The effect of liquidity and profitability on financial stability with financial distress as a moderating variable

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ABSTRACT

This study examines the effects of liquidity and profitability on financial stability, with financial distress as a moderating variable, in banking companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period. A quantitative research approach was employed, using numerical data derived from company financial reports. The study population comprised 58 banking companies, from which 12 companies were selected through purposive sampling based on predetermined criteria. Accordingly, the final dataset consisted of 48 company-year financial reports. Data analysis was conducted using SPSS version 26, incorporating descriptive statistical analysis, classical assumption tests, partial significance tests (t-tests), and Moderated Regression Analysis (MRA). The results reveal that neither liquidity nor profitability has a statistically significant effect on financial stability. Financial distress, however, has a statistically significant effect on financial stability, although it does not moderate the relationships between liquidity and financial stability or between profitability and financial stability. These findings suggest that financial distress is relevant to the assessment of banking financial stability, although its moderating role in the relationships examined is not statistically supported. This study is subject to limitations concerning its relatively small sample size and restricted observation period. Future research is therefore encouraged to incorporate additional variables, including operational efficiency, risk management, bank size, and macroeconomic factors, while extending the observation period and broadening the scope of the research objects.

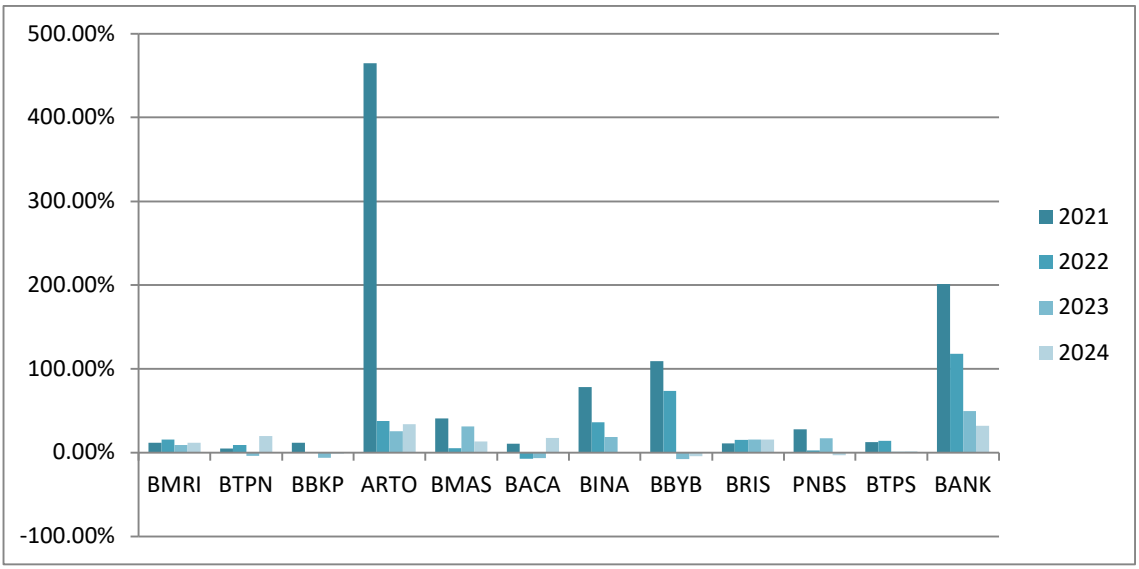
Keywords: *Liquidity; Profitability; Financial Stability; Financial Distress; Banking*

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INTRODUCTION

In the development of the national economy, the banking sector plays a significant role. For example, during Covid-19, state-owned banks allocated Rp. 830.2 trillion for the recapitalization of business debt relief for 6.68 million borrowers (Arlina, 2024) . Effective and efficient management of banking financial performance will have impact on financial stability of a bank and the achievement of national economic growth in the country. On November 1, 2024, the Monthly Board of Commissioners of the Financial Services Authority assessed that the financial stability of the banking sector remained stable amid increasing geopolitical risks and weakening global economic activity (Ismail, 2024) . However, liquidity conditions cannot be seen from the total annual assets, but can be seen more accurately in the short-term liquidity ratio.

The annual asset growth of banking companies listed on the Indonesia Stock Exchange (IDX) varied considerably during the 2021–2024 period, as illustrated in Figure 1. These variations provide an initial overview of differences in asset growth across banks and serve as a starting point for examining financial stability in the banking sector.



Source: Annual Financial Report at the Indonesia Stock Exchange, 2026

Figure 1
Banking Asset Growth 2021–2024

Financial stability is a condition that describes an entity experiencing stability in its financial performance over a certain period (Dedyanti & Hwihanus, 2024) . When a decline in the company's assets occurs, management will implement strategies to minimize potential losses and perform optimal asset management to achieve company growth again (Kharisma & Ayu, 2023) . Liquidity can be defined as a company's ability to finance its short-term obligations. The LDR measurement can be calculated by comparing Total Financing to Total Third Party Funds (Yuniari & Bagus, 2019) . The purpose of this ratio is to assess a bank's capacity to meet withdrawals by its depositors using financing as its liquidity management tool (Indira et al., 2022).

Previous research by Yakin, (2024) shows that liquidity does not significantly affect the financial stability**.** However, research conducted by Alifiana et al (2023), Mahdatika, (2022) shows that liquidity has a effect on bank stability in Indonesia. Profitability is one of the indicators used to assess the health of a bank, in accordance with Bank Indonesia regulations as stipulated in PBI No. 8/7/2011. ROA is an indicator used in measuring this variable by comparing total net profit with total assets. Previous research conducted by Sofwan, Imam et al (2025) states that profitability has a effect on the financial stability. However, research conducted by Yakin, (2024) shows that Bank stability cannot be influenced by profitability.

