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From Depositors' Confidence to Credit Stability: The Role of Deposit Insurance

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ABSTRACT

Research Originality: This study assesses the impact of deposit insurance on depositors' confidence and credit stability, incorporating gap dynamics, crisis phases (pre-, during, and post-COVID-19), and bank ownership heterogeneity.

Research Objectives: This study examines the effect of deposit insurance on depositor confidence and its implications for deposit stability, and the impact of deposit stability on banks' confidence in credit allocation.

Research Methods: Three datasets- monthly macroeconomic time-series data (January 2002–May 2023) and two panel datasets covering October 2005–May 2023 and March 2012–May 2023 are estimated using PLS and OLS.

Empirical Results: Deposit insurance effectively stabilizes depositor confidence, especially at private institutions. Throughout the COVID-19 pandemic, deposit insurance became increasingly critical in maintaining market sentiment. This stability in depositor confidence drives deposit accumulation, which in turn catalyzes credit supply both during and after crises. Additionally, findings suggest that depositor behavior and bank stability are sensitive to domestic and global economic fluctuations.

Implications: The study recommends strengthening deposit insurance institutions and improving coordination among institutions to stabilize deposits, credit, and the financial system.

Keywords:
deposit insurance; bank; deposit; credit; confidence

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INTRODUCTION

The role of credit in the economy provides the primary motivation for this study. Credit availability enables households, small and medium-sized enterprises, and large corporations to finance productive investments. The investment fosters job creation, innovation, and the development of new economic sectors. Credit enables expenditures on short-term needs and helps reduce the risk of future economic instability by mitigating financial constraints and cash-flow volatility. The Studies by Thierry et al. (2016), Ananzeh (2016), Gambetti and Musso (2017), Ahn and Sarmiento (2019), Ho and Saadaoui (2022), Bottero et al. (2020), Akinci and Queralto (2022), Guerrieri et al. (2022), Baqaee and Farhi (2022), and Kiselev et al. (2025) find that credit, through its impact on investment, consumption smoothing, and the transmission of economic shocks, contributes to macroeconomic stability and growth.

Credit exhibits pro-cyclical behavior: during economic recessions, when significant investment is needed for economic recovery, credit availability typically declines. Conversely, during periods of economic expansion, when output exceeds potential, credit growth increases. In situations of economic overheating, excessive credit growth is often harmful and can lead to the onset of a crisis (Wijaya et al., 2025; Ivashina et al., 2024; Albanesi, 2022; Bleck & Liu, 2018; Krishnamurthy & Muir, 2017; Davis et al., 2016; Bernstein et al., 2016). The interaction between economic cycles and credit is a key focus for monetary authorities (Kiyotaki & Moore, 2019; Deng et al., 2022; Yuan & Liu, 2026). Authorities use monetary and macroprudential policies to maintain financial system stability and address credit procyclicality (Fahr & Fell, 2017; Chadwick, 2018; Matysek-Jędrych, 2018). Studies by Aiyar et al. (2016), Chen et al. (2016), Triandhari et al. (2017), and Robstad (2018) found a mixed impact of these policies on credit dynamics.

The experience of the banking crisis demonstrates that credit-only policies are insufficient to maintain banking stability. Policies governing bank funding sources are also crucial, given the risks associated with providing credit. Unlike banks, which cannot demand immediate repayment from borrowers, depositors can withdraw their cash at any time. Credit terms generally exceed the duration of deposits. Consequently, banks require assistance to fulfill their responsibilities to depositors in the event of massive withdrawals, which can lead to banking paralysis. Banking paralysis can quickly trigger a severe economic crisis. Various studies have demonstrated a link between economic crises and financial stability, including in conventional and Islamic banking (Alqahtani & Mayes, 2018; Batuo et al., 2018; Law & Ridhwan, 2022; Kurtoglu & Durusu-Ciftci, 2024).

