520	-2.117708	0.0402
Inflation Rate	-0.107995	0.162541	-0.664413	0.5101
ESG Rating Scores	0.008242	0.035631	0.231309	0.8182

Source: EViews Output, 2025

Based on the t-test table above, the following decisions can be made:

Hipotesis:

H_0 : Independent variables have no significant effect on dependent variables partially.

H_1 : Independent variables have a significant effect on dependent variables partially.

Party Signifikansi:

$\alpha = 5\%$

Decision Criteria:

1. Subtract H_0 if the p-value is < 0.05
2. Accept H_0 if the p-value is > 0.05

Results:

Table 6. 1 Test Results t

Variable	Prob.	Results
Income Diversification (DIV)	0.4573	H_0 Accepted
Bank Capital (EQTA)	0.1475	H_0 Accepted
Bank Size	0.0000	H_0 rejected
Bank Performance (NIM)	0.6850	H_0 Accepted

Gross Domestic Product (GDP)	0.0402	H_0 rejected
Inflation Rate	0.5101	H_0 Accepted
ESG Rating Scores	0.8182	H_0 Accepted

Source: EViews Output, 2025

Conclusion:

At the significance level, it was obtained that the variables X3 and X5 had a significant effect on Y1 while the variables X1, X2, X4, X6, and X7 did not have a significant effect on Y1.$\alpha = 5\%$.

1. Simultaneous Test (F Test)

Simultaneous tests (F tests) are used to test whether simultaneously independent variables have a significant effect on dependent variables (Y) in regression models.

Table 7. Results of Simulation Test

Root MSE	0.673859R-squared	0.649540
Mean dependent var	1.448200Adjusted R-squared	0.591130
S.D. dependent var	1.149837S.E. of regression	0.735240
Akaike info criterion	2.368407Sum squared reside	22.70428
Schwarz criterion	2.674331Log likelihood	-51.21018
Hannan-Quinn critter.	2.484905F-statistic	11.12034
Durbin-Watson stat	0.840968Prob(F-statistic)	0.000000

Source: EViews Output, 2025

Based on the F test table above, the following decisions can be made:

Hipotesis:

H_0 : Independent variables have no significant effect on dependent variables simultaneously.

H_1 : Independent variables have a significant effect on dependent variables simultaneously.

Party Signifikansi:

$\alpha = 5\%$

Decision Criteria:

1. Subtract H_0 if the p-value is < 0.05
2. Accept H_0 if the p-value is > 0.05

Results:

P-Value 0.000 < 0.05 so that H_0 is subtracted

Conclusion:

At the significance level, the results were obtained that independent variables had a significant effect on Y1 simultaneously so that the regression model was feasible to use.$\alpha = 5\%$.

The determination coefficient serves to measure how much the ability of independent variables to explain the dependent variables of a study. This study uses the adjusted R square value to evaluate the regression model. The following are the results of the determination coefficient proxied through Adjusted R2:

Table 8. Results of Coefficient of Determination

Root MSE	0.673859R-squared	0.649540
Mean dependent var	1.448200Adjusted R-squared	0.591130
S.D. dependent var	1.149837S.E. of regression	0.735240
Akaike info criterion	2.368407Sum squared reside	22.70428
Schwarz criterion	2.674331Log likelihood	-51.21018
Hannan-Quinn critter.	2.484905F-statistic	11.12034
Durbin-Watson stat	0.840968Prob(F-statistic)	0.000000

Source: EViews Output, 2025

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Based on the table of determination coefficients, the Adjusted R-squared value of 0.59 or 59% was obtained, so it can be concluded that the Y1 variable can be explained by an independent variable of 59% while the remaining 41% is explained by other variables that are not included in this study.

MODEL 2

Model Specification Test

Table 9. Results of Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	7.811945	(9,33)	0.0000
Cross-section Chi-square	57.060121	9	0.0000

Source: EViews Output, 2025

The Prob value is 0.000 < 0.05, then the FEM model is selected.

