

THE EFFECT OF FINANCIAL RISKS RELATED TO THE INDUSTRIAL SECTOR AND MACROECONOMIC FACTORS ON THE FINANCIAL STABILITY OF COMMERCIAL BANKS IN INDONESIA

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Abstract

This study uses panel data regression, a two-step dynamic approach, to examine the effect of industry-specific financial risk and macroeconomics on the financial stability of private commercial banks in Indonesia. This study offers a comprehensive evaluation of how various elements affect financial stability over a 5-year period by examining data from 43 conventional banks. The results show that the financial stability of several banks has a positive effect on the variables of previous year stability, credit risk, liquidity, and bank concentration, a negative effect on the variables of bank size and gross domestic product, and no effect on the variable of real interest rate. On the other hand, lower financial stability is associated with larger banks and a country's economic performance. Larger banks may face greater operational and risk management difficulties, and financial stability may be disrupted by the real interest rate. Policy makers and bank managers, who face difficulties in controlling credit risk and bank size, need to understand these insights. According to the study, resilience can be strengthened by previous financial stability and positive economic indicators, but to maintain financial stability, it is necessary to pay attention to reducing the risks associated with large banks and credit risk to ensure sustainable financial stability.

Keywords: Financial Stability, Dynamic Panel Data, Financial Risk Industry Specifications, Macroeconomics

INTRODUCTION

The banking sector plays a central and vital role as the backbone of a country's economy. Banks function as intermediary institutions that connect parties with surplus funds with parties in need of funds (deficit), facilitate payment systems, and spearhead the implementation of monetary policy. Private commercial banks are one of the main pillars of the national banking structure, controlling a dominant share of total banking assets and contributing significantly to the distribution of credit to the real sector. The financial stability of these commercial banks not only reflects the health of each entity, but also serves as a barometer of the resilience of Indonesia's financial system as a whole. The stability of the global financial system, including Indonesia's, faces the test of external shocks that trigger symptoms of problems that are immediately felt in the banking sector (Bank Indonesia, 2020).

The financial stability of commercial banks in Indonesia is inseparable from the dynamics of two main risk factors: first, Industry-Specific Financial Risk, and second, Macroeconomic Factors. Industry-Specific Financial Risk refers to internal risks inherent in the bank's own operations and management, which are reflected in its financial performance. Indicators include Non-Performing Loans (NPL) or Non-Performing Financing (NPF) as a proxy for credit risk, Loan to Deposit Ratio (LDR) as an indicator of liquidity risk, and Capital Adequacy Ratio (CAR). High NPLs indicate potential credit losses that can erode the bank's capital, while an excessively high LDR can trigger liquidity problems. Research by Ozili & Peterson, (2025) on BRICS and ASEAN countries provides strong empirical evidence of a negative relationship between high NPLs and financial stability, emphasizing the importance of prudent credit risk management. The main symptom that has emerged is the potential for increased credit risk. The economic slowdown has caused many debtors, both individuals and corporations, to experience financial difficulties, thereby increasing concerns about default (Tsegaye, 2025).

Financial stability is becoming increasingly important in an era of globalization and high financial interconnectedness. When economic and financial conditions deteriorate, the impact is not only contemporaneous (immediate in the current period), but can also have delayed or sustained effects from the previous period. Previous year stability can be an important predictor and determinant of financial stability conditions in the current period (Badwan, Saleh, dan Hamdan, 2024). Research by Ozili et al., (2025) found that better financial stability in the previous period was followed by better financial stability in the following period in all regions, indicating the resilience of financial stability.