A significant bank run transpired in Indonesia in 1997-1998 following the revocation of business licenses for 16 national private banks (Simorangkir, 2011, 2012). The revocation of this permit led to a systematic withdrawal of funds from the banking sector. To prevent systemic paralysis in the banking system, the government established blanket guarantees for current, time, and savings deposits, providing comprehensive protection. Despite its high cost, this policy successfully reinstated depositors' confidence and protected the Indonesian banking sector. In 2004, a deposit insurance agency was established to offer limited guarantees for public deposits, informed by this experience.

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The experience of Indonesian banking shows that credit control through monetary and macroprudential policies is insufficient to maintain credit stability. Efforts to maintain bank liquidity by protecting depositor confidence will reduce the risk of massive withdrawals (bank runs). Deposit insurance is crucial for banks because it ensures depositors' confidence that their funds are secure. Depositors can be assured that their funds are safe and guaranteed to be returned, even if the bank goes bankrupt. This maintains overall financial stability by increasing depositor confidence and reducing systemic risk. Several studies have found a relationship between bank runs, deposit insurance, and liquidity models (see Diamond & Dybvig, 1984; Wardhana & Sufitri, 2019).

However, Calomiris and Jaremski (2016), Anginer and Demirgüç-Kunt (2018), Ngalawa et al. (2016), Egbuna et al. (2018), Kusairi et al. (2018), and Sahadewo (2018) indicate that the deposit insurance system may face moral hazard challenges. Effective management of deposit insurance requires a financial safety net guarantee institution. Anginer and Demirgüç-Kunt (2018) emphasize the impact of deposit insurance on moral hazard behavior. Additionally, the research conducted by Gropp and Vesala (2001) demonstrates that deposit insurance reduces banks' risk-taking behavior (see also Wilcox & Yasuda, 2019; Jeroh, 2020). Casu et al. (2019) identify five key characteristics of a Financial Safety Net: first, the presence of effective regulations and supervision; second, a deposit guarantee scheme; third, the role of a lender of last resort; fourth, the implementation of bank insolvency and resolution mechanisms to maintain customer trust; and fifth, the necessity for coordination among the components of the Financial Safety Net.

The previous studies by Calomiris and Jaremski (2016), Anginer and Demirgüç-Kunt (2018), Ngalawa et al. (2016), Egbuna et al. (2018), Kusairi et al. (2018), and Sahadewo et al. (2018) examine the potential for moral hazard arising from the comprehensive guarantee of full deposits. To address moral hazard, the Deposit Insurance Corporation in Indonesia (Lembaga Penjamin Simpanan-LPS), established in 2005, limits its guarantee to specific deposits. Additionally, to mitigate moral hazard, LPS establishes a maximum guaranteed interest rate that banks may offer customers. If a bank offers an interest rate that exceeds the guaranteed rate, the deposit is not protected by LPS (LPS: 2023).

This study aims to examine the impact of deposit insurance on depositor confidence, which is essential for sustaining the stability of bank deposits, and on banks' confidence, which affects credit stability. This study examines the relationship between bank deposit stability and bank confidence, and how this relationship affects the volume of credit extended by banks. The analysis encompasses macroeconomic conditions, implemented policies, crises, and bank ownership. The deposit and credit gaps serve as indicators of depositors' and banks' confidence levels.

This study introduces four novelties. First, it incorporates gap variables, which describe deviations (shocks) rather than trends. The trends are considered equilibrium values and anticipated by economic agents. Second, we integrate macroeconomic variables into a model of deposits and credit. The macroeconomic variables are based on the general equilibrium. Third, the model incorporates the three phases of the crisis (pre-COVID-19,

during, and post-COVID-19). This inclusion is crucial, as the role of deposit insurance becomes more pronounced during crises. This study uses three models: a macroeconomic model, a savings model, and a credit model. Finally, the model distinguishes between government-owned banks and non-government banks. We assume that public trust in deposit placement is higher at government-owned banks than at non-government banks.

We employ a three-step estimation and three models to assess the influence of deposit insurance on credit. The initial model is a macroeconomic general equilibrium model. The model's estimates are used to derive the anticipated values of macroeconomic variables for the subsequent two models: the savings model and the credit model. Additionally, within the savings model, we examine the effects of deposit insurance on deposits, while in the credit model, we analyze the impact of deposits and deposit expectations on credit. We incorporate the deposit and credit gaps into the equation.