Meanwhile, research conducted by Rohimah, (2024) proves that financial stability influenced by profitability has negative results. Financial distress is a condition that reflects financial difficulties for companies, in which debts cannot be repaid by the company, which will lead to the bankruptcy of an entity and financial instability of the company, because the total assets are smaller than its debts (Ayu & Kartika, 2022). In this study, the financial distress is a moderating variable, because the financial distress variable can affect the liquidity variable. This is proven by research by Bhramasta & Kurniawan, (2023) which proves that financial distress affects liquidity, and financial distress has been proven to affect profitability, as proven by research by Saputri et al., (2022). The financial distress variable has been proven to affect both independent and dependent variables.

The growth of banking assets between 2021 and 2024 has shown varied trends, as illustrated in Figure 1. This situation serves as an initial point for examining the financial stability of the banking sector. Furthermore, previous research has yielded inconsistent findings regarding the impact of liquidity and profitability on financial stability. Consequently, this study investigates the influence of liquidity and profitability, as well as the role of financial distress as a moderating variable, within banking companies listed on the Indonesia Stock Exchange.

This study aims to analyze how liquidity and profitability levels influence the financial stability of banks. Furthermore, it seeks to determine whether a state of financial distress can affect or strengthen the relationship between liquidity, profitability, and the financial stability of banking companies listed on the Indonesia Stock Exchange.

This study is expected to provide theoretical benefits by adding empirical evidence regarding the relationship between liquidity, profitability, and financial stability, while also clarifying the role of financial distress as a moderating variable. In practical terms, the findings are intended to serve as a consideration for bank management in managing liquidity, profitability, and the risk of financial distress, as well as to act as a reference for investors and future researchers in evaluating the financial stability of the banking sector.

LITERATURE REVIEW

Signaling Theory

This theory explains that companies send signals to users of financial reports, which can be good news as a positive signal or bad news as a negative signal Spence (1973). To meet expectations, the signal leader provides information related to decisions that will be made by the manager. This is important for investors and stakeholders because the signal provides information related to future conditions based on past information for the company's sustainability and its impact (Diyanto et al., 2020).

Financial Stability

Financial stability is a condition that indicates the consistent financial health of a company (Kharisma & Ayu, 2023) . Financial stability is determined by determining factors, namely, liquidity ratios and the logarithm of total assets squared (Ferrouhi, 2018). Financial stability can be measured in the following ways:

$$Achange = \frac{\text{Total Asset (t)} - Total\ Asset\ (t-1)}{\text{Total Asset (t} - 1)}\ X\ 100$$

Liquidity

According in Kasmir (2025) liquidity ratio is defined as a calculation that describes how competent a company is in paying off debts that are less than 5 years old. (Salsabila & Mustika, 2022). Factors that affect liquidity are the success of banks in disbursing financing (Ismayadi, 2023). The liquidity ratio can be assessed using the following methods:

$$LDR = \frac{Total\ Financing}{\text{Third Party Funds}}\ X\ 100$$

Profitability

Profitability is the main objective of a company in achieving profits, so the profitability ratio is the most important ratio in all company financial reports (Pratiwi & Muthohar, 2021) . The factor determining the profitability ratio is the ROA (Kosmidou, 2021). The measurement is:

$$ROA = \frac{\text{Net Profit}}{\text{Total Equity}}\ X\ 100$$

Financial distress

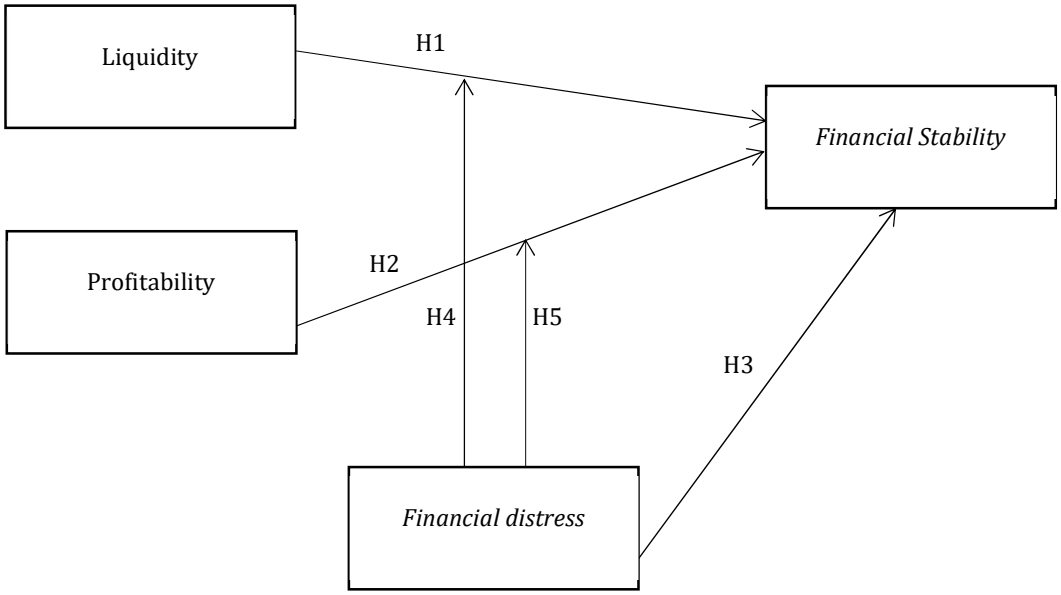
According to Ross and Westerfield, (2013), financial distress is where cash flow is insufficient to meet debts, causing failure in restructuring the company's finances (Saputri et al., 2022). The factors influencing the occurrence of financial distress are caused by poor financial health of the company, which is due to several factors, such as the impact of decisions regarding the withdrawal of large amounts of funds by customers (Diana & Yudiantoro, 2023) . To assess a company's financial distress, the Altman Z-Score proxy can be used (Putri, 2025) . The following is the Altman Z-Score formula:

$$Z'' = 6{,}56X1 + 3{,}26X2 + 6{,}72X3 + 1{,}05X4$$

Research Framework

The research framework in Figure 2 illustrates the relationship between liquidity, profitability, and financial stability, with financial distress serving as a moderating variable. This study examines the impact of liquidity on financial stability (H1) and the impact of profitability on financial stability (H2). It also investigates the direct effect of financial distress on financial stability (H3), as well as its role in moderating the relationships between liquidity and financial stability (H4) and between profitability and financial stability (H5). The objective of this research framework is to analyze the influence of each variable and determine whether a state of financial distress strengthens

or weakens the relationships between liquidity, profitability, and the financial stability of banking companies listed on the Indonesia Stock Exchange.



