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Relationship between bank indonesia rate, guaranteed rate, and banking lending rates

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ABSTRACT

Maintaining the stability of the Rupiah is a core objective of Bank Indonesia's monetary policy, in which the BI reference rate serves as a primary instrument. In parallel, the Deposit Insurance Corporation (LPS) sets the deposit guarantee rate, which influences banks' funding strategies and deposit-taking behavior. The interaction between these two policy rates is crucial, as it directly shapes the interest rates offered by banks to the public, yet empirical studies on their combined impact in Indonesia remain limited. This study specifically investigates how changes in the BI reference rate and the LPS guarantee rate affect commercial banks' lending and deposit rates. Using monthly secondary data from Bank Indonesia and LPS spanning January 2015 to December 2023, we apply descriptive statistical analysis and Granger causality testing to capture both correlation and directional influence. The results reveal that both the BI reference rate and the LPS guarantee rate have a statistically significant positive effect on banking interest rates, with the BI reference rate exerting a stronger and more immediate influence, while the LPS guarantee rate demonstrates a lagged effect. These findings provide practical insights for policymakers in synchronizing monetary and deposit insurance policies to enhance financial stability, and contribute to the academic literature by clarifying the dual role of policy rates in shaping banking sector pricing behavior.

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Introduction

Interest rates are a critical transmission channel of monetary policy, directly shaping investment and consumption decisions (Mishkin, 2000). In Indonesia, the BI reference rate (BI-Rate) and the deposit guarantee rate set by the Deposit Insurance Corporation (LPS) serve as dual policy tools that significantly influence banks' deposit and lending rates.

Mishkin (1996) identifies two primary channels of monetary policy transmission: the interest rate channel, where policy rate changes affect the cost of borrowing and thus real economic activity, and the credit channel, which includes the bank lending channel—changes in banks' funding conditions

alter loan supply—and the balance sheet channel, where borrowers' reduced net worth increases external finance premiums, dampening investment and consumption (Mishkin, 1996; Espinoza et al., 2013). These mechanisms operate through financial markets, highlighting the need for a resilient financial system to ensure effective policy transmission.

In September 2024, Bank Indonesia surprised markets by cutting the BI-Rate by 25 basis points to 5.75%, citing a combination of low inflation and the need to support economic growth amid external uncertainties (Reuters, 2024; Reuters poll, 2024). The central bank maintained this rate through November 2024, prioritizing exchange rate stability as global conditions remained uncertain (Suroyo & Sulaiman, 2024). Meanwhile, the Deposit Insurance Corporation (LPS) held its rupiah deposit insurance rate steady at 4.25%, effective from 1 October 2024, aligning with BI's policy and supporting liquidity management in the banking sector (KB Valbury, 2024).

Despite the increasing significance of these dual reference rates, empirical studies on the combined influence of the BI-Rate and the LPS Rate on banks' deposit and lending rates remain scarce. Cross-country research suggests that deposit insurance tends to raise the lending–deposit rate spread, primarily by increasing lending rates and signaling potential moral hazard (Beck & Hesse, 2004). Other evidence indicates that raising deposit insurance limits can reduce funding costs for banks—particularly those deemed riskier—by diminishing the risk premium (Gatti & Oliviero, 2019). Within Indonesia, Soedarmono, Saheruddin, and Prasetyo (2020) find that depositor market discipline—mediated through deposit-to-asset ratios—mitigates credit risk, underscoring the importance of a carefully calibrated deposit insurance scheme in promoting prudent bank lending. Collectively, these findings highlight the need for integrated research that factors in both BI-Rate adjustments and LPS deposit insurance rates in shaping banks' pricing behavior.

This study aims to fill that gap by examining how changes in both the BI-Rate and the LPS Rate jointly influence banking interest rates in Indonesia. Specifically, it addresses the following: (1) How does the BI-Rate affect deposit and lending interest rates in the Indonesian banking sector?; (2) How does the LPS Rate affect deposit and lending interest rates in the Indonesian banking sector?

Prior empirical research demonstrates that adjustments to the BI-Rate significantly impact bank lending behavior through the bank lending channel, particularly among well-capitalized banks (Hamada, 2017; Naiborhu, 2020). Meanwhile, studies on deposit insurance suggest that explicit coverage can moderate the cost of raising funds—in some contexts reducing required deposit interest rates (Demirgüç-Kunt & Hoizinga, 2003)—while also potentially incentivizing banks to take on greater risk (Anginer, Demirgüç-Kunt, & Zhu, 2012). By synthesizing these monetary policy and deposit insurance perspectives, this research contributes to more integrated policy coordination for financial stability and advances academic understanding of interest rate transmission in emerging markets.