Credit risk is one of the main factors that greatly determines banking health and financial system stability. Credit risk arises when debtors fail to meet their loan repayment obligations, which can lead to a decline in the quality of bank assets and ultimately reduce the overall resilience of the financial system (International Monetary Fund atau IMF, 2021). An increase in credit risk also has an impact on financial stability and the ability to channel new credit that can drive economic growth (Acheampong, Danso, dan Ibeji, 2024). According to the deterioration in credit quality, it reduces investor and depositor confidence, increases funding costs and credit spreads, thereby creating liquidity pressure. The loan-to-asset ratio is a measure of a bank's credit risk. This ratio shows the proportion of loans to total assets in a year. Banks with more loans or whose loans account for a large portion of

their assets have a higher loan-to-asset ratio. A higher ratio indicates that a bank has more assets in the form of loans. The loan-to-asset ratio has been used by researchers (Tsegaye, 2025).

One internal element that is often considered to be related to bank financial stability is liquidity. Good liquidity indicates how well a bank can meet short-term demands without incurring significant losses. Banks with sufficient liquidity are believed to be able to cope with sudden demands for withdrawals, maintain the trust of depositors or customers, and reduce the risk of default. Therefore, liquidity is often considered the main protector of stability in the financial sector, as reflected in international prudential regulations such as the liquidity coverage ratio (LCR) and net stable funding ratio (NSFR) introduced in the Basel III framework (Thi Tran, 2024).

The structure of the banking market, particularly the level of banking concentration, is a crucial factor in evaluating the stability of the financial system. Bank concentration assesses the extent to which the market is dominated by a number of large banks, for example through the Herfindahl-Hirschman Index. According to research by Yudaruddin, (2022), banks operating in markets with high concentration levels are generally more resistant to financial shocks, especially when they have solid capital ratios. However, the impact of concentration and financial freedom on stability can actually be negative when viewed in the broader context of financial freedom. Contrary to the initial view, which argues that high banking concentration makes the market less competitive, banks tend to take excessive risks due to their dominant position and large volume, which ultimately has the potential to increase vulnerability to systemic instability (Thanh, Gholipour, Arjomandi dan Amir, 2024).

One of the key factors affecting financial stability is the macroeconomic situation, particularly Gross Domestic Product (GDP), which serves as a key indicator of the extent to which goods and services are produced in a country. Strong GDP usually indicates a high level of economic activity, which can increase liquidity in the banking sector and strengthen investor confidence, thereby supporting financial stability. On the other hand, a slowdown in growth can be a sign that demand and investment are beginning to weaken, which in turn can increase potential credit risk and fluctuations in financial markets (Tsegaye, 2025). Researchers Ullah, Zaman, dan Mubasher, (2024) concluded that GDP growth has a positive and significant impact on banking financial stability in an analysis involving 122 countries, emphasizing the importance of real economic conditions for maintaining financial stability in both developed and developing countries.

One macroeconomic indicator that plays a crucial role in maintaining financial stability is the real interest rate, which is measured using the average annual real interest rate. Fluctuations in the real interest rate can affect banking behavior, investment choices, financial industry stability, and systemic risk in both the short and long term. Research by Ullah et al., (2024) found that an environment with low real interest rates can accelerate credit expansion and increase asset values, which initially stimulates economic growth. However, this condition can lead to monetary policy tightening in the future and increase the risk of financial instability due to debt accumulation and misjudgment of risk. Banks can mitigate the impact of interest rate changes by implementing a hedging approach, allowing central banks to change interest rates. This method has been identified as crucial in achieving financial stability and is commonly used by financial institutions to control residual risk, often referred to as the residual risk of money supply. Financial stability is driven by real

interest rates based on inflation targets. Interest rates, either directly or indirectly, help maintain the financial stability of banks (Elsayed, 2023).

REVIEW OF LITERATURE

Financial stability is generally defined as a condition in which the banking system, capital markets, non-bank institutions, and market infrastructure are able to perform their functions of credit distribution, risk allocation, and payment settlement without major disruptions, and are resilient to shocks so as not to cause contagion effects that harm the real economy (International Monetary Fund, 2021). Based on Tsegaye, (2024) empirical research and theories related to financial stability, financial stability is influenced by a combination of internal bank characteristics, the structure of the banking industry, and macroeconomic conditions.