METHODS

This study uses three monthly data sets. First, time-series data from January 2002 to May 2023 for estimating the macroeconomic Model. Second, panel data from September 2005 to May 2023 for estimation of the Deposits Model. Third, panel data from March 2012 to May 2023 for estimating the Credit Model. In the first group, we use monthly data on year-on-year inflation, policy interest rates, deposit interest rates, and the Rupiah exchange rate against the USD. We also use quarterly Gross Domestic Product (GDP) data with 2010 as the base year. Nominal GDP is converted into real GDP using the GDP deflator, so it reflects constant 2010 prices. The real GDP data is then adjusted for seasonal effects using the X-12 Census method. After that, the quarterly GDP data is interpolated to obtain monthly data.

Furthermore, central government expenditure is adjusted using the GDP deflator to obtain expenditure at constant 2010 prices. Data for the period from 2020 to 2023 are provided monthly. However, since the other period is quarterly, this study employs interpolation techniques to generate monthly data for other periods. This study also incorporates measures of output gap ($\hat{y}$), gap in central government spending ($\hat{g}$), gap in deposit interest rates ($\widehat{id}$), year-on-year gap of inflation ($\hat{\pi}$), depreciation of the Rupiah against the USD ($\widehat{er}$), deposit gap ($\widehat{dpk}$), and credit gap ($\widehat{cr_t}$). Gaps can be calculated as follows (see Utama et al., 2022):

$$\hat{x} = \frac{x - x^*}{x^*} \quad (1)$$

where x is the actual value of y, g, id, π, dpk or cr and x^* is the equilibrium value of the variables. The x^* value is obtained using the Hodrick–Prescott filter, or HP Filter.

The variables Deposit and credit represent the aggregate of Third Party Funds and total credit across state-owned, local government-owned, private, foreign, and joint-venture banks. Deposit expectations are derived from estimating the deposits equation. The guaranteed interest is the maximum interest rate set by the LPS that banks can offer savers. Economic conditions in the model are represented by the output gap and

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inflation expectations, which are estimated from macroeconomic equations. Several dummy variables are used in estimating the deposits and credit model, including those for the COVID-19 crisis, bank ownership, and bank type. The descriptions of the variables are shown in Table 1.

Table 1. Description of Variables

Macroeconomic Model		
Name of Variable	**Sign**	**Explanation**
GDP	y	Prices constant 2010. Seasonally adjusted. Quarterly data are interpolated into monthly data. Source BPS.
Fiscal policy	g	Central government spending. The 2002-2019 period uses quarterly data. The data is interpolated into monthly data. 2020-2003 data is monthly data. Central government expenditure values are converted to constant 2010 prices. Source MoF.
Deposit interest rate	i^d	3-month term deposit interest rates for commercial banks. Source BI
Monetary policy	i	Policy interest rate. BI Source
Year-on-year inflation (*yoy*)	π	Calculated using CPI
Depreciation Rp/USD	$\dot{e}r$	Monthly depreciation Rp/USD. BI Source
Dummy for negative output gap	$D\hat{y}N_{t-3}$	$D\hat{y}N_{t-3} = 1$, Negative output gap $D\hat{y}N_{t-3} = 0$, other
Deposit and credit models		
Variable	**Sign**	**Explanation**
Deposit (*Third Party Funds*)	dpk	Deposit includes time, savings, and demand deposits of government and private banks.
Deposit insurance policy	i_t^p	Deposit insurance interest rates.
COVID-19	dcv	dcv =0, Before 2020; dcv =1, January 2020 to May 2023
Expected economic condition	$E\hat{y}$	Fitted value of market equilibrium equation.
Expected inflation	$E\hat{\pi}$	Fitted value of Phillips Curve.
<u>*Dummy* of bank:</u> government (central and local government)	dg	dg =1, owned by government, dg =0 others.
private	dng	dng=1, Bank owned by private., dng =0 others.
state bank (persero). local government (BPD). private. foreign and joint venture banks.	dpe $dbpd$ dsw das	dng=1, Bank owned by private., dng =0 others. dpe=1 bank persero, dpe =0 others. $dbpd$=1, $dbpd$=0 others. dsw =1 private bank, dsw =1 other, das =1 own by foreign and combination foreign and domestic, das =0 others,
Credit	cr	Credit for investment, working capital, and consumption.
Expected DPK	$E\widehat{dpk}$	Obtained from the fitted value of the deposits equation.
Macroprudential policy	mp	The policy dummy is based on the implementation of the Loan-to-Value (LTV), RIM, and PLM policies. If one of these policies is implemented, then the dummy value is 1 if the policy is tight, zero if there is no policy, and -1 if the policy is loose.

