# The Influenceof Internal and External Factors on the Stability of Conventional Banks in Indonesia

John Laurens Barus<sup>1</sup>\*, F Defung<sup>2</sup>, Wirasmi Wardhani<sup>3</sup>

Master of Management, Faculty of Economics and Business, Mulawarman University, Indonesia \*Author Correspondence

## ABSTRACT

In the realm of stable banking with sound conditions, the effectiveness of monetary policy implementation is paramount. Conversely, the maintenance of monetary stability wields significant influence over banking stability. Consequently, the need for a health analysis of banking emerges as an early warning sign, indicating the soundness or unsoundness of a bank. This, in turn, is beneficial both for the bank itself, as it prompts corrective actions, and for early warning systems. Factors influencing banking stability can be categorized into internal factors, including bank size, efficiency, and capital buffer, as well as external factors such as gross domestic product (GDP), inflation, and interest rates.

The primary objective of this research is to assess the impact of bank size, efficiency, capital buffer, GDP, inflation, and interest rates on the stability of conventional banks in Indonesia during the period from 2018 to 2022.

The research methodology involves the utilization of secondary data derived from official sources, including the Central Bureau of Statistics (BPS), the Financial Services Authority (OJK), Bank Indonesia (BI), and the annual financial reports of 12 conventional banks categorized under KBMI category 3 for the period spanning 2018 to 2022. The analytical method employed in this study is Multiple Linear Regression Analysis, facilitated by the SPSS (Statistical Package for Social Science) version 21 computer program.

The results of this study demonstrate that, in a partial context, the capital buffer variable has a positive and significant effect on bank stability. Meanwhile, the variables of bank size, efficiency, and GDP exhibit positive but insignificant influences on bank stability. On the other hand, the interest rate variable has a negative and significant impact on bank stability, whereas the inflation variable exerts a negative but insignificant effect on bank stability. In conclusion, this research substantiates the following key findings, an increase in bank size has a positive impact on bank stability. This is attributed to the perception that larger companies have promising prospects, indicating relative stability and an enhanced capacity to generate profits. Higher efficiency levels are indicative of improved bank stability. Conversely, declining efficiency suggests an increased risk level for a bank. The capital buffer serves as a strategy to mitigate risks to the stability of the financial system and the economy when a bank experiences failure. The resulting GDP growth can lead to expansion across all economic activities, enhancing the ability of borrowers to meet their obligations, thereby positively influencing bank stability. Elevated inflation levels significantly increase market risks embedded within bank balance sheets. This leads to a reduction in bank funding, resulting in a decrease in overall bank stability. A rise in interest rates negatively impacts the credit risk of borrowers, causing a decrease in actual credit demand. As a result, banking risks, especially liquidity risks related to deposits and non-performing loan risks, continue to increase, leading to a decline in bank stability.

Keywords: bank stability, bank size, efficiency, capital buffer, GDP, inflation, interest rates.

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## I. INTRODUCTION

To maintain economic stability and financial system resilience in Indonesia amidst the impact of the COVID-19 pandemic, the government has adopted extraordinary measures by granting additional authority to members of the Financial System Stability Committee (KSSK), including Bank Indonesia, the Ministry of Finance, the Financial Services Authority (OJK), and the Deposit Insurance Corporation (LPS). These policy measures are outlined in Government Regulation instead of Law (Peraturan Pemerintah Pengganti Undang-Undang or Perpu) Number 1 of 2020 regarding State Financial Policies and Financial System Stability for Handling the COVID-19 Coronavirus Disease 2019 (COVID-19) Pandemic and/or in the Context of Confronting Threats that Endanger National Economy and/or Financial System Stability. This regulation was subsequently enacted as Law Number 2 of 2020.

In the context of the COVID-19 pandemic, this law complements Law Number 9 of 2016 on the Prevention and Handling of Financial System Crisis (UU PPKSK) as the legal foundation for crisis management. This law provides the legal basis for Bank Indonesia to reinforce measures and policies to preserve economic stability and financial system resilience in the face of the COVID-19 pandemic as an integral part of the National Economic Recovery Program (PEN).

The banking sector is an intermediary institution that channels funds from surplus to deficit units. Banking is the epicenter of various financial transactions, including fund storage, investment, payments, and transfers. The advancement of a country's banking sector can be used to gauge that nation's progress. The more advanced a country, the more significant the role of banking in controlling the nation.

Banking plays a pivotal role, with the banking industry dominating 76.90% of the total assets in the entire financial sector. The significant role of banking in the financial sector leads to a strong interconnectedness between the sustainability of the banking sector and financial system stability (FSS). The banking sector's instability can disrupt the flow of funds required in the real sector.





Source: Bank Indonesia (2022) (Indonesian Bank: 2022)

The stability of the banking system, in general, is reflected in the soundness of the banking sector and the effective operation of banking intermediation functions in mobilizing public savings for lending and other financing activities to businesses (Myrandasari, 2015). In its evolution, banks need to maintain stability when facing economic conditions in Indonesia to gain trust from the public as the chosen financial intermediaries. When this condition is preserved, the money circulation process and the transmission mechanism of monetary policy in the economy, which largely operates through the banking system, can also function effectively.