According to the IMF, (2021), previous year stability refers to a measure of financial stability calculated for the previous period. The financial stability index, a measure of systemic connectivity, market liquidity, or bank failure indicators at t-1 explain stability in the period. Bank financial stability is persistent and influenced by past performance. Banks that had high stability in the previous year tend to maintain or improve their stability in the following year. This is supported by the theory of path dependence in bank financial performance. Research by Pham, Dayo, dan Nguyen (2021) found that the previous year's financial stability significantly affects the current year's stability. Bank stability is a continuous process, not a momentary achievement, and a bank's performance over time affects its ongoing stability. In other words, a bank's financial stability in one year can affect its stability in the following year. In this study, the Z-scores from the previous year will be used to measure the financial stability of the previous year (Tsegaye, 2025).

Bank size can be measured using the natural logarithm of total assets. The too big to fail theory states that large banks are considered more stable, but recent research shows that operational complexity and high costs can lead to diseconomies of scale (Ozili, 2025). Researchers Pham et al., (2021) found that bank size is negatively related to financial stability, supported by higher operational risks and management costs. With increased market power, larger banks are typically less vulnerable to liquidity or macroeconomic shocks, allowing them to increase revenues and accumulate larger capital buffers. Due to economies of scale, banks can increase revenues and offer more competitive interest rates when they have more assets, such as loans, which can boost business.

The credit risk ratio shows the proportion of loans to total assets in a year. Banks with more loans or whose loans contribute a significant portion of their assets have a higher loan-to-asset ratio (Djebali & Zaghoudi, 2020). The loans-to-assets ratio (a measure of specific credit risk) has a positive effect on financial stability in several of the models tested, meaning that, under certain conditions, an increase in the loan-to-asset ratio is associated with an increase in bank stability.(Tsegaye, 2025). Research by Ari, Chen, Ratnovski, dan Lev, (2021) found that an increase in NPLs reduces a bank's net assets, decreases equity, increases the probability of bank bankruptcy, reduces public confidence, and causes runs on banks. Historical evidence shows that many banking crises have been marked by sharp increases in NPLs. Research conducted by Salim, Wadana, Kristanti, (2024) on P2P fintech companies shows that Loan to Total Assets (LTA) has a positive and significant effect on the stability

score (Z-score of Equity to Total Assets), indicating that an increase in the proportion of loans to assets contributes positively to the company's financial stability indicators. This assumption can be applied in the banking context.

Another factor that affects a bank's financial health is liquidity, which is measured as the ratio of liquid assets to total assets. The higher this figure, the more liquidity the bank has, and thus, the banking system will be more stable. A bank's ability to meet its obligations, especially to depositors, is referred to as liquidity. According to (Berger, Guedhami, Kim, dan Lin, 2022), high cash holdings can reduce liquidity risk and help banks lower the likelihood of failure. In line with Tsegaye, (2025) research, banks with more liquid assets have lower failure rates. Liquid assets divided by total assets are used as a proxy. Regarding the banking sector in ASEAN, it shows that liquidity creation, which describes the ratio of liquid assets to total assets, has a significant impact on bank stability.

Bank concentration refers to the extent to which the banking market is dominated by a small number of large banks (Dang, Lan, Lin, and Nguyen, 2025). Bank concentration is measured by the Herfindahl-Hirschman Index (HHI). Competition theory with stability states that high concentration can reduce efficiency and increase systematic risk (Tsegaye, 2025). The Hirschman-Herfindahl Index (HHI), which measures market competition in the banking industry, is used in this study to measure banking concentration. Each bank's market share is squared and summed to determine the HHI. Lower competition is indicated by higher concentration, which can reduce banking operational efficiency (Peleckis, 2022).