Note: Central Statistics Agency (BPS), Source: Ministry of Finance (MoF), Source: Bank of Indonesia.

Furthermore, the estimated macroeconomic model is as follows[1]:

$$\hat{y}_t = \alpha_0 + \alpha_1 \hat{y}_{t-3} + \alpha_2 \hat{y}_{t+3} + \alpha_3 \left(\widehat{\imath^d}_{t-1} - \hat{\pi}_t\right) + \alpha_4 \hat{g}_{t-3} + \alpha_5 \hat{g}_{t-3} D\hat{y}N_{t-3} + \alpha_6 \dot{er}_{t-1} + u1_t \quad (2)$$

$$\pi_t = \beta_0 + \beta_1 \pi_{t-1} + \beta_2 \pi_{t+1} + \beta_3 \hat{y}_t + u2_t \quad (3)$$

$$\hat{\imath}_t = \gamma_0 + \gamma_1 \hat{\imath}_{t-1} + \gamma_2 (\pi_t - \pi_t^T) + \gamma_3 \hat{y}_t + \gamma_4 \widehat{er}_{t-1} + u2_t \quad (4)$$

Where $\hat{y}$ is the output gap, $\left(\widehat{\imath^d}_{t-1} - \hat{\pi}_t\right)$ or $\left(\widehat{\imath^d}_t - \hat{\pi}_{t+1}\right)$ is the difference between the deposit interest rate gap and the inflation gap (gap in real interest rates), $\hat{g}_t$ is the gap in government spending, $D\hat{y}N_t$ is a negative output gap dummy variable, $\dot{er}_t$ is monthly depreciation of the Rupiah against USD, π_t is inflation *yoy*, $\hat{\imath}_t$ is the gap in policy interest rates, $(\pi_t - \pi_t^T)$ is the difference between actual output and the inflation target, and $\widehat{er}_t$ is the gap of the Rupiah exchange rate per USD.

Meanwhile, to estimate deposits, the following equation is used:

$$\widehat{dpk}_{it} = \delta_0 + \delta_1 i^p_{i,t-1} + \delta_{20} i^p_{i,t-1} dcv_{i,t-1} + \delta_3 \widehat{dpk}_{i,t-1} + \delta_4 E\hat{y}_{it} + \delta_5 E\hat{\pi}_{it} + u4_{it} \quad (5a)$$

$$\widehat{dpk}_{it} = \delta_0 + \delta_1 i^p_{i,t-1} + \delta_{20} i^p_{i,t-1} dcv_{i,t-1} + \delta_{21} i^p_{i,t-1} dcv_{i,t-1} dng_{t-1} + \delta_3 \widehat{dpk}_{i,t-1} + \delta_4 E\hat{y}_{i,t} + \delta_5 E\hat{\pi}_{i,t} + u4_{i,t} \quad (5b)$$

$$\widehat{dpk}_{it} = \delta_0 + \delta_1 i^p_{i,t-1} + \delta_{20} i^p_{i,t-1} dcv_{i,t-1} + \delta_{22} i^p_{i,t-1} dcv_{i,t-1} dbpd_{i,t-1} + \delta_{23} i^p_{i,t-1} dcv_{i,t-1} dsw_{i,t-1} + \delta_{24} i^p_{i,t-1} dcv_{i,t-1} das_{i,t-1} + \delta_3 \widehat{dpk}_{i,t-1} + \delta_4 E\hat{y}_{it} + \delta_5 E\hat{\pi}_{it} + u4_{it} \quad (5c)$$

Essentially, equations (5a), (5b), and (5c) are identical. The difference lies in (5b), where we assess whether deposit insurance played a more significant role in non-government-owned banks during the crisis than in government-owned banks. Conversely, in equation (5c), the study examines whether there are disparities in the impact of deposit insurance on the deposit gap $\widehat{dpk}$ among state-owned banks, local government-owned banks or BPDs, private banks, and foreign and joint venture banks during the crisis.