Financial stability, according to Sutton and Tosovsky (2005) as cited in Bank Indonesia (2007), is a situation in which the financial system can: (1) efficiently allocate resources to productive activities at different times, (2) predict and measure financial risks, and (3) absorb shocks. These three points mean that financial system stability encompasses efficiency and the resilience of the financial system, which is inherently a complex concept. The financial system's stability depends not only on individual financial institutions but also on the complex interactions among financial institutions, the real sector, and financial markets.

According to Warjiyo (2006), the stability of the banking system and monetary systems' stability are interrelated. The stability of the banking system generally means a condition reflected in the soundness of banking and the effective operation of banking intermediation functions. One of the intermediation functions in banking is mobilizing public savings for lending and other financing. If this condition runs smoothly, then the money circulation process and the transmission mechanism of monetary policy will also function well. Based on this perspective, the banking system's stability occurs when the banking sector is healthy and capable of carrying out its operational activities effectively.

Disruptions to banking stability can occur due to internal and external factors. Internal factors are related to all policies and decisions in managing a bank's operational strategy. Meanwhile, external factors represent risks beyond the control of banking, typically arising from macroeconomic shocks. From external factors, several components must be considered by the government and Bank Indonesia to preserve banking system stability. Stable banking with a healthy condition determines the effectiveness of monetary policy implementation. Conversely, the preservation of monetary stability has a significant impact on banking stability.

Therefore, it is necessary to conduct a health analysis for banking as an early warning sign of the health or unhealthiness of a bank, which is beneficial for the bank to make improvements or early warnings. The

factors influencing bank stability consist of internal factors, namely bank size, efficiency, and capital buffer, while external factors include gross domestic product (GDP), inflation, and interest rates.

### **II. THEORETICAL FRAMEWORK**

According to Bank Indonesia (2018), financial system stability is defined as the ability of a system to hinder economic activities, indicating instability when economic activities are impeded. Beck (2008) states that bank stability is achieved when banks effectively mobilize and allocate resources to the public. Furthermore, Warjiyo (2007) defines the banking system's stability as reflected in the health of banks and the effectiveness of their intermediation functions in mobilizing public savings, which are then channelled into credits and financing for businesses. A bank is considered stable when it is financially healthy and free from financial difficulties.In summary, bank stability is the capacity of a bank to efficiently perform its intermediation functions and remain free from financial issues. A stable bank can assess and manage risks and allocate resources efficiently. A financially stable bank also possesses strong resilience, allowing it to sustain operations in different economic environments, including sudden economic disruptions.

Renniwaty (2017) defines bank size as the scale of a company's operations, often measured by the amount of assets it holds. This definition is further supported by Ardi and Lana (2007), who state that asset value is relatively more stable than market capitalization and sales in measuring a company's size.Based on these definitions, bank size is the scale of operations owned by a bank, as viewed from the perspective of its assets. Bank size is represented by total assets in the form of currency, which may need to be transformed into logarithmic form. This transformation aims to standardize the bank size data with other variables to narrow down variations.

Business efficiency refers to the cost incurred to generate profits smaller than those obtained from using assets. Banks that could be more efficient in their operations may face difficulties competing for public funds and channelling these funds to those needing business capital.Dendawijaya (2009) explains that the Operating Expense to Operating Income ratio (BOPO) measures the efficiency level and a bank's ability to carry out its operational activities. An increasing BOPO ratio indicates a bank's inability to control operational costs and increase its income. BOPO also reflects banking efficiency in conducting its business activities.

In banking, efficiency can be measured through the Business Operational and Income Operational (BOPO) ratio, which compares operational expenses to operational income. A higher BOPO indicates higher operational costs, which tend to reduce a bank's profitability. However, all operational activities require expenses, which can only be conducted with expenses. Operational expenses are related to operational income, and BOPO is interconnected; the company will gain higher profits if income is higher than operational costs. Failure to control operational costs can have adverse effects on a company. BOPO plays a significant role in measuring efficiency and a bank's ability to conduct its operational activities. The higher the efficiency level of a bank, the healthier it is.

Wibowo (2016) defines capital buffer policy as the difference between a bank's capital ratio and the required minimum capital ratio, which measures a bank's capital strength in mitigating risks that can threaten bank stability. According to Basel II, the minimum capital requirement is 8% of risk-weighted assets (RWA). This minimum capital requirement is set for credit, market, and operational risks. Meanwhile, Haryanto (2015) states that capital buffer in the banking industry serves to anticipate future increases in losses and to prepare for situations where capital becomes scarce and expensive during downturns.

Furthermore, Shim (2013) emphasizes that capital buffer, as an element of the capital adequacy framework, is designed to enhance a bank's capacity to absorb potential losses, particularly during crises or periods of high credit growth, thereby improving the stability and competitiveness of the banking system. This perspective is aligned with the regulatory hypothesis, which suggests that regulators encourage banks with higher risk profiles to maintain higher capital buffers(Bagntasarian & Mamatzakis, 2019). Supported by the franchise-value theory, banks are inclined to retain more capital to safeguard against destabilization and address the risks of business failure.