Source: Constructed by author, 2025

Figure 2
Research Framework

HYPOTHESIS

The following are the hypotheses formulated in this study:

H1: Liquidity affects the financial stability of banking companies listed on the Indonesia Stock Exchange (IDX).

H2: Profitability affects the financial stability of banking companies listed on the Indonesia Stock Exchange (IDX).

H3: Financial distress influences the financial stability of banking companies listed on the Indonesia Stock Exchange (IDX).

H4: Financial distress moderates the effect of liquidity on the financial stability of banking companies listed on the Indonesia Stock Exchange (IDX).

H5: Financial distress moderates the effect of profitability on the financial stability of banking companies listed on the Indonesia Stock Exchange (IDX).

METHOD

This research is quantitative research, which emphasizes data analysis and numerical results. This method assesses variables by measuring them objectively (Yakin, 2024). All banking companies from 2021 to 2024 were included in this study, resulting i 58 companies with a total sample of 12 companies based on certain criteria, yielding 48 financial reports being collected for the study.

The scope of this study is to examine the effect of liquidity and profitability on financial stability with financial distress as a moderating variable in banking companies

listed on the Indonesia Stock Exchange (IDX) for the period 2021-2024. The sample for this study was determined using a purposive sampling technique, which involves selecting a sample based on predetermined criteria aligned with the research requirements. As shown in Table 1, there were 58 banking companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period. Of these, 34 companies were excluded because they did not fall into the KBMI 1 through 4 categories, leaving 24 companies.

Furthermore, 12 companies failed to meet the criteria regarding the completeness of their annual financial report disclosures throughout the observation period. Consequently, 12 banking companies were selected as the final sample, resulting in a total of 48 annual financial reports from banking companies listed on the Indonesia Stock Exchange.

Table 1
Sample Selection Criteria

No	Criteria	Number of Companies	Year	Total Financial Reports
11	Banks listed on IDX period 2021–2024	58	4	232
22	Banking companies not included in KBMI categories 1–4 listed on the IDX for the period 2021–2024	(34)	4	(136)
33	Banks classified under KBMI categories 1–4 listed on (IDX) period 2021–2024	24	4	96
44	Banking companies based on KBMI 1–4 that did not fully publish their annual financial reports in 2021 and 2024	(12)	4	(48)
55	Banking companies based on KBMI 1 - 4 that published complete annual reports in 2021 and 2024 and had complete data for the variables studied, namely liquidity (LDR/FDR), profitability (ROA), financial distress (Altman Z-Score), and financial stability (AChange).	12	4	48
	Number of Research Samples	12	4	48

Source: Processed by Researcher, 2025

Purposive sampling is a sampling technique used in this study (Nst & Albar, 2022), which provides selection criteria based on KBMI 1-4. Secondary data is the type of data used, and the method of data collection and acquisition is through the official IDX website, www.idx.co.id.

The variables in this study that became independent variables were Liquidity (X1) and Profitability (X2), while the dependent variable (Y) was Financial Stability and Financial Distress as a moderating variable (Z). The data were analyzed using SPSS 26 software with descriptive statistical data analysis methods, classical assumption tests (normality, multicollinearity, heteroscedasticity, and autocorrelation), Partial Test,MRA Test (Moderating Regression Analysis), and (R^2 (Yakin, 2024). Formulation of regression equations:

$$\mathbf{Y = \alpha + \beta_1 . X_1 + \beta_2 . X_2 + \beta_3 . Z + \in \beta_4 X_1 . Z + \beta_5 . X_2 . Z + \epsilon}$$

Explanation:

Y = Dependent variable (Y estimate), is the variable being explained or predicted by the model

$X_1 X_2$ = Independent variable, which is the variable that influences Y

α = Constant (value of Y when X_1 dan $X_2 = 0$) , which indicates the intercept of the regression line with the Y-axis

$\beta_1 \beta_2 \beta_3 \beta_4 \beta_5$ = Regression coefficients, each of which describes the magnitude of change in Y due to a one-unit change in the variables $X_1 X_2$ and Z, with all ther variables held constant (ceteris paribus).

Z = Moderator variable, an additional variable that serves to strengthen or weaken the relationship between X and Y.

$\in$ = Error Term, which indicates other factors that influence Y but are not included in the model.

RESULTS AND DISCUSSION

Descriptive Statistical Analysis Test

Descriptive statistical analysis is used to describe the characteristics of the research data through minimum and maximum values, the mean, and the standard deviation.

The variables analyzed in this study include liquidity (LDR), profitability (ROA), and financial stability which serve as dependent variables as well as financial distress (Altman Z-score), which functions as a moderating variable. The results of the analysis are presented in Table 2.

Table 2
Results of Descriptive Statistical Analysis

Descriptive Statistics

	N	Min	Maximum	Mean	Standard Deviation
Liquidity	34	0.2053	1.4700	0.883032	0.2749971
Profitability	34	-0.0493	0.0403	0.008691	0.0192213
Financial Stability	34	-0.0800	0.5000	0.144065	0.1481169
Financial Distress	34	-5.01	8.49	2.8053	3.10189
Valid N (listwise)	34				

Source: Secondary data analyzed by the researcher, 2026

Variable X1, namely liquidity based on statistical testing results, has a minimum value of 20.53%, where the minimum value of 20.53% was experienced by PT Bank Capital Indonesia. Meanwhile, the maximum value of 147.00% occurred at PT SMBC Indonesia Tbk. The average liquidity value for all banking companies was 88.30% and the standard deviation of liquidity was 27.5%. The second independent variable, profitability (X2), produced a minimum value of -4.93%, with PT Bank KB Bukopin Tbk experiencing the minimum value of -4.93%. Meanwhile, the maximum value of 4.03% occurred at PT Bank Mandiri Persero. The average profitability of all banking companies was 0.87% and the standard deviation was 1.92%.