Table 10. Results of Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	7	1.0000

Source: EViews Output, 2025

The Prob value is 1.0000 > 0.05, then the REM model is selected.

Table 11. Results of Lagrange Test

	Hypothesis Test		
	Cross-section	Time	Both
Breusch-Pagan	0.052209	0.145681	0.197890
	(0.8193)	(0.7027)	(0.6564)
Honda	0.228492	-0.381682	-0.108321
	(0.4096)	(0.6487)	(0.5431)
King-Wu	0.228492	-0.381682	-0.190834
	(0.4096)	(0.6487)	(0.5757)
Standardized Honda	1.124296	0.658372	-2.463256
	(0.1304)	(0.2551)	(0.9931)
Standardized King-Wu	1.124296	0.658372	-2.415742
	(0.1304)	(0.2551)	(0.9921)
Gourieroux, et al.	--	--	0.052209
			(0.6532)

Source: EViews Output, 2025

The Prob value is 0.8193 > 0.05, then the CEM model is selected.

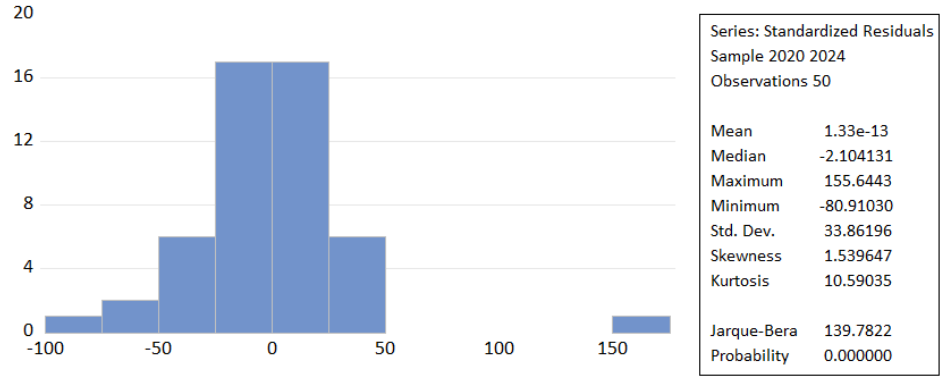
Based on the results of the Chow Test, Hasuman, and LM Test, the best model is the CEM model.

Classic Assumption Test

The classical assumption test aims to test the condition of research data in the form of data processing. The classical assumption test in this study includes the normality test, the multicollinearity test, the heterogeneity test and the autocorrelation test.

The normality test can be done by several methods, namely residual histogram, kolmogrov smirnov, kurtosius skewness and jarquebera. The normality test in this study used the JB or jarquebera test in the form of a histogram graph.

Figure 4. Histogram of Residual Normality Test Using Jarque-Bera



Source: EViews Output, 2025

Based on the above normality test, the significance value of jarquebera was obtained of 0.000 < 0.05, so it can be concluded that the data in this study is not normally distributed, which means that the normality assumption test is not fulfilled.

	X1	X2	X3	X4	X5	X6	X7
X1	1	-0.8088793...	0.64048781...	-0.6233297...	-0.0122335...	-0.0110460...	0.54557478...
X2	-0.8088793...	1	-0.5968427...	0.75566123...	0.10079476...	0.03007467...	-0.7409348...
X3	0.64048781...	-0.5968427...	1	-0.7949053...	0.00739497...	0.04916082...	0.41246263...
X4	-0.6233297...	0.75566123...	-0.7949053...	1	-0.0907266...	-0.0767506...	-0.5929651...
X5	-0.0122335...	0.10079476...	0.00739497...	-0.0907266...	1	0.43437319...	-0.0055852...
X6	-0.0110460...	0.03007467...	0.04916082...	-0.0767506...	0.43437319...	1	0.09588982...
X7	0.54557478...	-0.7409348...	0.41246263...	-0.5929651...	-0.0055852...	0.09588982...	1

Figure 5. Multicollinearity Test
Source: EViews Output, 2025

Based on the multicollinearity test above, it was found that all correlation values between variables were free < 0.85 so that it could be concluded that there was no problem of multicollinearity.