Economists typically define economic growth as an increase in a country's income. Gross Domestic Product (GDP) is the most commonly used indicator to calculate a country's income. According to Sukirno (2019), Gross Domestic Product can be understood as the value of goods and services produced within a country in a specific year. Mankiw (2014) defines Gross Domestic Product (GDP) as the market value of all final goods and services produced in a country during a specific period. Evaluating whether an economy is performing well or poorly naturally involves assessing the total income earned by all individuals in that economy.

Gross Domestic Product (GDP) measures the total income of individuals and the total spending on goods and services produced within the economy. GDP can measure both total income and total spending simultaneously because, fundamentally, these two aspects are essentially the same. For an entire economy, total income must equal total spending (Mankiw, 2014).

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Inflation is defined as a condition characterized by rising prices of goods, services, and production, which can indicate a weakening of purchasing power and a decline in the real value of a nation's currency (Samuelson, 2004). It's essential to note that not every price increase qualifies as inflation, as inflation refers to continuous price increases over an extended period. Inflation is also a general phenomenon, meaning that price increases affect all products. Inflation is measured by the inflation rate, which represents the rate of change in overall price levels.

The benchmark interest rate is the BI Rate, established monthly by Bank Indonesia (Bank Indonesia, 2014). An interest rate is a cost imposed on loans with a specific term, representing the cost of credit for bank customers. However, Bank Indonesia's ability to raise or lower interest rates is subject to various considerations. Bank Indonesia will increase the BI Rate if projected inflation exceeds the target. At the same time, it will reduce the interest rate (BI Rate) if future inflation is anticipated to fall below the target.

The BI Rate can influence banking stability because when interest rates rise or the percentage cost increases, it leads to higher customer borrowing costs. Consequently, customers' ability to repay loans diminishes due to the increased interest burden and larger principal repayments, resulting in bank losses. This, in turn, reduces the level of profitability that banks receive (Zeman, 2008).

## **Conceptual Framework**



Picture 2.1 Conceptual Framework

#### **III. RESEARCH METHOD**

#### **Operational Definition**

This study employs a quantitative approach with the multiple linear regression method. In general, banking stability represents a condition in which a bank is in a sound state and can effectively carry out its banking activities and intermediation functions, even during economic turmoil. The Z-Score method can also assess financial stability (Hamdaini & Syatiri, 2017). Therefore, a measurement tool to assess stability is the Z-Score formula as follows (Altman, 1983):

$Z = \frac{ROA * \frac{Eq}{TA}}{SD_{ROA}}$		
Keterangar	ı :	
Z	=	Z-score
ROA	=	Return on Assets
Eq	=	Total of Equity
TĀ	=	Total Bank Asset
SDROA	=	Standard Deviation of ROA

The higher the Z-Score value, the greater the bank's stability, and if the Z-Score is higher than zero, it indicates that the bank has good stability (Cihak & Hesse, 2008).

According to Pangemanan & Mawikere (2011), one of the indicators used to measure the size of a company is the company's asset size. Companies with significant total assets have reached a mature stage where their size is positive, implying good long-term prospects. Furthermore, it reflects that the company is relatively more stable and capable of generating profits than companies with smaller total assets.

The magnitude of its assets measures the size of a bank. The larger the bank's assets, the larger its size, with the formula for bank size as follows (Naceur, 2003): Bank Size = natural logarithm of Total Assets

Efficiency in the banking sector, especially cost efficiency, leads to more optimal profits, increased funds disbursed, competitive costs, improved customer service, and enhanced banking security and health (Buchory, 2015).

Meanwhile, according to Hakiim & Rafsanjani (2016), the greater the efficiency of a bank in conducting its activities, the lower the operational costs compared to its operational income. This indicates that the bank's management is highly efficient in its operational activities. The formula for calculating the Cost to Income Ratio (CIR), also known as the Operating Expense to Operating Income ratio (BOPO), is as follows (Dendawijaya, 2009):

 $BOPO = \frac{-Operating Expense}{-Operating Income} \ge 100\%$ 

Banks set aside a capital buffer to absorb potential losses that may occur in the future. The capital buffer reserved by the bank is expected to mitigate risks that may arise due to changes in the business cycle (Wibowo, 2016). To calculate the capital buffer, the following formula can be used:

 $CB = K_{i,t} - K_{i,t}^r$ 

Dimana:

CB:capital buffer.

K<sub>i,t</sub>:rasiokecukupanmodalbankipadatahunke-t.

K<sup>r</sup><sub>i,t</sub>:rasiokecukupanmodalminimumsesuaiprofilrisiko.

Gross Domestic Product (GDP) can be defined as the value of goods and services produced within a country in a specific year (Sukirno, 2019). The GDP growth rate in this study was obtained from the real GDP growth rate for 2018-2022, which can be accessed on the website of the Central Statistics Agency.

