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Monetary Policy in Action: The Dynamic Influence of Reserve Requirements on Bank Lending in Indonesia

ABSTRACT

Bank Indonesia enforces the Statutory Reserve Requirement (RRR/GWM) as a key monetary policy instrument aimed at maintaining liquidity stability within the banking system. This policy plays a crucial role in regulating the amount of funds banks can allocate to society through credit distribution. This study examines the impact of Reserve Requirements (RRR/GWM), Gross Domestic Product (GDP), inflation, bank size, the BI Rate, and third-party funds on bank credit. A dynamic panel data analysis is conducted using the System Generalized Method of Moments (SYS-GMM) approach to address potential endogeneity bias. The sample consists of 42 conventional banks listed on the Indonesia Stock Exchange (IDX) from 2014 to 2023. The results indicate that an increase in Reserve Requirements, bank size, the BI Rate, and third-party funds positively and significantly influences credit distribution. In contrast, GDP and inflation exert a negative and significant impact on bank lending. These findings highlight the crucial role of monetary policy in shaping banking dynamics, particularly in credit allocation. The policy implications derived from this study provide valuable insights for regulators in designing more effective liquidity management strategies in the future.

Keywords: Monetary Policy, Reverse Requirement, BI Rate, Credit, SYS – GMM

Clasification JEL: C61, E52, G10

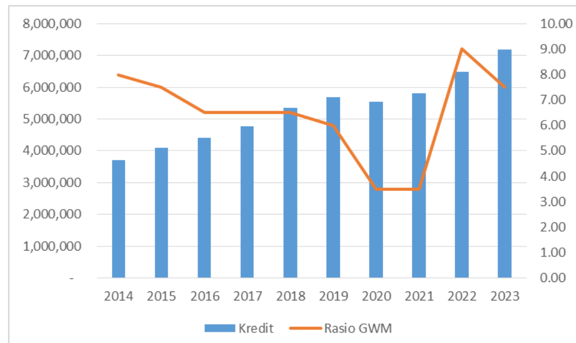
INTRODUCTION

The global economy has experienced sharp shifts in recent years, with the COVID-19 pandemic alone wiping out trillions of dollars of global output and amplifying uncertainty across financial markets (Basmar et al., 2022). These disruptions underscore the pivotal role of a stable and resilient banking sector in preserving financial stability and supporting economic recovery (Parhusip & Cakranegara, 2021). In bank-based financial systems, banks are the primary intermediaries that mobilize savings and allocate capital to households and firms. Because bank balance sheets are tightly linked to liquidity conditions and risk perceptions, disruptions in banking intermediation can quickly spill over to investment, consumption, and employment. For that reason, central banks use monetary policy instruments to steer system-wide liquidity and influence credit conditions, including open market operations, policy rates, and reserve requirements (Fajri et al., 2022).

In Indonesia, Bank Indonesia (BI) operationalizes monetary policy through instruments such as discount facilities, open market operations, the policy rate (BI-Rate/7-Day Reverse Repo Rate), reserve requirements (Giro Wajib Minimum, GWM), and moral suasion. A recurring operational challenge is liquidity management. Excess liquidity can strengthen inflationary pressures, weaken purchasing power, and increase macroeconomic instability; it may also inflate asset prices, encourage risk-taking through aggressive lending, and elevate non-performing loan (NPL) risk when credit standards loosen.

From a regulatory perspective, BI's reserve requirement framework requires banks to hold a minimum portion of third-party funds (Dana Pihak Ketiga/DPK) as reserves at BI. In principle, a higher GWM absorbs liquidity and tightens banks' lending capacity, while a lower GWM releases liquidity and can support loan supply (Bitar, 2022).