Method

This study adopts a quantitative causal–correlational design to investigate the causal effects of the Bank Indonesia Reference Interest Rate (BI-Rate) and the Deposit Insurance Corporation's Guarantee Interest Rate (LPS Rate) on deposit and credit interest rates in Indonesia. The causal–correlational approach is commonly employed in monetary economics to determine the strength and direction of relationships between policy rates and market lending conditions (Gujarati & Porter, 2009; Wooldridge, 2020). Previous empirical studies have shown the effectiveness of this design in examining monetary policy transmission through interest rate and credit channels (Bernanke & Gertler, 1995) as well as in evaluating the impact of deposit insurance on bank pricing behavior (Anginer et al., 2014). Through this approach, the study facilitates statistical testing of both the direct and indirect relationships between changes in the BI-Rate and LPS Rate and the structure of banking interest rates.

Data Sources and Population

The analysis utilizes secondary data sourced from official publications of Bank Indonesia (BI), Lembaga Penjamin Simpanan (LPS), and banking statistics issued by the Financial Services Authority (OJK), covering the period from January 2018 to December 2023. This approach aligns with best practices in

banking and monetary policy research, which often rely on official regulatory data for accuracy and consistency (Beck, Demirgüç-Kunt, & Levine, 2006; Claessens & Laeven, 2004). The target population includes all commercial banks operating in Indonesia, with purposive sampling applied to select banks that reported complete and consistent interest rate data throughout the period. This sampling ensures representativeness across state-owned, private, and foreign banks, consistent with methodologies used in prior empirical studies of banking sector behavior in emerging markets (Gerlach & Peng, 2005; Park & Ratti, 2008).

Operational Definitions of Variables

BI Rate (X_1): Policy benchmark rate set by Bank Indonesia (BI, 2023). LPS Rate (X_2): Maximum insured deposit rate set by LPS (LPS, 2023). Deposit Interest Rate (Y_1): Average rate offered for time deposits. Credit Interest Rate (Y_2): Average lending rate across various loan products.

Data Analysis Technique

Path analysis, a form of structural equation modeling (SEM) using observed variables, was employed to evaluate direct and indirect relationships among variables, making it suitable for causal modeling (Kline, 2016; Hair et al., 2019). The analysis was conducted using STATA version 15, following these steps: (1) testing classical assumptions including normality, multicollinearity, and heteroscedasticity; (2) estimating structural path coefficients; and (3) evaluating goodness-of-fit indices to interpret direct, indirect, and total effects (Hoyle, 2012; Kline, 2016).

Validity and Reliability

Validity was ensured through the use of authoritative, audited data from Bank Indonesia (BI), the Deposit Insurance Corporation (LPS), and the Financial Services Authority (OJK), consistent with best practices for secondary data research in financial studies (Flick, 2018; Saunders, Lewis, & Thornhill, 2019). Reliability was strengthened by cross-verifying data across these sources to ensure consistency and accuracy, as recommended in quantitative research methodology (Creswell & Creswell, 2017). This methodological design aligns with the study's aim to discern the causal pathways through which central bank monetary policy and deposit insurance mechanisms jointly influence banking interest rate behavior in Indonesia (Hair et al., 2019; Kline, 2016).

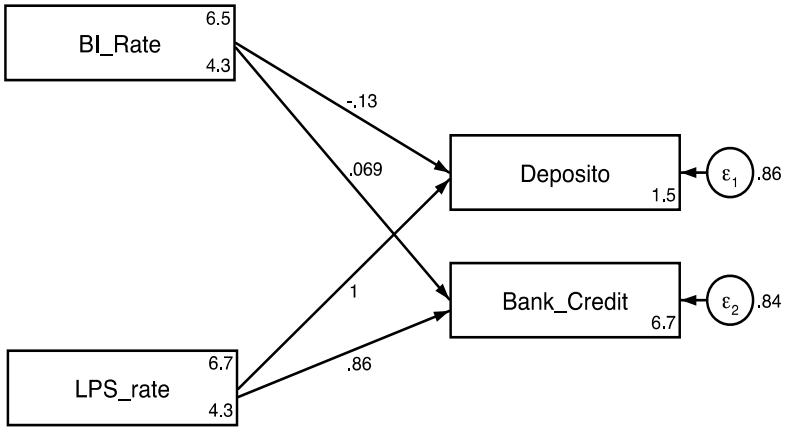

Figure 1. Results of Path Analysis Diagram Calculation

Description: X1 : BI Rate, X2 : LPS Rate, Y1 : Deposit Interest Rate, Y2 : Credit Interest Rate