Inflation is an overall increase in the price level. Inflation encompasses a sustained rise in the general price level in a country, which can ultimately reduce the purchasing power of the public (Mankiw, 2014). The inflation rate in this study was obtained from the Inflation Report (Consumer Price Index) based on the calculation of annual inflation, which can be accessed on the website of Bank Indonesia.

According to Sunariyah (2003), interest rates represent the cost of borrowing, where interest is a measure of the cost of resources used by borrowers that must be paid to creditors. Interest rates are one of the variables in the economy that are closely monitored due to their broad impact.

### Population and Sample

Based on Regulation No. 12 of 2021 issued by the Financial Services Authority (OJK) regarding Commercial Banks, the regulatory framework for categorizing banks has changed from the previous classification based on core capital (Bank Umum Kegiatan Usaha or BUKU) to the new classification based on core capital (Kelompok Bank berdasarkan Modal Inti or KBMI). Under the previous classification, commercial banks were divided into four categories based on their core capital: BUKU I, BUKU II, BUKU III, and BUKU IV. BUKU I banks had core capital below IDR 1 trillion, BUKU II banks had core capital between IDR 1 trillion and IDR 5 trillion, BUKU III banks had core capital exceeding IDR 5 trillion up to IDR 30 trillion, and BUKU IV banks had core capital exceeding IDR 30 trillion. Under the current classification, banks are categorized into four KBMI (Kelompok Bank berdasarkan Modal Inti) categories, which are:

- 1. KBMI Category 1: Core Capital up to IDR 6 trillion.
- 2. KBMI Category 2: Core Capital above IDR 6 trillion up to IDR 14 trillion.
- 3. KBMI Category 3: Core Capital above IDR 14 trillion up to IDR 70 trillion.
- 4. KBMI Category 4: Core Capital above IDR 70 trillion.

Considering the range of core capital amounts within KBMI Category 3, which is from IDR 14 trillion up to IDR 70 trillion, it can be assumed that banks in KBMI Category 3 represent medium to large-sized banks. Therefore, the sample used in this research includes all conventional banks categorized under KBMI Category 3, totaling 12 banks. These banks are: Bank BTN (Persero), Bank Danamon, Bank Permata, Bank Maybank, PAN Indonesia Bank, Bank CIMB Niaga, Bank UOB Indonesia, Bank OCBC NISP, Bank HSBC Indonesia, Bank Mega, Bank Mayapada International, and Bank BTPN.

This research was conducted on conventional banks in Indonesia that are registered with Bank Indonesia and supervised by the Financial Services Authority (OJK). Data was collected from the official websites of the respective banks for the period from 2018 to 2022, based on quarterly and annual financial reports published on their websites and the OJK website. The data used in this study consists of secondary data obtained from the official websites of the Central Statistics Agency (BPS), the Financial Services Authority (OJK), Bank Indonesia (BI), and annual reports. The population in this research consists of the 12 banks categorized under KBMI Category 3, which are registered and supervised by the OJK.

## Data Analysis Technique

The data analysis method used in this study is multiple linear regression analysis. Regression analysis is used to test hypotheses, and in multiple linear regression, classical assumption tests are one of the prerequisites. These assumptions include:

1. Normality Test

The normality test determines whether a regression model's dependent and independent variables are normally distributed. According to Ghozali (2009), the normality test is used to generate more detailed figures regarding whether a regression equation to be used is free from normality. A regression equation has a normal distribution if the significance value of the Kolmogorov-Smirnov test statistic (Z) is higher than 0.05. 2. Autocorrelation Test

The autocorrelation test is used to examine whether there is a correlation between the disturbance terms in the regression model for period t and the disturbance terms in period t-1 (previous period). To determine the presence of autocorrelation in a regression model, the Durbin-Watson (DW) statistic is used. A regression model is considered free from autocorrelation if the Durbin-Watson statistic (DW) falls within the range of 1.73 to 2.3. 3. Multicollinearity Test

The multicollinearity test is used to determine whether there is a correlation among the independent variables in the regression model. According to Ghozali (2009), to test for the presence of multicollinearity, the Variance Inflation Factor (VIF) is used. A regression model is considered free from multicollinearity if the VIF values are below 10.

The Multiple Linear Regression Analysis model used to determine the determinants of bank stability is as follows:

 $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e$ 

Information:

Y: Bank Stability

a: Constant

β1-β6: Regression Coefficients for each independent variable

X1: Bank Size

X2: Efficiency

X3: Capital Buffer

X4: GDP

X5: Inflation

X6: Interest Rate

e: Error

The F-test assesses the influence of independent variables (predictors) on the dependent variable. In other words, the F-test can be used to determine whether a regression model can predict the dependent variable. The F-statistic can be calculated using the following formula:

$$Fhitung = \frac{R^2/k}{(1-R^2)/(n-k-1)}$$

Explanation:

R2: Coefficient of determination

n: Number of data points

k: Number of dependent variables

The hypothesis testing conditions in this study are as follows:

If F-calculated < F-table, then the Null Hypothesis (Ho) is accepted, and the Alternative Hypothesis (Ha) is rejected.