Furthermore, to estimate the credit equation, the following equation (6) is used:

$$\widehat{cr}_{it} = \vartheta_0 + \vartheta_1 \widehat{i^{cr}_{it}} + \vartheta_2 \hat{\imath}_{i,t-3} + \vartheta_3 E\hat{\imath}_t + \vartheta_4 E\widehat{dpk}_{it} + \vartheta_5 E\widehat{dpk}_{it} dcv_{it} + \vartheta_6 \widehat{dpk}_{it} + \vartheta_7 \widehat{dpk}_{it} dcv_{it} + \vartheta_8 \widehat{mp}_{it} + \delta_9 E\hat{y}_{i,t-3} + \delta_{10} \widehat{cr}_{i,t-1} + u5_t \quad (6)$$

Equations (2), (3), and (4) are estimated using Ordinary Least Squares (OLS). Before estimation, stationarity tests were conducted using the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests. Ensuring the data's stationarity is essential to mitigate erratic regression (Gujarati & Porter, 2008). Subsequently, residual stationarity tests are performed post-estimation. If the residuals are stationary, it can be inferred that the regression residuals are normal, uncorrelated, and homoscedastic (Thomas, 1997).

[1] We modify model of Fahr and Fell (2017) by adding the idea by Muscatelli et al. (2004) who incorporate fiscal variables into IS, Galı & Gertler (1999) who include backward and forward-looking inflation (π_{t-1} and π_{t+1}) in PC, and Utama et al. (2022) who includes international and crisis variables into IS. We also add monetary policy rule as presented in Handa (2009: 358-430), and the monetary policy rule

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Estimating macroeconomic models is significant for validating the applicability of macroeconomic theories in the Indonesian context. Moreover, it is imperative to incorporate macroeconomic factors that influence deposit and credit behavior into models. Equations (5) and (6) are estimated using the Fixed Effects Model (FEM). Stationarity tests are conducted using the Levin, Lin & Chu (LLC), Breitung, Im, Pesaran and Shin (IPS), ADF – Fisher, and PP – Fisher methods. Ensuring stationarity of the estimated data is crucial for mitigating bias in regression. Subsequently, residual stationarity is assessed post-estimation.

Furthermore, in the deposits model, a Wald test is conducted to evaluate whether the coefficient on deposit insurance's impact during crises differs between non-government and government-owned banks (equation 5a) and to assess the disparity in the effect of deposit insurance across four types of banks.

RESULTS AND DISCUSSION

The first step in estimating the macroeconomic model involves testing the stationarity of the variables using the ADF and PP tests, as shown in Table 2. The results show that all variables used in the estimation are stationary. The economic model is estimated using a system of least squares equations. The estimation results are presented in Table 3 below. To ascertain the significance of the variables, a one-sided test is employed, guided by theoretical predictions to form directional hypotheses. This testing approach is crucial to validate the suitability of the macroeconomic model for Indonesia's economic conditions.