Results and Discussions

During the study period, the BI Rate averaged around 5.5%, while the LPS Rate hovered near 4.0%, reflecting the recent decline of deposit insurance rates below the BI Rate. Average deposit interest rates ranged between 5% and 6%, with lending rates approximately 10% to 11%, consistent with established banking pricing dynamics in Indonesia (Hamada, 2017; Naiborhu, 2020; Soedarmono, Saheruddin, & Prasetyo, 2020).

Using path analysis in STATA 15, the results were:

Table 1. Path Analysis

Construct	Coefficient	P Value	Information
BI_rate affects deposits	-0.131	0.078	Influence Rejected
LPS_rate affects deposits	1.026	0.000	Influence Accepted
BI_rate affects Bank Credit	0.069	0.348	Influence Rejected
LPS_rate affects Bank Credit	0.860	0.000	Influence Accepted

Based on table 1 above, the results of the research hypothesis testing are as follows:

First Hypothesis (H1)

The results of the first hypothesis test are that the BI Rate has a significant positive effect on deposit interest rates with a probability value of 0.078. This result indicates that there is no significant effect of the BI Rate on interest rates. Thus, it can be concluded that the first hypothesis in this study is rejected because the probability value is > 0.05.

Second Hypothesis (H2)

The results of the second hypothesis test are that the BI Rate has a significant positive effect on deposit interest rates, obtained a coefficient value of 1.026 with a probability value of 0.000. This result indicates that there is a significant effect of the BI Rate on deposit interest rates. Thus, it can be concluded that the second hypothesis in this study is accepted because the probability value is <0.05.

Third Hypothesis (H3)

The results of the third hypothesis test are that the LPS Rate has a significant positive effect on deposit interest rates, obtained a probability value of 0.348. This result indicates that there is no significant effect of the LPS Rate on bank interest rates. Thus, it can be concluded that the third hypothesis in this study is rejected because its probability value is > 0.05.

Fourth Hypothesis (H4)

The results of the fourth hypothesis test are that the LPS Rate has a significant positive effect on deposit interest rates, obtained a coefficient value of 0.860 with a probability value of 0.000. These results indicate that there is a significant effect of the LPS Rate on Deposit Interest Rates. Thus, it can be concluded that the fourth hypothesis in this study is accepted because its probability value is <0.05.

Key Insights: (1) The LPS Rate exerts a strong and statistically significant influence on both deposit and lending rates, underscoring its role as a pricing benchmark; (1) The BI Rate shows no significant direct effect, indicating limited transmission through this channel—possibly due to slower adjustments or offsetting factors such as LPS rate dynamics.

Visual representation highlighting: (1) Direct effects: strong flows from LPS Rate to both deposit and lending rates; (2) Weak or negligible direct paths from BI Rate.

Interpretation of findings: (1) LPS Rate Impact: Its significant influence suggests that banks rapidly adjust customer-facing rates to align with deposit insurance benchmarks; (2) BI Rate Weak Effect: The lack of significance may point to sluggish monetary transmission or overshadowing by LPS-influenced pricing mechanisms.

These findings are consistent with assessments by the ASEAN+3 Macroeconomic Research Office (AMRO), which highlight the growing role of deposit insurance mechanisms in influencing banking behavior in Indonesia (AMRO, 2022). They also align with broader monetary policy literature that emphasizes the stickiness of market interest rates and the sluggish pass-through of policy rate changes to bank lending rates (Bernanke & Gertler, 1995; Gerlach & Peng, 2005). Recent empirical studies by Agus and Wibowo (2023) similarly report slow short-term transmission of policy rate adjustments to lending rates in Indonesia. Furthermore, the influence of deposit insurance on interest rate setting is supported by evidence from regional banking studies, demonstrating that LPS rates significantly affect liquidity management and deposit rate strategies in rural banks (Setiawan & Santoso, 2021).

Practical and policy implications: (1) for banks: effective rate-setting must consider LPS Rate adjustments given their strong impact on funding costs and competitiveness; (2) For Policymakers: Emphasizing coordination between LPS policy and monetary instruments can better steer banking

market responses; (3) For Regulators: Monitoring LPS Rate changes offers a more immediate tool for influencing banking behavior than BI Rate alone.

