

# The Influence of Macroprudential Policies on The Dynamics of Financial Stability in Indonesia: A Sur Model-Based Study

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## Abstract

Financial stability and economic growth are two important aspects that are interrelated in a country's economy. Macroprudential policies play an important role in maintaining this balance, especially with various instruments including regulation of interest rates, control of M2, namely the amount of money in circulation, to the ratio of non-performing loans. In Indonesia, the implementation of macroprudential policies continues to be strengthened to face global challenges and maintain the stability of the financial system. However, the impact of these policies on economic growth and inflation requires further study to determine their effectiveness in supporting the national economy. The final results of the study are expected to be able to analyze the influence of macroprudential policies on financial stability and economic growth in Indonesia using the approach *Seemingly Unrelated Regression* (SUR) during the period 2017-2023. The independent variables studied include Interest Rate Level, Money Supply (M2), Minimum Reserve Loan Fund Ratio (GWM LFR), Non-Performing Loan (NPL), and Inflation, with dependent variables of Economic Growth (GDP) and Inflation. Estimates *Output* The data processed through Eviews 10 shows that the Interest Rate Level (TSB) and Inflation have a negative and significant effect on GDP, while NPL has a significant positive effect. In addition, in the second model, the Interest Rate Level has a positive effect on Inflation, while M2 has a negative effect. Other variables such as GWM LFR and NPL do not have a significant effect on inflation. The R-squared value in both models shows the high ability of the model to explain the variation of the dependent variable. This finding indicates that macroprudential policies in Indonesia, especially in terms of managing interest rates, inflation, and NPLs, play an important role in supporting economic stability. Therefore, a more balanced interest rate policy is needed as well as optimization of liquidity management and NPL supervision to maintain sustainable economic growth and financial system stability, especially in Indonesia.

**Keywords:** Macroprudential Policy, Financial Stability, SUR.

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## Introduction

Macroprudential policy has become a key instrument to reduce systemic risk in the financial sector, especially in the face of global economic volatility (Detragiache & Gupta, 2021), (Fernandes & Silva, 2021) & (Ha, Kose, & Ohnsorge, 2022). Financial stability is an important prerequisite for achieving sustainable economic growth in Indonesia (Koong, Law, & Ibrahim, 2021), (Rahman & Zamil, 2023) & (Zhang & Li, 2024). The global financial crisis in 2008 has made various countries, including Indonesia, aware of the importance of implementing a policy, especially macroprudential as a policy that functions to stabilize the financial system (Saidi & Othman, 2021). The intended goal is to prevent systemic risks that can disrupt the financial sector and the economy as a whole (Gadanecz & Jayaram, 2018). Thus, various macroprudential policy instruments, such as interest rates, money supply (M2), Minimum Reserve Loan Fund Ratio (GWM LFR), and Non-Performing Loan (NPL), have been implemented to maintain financial stability and support economic growth.

The first macroprudential policy instrument, the interest rate, is one of the important factors influencing the dynamics of inflation and economic growth (Beck, 2012) & (Bernanke, 2013). According to previous studies, changes in interest rates can have a direct impact on borrowing costs, consumption, and investment, which ultimately affect the inflation rate. In the context of Indonesia, interest rate fluctuations in the period 2017 to 2023 show a response to global and domestic economic conditions, such as a decrease in interest rates in 2021 as an effort to restore the economy to be able to grow after the COVID-19 pandemic (Taylor, 2019).

In addition to interest rates, the money supply (M2) also plays an important role in financial stability. M2 reflects liquidity in the economy, and an increase in the money supply can affect inflation and drive economic growth (Sengupta & Vilan, 2022) & (Novalina et al., 2020). In 2020, for example, the money supply increased drastically due to stimulus policies during the pandemic, which then affected the inflation rate and accelerated economic recovery (Sharma & Singh, 2022). Excessive increases in M2 can drive inflation through increased liquidity that is not balanced with demand for goods and services (Friedman, 1963; Bernanke, 2013).