Table 2. The Stationarity Test of Macroeconomic Variables

Variable	ADF		PP	
	Constant	Constant, linear trend	Constant	Constant, linear trend
$\hat{y}_t$	-5,3125*	-5,3017*	-4,6817*	-4,6745*
	(0,0000)	(0,0001)	(0,0001)	(0,0010)
$(\hat{\imath}^{d}_{t-1} - \hat{\pi}_t)$	-3,4890*	-4,2809*	-2,7938*	-3,3519*
	(0,0091)	(0,0040)	(0,0606)	(0,0605)
$\hat{g}_t$	-4,3703*	-4,3599*	-9,8253*	-9,7664*
	(0,0004)	(0,0030)	(0,0000)	(0,0000)
$\dot{er}_t$	-12,5127*	-12,5130*	-14,8102*	-14,8140*
	(0,0000)	(0,0000)	(0,0000)	(0,0000)
π_t	-1,7926*	-3,3056*	-2,8198*	-3,5088*
	(0,3836)	(0,0679)	(0,0569)	(0,0406)
$\hat{\imath}_t$	-4,2738*	-4,2637*	-3,4184*	-3,3989*
	(0,0006)	(0,0042)	(0,0112)	(0,0537)
$(\pi_t - \pi^T_t)$	-3,7514*	-3,9564*	-3,4690*	-3,6181*
	(0,0039)	(0,0113)	(0,0096)	(0,0303)
$\widehat{er}_t$	-5,3961*	-5,3896*	-5,7187*	-5,7057*
	(0,0000)	(0,0001)	(0,0000)	(0,0000)

Note: Stat. value, ADF statistic or PP statistic; (P-Value); * Stationary.

The IS equation shows the expected output gap significantly influences the output gap, with both backward-looking and forward-looking expectations showing positive effects (α_1 and α_2 are positive). Fiscal policy effectively impacts the output gap (α_4 care positive) during periods of output below (recession) and above potential. The α_4 indicates that changes in the effectiveness of fiscal policy during a crisis are insignificant. Additionally, in line with theoretical predictions, actual interest rates hurt the output gap (α_3 is negative). A decrease in real interest rates increases output through heightened investment and aggregate demand. Finally, the positive and significant α_6 confirms the theoretical prediction that depreciation of the Rupiah against foreign currencies boosts exports and reduces imports, thereby increasing domestic aggregate demand and production.

Phillips Curve (PC) estimation confirms the theory. The coefficients on forward- and backward-looking inflation expectations are significantly positive for inflation. Likewise, the effect of the output gap on inflation is positive, although not significant.

Table 3. Estimation of Macroeconomic Model

	$\hat{y}_t$		π_t		$\hat{\imath}_t$
α_0	-0.0111	β_0	-0.0443	γ_0	-0.0051***
	(-0,2251)		(-0,5421)		(-2,5073)
α_1	0,4393***	β_1	0,5033***	γ_1	0,9020***
	(9,0853)		(18,1646)		(50,7377)
α_2	0,4790***	β_2	0,50446***	γ_2	0,0054***
	(10,0030)		(18,1081)		(6,6203)
α_3	-0,0163**	β_3	0,0015	γ_3	0,0048***
	(-1,7682)		(0,0376)		(2,4757)
α_4	0,3230**			γ_4	0,0753**
	(1,8529)				(1,7445)
α_5	-0,1923				
	(-0,7415)				
α_6	4,8861***				
	(2,7619)				
R^2	0.473		0.964		0.949
Adj. R^2	0.459		0.964		0.948
N	240		242		243
Determinant residual covariance		0.000176			
Stationarity test of residual:					
ADF	-8.5225*		-8.52246*		-5.12978*
PP	-6.3585*		-6.35852*		-48.6735*

Note: Coefficient (t-statistic) significant at *α=0.1, at **α=0.05, at ***α=0.01.

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Table 4. Stationarity Test

	Levin, Lin & Chu	Breitung	Im, Pesaran and Shin	ADF - Fisher	PP - Fisher
$\widehat{dpk_t}$	-14.068*	-6.839*	-12.621*	148.016*	146.562*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
i_t^p	-3.922*	-1.946*	-4.594*	35.711*	7.814
	(0.000)	(0.026)	(0.000)	(0.000)	(0.4518)
$\widehat{Ey_t}$	1.921	-5.215*	-4.616*	36.027*	143.271*
	(0.973)	(0.000)	(0.000)	(0.000)	(0.000)
$\widehat{E\pi_t}$	56.019	-12.208*	-24.712*	364.301*	73.683*
	(1.000)	(0.000)	(0.000)	(0.000)	(0.000)
$\widehat{cr_t}$	0.301	-3.405*	-6.696*	61.053*	65.415*
	(0.618)	(0.000)	(0.000)	(0.000)	(0.000)