Gross Domestic Product Rate (GDP) is one of the determining macro factors. This study is the first to analyze the financial health of Palestinian banks using various significant independent factors. Research by Tsegaye, (2025) research shows that GDP is an indicator of national economic growth, indicating that when the economy develops, demand for financial services will increase, investment levels will rise, and income for companies and individuals will also increase. In the context of commercial banking, high GDP growth contributes to financial stability and can attract more deposits, make credit distribution more efficient, and increase public confidence in the banking system. Economic growth as measured by GDP is one of the main indicators in macroeconomics that affects the health and resilience of the financial system as a whole. When GDP increases, banks' ability to manage credit risk also improves, thereby strengthening financial stability. Conversely, a decline in GDP often puts pressure on banking institutions due to an increase in bad loans and market fluctuations, which in turn can reduce financial stability (Naili & Lahrichi, 2022).

Research by Tsegaye, (2025) found that high interest rates from central banks increase the ratio of non-performing loans, which reduces the stability of the banking system in African countries and other developing countries. This phenomenon occurs because increased financing costs result in an increased likelihood of loan defaults by debtors. Real interest rates not only affect loan demand but also determine the resilience of financial institutions' balance sheets, thereby contributing to the possibility of financial instability. Research conducted by Anthony & Atellu, (2021) states that high real interest rates tend to undermine financial system stability by increasing financing costs for debtors and increasing the risk of bad debt, while regulatory measures and more inclusive financial access can increase the financial system's capacity to withstand economic shocks.

RESEARCH METHOD

The research hypothesis was formulated as an initial statement to answer all existing problems, which were then tested using the GMM method to evaluate the influence of independent variables such as Previous Year Stability, Bank Size, Credit Risk, Liquidity, Bank Concentration, Gross Domestic Product, and Real Interest Rate on Financial Stability as a dependent variable. Data collection was carried out using a panel data approach, which is a combination of time series and cross-section data. This study covers 43 banking sector companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period. Data analysis will use Eviews software (Tsegaye, 2025). This study will use a panel data regression method processed using Eviews 9, aiming to test and analyze the effect of independent variables, namely Previous Year Stability, Bank Size, Credit Risk, Liquidity, Bank Concentration, Gross Domestic Product, and Real Interest Rate on Financial Stability recorded on the Indonesia Stock Exchange. This method includes three approaches, namely common effect, fixed effect, and random effect (Sugiyono, 2020). Financial stability reflects the ability of the monetary system, particularly the banking sector, to continue operating efficiently, withstand economic shocks, and maintain public confidence. Financial stability is typically measured using parameters such as Z-score, NPL, or capital adequacy ratio, which indicate a bank's resilience to risk threats (Naili & Lahrichi, 2022). Based on Tsegaye, (2024) empirical research and theories related to financial stability, financial stability is influenced by a combination of internal bank characteristics, banking industry structure, and macroeconomic conditions. Research Pham et al., (2021) found that the previous year's financial stability significantly affects the current year's stability. Conversely, Tsegaye, (2024) found that bank size is negatively related to financial stability, supported by higher operational risks and management costs. Bank size reflects a bank's ability to manage risk and impacts stability through its capital strength and level of operational complexity. Well-managed credit (such as low Non-Performing Loans) provides banks with the opportunity to maintain high profitability and sufficient capital reserves, which strengthens their resilience to external shocks and demonstrates that when the amount of non-performing loans is low, banks are better able to maintain capital reserves and reduce pressure on the system. Credit risk has a positive relationship with profitability, which ultimately supports financial stability when banks can monitor credit risk well (Rahadian, Suherman, dan Pranata, 2025). Liquidity plays an important role in maintaining the ability of banks to meet short-term obligations and reduce liquidity pressures that can trigger financial instability (Thi Tran, 2024). Research conducted by (Antony et al., 2021) found that bank concentration describes the structure of the banking market that affects the level of competition and risk-taking behavior of banks, which ultimately has an impact on financial stability. Meanwhile, GDP as an indicator of macroeconomic conditions reflects the real sector's ability to support the health of the financial sector, where higher economic growth tends to increase banking stability (Tsegaye, 2025). Measuring the real interest rate using the average annual interest rate reflects the overall interest rate situation, which tends to be more consistent than data taken from higher frequencies. This consistency is very important because extreme interest rate variations can add uncertainty to the market and increase the possibility of default. With annual real interest rates tending to be stable, banks can manage credit distribution more carefully and sustainably, thereby maintaining asset quality. Panel research conducted in OECD countries

shows that interest rates used as macroeconomic factors have a positive and significant correlation with financial stability as measured by banking Z-scores. These findings support the results of this study that real interest rates affect financial stability (Morina, 2025).