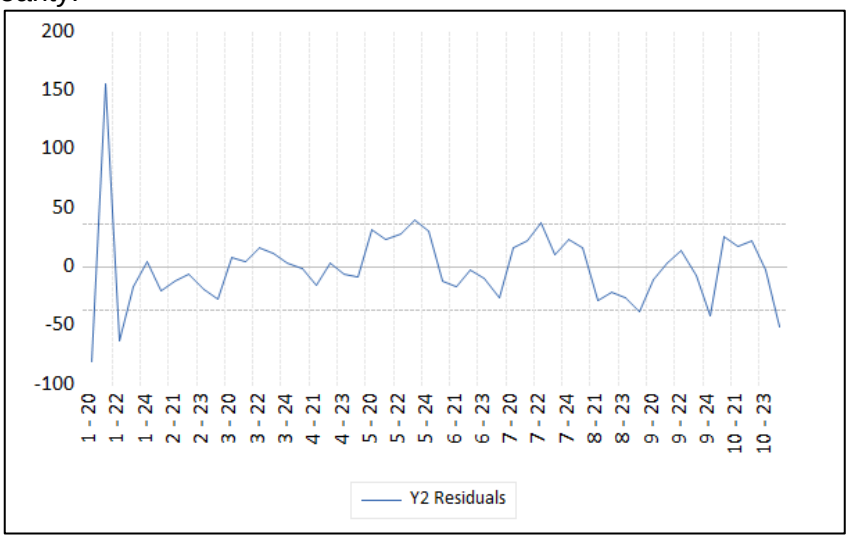


Figure 6. Heteroscedasticity Test
Source: EViews Output, 2025

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From the residual graph it can be seen that it does not cross the limit (500 and -500), meaning that the residual variant is the same. Therefore, there are no symptoms of heteroscedasticity or passing the heteroscedasticity test.

Table 12. Results of Regressed Data Panel

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Liquidity Risk	-394.5494	175.0378	-2.254081	0.0295
Income Diversification (DIV)	349.8614	73.38603	4.767411	0.0000
Bank Capital (EQTA)	26.21387	7.759751	3.378185	0.0016
Bank Size	-885.3325	216.4279	-4.090658	0.0002
Bank Performance (NIM)	-197.1862	88.03943	-2.239749	0.0305
Gross Domestic Product (GDP)	-0.413294	2.164952	-0.190902	0.8495
Inflation Rate	-7.464464	8.085742	-0.923164	0.3612
ESG Rating Scores	0.468333	1.772495	0.264222	0.7929

Source: EViews Output, 2025

Based on the results of the regression data panel on, the regression model can be written as follows:

Y2 = -394.55 + 349.86*X1 + 26.21*X2 - 885.33*X3 - 197.19*X4 - 0.41*X5 - 7.46*X6 + 0.47*X7

Hypothesis

Partial tests (t-tests) are used to test whether each independent variable individually has a significant effect on the dependent variable in the regression model.

Table 13. Results of Partial Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Liquidity Risk	-394.5494	175.0378	-2.254081	0.0295
Income Diversification (DIV)	349.8614	73.38603	4.767411	0.0000
Bank Capital (EQTA)	26.21387	7.759751	3.378185	0.0016
Bank Size	-885.3325	216.4279	-4.090658	0.0002
Bank Performance (NIM)	-197.1862	88.03943	-2.239749	0.0305
Gross Domestic Product (GDP)	-0.413294	2.164952	-0.190902	0.8495
Inflation Rate	-7.464464	8.085742	-0.923164	0.3612
ESG Rating Scores	0.468333	1.772495	0.264222	0.7929

Source: EViews Output, 2025

Based on the t-test table above, the following decisions can be made:

Hipotesis:

H_0 : Independent variables have no significant effect on dependent variables partially.

H_1 : Independent variables have a significant effect on dependent variables partially.