Figure 1 Growth of Conventional Commercial Bank Loans and Reserve Requirement Ratio for the 2014-2023



Source: Bank Indonesia and OJK

However, Indonesia's recent experience suggests that the GWM–lending relationship is not always mechanically negative. Over 2014–2023, credit growth and the reserve requirement stance moved in ways that reflected broader policy objectives and shifting macro-financial conditions. For instance, in 2020 BI lowered GWM from 6% to 3.5%, yet conventional commercial bank credit declined from IDR 5,683,757 billion to IDR 5,547,618 billion. Conversely, in 2022 BI raised GWM to 9% while credit expanded from IDR 5,820,636 billion to

IDR 6,497,620 billion. Figure 1 illustrates these movements using Bank Indonesia and OJK data. This descriptive pattern appears inconsistent with a strict "reserve tax" interpretation in which higher reserve requirements unambiguously reduce credit supply. Prior empirical findings are also mixed: several studies report a negative relationship between reserve requirements and lending (Okey Onoh & Timothy Nwachukwu, 2017; Wuryandani et al., 2014; Yang & Yi, 2020), others find weak or insignificant effects (Kim Nguyen et al., 2022), and some report positive associations under specific conditions or regimes (Ertan & Kıran, 2021; Orji et al., 2019).

Research Gap

Recent frontier research provides a sharper lens for interpreting these mixed results and reveals several gaps that remain underexplored for Indonesia. First, cross-country evidence shows that reserve requirements can function as a financial stability instrument: tightening reduces the amplitude of credit cycles and lowers the frequency of stress episodes, but often at the cost of lower credit growth and output, with effects that tend to be stronger in emerging markets (Cantú et al., 2024). This implies that the relevant question is not only whether GWM tightens or loosens loan supply, but also how it operates within a broader stability–credit trade-off. Second, micro-level evidence shows that the lending response depends on the distribution of reserves across banks: when reserve holdings are uneven, "reserve-rich" banks expand lending more, while liquidity-constrained banks respond less, potentially generating uneven credit transmission across regions and sectors (Kuang et al., 2024).

Yet many empirical applications treat the banking sector as homogeneous and do not explicitly connect reserve policy to balance-sheet capacity. Third, research on the evolving operating framework of monetary policy such as ample-reserves regimes and innovations like a zero-interest digital euro suggests that reserve requirements may play different roles depending on the liquidity regime and the interaction with other instruments (Cantú et al., 2024). Together, these insights motivate a "policy-mix aware" interpretation and a bank-level empirical design that recognizes persistence and heterogeneity in lending dynamics.

Against this backdrop, this study asks a focused question: to what extent, and through what dynamic mechanisms, do changes in Indonesia's reserve requirement policy (GWM) relate to bank lending once credit persistence, monetary policy stance, macroeconomic conditions, and banks' balance-sheet capacity are accounted for? Empirically, we estimate a dynamic panel model in which bank lending depends on its own lag, GWM, the policy rate, macroeconomic controls (GDP and inflation), and bank-specific controls (bank size and deposits/DPK). A dynamic panel approach is appropriate because lending is persistent and because policy and balance-sheet variables may be endogenous to credit conditions; therefore, we rely on System GMM as the primary estimator and report alternative panel estimators as benchmarks.

This study contributes in three ways. First, it adds to the applied monetary transmission and banking literature by providing bank-level evidence from Indonesia on the dynamic association between reserve requirements and lending, interpreted through the stability credit trade-off and heterogeneity perspectives highlighted by recent research. Second, it contributes methodologically by employing a dynamic panel framework (SYS-GMM) that is widely used for persistent credit outcomes and endogeneity concerns in banking panels. Third, it offers policy-relevant implications for calibrating reserve-based instruments within Indonesia's monetary–macroprudential policy mix so that credit intermediation can be supported without undermining macro-financial stability.