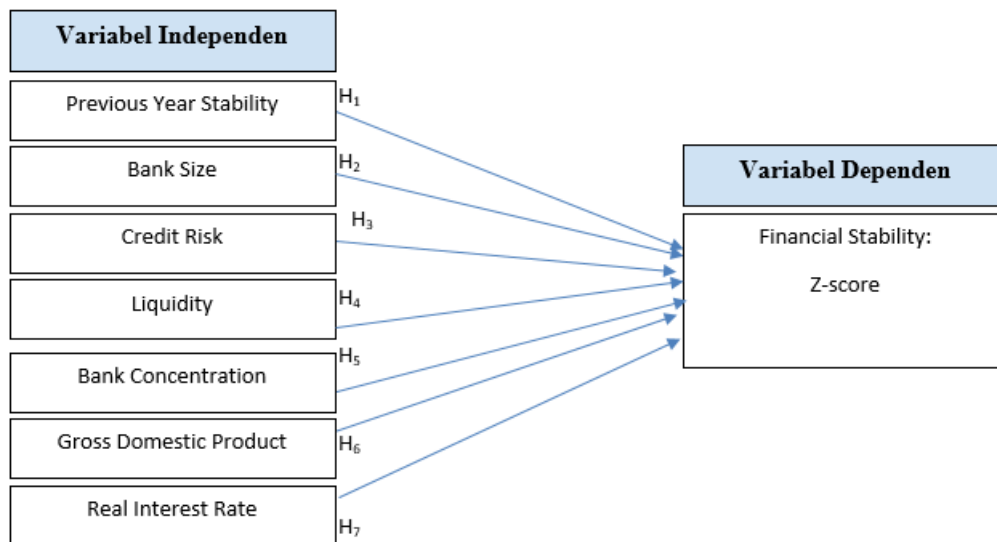
Research Hypothesis

This study aims to analyze the influence of previous year stability, bank size, credit risk, liquidity, bank concentration, gross domestic product, and real interest rate on financial stability. Based on the review of the literature and previous research, the hypothesis proposed in this study is as follows:

- H₁: Previous year stability has a positive effect on financial stability
- H₂: Bank size has a positive effect on financial stability
- H₃: Credit risk has a positive effect on financial stability
- H₄: Liquidity has a positive effect on financial stability
- H₅: Bank concentration has a positive effect on financial stability
- H₆: Gross domestic product has a positive effect on financial stability
- H₇: Real interest rate has a positive effect on financial stability

Research Model

This research model describes the relationship between independent variables (previous year stability, bank size, credit risk, liquidity, bank concentration, gross domestic product, and real interest rate) to dependent variables (financial stability). This model can be illustrated as follows:



This research will use a quantitative approach with secondary data as the data source. Data will be taken from the official website of the Indonesia Stock Exchange (www.idx.co.id) covering the last five years, from 2020 to 2024. The information comes from companies that publish financial reports and annual reports. The unit of analysis in this study is banking companies listed on the Indonesia Stock Exchange. The research will use purposive sampling, a sampling technique based on criteria relevant to the population. This selection is made with considerations tailored to the research variables in order to obtain accurate results. The research sample only includes banking companies listed on the Indonesia Stock Exchange (IDX) during the period 2020 to 2024 (Sugiyono, 2020). This

study applies the GMM method used to test the effect of a number of independent variables, namely Previous Year Stability, Bank Size, Credit Risk, Liquidity, Bank Concentration, Gross Domestic Product (GDP), and Real Interest Rate on Financial Stability as measured by Return On Assets (ROA) + Equity/Total Assets (TA). All variables in this study were analyzed theoretically, then arranged in a conceptual framework in the form of a chart to illustrate the relationship between independent and dependent variables.