GWM LFR shows the bank's ability to meet short-term liquidity needs. GWM LFR that is too high can cause liquidity risk, while if it is too low it can reduce efficiency in credit distribution (Suhartono & Nurcahyo, 2023) & (Nazliana Nasution, Novalina, Rusiadi, 2023; Novalina et al., 2021; Valentine et al., 2024). Proper liquidity management can maintain financial sector stability and reduce inflationary pressures. Furthermore, high Non-Performing Loans (NPL) reflect increasing credit risk in the banking sector, which can hamper financial stability (Hidayat et al., nd; Nazliana Nasution, Novalina, & Mahrani Rangkyuty, 2023; Novalina & Rusiadi, 2018a). During the pandemic, NPL in Indonesia experienced an increase due to the large number of defaults from debtors. Therefore, control over NPL is crucial in maintaining the stability of the financial system (Beck, 2012).

In this study, the variables of inflation (Y1) and economic growth (Y2) are used as dependent variables to assess the impact of macroprudential policies on financial stability. Controlled inflation reflects the success of the policy mix in maintaining price stability, while positive economic growth reflects the effectiveness of the policy in encouraging economic expansion (Aprilia & Adianti, 2020; Aprillia et al., 2024; Djannah Rosadi & Rusiadi, 2024; Novalina et al., 2023) & (Mishkin, 2019). Meanwhile, economic growth (GDP) reflects the overall performance of the economy. Positive economic growth reflects increasing economic activity that can have an impact on people's welfare (Romer, 2011).

Inflation and Economic Growth Instability is shown during the period 2017 to 2023. Where, Indonesia experienced significant fluctuations in inflation and economic growth. Macroprudential policies implemented by Bank Indonesia (BI) and the Financial Services Authority (OJK) seek to respond to various economic challenges, including instability in the

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prices of goods and services and inconsistent economic growth (Bank Indonesia, 2023) & (Ade Novalina, 2021; Russiadi et al., 2021, 2024). Furthermore, Indonesia's economic growth has varied during this period, with several years experiencing slower growth due to the impact of the COVID-19 pandemic and global economic uncertainty. Macroprudential policies, such as adjusting interest rates and bank reserve ratios, have been implemented to stimulate economic growth, but their effectiveness has varied depending on the economic conditions at that time. On the other hand, managing the money supply (M2) is a major challenge in maintaining price stability and supporting economic growth. An increase in M2 without commensurate economic growth can exacerbate inflationary pressures (BPS, 2022) & (OECD, 2021). In 2020 - 2023, fluctuations in the GWM LFR ratio affected banking liquidity and credit capacity. The GWM LFR adjustment policy implemented to regulate liquidity often has an impact on banks' ability to provide credit, which can affect investment and consumption. High NPL levels also indicate problems in credit quality and can threaten the stability of the financial system. During this period, various policies have been implemented to reduce NPL, but challenges remain, especially in unstable economic conditions and the impact of the COVID-19 pandemic (Ministry of Finance of the Republic of Indonesia, 2020) & OJK, 2023).

This phenomenon reflects how macroprudential policies play a role in maintaining financial stability and encouraging economic growth. Research conducted by Claessens et al. (2014) and Taylor (2019) as previous research, revealed that macroprudential policies have a significant influence on financial and economic stability (Economics and Public Policy & Novalina, 2017; Mahrani Rangkyut & Ramadhani, 2020; Nazliana Nasution, Novalina, & Mahrani Rangkyut, 2023; Novalina & Rusiadi, 2018b; Rusdianto et al., 2024; Sanusi et al., nd). However, a comprehensive study on how this macroprudential policy affects inflation and economic growth in Indonesia through the SUR (Seemingly Unrelated Regression) model is small and limited in scope. Therefore, this study was conducted to examine how various macroprudential policy instruments affect the dynamics of inflation and GDP as variables measuring economic growth in Indonesia.

## LITERATURE REVIEW

Classical Macroeconomic Theory with the monetary and macroprudential policy approach covers various aspects of economic theory and relevant policies to understand the interaction between variables such as interest rates, money supply (M2), Minimum Reserve Loan Fund Ratio (GWM LFR), Non-Performing Loan (NPL), inflation, and economic growth (Mishkin, 2020), (Romli, 2021) & (Friedman and Schwartz, 2021). Classical macroeconomic theory is an approach that emphasizes market equilibrium and the important role of monetary policy in influencing macroeconomic variables (OECD, 2022) & (Alamsyah, 2023). This theory assumes that markets automatically reach equilibrium in the long run, and economic policy affects output and prices in the short run.