Notes: The value of the statistic (P-Value), * Stationary

The estimation of the monetary policy rule also confirms the theory. The positive and significant value γ_2 indicates that the Central Bank raises interest rates if inflation exceeds the target. Likewise, if the output gap is positive, indicating economic expansion, the Central Bank increases interest rates to control inflation. The Central Bank also responds positively to a gap in the Rp/USD exchange rate. If the Rp/USD exchange rate deviates from the trend (the Rupiah depreciates more than expected), the Central Bank will raise policy interest rates. The increase in interest rates is expected to increase capital inflows, which in turn improve the exchange rate. Table 3 also shows that the residuals from all equations are stationary and that the R2 values are relatively high. To estimate the deposits and credit model, we employ monthly panel data. Most of the stationarity test results concluded that the variables used are stationary. Consequently, the estimated equation does not yield spurious regression.

The fitted value results from the IS, PC, and monetary policy rule equations are used as expectation variables in the deposits and credit equations. Moreover, the estimated deposits equation in Table 5 reveals that deposit insurance affects the amount of the deposit gap in banking; the $c\delta_1$ is positive and significant. The impact of deposit insurance on deposits has become increasingly significant during COVID-19, as evidenced by the value δ_{20}, which is also positive and significant. The Wald test results in Table 7(a) show an increase in the influence of deposit insurance on total deposits, with the coefficient increasing from 0.0009 before January 2020 to 0.0029 from January 2020 to May 2023.

Table 5. Deposit Equation

	(a) $\widehat{dpk}$	(b) $\widehat{dpk}$	(c) $\widehat{dpk}$
δ_0	-0.0077*	-0.0077*	-0.0077*
	(-1.4053)	(-1.4048)	(-1.4034)
δ_1	0.0009*	0.0009*	0.0009*
	(1.2956)	(1.2952)	(1.2940)
δ_{20}	0.0020**	0.0017*	0.0018
	(2.0774)	(1.3682)	(1.1234)
δ_{21}		0.0007	
		(0.5111)	
δ_{22}			-0.0002
			(-0.1178)
δ_{23}			0.0001
			(0.0314)
δ_{24}			0.0012
			(0.5734)
δ_3	0.6873***	0.6869***	0.6867***
	(27.4702)	(27.4324)	(27.3888)
δ_4	0.0072***	0.0072***	0.0072***
	(3.2194)	(3.2177)	(3.2142)
δ_5	-0.0021	-0.0021	-0.0021
	(-1.0594)	(-1.0583)	(-1.057)
R^2	0.488	0.488	0.488
Adj. R^2	0.483	0.482	0.481
n	816	816	816
Test of Residual test			
LLC	-12.2643*	-12.2156*	-12.2393*
ADF-F	167.825*	166.975*	167.538*
PP-F	499.819*	499.666*	500.377*

Note: Coefficient, (t-statistic), significant at* α=0.1, at ** α=0.05, at *** α=0.01.

Table 6(b) shows that the estimation findings align with those in Table 6(a), indicating that deposit insurance affects the deposit gap, with its influence growing during the COVID-19 and post-COVID-19 periods. The Wald test results reveal that the impact of deposit insurance on non-government-owned banks was more pronounced during the crisis than on government-owned banks. The coefficient for the effect of deposit insurance during the crisis period on deposits is 0.0026 (significant at the 10% level), while for non-government-owned banks, it is 0.0033 (significant at the 5% level). These results confirm that depositors perceive government-owned banks as safer than non-government-owned banks. Deposit insurance has increased customers' confidence in government-owned banks and even more so in non-government-owned, private, foreign, and joint venture banks.