The dependent variable of financial stability (Y) produced a minimum value of -8.00%, with the minimum value of 8.00% experienced by PT Bank Neo Commerce Tbk. Meanwhile, the maximum value of 50.00% was experienced by PT Bank Aladin Syariah Tbk. The average financial stability value for all banking companies is 14.41% and the

standard deviation is 14.81%. The moderating variable of financial distress from the above data results in a minimum value of -5.01, where the minimum value of -5.01 is experienced by PT Bank Neo Commerce Tbk. Meanwhile, the maximum value of 8.49 occurs at PT Bank Aladin Syariah Tbk. The average financial distress value for all banking companies is 2.8053 or 2.81, and the standard deviation is 3.10189 or 3.10.

Classical Assumption Test

Normality

Normality testing is a procedure used to determine whether the residuals in a regression model follow a normal distribution. This test is part of the classical assumption tests, which are employed to assess whether a regression model meets the normality assumption before further analysis is conducted. One method that can be used for this purpose is the One-Sample Kolmogorov–Smirnov Test, by examining the significance value (Asymp. Sig. 2-tailed) (Inami et al., 2024).

The decision-making criterion for the Kolmogorov–Smirnov normality test is based on a significance level of 0.05. If the significance value is greater than 0.05, the residuals are considered to be normally distributed, meaning the normality assumption has been met. Conversely, if the significance value is less than 0.05, the residuals are considered not to be normally distributed, indicating that the normality assumption has not been met. Meanwhile, if the significance value is exactly 0.05, the test result falls precisely at the significance threshold; in such cases, the decision is determined based on criteria applied consistently throughout the study (Inami et al., 2024).

In this study, a normality test was conducted using the One-Sample Kolmogorov–Smirnov method to determine whether the residuals in the regression model satisfy the assumption of a normal distribution. Decision-making is based on the significance value (Asymp. Sig. 2-tailed) at a significance level of 0.05. The results of the normality test are presented in Table 3.

Table 3
Normality Test Results Using One-Sample Kolmogorov–Smirnov

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		34
Normal Parameters [a, b]	Mean	0.00000
	Std. Deviation	0.12832230
Most Extreme Differences	Absolute	0.119
	Positive	0.119
	Negative	-0.067
Test Statistic		0.119
Asymp. Sig. (2-tailed)		0.200[c,d]

Source: Secondary data analyzed by the researcher, 2026

It is clear from the Table 3 that the Asymp. Sig. (2-tailed) value is 0.200. This suggests that the data is regularly distributed because 0.200 > 0.05.

Multicollinearity

Multicollinearity testing is a procedure in regression analysis used to determine whether there is a high correlation among the independent variables in a regression model. A well-constructed regression model should ideally be free from multicollinearity, as its presence can interfere with the estimation of regression coefficients.

This test can be performed by examining the Tolerance and Variance Inflation Factor (VIF) values. The decision-making criteria for the multicollinearity test are based on theseTolerance and Variance Inflation Factor (VIF) values. If theTolerance value is greater than 0.10 and the VIF value is less than 10, it can be concluded that there is no multicollinearity in the regression model.

Conversely, if the Tolerance value is less than or equal to 0.10 and the VIF value is greater than or equal to 10, there is an indication of multicollinearity within the regression model. Multicollinearity testing is conducted to ascertain whether any correlation exists among the independent variables in a regression model (Susanti et al., 2026).

In this study, the test utilizes Tolerance and Variance Inflation Factor (VIF) values, with criteria requiring a Tolerance value greater than 0.10 and a VIF value less than 10. The results of the multicollinearity test for the variables of liquidity, profitability, and financial distress are presented in Table 4.

Table 4
Multicollinearity Test Results

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	0.071	0.079		0.899	0.376		
Liquidity	0.018	0.089	0.033	0.199	0.844	0.914	1.094
Profitability	-1.074	1.244	-0.139	-0.863	0.395	0.960	1.042
Financial Distress	0.024	0.008	0.497	2,948	0.006	0.879	1.138

Source: Secondary data analyzed by the researcher, 2026

The LDR, ROA, and Altman Z-Score values in the following table demonstrate tolerance values > 0.10 and VIF < 10.00. Consequently, it may be said that none of the aforementioned variables show multicollinearity.

Heteroscedasticity

The heteroscedasticity test aims to determine whether there is an inequality of residual variances across observations in a regression model. This test employs the Glejser method by examining the significance value (Sig.) for each variable. If the significance value is greater than 0.05, there is no indication of heteroscedasticity; conversely, if the significance value is less than 0.05, there is an indication of heteroscedasticity (Ilham et al., 2025).

The heteroscedasticity test is conducted to determine whether there is an inequality of residual variances in the regression model. The test is performed using the Glejser method, with a significance level of 0.05. The results of the heteroscedasticity test for the variables of liquidity, profitability, and financial distress are presented in Table 5.

Table 5
Heteroskedasticity Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	0.110	0.049		2.257	0.031
	Liquidity	-0.028	0.055	-0.094	-0.501	0.620
	Profitability	-0.119	0.770	-0.028	-0.155	0.878
	Financial Distress	0.005	0.005	0.182	0.951	0.349

Source: Secondary data analyzed by the researcher, 2026

According to the findings in the Table 5, Heteroscedasticity is not present because the Sign values for LDR (Loan to Deposit Ratio), ROA (Return on Assets), and Altman Z-Score are > 0.05.