### Main Components of Classical Macroeconomic Theory:

1. **Market Equilibrium:** In this theory, the goods and services market, as well as the production factor market, tend to reach equilibrium automatically (Bank Indonesia, 2021). This means that fluctuations in economic variables such as inflation, interest rates, and output will reach equilibrium if there is no external intervention.
2. **Monetary Policy:**
  - o **Interest rate:** This theory explains how interest rate policy affects investment and consumption. Lower interest rates tend to encourage investment and consumption, while higher interest rates can depress both, which ultimately affects economic growth.

- **Money Supply (M2):** The money supply affects the price level and inflation. According to the quantity theory of money, changes in the money supply will affect the inflation rate and output in the short term (Friedman, 2020).
- 3. **Inflation and Economic Growth:**
  - **Phillips Curve:** Describes the trade-off between inflation and unemployment in the short run. This theory shows how monetary policy that affects inflation can affect the unemployment rate and economic growth.

### **Monetary and Macprudential Policy Approach**

#### **Monetary Policy:**

- **Influence of Interest Rates:** Setting interest rates as a policy instrument to influence economic activity (Solow, 2020). Lowering interest rates can stimulate investment and consumption, while raising interest rates aims to suppress inflation and control economic overheating.
- **Money Supply (M2):** Monetary policy regulates the amount of money circulating in the economy to achieve inflation targets and support stable economic growth. Control over M2 helps in managing inflation and economic stability.

#### **Macprudential Policy:**

- **Minimum Statutory Reserve Loan Fund Ratio (GWM LFR):** Used to regulate banking liquidity and ensure the stability of the financial system. GWM LFR affects the ability of banks to provide credit, which in turn affects economic activity and growth.
- **Non-Performing Loans (NPL):** NPL is related to credit risk and banking stability. High NPL can reduce credit availability and affect investment and economic growth. NPL management is important to maintain financial sector stability (Nugroho, 2022).

### **Interaction of Variables in Classical Macroeconomic Theory**

- **Inflation and Interest Rates:** This theory explains how monetary policy affects inflation through interest rates. For example, the central bank can raise interest rates to control inflation.
- **Money Supply and Inflation:** The quantity theory of money suggests that an increase in M2 can lead to inflation if it is not offset by an increase in output.
- **GWM LFR and Economic Stability:** A tight GWM LFR policy can reduce systemic risk and support economic stability by regulating bank liquidity.
- **NPL and Economic Growth:** Although high NPLs can indicate problems in the banking sector, in certain contexts, increasing NPLs can be associated with increased economic activity if followed by adjustments in credit policy (Nugroho, 2022).

## **RESEARCH METHODS**

This research was conducted in Indonesia during the period 2017 to 2023, covering a total of seven years. The data used is panel data, which combines time series and cross-section data (Rusiadi et al., 2017; Sunyoto, 2011). Data collection was carried out through documentation studies and library approaches, by collecting data from various official sources and publications (associative research - quantitative approach) (Sugiyono, 2015). Primary and secondary data are the benchmarks in the technique of use, but based on Sugiyono's classification (2015), the secondary data that will be used is the source of the World Bank, which can be accessed through <http://www.worldbank.org>.

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Data analysis was conducted using the Seemingly Unrelated Regression (SUR) method with a conceptual framework described as follows:

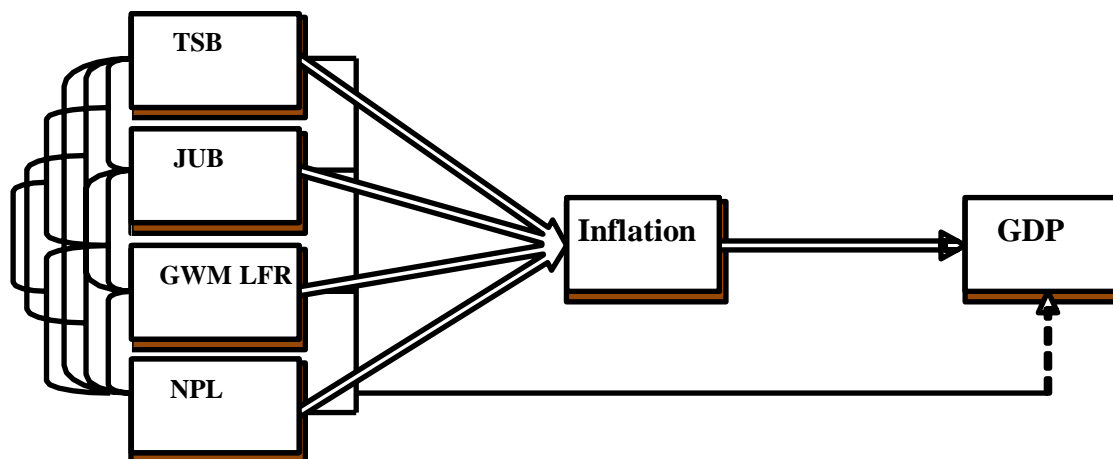


Figure 1. Conceptual Framework of Research  
Source: Author, 2024

Information :