Party Signifikansi:

$\alpha = 5\%$

Decision Criteria:

2. Subtract H_0 if the p-value is < 0.05
3. Accept H_0 if the p-value is > 0.05

Results:

Table 14. Results t Test

Variable	Prob.	Results
Income Diversification (DIV)	0.0000	H_0 rejected
Bank Capital (EQTA)	0.0016	H_0 rejected
Bank Size	0.0002	H_0 rejected
Bank Performance (NIM)	0.0305	H_0 rejected
Gross Domestic Product (GDP)	0.8495	H_0 Accepted
Inflation Rate	0.3612	H_0 Accepted

ESG Rating Scores	0.7929	H_0 Accepted

Source: EViews Output, 2025

Conclusion:

At the significance level, the results were obtained that the variables X1, X2, X3, and X4 had a significant effect on Y2 while the variables X5 X6, and X7 did not have a significant effect on Y2.$\alpha = 5\%$.

Simultaneous tests (F tests) are used to test whether simultaneously independent variables have a significant effect on dependent variables in regression models.

Table 15. Results of Simultaneous Test

Root MSE	33.52163R-squared	0.440820
Mean dependent var	72.62500Adjusted R-squared	0.347623
S.D. dependent var	45.28310S.E. of regression	36.57509
Akaike info criterion	10.18226Sum squared reside	56184.97
Schwarz criterion	10.48818Log likelihood	-246.5565
Hannan-Quinn critter.	10.29876F-statistic	4.729993
Durbin-Watson stat	2.531490Prob(F-statistic)	0.000553

Source: EViews Output, 2025

Based on the F test table above, the following decisions can be made:

Hipotesis:

H_0 : Independent variables have no significant effect on dependent variables simultaneously.

H_1 : Independent variables have a significant effect on dependent variables simultaneously.

Party Signifikansi:

$\alpha = 5\%$

Decision Criteria:

3. Subtract H_0 if the p-value is < 0.05
4. Accept H_0 if the p-value is > 0.05

Results:

P-Value 0.000 < 0.05 so that H_0 is subtracted

Conclusion:

At the level of significance, the results were obtained that independent variables had a significant effect on Y2 simultaneously so that the regression model was feasible to use.$\alpha = 5\%$.

The determination coefficient serves to measure how much the ability of independent variables to explain the dependent variables of a study. This study uses the adjusted R square value to evaluate the regression model. The following are the results of the determination coefficient proxied through Adjusted R2.

Table 16. Results of Coefficient of Determination

Root MSE	33.52163R-squared	0.440820
Mean dependent var	72.62500Adjusted R-squared	0.347623
S.D. dependent var	45.28310S.E. of regression	36.57509
Akaike info criterion	10.18226Sum squared reside	56184.97
Schwarz criterion	10.48818Log likelihood	-246.5565
Hannan-Quinn critter.	10.29876F-statistic	4.729993
Durbin-Watson stat	2.531490Prob(F-statistic)	0.000553

Source: EViews Output, 2025

Based on the table of determination coefficients, the Adjusted R-squared value of 0.347 or 34.7% was obtained, so it can be concluded that the Y2 variable can be explained by an independent variable of 34.7% while the remaining 65.3% is explained by other variables that are not included in this study.

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CONCLUSION

This study finds that bank-specific factors, particularly profitability measured by the Net Interest Margin (NIM) and capital strength, play a crucial role in shaping liquidity risk in Indonesian banks. Stronger bank performance is associated with greater liquidity reserves, while inflationary pressures tend to erode banks' capacity to maintain liquidity. Large and well-capitalized banks are generally more aggressive in lending, which can influence their liquidity position, whereas strategies such as income diversification can help strengthen liquidity. Meanwhile, macroeconomic variables like GDP growth and the ESG score did not show a significant direct impact during the study period, although the inclusion of ESG factors provides an important empirical insight for future research. The results imply that bank management and policymakers should focus on strengthening profitability and capital buffers while carefully monitoring inflationary conditions to safeguard liquidity.

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