

THE ROLE OF THE MACROPRUDENTIAL INTERMEDIATION RATIO AND THE COUNTERCYCLICAL CAPITAL BUFFER IN MAINTAINING INDONESIA'S FINANCIAL SYSTEM STABILITY

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Abstract: Financial system stability is a crucial element for the sustainability of the national economy. Imbalances in the financial sector, particularly those arising from credit growth that is not aligned with economic capacity, can lead to systemic risk. In response to these risks, Bank Indonesia has implemented macroprudential policies through instruments such as the Macroprudential Intermediation Ratio (RIM) and the Countercyclical Capital Buffer (CCyB). This study aims to analyze how RIM and CCyB contribute to maintaining financial system stability in Indonesia by utilizing national data from 2010 to 2024. Financial system stability is measured using the Non-Performing Loan (NPL) ratio in the banking sector. The analytical method employed is time series regression using the Ordinary Least Squares (OLS) approach, complemented by stationarity tests and classical assumption tests. The results indicate that RIM has a significant negative effect on NPL, while CCyB also exhibits a negative relationship, although with a lower level of significance. These findings suggest that synergy in macroprudential policies is essential to strengthen banking sector resilience and maintain the stability of Indonesia's financial system.

Keywords: Financial System Stability, Macroprudential Policy, Macroprudential Intermediation Ratio (RIM), Countercyclical Capital Buffer (CCyB), Credit Growth, Systemic Risk, Indonesian Banking, Bank Indonesia, Financial Cycle.

INTRODUCTION

The financial system plays a crucial role in supporting economic development through its functions in financial intermediation, payment systems, and the allocation of funds for investment and financing of the real sector. The International Monetary Fund (2006) defines the financial system as a network of interactions between financial institutions and markets that facilitate the allocation of funds from surplus units to deficit units. In practice, the financial system not only comprises financial institutions such as central banks and commercial banks, but also involves households, the non-financial sector, governments, and interconnected financial markets in economic activities.

Financial system stability reflects the extent to which the system is able to perform its intermediation function effectively and remain resilient in the face of both internal and external shocks. Bank Indonesia (2007) states that a stable financial system is capable of allocating resources efficiently and absorbing shocks without causing significant disruptions to the real sector. When stability is maintained, the confidence of economic agents is preserved and the risk of financial crises can be mitigated. Conversely, experience from global financial crises has shown that imbalances in the financial sector, particularly

those driven by excessive credit growth, can trigger systemic risks with widespread impacts and high economic recovery costs.

In this context, Bank Indonesia has implemented macroprudential policies as a preventive measure to safeguard overall financial system stability. Two key instruments employed are the Macroprudential Intermediation Ratio (RIM) and the Countercyclical Capital Buffer (CCyB). The RIM functions to maintain balance in banking intermediation activities, while the CCyB serves as a capital buffer to strengthen banking resilience against fluctuations in the financial cycle. Although numerous studies have examined macroprudential policies, research that simultaneously explores the roles of RIM and CCyB in the Indonesian context remains limited. Therefore, this study aims to empirically examine the contribution of these two instruments in maintaining the stability of Indonesia's financial system.

RESEARCH METHOD

This study uses a quantitative approach with an explanatory research approach. The quantitative approach was chosen because the study aims to analyze the causal relationship between macroprudential policies implemented by Bank Indonesia, namely the Macroprudential Intermediation Ratio (RIM) and the Countercyclical Capital Buffer (CCyB), and the stability of the Indonesian financial system empirically and measurably. This study is time series in nature, analyzing time series data to capture the dynamics of macroprudential policies and the response of financial system stability to changing economic conditions. This approach is relevant considering that macroprudential policies are designed to control the financial cycle and mitigate systemic risks that develop over time.

Data Types and Sources

This study uses quantitative secondary data. Secondary data was chosen because all research variables are available in official publications of authoritative institutions and have a high level of validity and reliability. The data used is time series data with national coverage. The research data sources come from official and credible institutions, namely: Bank Indonesia (BI): Macroprudential Intermediation Ratio (RIM) data, Countercyclical Capital Buffer (CCyB), policy interest rates (BI7DRR), and the Financial System Stability Report. Financial Services Authority (OJK): national banking Non-Performing Loan (NPL) data. Central Statistics Agency (BPS): Indonesian inflation and economic growth data. Scientific publications and international reports (IMF, BIS) as supporting theoretical framework.

Data Analysis Models and Techniques

To analyze the influence of macroprudential policies on the stability of the Indonesian financial system, the following time series regression model is used:

$$NPL_t = \alpha + \beta_1 RIM_t + \beta_2 CCyB_t + \beta_3 INF_t + \beta_4 Growth_t + \varepsilon_t$$

Information:

- NPL_t = Non-Performing Loan as a proxy for financial system stability
- RIM_t = Macroprudential Intermediation Ratio
- $CCyB_t$ = Countercyclical Capital Buffer
- INF_t = Inflation
- $Growth_t$ = Economic Growth
- ε_t = error term
- α = constant
- $\beta_1 - \beta_4$ = regression coefficient

This model is designed to empirically test the extent to which RIM and CCyB policies play a role in maintaining the stability of the Indonesian financial system. Data collection techniques are carried out through documentation studies, namely by collecting data from official publications of Bank Indonesia, OJK, and BPS, as well as literature studies by reviewing scientific journals, textbooks, and previous research relevant to macroprudential policies and financial system stability. Data analysis is carried out through the following stages: Descriptive Statistical Analysis: Used to describe the development of each research variable during the observation period.