If F-calculated > F-table, then the Null Hypothesis (Ho) is rejected, and the Alternative Hypothesis (Ha) is accepted.

The partial significance test (T-test) is used to determine whether an independent variable (predictor) has a significant effect on the dependent variable. According to Boedijowono (2001), the T-test tests the regression coefficient separately, assuming that other independent variables are held constant. The T-statistic can be calculated using the following formula:

 $T \text{ count} = \frac{r\sqrt{n-k-1}}{\sqrt{1-r^2}}$ 

Information:

R: Partial correlation coefficient

n: Number of data points

k: Number of independent variables

The hypothesis testing conditions proposed by the author in this study are as follows:

If t-calculated < t-table, then the hypothesis is rejected.

If t-calculated > t-table, then the hypothesis is accepted.

The determination test (R2) measures the extent to which the independent variables can explain the dependent variable. The larger the coefficient of determination, the greater the variation of the independent variables in influencing the dependent variable.

The author used the SPSS (Statistical Package for the Social Sciences) version 21 computer program to analyze and test these hypotheses to facilitate statistical calculations.

## IV. GENERAL DESCRIPTION OF RESEARCH OBJECTS

Based on the Financial Services Authority (Otoritas Jasa Keuangan) Regulation No. 12/POJK.03/2021 dated July 30, 2021, concerning Commercial Banks, there has been an official change in the rules for categorizing banks. Previously, banks were categorized into Commercial Banks Based on Business Activities (BUKU). Now, they are categorized into Commercial Banks Based on Core Capital (KBMI). The banking sector is currently divided into four categories under KBMI:

	Table 4.1. List of Commercial Danks Dased on Core Capital							
No Category Core Capital		Conventional Banks	Islamic Banks	Total				
1	KBMI 1	Up to Rp. 6 trillion	59	11	70			
2	KBMI 2	Rp. 6 trilliontoRp. 14 trillion	18	1	19			
3	KBMI 3	Rp. 14 trillion toRp. 70 trillion	12	1	13			
4	KBMI 4	Above Rp. 70 trillion	4	0	4			
Total			93	13	106			

Table 4.1. List of Commercial Banks Based on Core Capital

Source: Financial Services Authority (Otoritas Jasa Keuangan) (2022)

The conventional banks in Indonesia falling under the KBMI 3 category, which is the subject of the researcher's study, are listed in the table below:

No	Banks	Core Capital	Assets
1	Bank Tabungan Negara (Persero)	Rp.25,90trillion	Rp.402,14 trillion
2	Bank Danamon Indonesia	Rp.47,47 trillion	Rp.197,72 trillion
3	Bank Permata	Rp.37,61 trillion	Rp.255,11 trillion
4	Bank Maybank Indonesia	Rp.29,53 trillion	Rp.160,81 trillion
5	Bank PAN Indonesia	Rp.50,71 trillion	Rp.212,43 trillion
6	Bank CIMB Niaga	Rp.45,27 trillion	Rp.306,75 trillion
7	Bank UOB Indonesia	Rp.15,36 trillion	Rp.138,27 trillion
8	Bank OCBC NISP	Rp.34,21 trillion	Rp.238,49 trillion
9	Bank HSBC Indonesia	Rp.17,75 trillion	Rp.125,98 trillion
10	Bank Mega	Rp.20,63 trillion	Rp.141,75 trillion
11	Bank Mayapada International	Rp.13,85 trillion	Rp.135,38 trillion
12	Bank BTPN	Rp.39,41 trillion	Rp.209,16 trillion

Source: Financial Services Authority (Otoritas Jasa Keuangan) (2022)

## V. RESEARCH RESULT AND DISCUSSION

## **Data Description**

## Tabel 5.1. Statistik Deskriptif Variabel Penelitian

Ket	Mean	Std. Deviation	Ν			
Stabilitas Bank	0,67500	0,170786	60			
Ukuran Bank	4,30000	0,566987	60			
Efisiensi	1,71000	0,32502	60			
Capital Buffer	3,67800	0,759759	60			
PDB	1,20800	0,253630	60			
Inflasi	1,22200	0,133083	60			
Suku Bunga	1,13000	0,096726	60			

Source : sourced data

Table 5.1 above presents the results of descriptive statistical calculations. The data indicates that N represents the number of observations used in this study, totalling 60 observations taken from the annual financial reports published by conventional banks from 2018 to 2022.

The bank size variable has an average bank size of 4.30000 with a standard deviation of 0.566987. This means that over 2018-2022, the average bank size or total assets amounts to Rp. 4.30 trillion, and the data distribution has a variation of 0.56%.

The efficiency variable exhibits an average efficiency value of 1.71000 and a standard deviation of 0.32502. This indicates that throughout 2018-2022, the average efficiency stands at 1.71%, with a data distribution having a variation of 0.32%.

The capital buffer variable has an average value of 3.67800 for the capital buffer and a standard deviation of 0.759759. This implies that over 2018-2022, the average capital buffer is 3.67%, and the data distribution has a variation of 0.75%.