Autocorrelation

The autocorrelation test aims to determine whether there is a correlation between the residuals in a given period and those in the preceding period. A practical criterion often cited in various articles is that a Durbin–Watson (DW) value between −2 and +2 indicates the absence of autocorrelation, while values below −2 suggest positive autocorrelation and values above +2 suggest negative autocorrelation.

However, a more statistically rigorous approach involves comparing the DW value against lower (dL) and upper (dU) critical limits, which are determined based on the sample size and the number of independent variables. In this study, the Durbin–Watson (DW) statistic is used for the test (Ilham et al., 2025).

Autocorrelation testing is conducted using the Durbin–Watson statistic to determine whether or not there is a correlation between the residuals in the regression model. The results of the autocorrelation test are presented in Table 6.

Table 6
Autocorrelation Test Results

Model Summary[b]

Model	R	R-Squared	Adjusted R-Square	Standard Error of the Estimate	Durbin-Watson
1	0.499[a]	0.249	0.174	0.1345856	1.745

a. Predictors: (Constant), Financial Distress, Profitability, Liquidity
b. Dependent Variable: Financial Stability
Source: Secondary data analyzed by the researcher, 2026

According to the Table 6, d = 1.745, dU = 1.6519, and 4 – dU = 2.3481. The null hypothesis, which states that there is no autocorrelation, is accepted if dU < d < 4 -dU.

Partial Test (t)

The t-test (partial test) is a procedure used to determine whether each independent variable has a significant effect on the dependent variable on an individual basis. The test is conducted at a significance level of 0.05. If the significance value (Sig.) is less than 0.05, the independent variable has a significant effect on the dependent variable. Conversely, if the Sig. value is greater than 0.05, the effect is not statistically significant (Wanita et al., 2021).

The t-test is conducted to determine the partial effect of liquidity, profitability, and financial distress on financial stability. The analysis in this study utilizes t-values and significance (Sig.) levels at a threshold of 0.05. The results of the t-test are presented in Table 7.

Table7
t-test Results (Partial)

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	0.071	0.079		0.899	0.376
	Liquidity	0.018	0.089	0.033	0.199	0.844
	Profitability	-1.074	1.244	-0.139	-0.863	0.395
	Financial Distress	0.024	0.008	0.497	2.948	0.006

a. Dependent Variable: Financial Stability

Source: Secondary data analyzed by the researcher, 2026

It is known that the liquidity variable has a Sign value of 0.844 > 0.05 and a t-count value of 0.199 < t-table 2.042, so it can be concluded that the liquidity variable (X1) has no effect on the financial stability variable (Y).

Conversely, the profitability variable (X2) has a t-value of -0.863 < t-table 2.042 and a Sign value of 0.395 > 0.05, indicating that it has no effect on the financial stability variable (Y). It can be inferred that the financial distress variable (Z) influences the financial stability variable (Y) since the financial distress moderation variable (Z) has a Sign value of 0.006 < 0.05 and a t-count value of 2.948 > t-table 2.042.

MRA Test (Moderating Regression Analysis)

Moderated Regression Analysis (MRA) is a regression analysis method used to determine whether a moderating variable strengthens or weakens the relationship between an independent variable and a dependent variable by testing an interaction variable. If the significance value of the interaction coefficient is < 0.05, the moderating variable is considered to have a significant effect on the relationship; conversely, if the value is > 0.05, the moderating effect is not statistically significant. Meanwhile, the R^2 and Adjusted R-Square values in the Model Summary table indicate the model's ability to explain the variation in the dependent variable (Hartono et al., 2026).

Moderated Regression Analysis (MRA) was conducted to determine whether financial distress moderates the influence of liquidity and profitability on financial stability. The MRA model incorporates independent variables, a moderating variable, and an interaction variable. A summary of the model's ability to explain the variation in financial stability is presented in Table 8.

Table 8
MRA Analysis

Model Summary

Model	R	R Square	Adjusted R-Square	Standard Error of the Estimate
1	0.525[a]	0.276	0.146	0.1368558

a. Predictors: (Constant), X2M, Liquidity, Financial Distress, Profitability, X1M
Source: Secondary data analyzed by the researcher, 2026

It may be inferred that the financial distress variable cannot mitigate the impact of the liquidity variable on financial stability because the Sign value of the interaction variable between liquidity (X1) and financial distress (Z) is 0.781 > 0.05. In the meantime, the financial hardship variable is also unable to attenuate the impact of the profitability variable on financial stability, as indicated by the Sign value of the interaction variable between profitability (X2) and financial distress (Z) being 0.327 > 0.05.

Determination Coefficient Analysis (R^2)

The coefficient of determination is a measure used to determine the extent to which independent variables can explain the variation in a dependent variable. The R^2 value ranges from 0 to 1. The closer the value is to 1, the greater the proportion of the dependent variable's variation that can be explained by the independent variables in the model; conversely, the closer it is to 0, the smaller the proportion that can be explained. In regression models involving multiple independent variables, the Adjusted R-Square value can also be used, as it accounts for both the number of independent variables and the sample size. The coefficient of determination does not rely on significance criteria such as those used in t-tests, but is instead interpreted based on the magnitude of the proportion of variation that the model is able to explain (Mubarokah et al., 2025).

The coefficient of determination test in this study is conducted to determine the extent to which the liquidity and profitability variables can explain the variation in financial stability. The results of the coefficient of determination test are presented in Table 9.

Table 9
Coefficient of Determination Test Results

Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	0.499[a]	0.249	0.174	0.1345856

a. Predictors: (Constant), Financial Distress, Profitability, Liquidity
Source: Secondary data analyzed by the researcher, 2026

It is known that the R Square value to the Table 9 is 0.249, which means that the liquidity (X1) and profitability (X2) variables, when moderated by the financial distress (M) variable, have a weak effect on financial stability (Y) of 0.249 or 24.9%.