RESULTS AND DISCUSSION

The following are the research results obtained from the analysis using Eviews 9, namely:

Table 1
Sampling Criteria

Description	Amount
Total banks listed on the Indonesia Stock Exchange for the period 2020 - 2024	47
Indonesian Sharia Banking	(4)
Number of Research Samples	43
Observations (43 banks x 5 years)	215

Table 2
Chow Test Results

Test	Dependent Variable	Chi-Square	Prob.	Decision
1.	ZSCORE	128.414628	0.0000	H ₀ rejected, selected FEM

Source: Processed Results from Eviews 9

Table 3
Hausman Test Results

Test	Dependent Variable	Chi-Square	Prob.	Decision
1.	ZSCORE	110.039093	0.0000	H ₀ rejected, selected FEM

Source: Processed Results from Eviews 9

Table 4
Lagrange Multiplier Test Results

Test	Dependent Variable	Breusch-pagan	Cross-section statistic	Decision
1.	ZSCORE	2.691069	0.1009	H ₀ accepted, selected CEM

Source: Processed Results from Eviews 9

Table 5
F Test Results

Test	Dependent Variable	F - Statistic	Prob.	Decision
1.	ZSCORE	7.403994	0.000000	H ₀ rejected

Source: Processed Results from Eviews 9

Table 6
Goodness of Fit Test Results

Test	Dependent Variable	R ²	Adjusted R ²
1.	ZSCORE	0.688684	0.595669

Source: Processed Results from Eviews 9

Table 7
Results of Descriptive Statistical Analysis

Variabel	Mean	Maximum	Minimum	Std. Dev.	Observations
ZSCORE	0.225273	0.947659	-0.034864	0,155709	215
PYS	0.177513	0.947659	-0.034864	0.168132	215
SIZE	17.689248	21.610014	14.181010	1.70923	215
CR	0.569342	0.859173	0.103259	0.12915	215
LIQ	0.314389	0.687674	0.096088	0.11233	215
BANK CONCERN	0.004651	0.052590	0.000031	0.00979	215
GDP	0.034	0.0531	-0.0207	0.02801	215
RITR	0.047	0.0610	0.425	0.01029	215

Source: Processed Results from Eviews 9

Table 8
Model Regression Analysis Results
Fixed Effect Model

Variables	Coefficient	Prob.	Conclusion
Constanta	0.666076	0.0000	-
Previous Year Stability	0.072886	0.0000	significantly positive
Bank Size	-0.38579	0.0000	significantly negative
Credit Risk	0.016362	0.0098	significantly positive
Liquidity	0.018697	0.0077	significantly positive

Bank Concentration	0.376531	0.0000	significantly positive
GDP	-0.137616	0.0000	significantly negative
Real Interest Rate	-0.219058	0.7047	does not affect

Source: Processed Results from Eviews 9

Chow Test

The results show that the value of the Prob. Cross-Section Chi-Square model zscore is $0.0000 < 0.05$, H_0 is rejected (H_a is accepted). It can be concluded that the best model selected is the Fixed Effects Model.

Hausman Test

The results show that the value of the Prob. Cross-Section Chi-Square model zscore is $0.0000 < 0.05$, H_0 is rejected (H_a is accepted). It can be concluded that the best model selected is the Fixed Effects Model.

Lagrange Multiplier Test

The results show that the value of the Prob. Breusch-pagan model zscore is $0.1009 > 0.05$, H_0 is accepted (H_a is rejected). It can be concluded that the best model selected is the Common Effects Model.

F Test

For the dependent variable ZSCORE, the test results show a Prob (F-Statistic) value of $0.000 < 0.05$, H_0 is rejected (H_a is accepted). It can be concluded that there is at least one independent variable (previous year stability, bank size, credit risk, liquidity, bank concentration, gross domestic product, and real interest rate) that has a significant effect on the dependent variable, thus the model Fit

Goodness of Fit Test

In the zscore model, an adjusted R^2 value of 0.595669 was obtained, which means that 59.5669% of the variation or behavior of the independent variables, namely previous year stability, bank size, credit risk, liquidity, bank concentration, gross domestic product, and real interest rate can be explained, while the remaining 40.4331% is the variation of other independent variables that affect ZSCORE but are not included in the model. These results indicate that the model produced has a fairly good model fit.