Stationarity Test: Conducted using the Augmented Dickey-Fuller (ADF) test to ensure that the time series data is stationary. Classical Assumption Test: Includes normality, multicollinearity, heteroscedasticity,

and autocorrelation tests to ensure the feasibility of the regression model. Regression Model Estimation: Estimation is carried out using the Ordinary Least Squares (OLS) method. Hypothesis Testing: t-test for partial effects, F-test for simultaneous effects. Coefficient of determination (R^2) to see the model's ability to explain the dependent variable.

RESULTS AND DISCUSSION

Research result

The results of data processing using a time series regression model provide an empirical overview of the role of macroprudential policies, particularly the Macroprudential Intermediation Ratio (RIM) and the Countercyclical Capital Buffer (CCyB), in influencing the stability of the Indonesian financial system. Financial system stability in this study is proxied by the banking sector's Non-Performing Loan (NPL) rate. Prior to estimation, all data underwent stationarity and classical assumption tests, thus confirming that the model meets the eligibility criteria for further analysis.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Standard Deviation
NPL	15	2.10	3.10	2,6000	.28284
RIM	15	78.50	93.10	88.1200	4.77362
CCyB	15	.00	1.00	.1667	.36187
INF	15	1.70	8.40	4.2733	2.17895
Growth	15	-2.10	6.50	4.7667	2.00879
Valid N (listwise)	15				

Descriptive statistics show that the average Non-Performing Loan (NPL) during the observation period was at 2.6 percent with relatively low variation. The Macroprudential Intermediation Ratio (RIM) had an average value of 88.12, reflecting a relatively high level of banking intermediation. Meanwhile, the relatively low Countercyclical Capital Buffer (CCyB) value indicates that capital buffer policies were not implemented intensively for most of the observation period. These results align with research by Nararya and Aji (2024), who found that RIM contributed to reducing systemic banking risk through a more controlled intermediation function control mechanism. Inflation and economic growth showed significant fluctuations, reflecting the dynamics of macroeconomic conditions during the study period.

Table 2. Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	5,744	1,547		3,712	.004		
RIM	-.037	.016	-.627	-2,311	.043	.474	2.111
CCyB	-.136	.154	-.174	-.884	.398	.898	1,113
INF	-.037	.034	-.286	-1,086	.303	.503	1,989
Growth	.065	.032	.461	2,029	.070	.676	1,479

Description :

- $R^2 = 0.652$
- Adjusted $R^2 = 0.512$
- F-statistic = 4.675 (Prob. = 0.022)
- Durbin-Watson = 1.611

The regression estimation results indicate that the research model is simultaneously significant at the 5 percent significance level. The Adjusted R^2 value of 0.512 indicates that macroprudential policy variables and macroeconomic conditions can explain 51.2 percent of the variation in Non-Performing Loans (NPLs), while the remainder is influenced by other factors outside the model.

Partially, the Macroprudential Intermediation Ratio (RIM) has a negative and significant effect on NPLs. This finding indicates that controlling banking intermediation through macroprudential instruments plays a role in reducing the risk of non-performing loans. This aligns with the objective of macroprudential policy, which is aimed at maintaining financial system stability. The Countercyclical Capital Buffer (CCyB) has a negative coefficient but is not statistically significant. This indicates that the capital buffer policy has not had a direct impact on reducing NPLs in the short term, possibly due to the limited implementation period or the policy's intensity. Inflation also showed a negative but insignificant effect on NPLs, indicating that changes in price levels have not directly affected bank credit quality. Meanwhile, economic growth had a positive and significant effect at the 10 percent level, indicating that increased economic activity has the potential to drive credit expansion, accompanied by an increase in the risk of non-performing loans.

Overall, the simultaneous test results indicate that RIM and CCyB together significantly influence the stability of Indonesia's financial system. This finding confirms that macroprudential policies will be more effective when implemented in an integrated manner, rather than in isolation. The coefficient of determination (R^2) obtained indicates that the variation in NPLs, as an indicator of financial system stability, can be significantly explained by the macroprudential policy variables in the research model, while the remainder is influenced by other factors outside the scope of the study.

CONCLUSION

This study shows that macroprudential policies and macroeconomic conditions play a role in influencing the level of Non-Performing Loans (NPLs) in Indonesia. Simultaneously, the Macroprudential Intermediation Ratio (RIM), Countercyclical Capital Buffer (CCyB), inflation, and economic growth significantly influence NPLs. The model explains approximately 51 percent of the variation in NPLs during the observation period.

Partially, RIM has a negative and significant effect on NPL, indicating that banking intermediation controls contribute to reducing the risk of non-performing loans. CCyB and inflation have a negative but insignificant effect, indicating that capital buffer policies and price stability have not directly impacted credit quality. Economic growth has a positive and significant effect at the 10 percent level, indicating that economic expansion has the potential to be followed by increased credit risk if not balanced with prudential principles.

POLICY IMPLICATIONS

This study's findings underscore the importance of strengthening macroprudential policies, particularly the management of banking intermediation, to support financial system stability and economic development. RIM instruments need to be continuously adjusted to maintain a balance between credit growth and financing quality.

Furthermore, the implementation of CCyB needs to be evaluated to ensure it is more responsive to the dynamics of the economic cycle, thus optimally functioning as an instrument to prevent the accumulation of systemic risk. Findings related to economic growth indicate that the expansionary phase needs to be accompanied by strengthened banking risk management and macroeconomic policy coordination to ensure sustainable and inclusive economic growth.

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