It is clear from the test results to the Table 9 that this study has passed all of the traditional assumption tests. According to the results of the R Square test, the independent variables of profitability and liquidity can account for 3.2% of the dependent

variable of financial stability, and when the variable of financial distress is taken into account, the variables of profitability and liquidity can account for 24.9% of financial stability. In the meantime, other variables not covered by this research model account for the remaining 75.1%.

The effect of liquidity on financial stability

H1 is rejected since the findings of the hypothesis test indicate that liquidity has no discernible impact on financial stability. The liquidity variable has a positive direction but no discernible impact. This claim is backed by signaling theory, which holds that liquidity indicators are important in sending either positive or negative signals about a company's financial soundness, and it is demonstrated by the study's t-test of the regression coefficient (Ismayadi, 2023 ; Istiqomah & Indira, 2024). The study's findings, however, show that bank liquidity does not give stakeholders and the market a clear indication of the bank's ability to sustain financial stability. According to Amelia and Windi (2019), the average liquidity situation of banking businesses in this study between 2021 and 2024 was 88%, indicating that banks are still in rather good shape (Amelia & Windi, 2019).

The findings of this study are consistent with research by Yakin (2024), which demonstrates that the financial stability of banks listed on the IDX between 2020 and 2023 is not substantially impacted by liquidity. Pajriah (2025) conducted another study that supports this, demonstrating that liquidity has no appreciable impact on banks' financial stability. This is due to the fact that banking institutions do not consider liquidity as one of their benchmarks for preserving financial stability.

The effect of profitability on financial stability

H2 is rejected because it can be inferred from the hypothesis test results that profitability has no discernible impact on financial stability. Return on assets, or ROA, does not always accurately reflect actual cash flows, such as earnings from non-cash transactions or regular profits, which is one of the reasons it has little bearing on financial stability (Apriyani et al., 2025). However, this study's profitability variable regression coefficient's t-test result also indicates a negative trend toward financial stability. One explanation is that when the company's ROA profitability is high, management will decide to invest in high-risk but high-return ventures. As a result, high ROA is followed by a decline in the company's financial stability when it encounters investment risks.

The signaling theory, which holds that stakeholders like creditors, investors, and management cannot accept positive or negative signals about the profitability of banking companies that can be used to evaluate the company's financial stability, is also refuted by the study's findings (Apriyani et al., 2025). Banks are in poor health, as evidenced by the study's average profitability of 0.87% for banking firms between 2021 and 2024. Yakin (2024) supports the study's findings by demonstrating that bank stability is not much impacted by profitability. The financial health of banks listed on the Bangladesh stock exchange is significantly impacted by financial turmoil, according to research by Hasan (2025).

The effect of financial distress on financial stability

H3 is accepted since it can be concluded from the hypothesis test results that financial suffering significantly affects financial stability. According to signaling theory, which holds that information about financial hardship can give investors, creditors, and regulators either positive or negative signals, the t-test result of the regression coefficient

in this study indicates a positive direction. According to this study, a banking company's financial stability and insolvency are threatened when it faces financial challenges such a drop in capital and negative cash flow.

On the other hand, the business will have financial stability if it has a suitable capital structure and strong operating cash flow, (Jonathan & Ariani, 2024) . The findings of this study are consistent with Alfadli & Sahraoui (2022) research, which demonstrates that financial distress indicators significantly impact the financial stability of commercial banks in MENA nations. The financial health of banks listed on the Bangladesh stock exchange is significantly impacted by financial turmoil, according to research by Hasan (2025).

Financial distress moderates the effect of liquidity on financial stability

H4 is rejected because the hypothesis test's findings demonstrate that financial distress cannot mitigate the impact of liquidity variables on financial stability. However, the study's MRA (Moderating Regression Analysis) regression coefficient test value is negative, indicating that the greater the financial distress value, the less liquidity can sustain corporate financial stability and support signaling theory, which can give financial statement users information about positive or negative signals for decision-making (Nur et al., 2024). Users of financial statements are encouraged to examine additional financial ratio assessments, such as capital, market risk, and credit risk.

In order to preserve the company's financial stability, the corporation focuses on managing liquidity levels effectively and efficiently, making sure that liquidity is neither too high nor too low. Because of the substantial amount of cash financing distributed among deposits, excessive liquidity will show the degree of risk banks face in meeting their obligations. If liquidity is too low, it will show that there is a lot of idle cash, which is regarded as unproductive, and that the management of the company is unable to allocate finance in the best possible way. To avoid financial crisis, the company's whole capital structure must also be carefully managed and developed for the operational productivity of the business.

Between 2021 and 2024, banking companies' average financial distress condition was 2.81, indicating that they were not in bankruptcy. The findings of this study are consistent with research by Febriyanto and Laurensius (2022), which asserts that the impact of corporate liquidity cannot be mitigated by financial difficulties (Bhramasta & Kurniawan, 2023) .

Financial distress moderates the effect of profitability on financial stability

H5 was rejected because the findings of the hypothesis test demonstrated that financial distress had no effect on the profitability variable on financial stability. However, the study's MRA regression coefficient test value indicates a negative direction, indicating that the higher the financial distress value, the less profitability can sustain the company's financial stability and support the signaling theory, which can give financial statement users information about positive or negative signals to evaluate the company's financial stability. However, it is advised that while making decisions, readers of financial statements take into account not just profitability but also operational effectiveness, risk management, and capital adequacy.

When a company's financial performance declines before filing for bankruptcy, it is said to be in financial difficulty. The business will file for bankruptcy if this situation persists. In order to maintain financial stability, boost stakeholder trust particularly

among investors and avoid financial distress, management must take steps to raise the company's profitability by cutting operating expenses and optimizing asset and capital management. The findings of this study are consistent with research by (Rahmana, 2022), which asserts that the impact of business prosperity cannot be mitigated by financial hardship. Research from Seralurin (2025), which claims that financial hardship likewise cannot mitigate the impact of business performance, lends credence to this study.