The Effect of Previous Year Stability on Financial stability

The analysis results show that previous year stability has a positive effect on financial stability. This study shows that the z-score value in the previous period has a positive and significant impact on the z-score value in the current period. This means that the stronger the financial stability in the previous year, the higher the chance for financial entities to maintain or even improve their stability in the coming period. This finding is consistent with the results of Tsegaye, (2024) study, which found that previous year stability has a positive and significant coefficient in the model that determines the financial stability of commercial banks. Research by Ozili, (2025) study found that last year's stability continues to be a key factor and that better financial stability in previous years is followed by better stability in subsequent years in various countries.

The Effect of Bank Size on Financial stability

The analysis shows that bank size has a negative effect on financial stability. The results of this study indicate that bank size has a negative impact on bank financial stability,

as larger banks tend to exhibit lower stability when other factors remain unchanged. These results are consistent across various sample groups and regression models, reinforcing the notion that bank size can be a risk factor for financial stability Tsegaye, (2025). During the COVID-19 pandemic, bank size became one of the factors affecting bank stability against economic shocks, even though the main focus was on the impact of COVID-19. The results show that both large and small banks are equally vulnerable to the implications of reduced stability in times of crisis Tsegaye, (2024) Research conducted by Chowdhury, Karim, and Awanis, (2024) found that bank size has a negative effect on financial stability and bank resilience. Large banks actually face a decline in stability due to increased complexity and inefficiency in management. These findings show that size does not always increase a bank's financial resilience.

The Effect of Credit Risk on Financial stability

The results of the analysis show that credit risk has a positive effect on financial stability. The results of this study show that the positive effect of credit risk on financial stability in this study can be explained in several ways. First, the natural logarithm of total assets as an indicator of credit risk shows that banks with large assets tend to have sufficient capital reserves to handle potential credit losses. Second, large banks usually have more complex risk management systems so they can manage credit risk more efficiently. Tsegaye, (2025) research found that improvements in credit risk management, although generally considered a risky element, can strengthen financial resilience when complemented by effective mitigation tactics. These results are consistent with a number of recent international empirical studies showing that reliable credit risk management not only reduces exposure to risk but also increases the resilience of financial institutions when facing external shocks. Researchers found that banks with comprehensive credit risk control systems were better able to weather economic crises, particularly through the implementation of capital reserve mechanisms that quickly adapted to increased credit risk (Putri & Rahmayanti, 2025).

The Effect of Liquidity on Financial stability

The analysis shows that liquidity has a positive effect on financial stability. The results of this study indicate that liquidity in banking institutions is usually seen in a bank's capacity to meet its short-term obligations (such as withdrawals from customers, credit commitments, and obligations to other banks) without causing excessive pressure on funding costs. Nguyen, (2023) research found that LATA (liquid assets to total assets) is applied in liquidity risk management because it shows that the liquidity ratio (LATA) has a significant and positive impact on the Z-score, which means that the higher the liquidity, the more stable it is. In line with the research conducted by Thi Tran, (2024) a Bayesian regression analysis covering ASEAN-5 banks found that the LIQ variable (liquid assets/total assets) showed a positive coefficient on the Z-score (which indicates bank stability), thus supporting the argument that liquidity buffers increase the level of stability. This study applies the liquid assets/total assets (LA/TA) ratio and explains that an increase in the proportion of liquid assets can reduce risky assets and strengthen resilience to shocks; it also explains that the coefficients for stability (Z-score) and liquidity generally have a positive and significant relationship in their findings (Tsegaye, 2025).