- TSB : Interest Rate Variable (X1),
- JUB : Money Supply Variable (M2) (X2),
- GWM LFR : Minimum Loan Fund Ratio Reserve Variable (X3),
- NPL : Non-Performing Loan Variable (X4),
- Inflation : Inflation Rate Variable (Y1),
- GDP : Economic Growth Rate Variable (Y2).

SUR is an estimation technique used to overcome problems that occur when two or more regression equations have disturbances (error terms) that are correlated with each other (Zellner, 1962).

In the SUR model, each regression equation has a different dependent variable but often the same independent variables. The model assumes that the error terms between the equations are correlated, and therefore, uses that information to produce more efficient parameter estimates than if each equation were estimated separately.

The SUR model can be expressed by the formula  $Y_i = X_i \beta_i + \epsilon_i$  where:

- $Y_i$  : is the vector of dependent variables for the i-th equation.
- $X_i$  : is the independent variable matrix for the i-th equation.
- $\beta_i$  : is the parameter vector for the ith equation.
- $\epsilon_i$  : is the error term vector for the ith equation, which is assumed to have covariance between equations.

The SUR model is used to capture the relationship between inflation and economic growth influenced by macroprudential policies. The equation used in this model is:

$$Y_1 = \alpha_1 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon_1$$

$$Y_2 = \alpha_2 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon_2$$

SUR can produce more efficient parameter estimates by exploiting information about the correlation between error terms. This model allows simultaneous analysis of multiple

regression equations, which can provide deeper insights into the relationships between variables.

**RESULTS AND DISCUSSION**

Financial stability in Indonesia refers to the ability of the financial system to withstand economic shocks without causing a significant crisis. In recent years, Indonesia has experienced several pressures on financial stability due to global and domestic conditions. The COVID-19 pandemic is one of the major events that tested financial stability. In 2020-2021, banking Non-Performing Loans (NPLs) increased, but Bank Indonesia and the Financial Services Authority (OJK) introduced a number of policies such as credit restructuring to maintain financial sector stability. However, in 2022-2023, financial stability gradually improved with a decrease in NPLs and an improvement in the Loan-to-Deposit Ratio (LDR) in the banking sector.

Indonesia's economy continues to show post-pandemic recovery. In the second quarter of 2023, Indonesia's GDP grew by 5.17% year-on-year (YoY), driven by increased domestic consumption and exports. The manufacturing, trade, and agriculture sectors were the main drivers of economic recovery. Expansionary fiscal and monetary policies also played an important role in maintaining growth momentum, such as lower interest rates and increased government spending. In 2023, inflation was in the range of 4%, higher than Bank Indonesia's inflation target of 2-4%. Factors driving inflation included rising energy and food prices due to the global crisis and supply chain disruptions. Bank Indonesia responded by tightening monetary policy, raising the benchmark interest rate to dampen inflationary pressures. Although inflation was slightly higher, economic growth remained strong, demonstrating the fundamental resilience of the Indonesian economy. Further details are given in the development of the variables as follows:

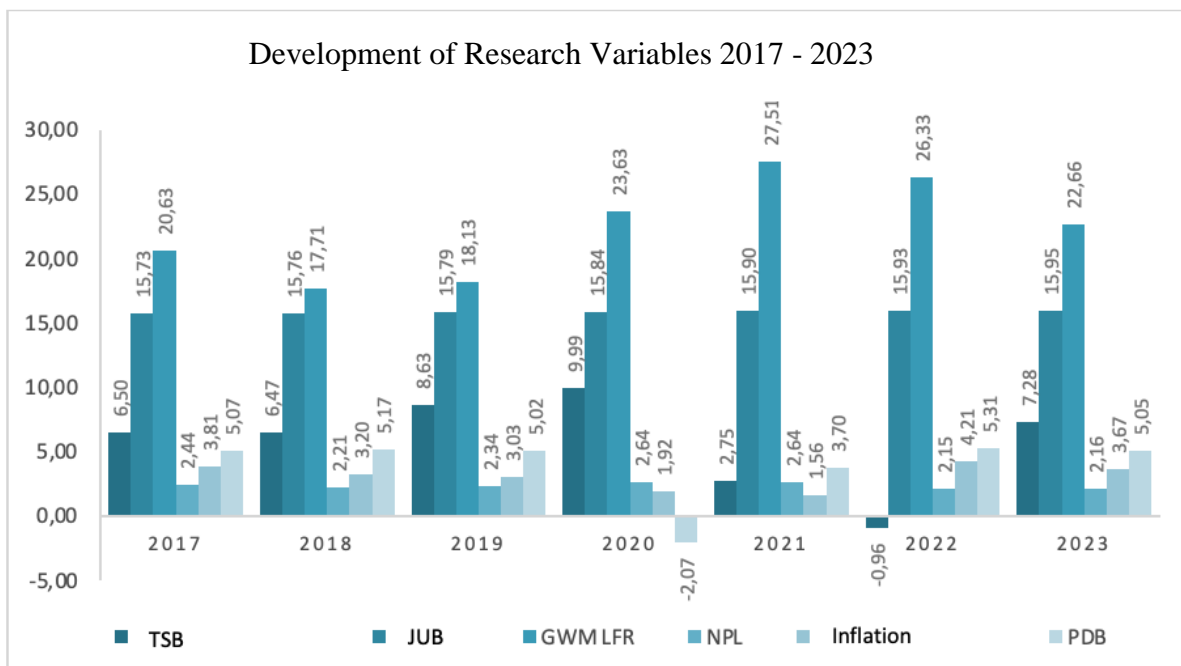


Figure 1. Research Variable Development Data

Source : <https://data.worldbank.org/>

The graph above shows the development of macroeconomic variables in Indonesia from 2017 to 2023. The Interest Rate Level fluctuated, decreasing from 6.50% in 2017 to 5.02% in

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2020, then stabilizing at around 2.64%-2.75% in 2021-2023. This decline supported post-pandemic economic recovery, but then rose again due to inflationary pressures. The money supply was relatively stable until 2019, but increased significantly in 2020 (23.63%) due to economic stimulus during the pandemic. After that, the money supply gradually decreased again to reach 15.95% in 2023. The bank's Minimum Loan Fund Ratio (GWM LFR) experienced a significant upward trend from 15.73% in 2017 to 26.33% in 2022, indicating an increase in the bank's capacity to support economic growth. NPL was relatively stable until 2019, but experienced a spike in 2020 (3.70%) due to increased credit risk during the pandemic. In 2022, NPL fell again to 2.15%, indicating an improvement in credit quality. The inflation rate fluctuated, dropping drastically in 2020 (-2.07%) due to the economic slowdown, then rising significantly in 2022 (5.31%) along with rising energy prices, and economic growth was stable at around 5% until 2019, contracting in 2020 (-2.07%) due to the pandemic, and recovering to 5.31% in 2022.

The interest rate cut and the increase in money supply during the pandemic were aimed at restoring economic growth, but at the same time caused inflation to increase. The increase in the LFR GWM and the improvement in NPLs supported financial system stability, which is important for sustainable economic growth. Higher inflation in 2022 indicates price pressures, but the economy continues to grow positively, reflecting effective policies in dealing with global and domestic challenges.

### Seemingly Unrelated Regression (SUR) Output Results

There are 2 (Two) equations in the output of SUR model data processing. Both equations are important parts of the model built to explore the relationship between variables that are interrelated but have non-identical errors. With this approach, it is expected to obtain more accurate and efficient estimation results compared to the usual regression method, especially in cases where there is a correlation between disturbances in different equations.