The GDP variable shows an average GDP value of 1.20800 with a standard deviation of 0.253630. This means that over 2018-2022, the average GDP occurring in Indonesia is 1.20%, and the data distribution exhibits a variation of 0.25%.

The variable has an average inflation rate of 1.22200 and a standard deviation of 0.133083. This indicates that throughout 2018-2022, the average inflation rate in Indonesia is 1.22%, with a data distribution variation of 0.13%.

The interest rate variable has an average value of 1.13000 and a standard deviation of 0.096726. This means that over 2018-2022, the average interest rate in Indonesia is 1.13%, and the data distribution shows a variation of 0.09%.

## Hypothesis Testing

Table 5.2. Results of the Determination Test $(\mathbf{R}^2)$								
Model	Model R		Adjusted R Square	Std. Error of the Estimate	Durbin- Watson			
1	0,539ª	0,291	0,210	0,151762	1,231			

Source: Data Sourced

Based on the data in Table 5.2, the calculation of the Adjusted R-squared yields a value of 0.291. This means that 29.10% of the variance in Bank Stability can be explained by the variables Bank Size, Efficiency, Capital Buffer, GDP, Inflation, and Interest Rate. The remaining 70.90% (100 - 29.10) of Bank Stability can be attributed to other variables not included in this regression model.

	Model	Sum of Squares	df	Mean Square	F	Sig
Ī	Regression	0,500	6	0,083	3,620	0,004 <sup>b</sup>
	Residual	1,221	53	0,023		
	Total	1,721	59			

Source : Data Sourced

Based on the data processing results in Table 5.3 above, the significance value is 0.004. With a significance value less than 0.05, it can be concluded that all the variables, namely Bank Size, Efficiency, Capital Buffer, GDP, Inflation, and Interest Rate, collectively influence the Bank Stability variable.

Model Unstanda Coeffic B		lardized icients	Standardized Coefficients		<u>8</u> :-	
		В	Std. Error	Beta	L	5ig.
	(Constant)	0,765	0,436		1,755	0,085
	Bank Size	0,066	0,037	0,220	1,811	0,076
	Efficiency	0,064	0,076	0,123	0,852	0,398
	Capital Buffer	0,081	0,033	0,362	2,441	0,018
	GDP	0,063	0,134	0,093	0,470	0,640
	Inflation	-0,254	0,263	-0,198	-0,968	0,337
	Interest Rate	-0,486	0,235	-0,275	-2,071	0,043

Source : Data Sourced

Based on Table 5.4, the multiple linear regression equation can be formulated as follows:

Y = -0.013 - 0.002(X1) - 0.066(X2) + 0.008(X3) - 0.022(X4) + 0.021(X5) - 0.032(X6) + e

1. The regression results indicate that the coefficient value for the variable Bank Size (X1) is 0.066 with a significance level of 0.076. This result can be interpreted as the Bank Size variable having a positive but not significant influence on the Bank Stability variable (0.076 > 0.05). Therefore, the hypothesis stating that Bank Size has a positive influence on Conventional Bank Stability is accepted.

- 2. The regression results show that the coefficient value for the Efficiency variable (X2) is 0.064 with a significance level of 0.398. This indicates that the Efficiency variable has a positive but not significant influence on Bank Stability (0.398 > 0.05). Thus, the hypothesis suggesting that Efficiency has a negative influence on Conventional Bank Stability is rejected.
- 3. The regression results reveal that the coefficient value for the Capital Buffer variable (X3) is 0.081 with a significance level of 0.018. This result suggests that the Capital Buffer variable positively and significantly influences Bank Stability (0.018 < 0.05). Consequently, the hypothesis proposing that Capital Buffer positively influences Conventional Bank Stability is accepted.
- 4. The regression results show that the coefficient value for the GDP variable (X4) is 0.063, with a significance level of 0.640. This indicates that the GDP variable has a positive but not significant influence on Bank Stability (0.640 > 0.05). Hence, the hypothesis suggesting that GDP has a positive influence on Conventional Bank Stability is accepted.
- 5. The regression results indicate that the coefficient value for the Inflation variable (X5) is -0.254 with a significance level of 0.337. This implies that the Inflation variable has a negative but not significant influence on Bank Stability (0.337 > 0.05). Therefore, the hypothesis proposing that Inflation has a negative influence on Conventional Bank Stability is accepted.
- 6. The regression results reveal that the coefficient value for the Interest Rate variable (X6) is -0.486 with a significance level of 0.043. This result suggests that the Interest Rate variable has a negative and significant influence on Bank Stability (0.043 < 0.05). Hence, the hypothesis suggesting that Interest Rate has a negative influence on Conventional Bank Stability is accepted.

## **Discussion:**

1. The Influence of Bank Size on Conventional Bank Stability:

Based on the analysis of the available data, it was found that the Bank Size variable has a positive but not significant influence on the Bank Stability variable. The results of this study align with the findings of Lestari and Suprayogi (2020), who discovered that bank size has a positive influence on bank stability. This means that the larger the bank size, the higher the level of banking stability. The results of this study are also consistent with the research conducted by Schaeck et al. (2009), which found that an increase in a bank's total assets has a significant positive impact on bank stability.