The Effect of Bank Concentration on Financial stability

The results of the analysis show that bank concentration has a positive effect on financial stability. This study shows that concentration in the banking sector, as measured by

the Herfindahl–Hirschman Index (HHI), has a beneficial impact on financial stability in the banking industry, indicating that the higher the concentration of the banking market, the greater the likelihood for banks to demonstrate better financial stability, as seen through Z-scores and other risk indicators that show improvement. Tsegaye, (2024) research highlights financial stability, emphasizing the importance of bank concentration, efficiency, and liquidity in maintaining the stability and profitability of commercial banks. Research by Arslan, (2025) found that, overall, banking sector concentration measured using the HHI contributes to financial stability in the banking industry in Turkey. A banking market with a higher level of concentration provides opportunities for banks to have more significant market power, enabling them to generate consistent profits and prepare sufficient capital buffers to overcome financial risks (Hac, 2021).

The Effect of Gross Domestic Product on Financial stability

The results of the analysis show that GDP has a negative effect on financial stability. This study shows that GDP in economic studies is often considered a measure of overall economic support. Various macro-financial models show that under normal circumstances, GDP growth generally contributes to financial stability by increasing the capacity of economic actors to meet their financial obligations and reducing credit risk. However, in certain situations such as excessive credit cycles, significant debt spikes, or external pressures, the opposite dynamic can occur, where high or unstable GDP growth actually becomes a burden on the financial system and disrupts its stability. Researchers Ahmed & Chowdhury, (2025) found that GDP has a negative effect on increasing financial stability, as an inadequate growth phase may reflect stable GDP figures but hide structural issues in the financial sector (e.g., increasing NPLs, reduced capital, or reduced foreign exchange reserves). The results of the study show that economic growth (GDP) does not always have a positive effect on financial sector stability. Rapid growth can sometimes reduce financial stability through increased systemic risk and liquidity pressure. Girma & Huseynov, (2025) found that economic growth does not always contribute to increased financial sector stability. During periods of high economic growth, banks often engage in more aggressive lending, which can lead to a decline in asset quality and increased earnings volatility. Increased ROA volatility due to greater credit risk can cause the Z-Score to decline, even if there is an increase in profitability and capitalization. Therefore, high GDP growth can have an impact on increasing the vulnerability of the banking system (Tsegaye, 2024, 2025).

The Effect of Real Interest Rate on Financial stability

The analysis shows that the Real Interest Rate has no effect on financial stability. This study shows that the real interest rate is the interest rate adjusted for inflation and is typically used to evaluate the actual cost of borrowing in the economy. Classical macroeconomic theory states that fluctuations in the real interest rate can affect financial risk through various channels of financing, debt use, credit, and banking behavior. However, the idea of financial stability interest rates expressed in recent studies emphasizes that this relationship is not direct. Akinci, (2023) research reveals that real interest rates do not have a direct impact on financial stability in this model, because other factors such as debt usage, credit spreads, and the situation of banks play a role in moderating their influence. This finding is in line with Tsegaye, (2024) research, which found that real interest rates do not have a significant effect on financial stability in certain contexts, such as the financial inclusion system in Indonesia. Real interest rates often interact with other factors such as credit spreads, bank leverage,

macroprudential policies, and dependence on capital markets. When these factors are included as controls in empirical models, the effect of real interest rates on financial stability is no longer significant or changes direction. This indicates that real interest rates do not independently determine financial stability in a broader context (Tsegaye, 2025)

CONCLUSION

This study aims to determine the effect of Previous Year Stability, Bank Size, Credit Risk, Liquidity, Bank Concentration, Gross Domestic Product, and Real Interest Rate on financial stability listed on the Indonesia Stock Exchange (IDX) for the period 2020–2024. The conclusions that can be drawn from this study are as follows: Previous Year Stability has a positive effect on financial stability, Bank Size has a negative effect on financial stability, Credit risk has a positive effect on financial stability, Liquidity has a positive effect on financial stability, Bank Concentration has a positive effect on financial stability, Gross Domestic Product has a negative effect on financial stability, Real Interest Rate has no effect on financial stability.

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