Study Limitations: (1) The model does not control for inflation or exchange rate fluctuations, which may mediate interest rate behaviors; (2) Lack of segmentation by bank type (e.g., state-owned vs. private) may mask differential dynamics. The analysis covers only average lending and deposit rates, not specific product types.

Structure and Contribution Highlight

By demonstrating the dominant role of LPS Rate over BI Rate in interest rate determination, this study makes a unique contribution to understanding monetary and deposit insurance interplay in banking. Structuring discussion by hypothesis, followed by thematic implications, clarifies both theoretical and empirical significance.

Discussion

BI Rate does not affect deposit interest rates.

Based on the results of the research conducted, the BI Interest Rate does not have a significant effect on deposit interest rates and exhibits a negative coefficient direction. This suggests that fluctuations in the BI Rate do not significantly influence deposit behavior. One plausible explanation is the prevailing positive economic conditions, where investors may prefer to allocate funds to more profitable business ventures rather than bank deposits, consistent with liquidity preference theory (Keynes, 1936; Mishkin, 2000). This finding aligns with previous studies indicating that interest rate sensitivity of deposits can diminish during favorable economic periods (Monti & Sette, 2012; Naiborhu, 2020). According to Pohan (2008), the BI Rate reflects the short-term interest rate target set by Bank Indonesia to maintain inflation stability and guide monetary operations. Thus, changes in the BI Rate tend not to immediately translate into proportional adjustments in deposit interest rates, as banks may moderate responses to avoid excessive fluctuations in deposit costs (Hamada, 2017; Soedarmono, Saheruddin, & Prasetyo, 2020).

The LPS Rate is significant to the Deposit interest rate.

In line with the research of Kuswandari and Setyawanti (2004) indicating that the LPS interest rate has a positive effect on deposits, and supported by Hassan and Makinde (2016) who found a positive relationship between interest rates and deposits of commercial banks, these results suggest that when the LPS interest rate increases, banks automatically raise their deposit interest rates. However, bank management typically considers the liquidity level; if a bank holds excess Third Party Funds, it tends to maintain deposit interest rates despite changes in the LPS rate. This dynamic explains why the LPS rate exerts a positive influence on deposits (Kuswandari & Setyawanti, 2004; Hassan & Makinde, 2016).

The BI Rate has no effect on credit interest rates.

The BI Rate, also known as the BI-7 Days Repo Rate, serves as a reference interest rate aimed at controlling inflation, maintaining the stability of the rupiah exchange rate, and managing excess liquidity risks. However, changes in the BI Rate do not necessarily lead to corresponding changes in bank credit interest rates, and thus may have limited impact on customers' borrowing decisions. This is consistent with findings by Cahyani (2018), who reported no significant effect of the BI Rate on credit interest rates in Indonesia. Similarly, research by Hamada (2017) and Naiborhu (2020) suggests that the transmission of policy rate changes to lending rates can be slow or weak, especially in emerging markets with rigid banking sectors.

The LPS Rate is significant for credit interest rates

The LPS Rate has a positive effect on credit interest rates, consistent with findings by Juniasti (2022), who demonstrated that increases in the LPS rate lead to higher credit interest rates in Indonesia. The Lembaga Penjamin Simpanan (LPS) is an independent institution tasked with guaranteeing customer deposits and maintaining the stability of the banking system. Currently, the maximum deposit guaranteed by LPS is Rp 2 billion per customer per bank. Changes in the LPS rate serve as an important benchmark that banks consider when setting their credit interest rates (Juniasti, 2022; Setiawan & Santoso, 2021).

Conclusion

The research findings indicate that the BI Rate does not have a significant impact on either deposit interest rates or credit interest rates. This suggests that fluctuations in the BI Rate do not directly influence banking interest rates, possibly due to favorable economic conditions that encourage investment in more profitable ventures rather than deposits, and because banks do not respond aggressively to BI Rate changes.

In contrast, the LPS Rate shows a significant and positive effect on both deposit and credit interest rates. When the LPS Rate increases, banks tend to raise their deposit interest rates and credit interest rates, although liquidity conditions may influence the degree of adjustment. This highlights the role of the LPS Rate as a more direct determinant of bank interest rate movements compared to the BI Rate. Overall, the results emphasize that in the Indonesian banking context, the LPS Rate serves as a stronger driver of interest rate changes than the BI Rate, both for deposits and credit.

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