This research identifies that an increase in bank size can indeed have a positive influence on bank stability. This is because companies with larger total assets indicate that they have reached a level of maturity where such companies are considered to have good long-term prospects. Moreover, it reflects that these companies are relatively more stable and capable of generating profits than companies with smaller total assets. Therefore, the strength of a bank, as depicted by its size, can enhance bank stability.

2. The Influence of Efficiency on Conventional Bank Stability.

From the results of the data analysis, it was found that the Efficiency variable has a positive but not significant influence on the Bank Stability variable. The results obtained in this study are in line with the research conducted by Zhang et al. (2013), which stated that efficiency has a positive impact on the stability of banking in the United States.

The findings of this research indicate a difference from the theory, as it is generally believed that the Operating Expenses to Operating Income (BOPO) ratio is used to measure the level of efficiency and a bank's ability to conduct its operational activities. An increasing BOPO ratio reflects a lack of the bank's ability to reduce operational costs and increase operational income. BOPO can also demonstrate the efficiency of banking in its business activities. This condition can subsequently disrupt the financial stability of the bank.

These results show that high efficiency indicates an increase in bank stability, and conversely, if efficiency decreases, the risk level of a bank also increases, which can lead to a decrease in bank stability. Improving efficiency towards a better direction will reduce the bank's bankruptcy risk.

3. The Influence of Capital Buffer on Conventional Bank Stability.

Based on the results of data analysis, it was found that the Capital Buffer variable has a positive and significant impact on the Stability variable of Banks. The results obtained in this study are consistent with the findings of the research conducted by Lestari & Suprayogi (2020), which stated that the higher the level of capital buffer held by a bank, the higher the level of bank stability. Additionally, this study's results support the research conducted by Bagntasarian & Mamatzakis (2019) and Danarsari (2018), which found that increased capital buffer would enhance bank stability.

Capital Buffer represents the difference between a bank's capital ratio and the minimum capital adequacy ratio imposed by Bank Indonesia. Banks can utilize capital buffers as reserve capital during unfavorable economic shocks. The Basel Committee on Banking Supervision implements the Basel Accord, which requires each bank to maintain a Capital Adequacy Ratio (CAR) of 13% to strengthen the capital position, reduce discrepancies in regulations across countries, and consider various banking risks to achieve a healthy and stable

international banking system. During 2018-2022, conventional banks had an average CAR of 14.10%, which means they exceeded the required thresholds. However, an excessively high CAR may not be favorable for banks, as capital could be used for development and profit generation.

The results of this study identify that the high costs associated with preventing and managing financial system crises make capital buffers an essential policy instrument to prevent excessive risk-taking by banks. In addressing financial issues, banks are encouraged to use their resources, including mechanisms for capital injection. This aims to reduce the negative impact on financial system stability and the economy when banks face financial problems. Therefore, a higher capital buffer can enhance the ability of banks in Indonesia to absorb risks that may arise due to crises or high credit growth, thus improving the stability of the banking system. The provision of higher capital buffers can enhance the stability of conventional banking in Indonesia, where capital buffers are employed to mitigate risks to financial system stability and the economy in the event of bank failures.

#### 4. The Influence of GDP on Conventional Bank Stability

From the results of the data analysis, it was found that the GDP variable has a positive but not significant influence on the Bank Stability variable. The results of this study are consistent with the research conducted by Rizvi (2020), which found that GDP growth has a positive impact on the stability of the banking sector in Indonesia. This research is also in line with the study by Diaconu & Dumitru (2014), which stated that GDP, as one of the independent variables, does not have a significant relationship with the stability of commercial banking in Romania.

The results of this study identify that GDP significantly affects bank stability. With each increase in GDP, there is a corresponding increase in bank stability. This could be attributed to the fact that the increased GDP results in an expansion of all economic activities, which enhances the ability of debtors to meet their obligations, consequently impacting the bank's stability.

An increase in a country's GDP means that the money supply has increased, which may lead to higher inflation. Therefore, it is expected that Bank Indonesia will take monetary and fiscal policies to maintain stable GDP growth and align with the economic conditions in Indonesia.

5. The Influence of Inflation on Conventional Bank Stability.

From the results of the data analysis, it was found that the Inflation variable has a negative and not significant influence on the Bank Stability variable. The results obtained in this study are consistent with the findings from research conducted by Setiawati (2020), which concluded that inflation has a negative impact on the financial stability of banks.

The results of this study identify that inflation represents the tendency of prices to continuously and sustainably increase across the entire price level within a country. Ultimately, this can decrease the purchasing power of the public. Therefore, it can be inferred that the higher the inflation rate, the lower the level of bank stability, as rising inflation prompts depositors to withdraw their savings from banks for consumption needs. This, in turn, leads to a gradual decrease in deposits, which can subsequently result in reduced bank stability.