The first equation is used to analyze the influence of JUB (Money Supply), GWM FLR (Minimum Loan Fund Ratio), NPL (Non-Performing Loan), and Inflation Rate on GDP (Gross Domestic Product) using the Seemingly Unrelated Regression (SUR) approach showing the following output:

**Table 1. Eviews 10 Output - First Equation of the SUR Model**

	Coefficient	Std. Error	t-Statistic	Prob.
C-10	-62.13456	15.53321	-3887614	0.0050
C-11	-0.235211	0.009260	-2871919	0.0002
C-12	-0.087211	1.087626	-0.058715	0.9611
C-13	-0.218726	0.478110	-0.523611	0.6100
C-14	11.42907	0.761972	25.15871	0.0000
C-15	-3.798717	0.451135	-8779816	0.0000
Determinant residual covariance		2.07E+04		
R-squared	0.973242	Mean dependent var		442.4017

Source: Data processing, Author 2024

Based on the Eviews 10 Output - First Equation of the SUR Model, the following is the regression equation formed:

$$\text{GDP} = -62.13456 - 0.235211(\text{TSB}) - 0.087211(\text{JUB}) - 0.218726(\text{GWM LFR}) + 11.42907(\text{NPL}) - 3.798717(\text{Inflation Rate})$$

The estimation results show that there are variations in the influence of variables on GDP. The variables that significantly affect economic growth are interest rates, Non-Performing Loans (NPL), and inflation. Interest rates (-0.235211, p-value 0.0002) and inflation (-3.798717, p-value 0.0000) have a negative effect on GDP, while NPL (11.42907, p-value 0.0000) shows a positive effect. The money supply (M2) and GWM LFR variables are not significant. This model has an R-squared of 0.973242, which indicates that 97.3% of the variation in economic growth can be explained by the variables in the model, although not all are statistically significant. Furthermore, testing the two equations shows the following results:

**Table 2. Eviews 10 Output - Second Equation of SUR Model**

	Coefficient	Std. Error	t-Statistic	Prob.
C-20	-52.01423	25.11027	-2.19811	0.0400
C-21	9.843212	0.311014	34.32211	0.0000
C-22	-0.71232	0.209811	-2.99011	0.0031
C-23	8.987616	7.470112	1.20001	0.2401
C-24	1.401172	3.982198	0.33009	0.7301
Determinant residual covariance		2.09E+02		
R-squared	0.960014	Mean dependent var		444.8717

Source: Data processing, Author 2024

Based on the Eviews 10 Output - Second Equation of the SUR Model, the following is the regression equation formed:

$$\text{Inflation} = -52.01423 + 9.843212(\text{TSB}) - 0.71232X2(\text{JUB}) + 8.987616(\text{GWM LFR}) + 1.401172(\text{NPL})$$

The estimation results in the second equation show that the variables that significantly affect inflation are the interest rate and the money supply (M2). The interest rate has a coefficient of 9.843212 (p-value 0.0000), indicating that an increase in the interest rate will increase inflation, while the money supply has a coefficient of -0.71232 (p-value 0.0031), which means that an increase in M2 decreases inflation. This model has an R-squared value of 0.960014, indicating that 96% of the variation in inflation can be explained by the independent variables, although not all variables are statistically significant.

Furthermore, the R-Squared value of 0.960014 indicates that 96.00% of the variation in the Inflation Rate can be explained by the independent variables in the model (Interest Rate, Money Supply, GWM LFR, and NPL). This is a very good value, meaning that the model is able to explain most of the variation in the Inflation Rate.

Based on the variable data that has been tested through Eviews 10 including the first and second equations, further discussion shows that in the first equation, analysis using the Seemingly Unrelated Regression (SUR) method was carried out to test the effect of Interest Rate Level (X1), Money Supply (M2) (X2), Minimum Loan Fund Ratio (GWM LFR) (X3), Non-Performing Loan (NPL) (X4), and Inflation (X5) on Economic Growth (GDP). The results show that, (1) Interest Rate Level (X1) has a negative and significant effect on GDP, which means that an increase in interest rates will suppress economic growth. This finding is in line with research by Amri et al. (2021) which states that interest rate increases tend to reduce investment and consumption, which ultimately slows down the rate of economic growth in developing countries. In addition, Baskoro et al. (2022) found that monetary policy with high