CONCLUSION AND SUGGESTION

Based on the research findings, it can be concluded that liquidity has a relatively minor influence on the financial stability of banks; therefore, it cannot be considered a primary indicator for maintaining such stability. Profitability also fails to show a significant impact on financial stability, suggesting that a high level of profit does not necessarily reflect a stable financial condition. Conversely, financial distress has a significant influence on the financial stability of banks.

This indicates that financial distress can serve as a crucial indicator for identifying potential financial instability particularly when a bank faces declining financial performance, negative cash flows, or a reduction in capital. Furthermore, the results of the hypothesis testing which reveal a negative interaction effect—indicate that financial distress does not moderate the influence of liquidity or profitability on financial stability. Consequently, the presence of financial distress warrants careful attention in efforts to maintain the financial stability of the banking sector.

Based on the research findings, bank management is advised to pay greater attention to indicators of financial distress in order to maintain the bank's financial stability, without neglecting the management of liquidity and profitability. Periodic monitoring of the bank's financial condition is essential so that potential financial strain can be identified early and appropriate preventive measures can be taken. Furthermore, for third parties such as investors, creditors, and regulators, the assessment of a bank's financial stability should not rely solely on liquidity and profitability ratios; it should also take into account indicators of financial distress. By considering this broader range of financial indicators, decisions regarding investments, credit granting, and banking supervision can be made with greater care and comprehensiveness.

Future researchers are advised to incorporate additional variables, such as asset quality, operational effectiveness, risk management, bank size, and macroeconomic factors. This recommendation stems from the study's findings, which indicate that liquidity and profitability do not have a significant impact on financial stability, suggesting that other factors may be at play.

Asset quality relates to the risk of non-performing loans; operational effectiveness reflects cost-management efficiency; risk management plays a role in controlling various banking risks; bank size represents the scale of operations; and macroeconomic factors such as inflation and interest rates can influence a bank's financial condition. Including these variables is expected to provide a more comprehensive understanding of the factors that influence the financial stability of banks.

REFERENCES

Alfadli, A. & S. D. (2022). *Dampak risiko keuangan terhadap Stabilitas Keuangan*.

Alifiana, Mia Ajeng & Puteri, A. N. &, & Kuncoro, M. T. (2023). Faktor-Faktor Yang Berdampak Pada Financial Sustainability Ratio. *Jurnal Manajemen Dan Bisnis Terapan*, *3*(2), 107–117.

Amelia, S. S., & Windi, N. (2019). *Penilaian Tingkat Kesehatan Bank Negara Indonesia Dengan Mengukur Earning Dan Likuiditas (Studi Kasus Pada Bursa Efek lndonesia Periode 2013-2017)*. 1–8.

Apriyani, D. &, Arditha Rachman, & A., & Makhsun, A. (2025). Pengaruh Rasio Likuiditas, Profitabilitas, Solvabilitas dan Aktivitas Terhadap Financial Distress Perusahaan Yang Terdaftar di Bursa Efek Indonesia Pada Tahun 2024. *Journal of Accounting and Finance Management*, *6*(3), 1638–1655. https://doi.org/10.38035/jafm.v6i3.2327

Ariani, S. E., Wijayati, S. P. A., Yuliana, I., Ekonomi, F., & Islam Negeri Maulana Malik Ibrahim Malang, U. (2022). Pengaruh Struktur Modal dan Profitabilitas Terhadap Nilai Perusahaan dengan Finansial Distress sebagai Moderasi. *JIMEA | Jurnal Ilmiah MEA (Manajemen, Ekonomi, Dan Akuntansi)*, *6*(1), 2022.

Arlina, L. (2024). *Catatan BRI, BNI dan Mandiri Usai Restrukturisasi Kredit Covid-19 Berakhir*. Financial.Bisnis.Com.

Ayu, K., & Kartika, U. (2022). *Penjualan dan Leverage terhadap Financial Distress pada Bank Umum*. *16*(2), 80–98.

Dedyanti, M. K., & Hwihanus, H. (2024). Analisis Pengaruh Kebijakan Dividen, Struktur Modal, dan Struktur Kepemilikan Terhadap Kinerja Keuangan dengan Investasi Sebagai Variabel Intervening pada Industri Rokok yang Terdaftar di Bursa Efek Indonesia Tahun 2019-2022. *MUQADDUMAH: Jurnal Ekonomi, Manajemen, Akuntansi Dan Bisnis*, *2*(2), 111–123.

Diana, B. M., & Yudiantoro, D. (2023). Pengaruh Kinerja Keuangan Terhadap Financial Distress Perusahaan Sektor Industri Barang Konsumsi di BEI 2018-2021. *Jurnal Ekobistek*, *12*(2), 601–607. https://doi.org/10.35134/ekobistek.v12i2.595

Diyanto, V., Ekonomi, F., Riau, U., Ekonomi, F., & Riau, U. (2020). *Pengaruh Likuiditas , Leverage dan Profitabilitas terhadap Financial Distress*. (2017), 127–133.

Ferrouhi, E. M. (2018). *Faktor penentu profitabilitas dan Bank : Tinjauan Umum*.

Hartono, S. A., Efni, Y., & Savitri, E. (2026). The Effect of Leverage , Liquidity and Activity on Financial Distress with Profitability and Firm Size as Moderating Variables. *Indonesian Journal Of Economics, Social, And Humanities*, 1–20.

Hasan, M. T. (2025). Measuring the financial health using the Altman Z-score model: A case study on listed banks in Bangladesh. *Asian Journal of Economics and Empirical Research*, *12*(1), 40–51. https://doi.org/10.20448/ajeer.v12i1.6825

Ilham, W., Herawati, D., & Santoso, A. (2025). Dampak Digitalisasi terhadap Aqilitas UMKM dalam Studi Kasus UMKN di Kelurahan Kota Baru. *Jurnal Ilmiah Raflesia Akuntansi V*, *11*, 255–268.

Indira, I., Kartikasari, E. D., & Mahmudah, A. (2022). Pengaruh Growth Opportunity , Intellectual Capital, Roa Dan Leverage Pada Firm Value. *Media Mahardika*, 489–500.