This indicates that increasing inflation reduces the currency's value and discourages people from keeping their money in banks, as they expect to earn interest amidst high inflation. Consequently, people feel disadvantaged when saving in banks, and from the bank's perspective, it diminishes the funds accumulated and disrupts the bank's intermediation function. Hence, with rising inflation, it becomes evident that the market risks in the bank's balance sheet, specifically the funds collected by the bank, will decrease. This, in turn, results in a decline in the banking sector's stability in Indonesia, as indicated by a high banking stability index.

6. The Influence of Interest Rates on Conventional Bank Stability.

From the results of the data analysis, it was found that the Interest Rate variable has a negative and significant influence on the Bank Stability variable. The results obtained in this study align with the findings from research conducted by Tantri (2017), which concluded that interest rates significantly affect the stability of the commercial banking industry with a negative interdependence relationship.

The results of this study identify that interest rates can influence banking stability. This occurs because when interest rates rise, or the percentage cost burden increases, it increases the borrowing costs for customers. Consequently, the ability of customers to repay their loans decreases. The customers' ability to repay is reduced due to the higher interest burden and the increasing principal amount of the loans. This leads to banking institutions incurring losses due to customers' inability to repay their debts, which, in turn, reduces the level of profit the banks receive.

This indicates that when the Central Bank, in this case, Bank Indonesia, chooses to raise interest rates, the credit interest rates within the banking system will also adjust upward. When credit interest rates rise, the credit risk for borrowers increases. As a result, the real demand for credit decreases, and this, in turn, increases

banking risks, especially in terms of liquidity risk from the deposit side and the risk of non-performing loans. This can result in a decline in the stability of the banking sector.

## VI. CONCLUSIONS AND SUGGESTIONS

### Conclusions

- 1. The Size of the Bank has a positive and non-significant impact on the Stability of Conventional Banks for the years 2018-2022. This result indicates that an increase in the size of the bank can have a positive influence on the stability of the bank. This is because a company with a large total asset base signifies that it has reached a maturity level where it is considered to have good long-term prospects. Furthermore, it reflects that the company is relatively more stable and capable of generating profits compared to companies with smaller total assets. Therefore, the strength of the banking sector, as depicted by its size, can enhance the bank's stability.
- 2. Efficiency has a positive and non-significant impact on the Stability of Conventional Banks for the years 2018-2022. This result suggests that high efficiency indicates an increase in bank stability, and conversely, if efficiency decreases, the level of risk for a bank also rises, which negatively impacts the bank's stability. Improving efficiency in a positive direction reduces the risk of bankruptcy for the bank itself.
- 3. Capital Buffer positively and significantly influences Conventional Bank Stability from 2018 to 2022. The research identifies that the high costs associated with financial crisis prevention and management make capital buffer an instrumental policy tool to prevent excessive bank risk-taking. In addressing financial issues, banks prioritize the use of their internal resources, including capital augmentation mechanisms. This aims to reduce negative impacts on financial system stability and the economy when banks face financial problems. Consequently, higher capital buffer provisions can enhance the ability of banks in Indonesia to absorb potential risks resulting from crises or high credit growth, thereby enhancing the stability of the banking system. The provision of a higher capital buffer can increase the stability of conventional banking in Indonesia, with the capital buffer serving as a strategy to mitigate risks to the financial system and the economy when banks face failure.
- 4. GDP has a positive and non-significant impact on the Stability of Conventional Banks for the years 2018-2022. The results of this study indicate that an increase in GDP can lead to an expansion in all economic activities, thereby enhancing the ability of debtors to meet their obligations, ultimately impacting the stability of the banks themselves.
- 5. Inflation has a negative and non-significant impact on the Stability of Conventional Banks for the years 2018-2022. The findings of this research identify that an increase in inflation clearly increases the market risks contained in the balance sheets of banks. The funds collected by the banks will decrease, and the stability of banks in Indonesia will decline, as indicated by a high banking stability index.
- 6. Interest rates have a negative and significant impact on the Stability of Conventional Banks for the years 2018-2022. This research identifies that when interest rates rise, the risk of borrower credit also increases, leading to a decrease in the real loan demand. This, in turn, increases the banking risks, particularly liquidity risk from the deposit side and the risk of non-performing loans, resulting in a decline in banking stability.

#### Ssuggestions

- 1. The research results being positive but not significant for bank size, it is hoped that the banking institutions will continue to enhance their risk management for better stability of the banking sector in the future.
- 2. Banks should demonstrate the ability to manage their finances in operational activities to ensure efficient expenditure, ultimately contributing to improved banking stability.
- 3. The banking sector is expected to maintain stability in various financial ratios, such as the capital buffer ratio, to positively impact its financial performance.
- 4. It is expected that banks will increase their participation in serving the community as institutions that can assist the public in capital for business ventures, aiming to enhance the local economy. Improved Gross Domestic Product (GDP) contributes to the well-being of a region.
- 5. Future researchers are encouraged to conduct more in-depth and focused investigations into this matter. Expanding the sample size to encompass various types of banks and more extended study periods would lead to more accurate and comprehensive results. Future research endeavors could also incorporate additional financial analysis ratios.

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