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interest rates reduces people's purchasing power and reduces investment activity, which leads to a decrease in GDP. However, research by Siregar et al. (2023) showed contradictory results, where they found that in several ASEAN countries, interest rate increases actually had a positive impact on GDP, especially in the context of macroeconomic stability. This difference may be due to differences in macroeconomic conditions between countries and domestic economic strength. (2) The Money Supply (M2) coefficient in this study shows a negative effect on GDP, but this effect is not significant. This result is different from the findings of Rahmawati et al. (2022) which stated that increasing the money supply can encourage economic growth because it increases aggregate demand. However, the insignificant effect of M2 in this study can be explained by the ineffectiveness of monetary transmission through the money supply channel in Indonesia during the observation period. (3) The GWM LFR coefficient shows a negative effect on GDP, although not significant. This result is in line with the research of Mahendra and Susanto (2021) which found that tightening the GWM LFR ratio tends to reduce banking liquidity, which can ultimately suppress economic growth. However, because the effect is not significant, this shows that this policy is not yet fully effective in directly influencing the economy. (4) Meanwhile, NPL shows a positive and significant effect on GDP. This finding is in accordance with the study by Kurniawan et al. (2023) which shows that increasing NPL can have a positive impact on economic growth in the short term, especially in developing countries. This occurs because high credit distribution risks creating an imbalance in the market, but can support economic activity in the near future. (5) The Inflation Coefficient has a negative and significant effect on GDP, which shows that increasing inflation will reduce economic growth. This result is in accordance with the findings of Pratama et al. (2021) which states that high inflation reduces people's purchasing power and suppresses investment. Another study by Yusuf et al. (2022) also supports this finding, where they found that uncontrolled inflation can disrupt economic stability and reduce GDP growth.

Furthermore, in the second equation, the independent variables analyzed include the Interest Rate Level (X1), Money Supply (M2) (X2), GWM LFR (X3), and NPL (X4) on Inflation (Y1). The regression results show that, (1) The Interest Rate Level (X1) has a positive and significant effect on inflation, which means that an increase in interest rates will drive up inflation. This result is in line with the research of Wijaya et al. (2022) which found that interest rate increases in several ASEAN countries increased production costs, which ultimately increased the prices of goods and services. However, this result contradicts the findings of Satriawan et al. (2020) which showed that an increase in interest rates should reduce inflation by reducing the money supply and suppressing aggregate demand. (2) The Money Supply (X2) has a negative and significant effect on inflation. This finding supports the research of Novianti et al. (2021) which found that an increase in M2 can reduce inflation by stimulating the production of goods and services in the market. However, this result contradicts the monetarist theory which states that an increase in the money supply generally increases inflation because more money is circulating in the community without being accompanied by an increase in the production of goods and services. (3) The GWM LFR coefficient (X3) shows a positive effect on inflation, but this effect is not significant. This shows that the GWM LFR policy has not been effective in directly influencing inflation. (4) Meanwhile, the NPL coefficient (X4) is also not significant, indicating that the level of non-performing loans does not have a direct impact on inflation during the observation period.

R-Squared and Model Performance show the results. In the first equation, the R-Squared value of 0.973242 indicates that 97.32% of the variation in Economic Growth can be explained by the independent variables in the model. While in the second equation, the R-Squared value of 0.960014 indicates that 96.00% of the variation in Inflation is explained by the independent variables. This shows that both models have excellent ability in explaining their respective dependent variables.

## **CLOSING**

This study found that macroprudential policies play an important role in maintaining Indonesia's financial and economic stability, reviewed based on the results of the study using the Seemingly Unrelated Regression (SUR) model, it is seen that the Interest Rate and Inflation have a negative and significant effect on Economic Growth (GDP), which indicates that increasing interest rates and inflation can inhibit economic growth. On the other hand, Non-Performing Loans (NPL) have a positive and significant effect on GDP, indicating that despite an increase in non-performing loans, this is still able to drive economic activity in the short term. However, other variables such as the Money Supply (M2) and the Minimum Loan Fund Ratio (GWM LFR) do not have a significant effect on GDP. In the second equation, the Interest Rate is also found to have a positive and significant effect on inflation, meaning that an increase in interest rates can trigger an increase in inflation in Indonesia. Conversely, M2 has a negative and significant effect on inflation, indicating that increasing liquidity in the market can suppress inflation. However, GWM LFR and NPL do not have a significant effect on inflation. Based on these results, there are several policy recommendations that can be taken. Bank Indonesia needs to consider more prudent interest rate management to maintain a balance between inflation control and economic growth. In addition, liquidity policy through instruments such as the Minimum Reserve Requirement must be optimized to encourage investment and economic growth without triggering price instability. NPL management also needs to be strengthened through tighter supervision of credit practices to reduce long-term risks to the banking system. Coordination of monetary, fiscal, and macroprudential policies is key to supporting healthy economic growth and sustainable financial stability in Indonesia.

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