Ismail, R. M. (2024). *Siaran Pers: Stabilitas Sektor Jasa Keuangan Terjaga di Tengah Meningkatnya Risiko Geopolitik*. Ojk.Go.Id.

Ismayadi, S. B. N. I. (2023). Pengaruh Dana Pihak Ketiga dan Likuiditas Terhadap Profitabilitas. In *Jambura Accounting Review* (Vol. 4, Number 2, pp. 261–272). https://doi.org/10.37905/jar.v4i2.93

Istiqomah, N., & Indira, I. (2024). *The Influence of Sales Growth and Profit Growth on Financial Distress with Asset Growth as a Moderating Variable*. *6*(2), 78–89.

Jonathan, B., & Ariani, M. dkk. (2024). Analisis Financial Distress Pada Bank Perekonomian Rakyat Di Surabaya Pada Periode 2015-2023 *Jurnal Ilmiah MEA*

(Manajemen, Ekonomi, Dan Akuntansi), *8*(2), 782–794.

Kharisma, P. &, & Ayu, C. (2023). Analisis Financial Target, Financial Stability, dan Ineffective Monitoring yang mempengaruhi Kecurangan Pelaporan Keuangan. *Jurnal Sosial Teknologi*, *3*(3), 210–219. https://doi.org/10.59188/jurnalsostech.v3i3.653

Laurensius, F. (2022). Profitabilitas, Leverage, dan Likuiditas Terhadap Penghindaran Pajak Dengan Financial Distress Sebagai Moderasi. *Seminar Nasional Sistem Informasi*, *7*(September), 4397–4408.

Mahdatika, I. C. & S. A. (2022). Pengaruh Manajemen GAP, Modal, Likuiditas, Risiko Pembiayaan, Tingkat Efisiensi dan Ukuran Bank (Size) terhadap Net Interest Margin pada Bank Syariah Mandiri, Bank BRI Syariah dan Bank BNI Syariah Tahun 2015-2019. *Islamic Banking : Jurnal Pemikiran Dan Pengembangan Perbankan Syariah*, *7*(2), 315–332. https://doi.org/10.36908/isbank.v7i2.304

Mubarokah, Nurfadilah & Budyastuti, T. (2025). *Pengaruh Profitabilitas, Sales Growth, dan Likuiditas Terhadap Nilai Perusahaan*. *11*, 428–438.

Nst, H. S., & Albar, A. (2022). Stabilitas Finansial Pada Bank Umum Syariah. *Jurnal Manajemen Bisnis*, 1–9.

Nur, S. &, Suciyanti, V. . dkk, Akuntansi, P. S., & Ekonomi, F. (2024). Pemanfaatan Teori Signal dalam Bidang Akuntansi : Literatur Review Use of Signal Theory in Accounting : Literature Review. *Economics, Business and Management Science Journal*, *4*(2), 55–65. https://doi.org/10.34007/ebmsj.v4i2.564

Pajriah, N. (2025). *Pengaruh Likuiditas, Efisiensi, Dan Size Terhadap Stabilitas Perbankan Syariah Di Indonesia (Studi Pada Bank Umum Syariah Periode 2019-2024)*.

Pratiwi, A., & Muthohar, A. M. (2021). Pengaruh growth opportunity, likuiditas, dan leverage terhadap nilai perusahaan dengan profitabilitas sebagai variabel intervening. *Journal of Accounting and Digital Finance*, *1*(3), 163–180. https://doi.org/10.53088/jadfi.v1i3.175

Putri, E. C. & S. M. B. & H. I. D. (2025). Pengaruh Leverage Dan Likuiditas Terhadap Financial Distress Pada Bank Konvensional Yang Terdaftar Di Bei Tahun 2020-2024 Dengan Return On Assets (Roa) Sebagai Variabel Moderating, *Estiatma*. *5*(521), 521–535.

Rahmana. (2022). Kompartemen : Jurnal Ilmiah Akuntansi. *Jurnal Ilmiah Akuntansi*, *23*(1), 109–121.

Rohimah, W. (2024). *Pengaruh struktur modal, efisiensi, profitabilitas dan teknologi terhadap stabilitas keuangan perbankan Syariah di ASEAN*.

Salsabila, & Mustika, P. A. (2022). Analisis Rasio Likuiditas Untuk Menilai Kinerja Keuangan Pusat Koperasi Unit Desa (Puskud) Kota Ambon. *Journal of Applied Accounting*, *1*(1), 7–10. https://doi.org/10.52158/jaa.v1i1.312

Sofwan, I. & Pribadi, M. I. & Anshari, R. (2025). *Pengaruh Risiko Kredit Dan Profitabilitas Terhadap Stabilitas Keuangan Bank Di Indonesia Periode 2019-2023*. *2025*(2024), 1–13.

Susanti, I. & Hermawan, S. (2026). Intellectual Capital Risk Management and Competitive Advantage Sustain Banking Financial Performance: Modal Intelektual Manajemen Risiko dan Keunggulan Kompetitif Menopang Kinerja Keuangan Perbankan. *Indonesian Journal of Law and Economics Review*, *21*(3). https://doi.org/10.21070/ijler.v21i3.1714

Wanita, N. &, Pratiwi, R. &, & Nursyamsu. (2021). *Pengaruh Pembiayaan Ultra Mikro Dan Menengah Di Masa Pandemi Covid-19*. *3*(2).

Yakin, A. & L. S. D. D. pratiwi. Y. (2024). Pengaruh Profitabilitas dan Ukuran Perusahaan. *E-Jurnal Manajemen*, *8*(4), 2297–2324.

Yuniari, N. P., & Bagus, B. I. (2019). Pengaruh Likuiditas, Efisiensi, Dan Ukuran Bank Terhadap Profitabilitas. *E-Jurnal Manajemen Universitas Udayana*, *8*(6), 3502. https://doi.org/10.24843/ejmunud.2019.v08.i06.p08