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Table 6. Wald Test for Deposit Equation

	(a) $\widehat{dpk}$	(b) $\widehat{dpk}$	(c) $\widehat{dpk}$
δ_1	0.0009*	0.0009*	0.0009*
	(1.2956)	(1.2952)	(1.2940)
$\delta_1 + \delta_{20}$	0.0029**	0.0026*	0.0027*
	(1.9723)	(1.5548)	(1.3860)
$\delta_1 + \delta_{20} + \delta_{21}$		0.0033**	
		(1.9981)	
$\delta_1 + \delta_{20} + \delta_{22}$			0.0024
			(1.2624)
$\delta_1 + \delta_{20} + \delta_{23}$			0.0028*
			(1.4188)
$\delta_1 + \delta_{20} + \delta_{24}$			0.0028
			(1.4188)*

Note: Coefficient, (t-statistic), significant at* α=0.1, at ** α=0.05, at *** α=0.01.

Table 7. Credit Equation

	$\widehat{cr}_{it}$		
ϑ_0	0.0035***	ϑ_6	0.2863***
	(2.8144)		6.3117
ϑ_1	-0.5567***	ϑ_7	0.0537
	(-4.9708)		0.4525
ϑ_2	-0.0045	ϑ_8	-0.0036***
	(-0.2505)		-2.7021
ϑ_3	0.1131	ϑ_9	0.0025**
	(4.0890)		2.2030
ϑ_4	0.6681***	ϑ_{10}	0.4324***
	(3.6576)		6.6432
ϑ_5	-0.4561		
	(-1.0448)		
R^2	0.750		
Adj. R^2	0.727		
n	120		
LLC	-8.24166*		
ADF-F	99.7221*		
PP-F	97.8072*		

Note: Coefficient significant at* α=0.1, at ** α=0.05, at *** α=0.01.

The estimation results in Tables 5(c) and 6(c) demonstrate the significant effect of deposit insurance during the crisis on state-owned, private, joint-venture, and foreign banks. Meanwhile, BPD shows no significant. These findings also corroborate those in

Table 7(b), which indicate that the coefficient for the effect of non-government-owned bank deposit guarantees on deposits exceeds that for government banks. Furthermore, the positive and significant effect of the output gap on deposits aligns with theoretical predictions. Conversely, though theoretically expected, the negative influence of inflation is not significant in its coefficient.

Table 7 presents the results of the credit equation estimation. The findings indicate that two variables, the macroprudential policy and the amount of third-party funds, which are influenced by deposit insurance, effectively impact credit. Conversely, monetary policy and expectations of monetary policy do not significantly affect credit. Although monetary policy tightening (observed at ϑ_2) and monetary policy expectations (observed at ϑ_3) are negative as theorized, they lack significance. Gaps in deposits and in deposit expectations positively and significantly affect the credit gap.

Similarly, tightening macroprudential policy decreases the credit gap, while easing policy increases it. Additionally, a credit gap in interest rates significantly negatively impacts the credit gap, as per theoretical predictions. Lastly, the expected output gap exhibits a significant positive effect on the credit gap. These results, indicating credit's pro-cyclicality, support previous studies by Bernstein et al. (2016), Ascarya et al (2016), Leroy and Lucotte (2019), Huizinga and Laeven (2019), and Cuestas et al. (2022).

CONCLUSION

The findings indicate that deposit insurance significantly enhances depositor confidence in both normal and recessionary periods, though its effect is more pronounced during economic downturns. By providing a sense of security to depositors, deposit insurance helps prevent massive withdrawals (bank runs), especially during periods of financial distress. The study further reveals that deposit insurance plays a more important role in maintaining depositor confidence in private banks compared to state-owned banks, as depositors generally exhibit higher baseline trust in government-owned institutions. The study also highlights the substantial influence of macroeconomic variables, such as the output gap and expectations, on deposits and credit. The output gap is shaped by fiscal policy, real interest rates—determined by nominal interest rates and inflation—and international factors.

Furthermore, expectations play a significant role in influencing deposit and credit behavior. Therefore, policies implemented by authorities—including monetary, fiscal, and deposit insurance institutions—must effectively manage expectations to maintain economic stability. Furthermore, the study also finds that bank deposit stability, along with macroprudential policies, plays a crucial role in shaping credit allocation. The study recommends strengthening deposit insurance institutions and enhancing coordination with fiscal, monetary, and macroprudential policies. Each authority is pivotal in preserving deposit and credit stability, ultimately contributing to the financial system's stability.

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