METHOD

This study adopts a quantitative design based on secondary data in an annual panel structure covering 2014–2023, combining time-series variation and cross-sectional observations from 42 conventional commercial banks listed on the Indonesia Stock Exchange (IDX). Bank-level information is obtained from each bank's annual financial statements, while macroeconomic and policy variables are compiled from Bank Indonesia (BI), the Financial Services Authority (OJK), and Statistics Indonesia (BPS). The empirical focus is to assess the impact of the statutory reserve requirement ratio (Giro Wajib Minimum, GWM) on bank lending, while controlling for macroeconomic conditions (GDP and inflation), bank-specific characteristics (bank size and third-party funds/DPK), and the conventional monetary policy stance (the BI Rate). The covariate set is motivated by the monetary transmission mechanism through the bank-lending channel and the macroprudential literature: reserve requirements are conceptualized as a liquidity-management and financial-stability instrument that can shape banks' intermediation (Bitar, 2022; Satria et al., 2016; Wuryandani et al., 2014), whereas the BI Rate captures the interest-rate channel and policy-reaction dynamics that are particularly salient in emerging-market settings (Lubis et al., 2022; Sinaga et al., 2020). Inflation and GDP proxy the business cycle and price stability, which influence credit risk and banks' underwriting conservatism (Riani et al., 2018; Tao & Xu, 2019), while bank size and deposits/DPK represent balance-sheet capacity and the primary funding base that underpin lending supply (Adnan et al., 2016; Diamond & Rajan, 2001).

(Arellano & Bond, 1991) developed a dynamic panel data model by leveraging the orthogonality condition, which ensures no correlation between the lagged values of y_{it} and the error term ε_{it} (Das, 2019). The general form of the dynamic panel data equation is:

$$Yi,t = ai + \delta Y_{i,t-1} + x'_{i,t}\,\beta + u_{it};\ i = 1,2,\ldots,\ Ni = 1,2,\ldots,T \qquad (1)$$

From Equation (1), it is evident that $Y_{i,t}Y_{i,t}$ is a function of $u_{i,t}u_{i,t}$, which is also correlated with the lagged dependent variable $Y_{i,t-1}Y_{i,t-1}$, as it is also a function of $u_{i,t}u_{i,t}$. Consequently, the OLS estimator becomes biased and inconsistent, while the explanatory variables may also be endogenous. Therefore, appropriate instruments and estimation methods are required. (Arellano & Bond, 1991) proposed the following model equation:

$$Y_{i,t} - Y_{i,t-1} = \beta\,(Y_{i,t-1} - Y_{i,t-2}) + \gamma\,(X_{i,t} - X_{i,t-1}) + (\varepsilon_{i,t} - \varepsilon_{i,t-1}) \quad (2)$$

Building on the Arellano–Bond dynamic panel framework, recent empirical studies typically specify bank credit as a dynamic equation driven by lagged credit, monetary policy instruments (the policy rate), liquidity/macroprudential tools such as reserve requirements (GWM), as well as macro controls (GDP and inflation) and bank-specific characteristics (asset size and deposits/DPK), namely:

$$\ln(Credit)_{i,t} = \rho\ln(Credit)_{i,t-1} + \beta RR_t + \theta i_t + \gamma_1\ln(GDP)_t + \gamma_2\pi_t + \delta_1\ln(Assets)_{i,t} + \delta_2\ln(Deposits)_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t}. \quad (3)$$

(Bitar, 2022; Satria et al., 2016; Tao & Xu, 2019; Wuryandani et al., 2014)

In this setting, GWM is interpreted as a liquidity-management instrument that can shape banks' intermediation capacity (Bitar, 2022; Satria et al., 2016; Wuryandani et al., 2014), while the policy rate captures the monetary stance and may interact with policy-reaction behavior and bank margin dynamics (Lubis et al., 2022; Sinaga et al., 2020). GDP and inflation proxy cyclical conditions and price stability (Riani et al., 2018; Tao & Xu, 2019), whereas assets and deposits/DPK reflect balance-sheet capacity and funding availability (Adnan et al., 2016; Diamond & Rajan, 2001). Given persistence and potential endogeneity in bank-level panels, this literature commonly relies on dynamic GMM estimators (difference/system) to obtain consistent parameter estimates. Based on model equation (2) dan model (3), this study employs the GMM model equation as follows:

$$LCR_{i,t} = \beta(LCR_{i,t-1} - LCR_{i,t-2}) + \gamma(LGDP_{i,t} - LGDP_{i,t-1}) + \gamma(INFL_{i,t} - INF_{i,t-1}) +$$

$\gamma(\text{LBANK}_{i,t} - \text{LBANK}_{i,t-1}) + \gamma(\text{BIRATE}_{i,t} - \text{BIRATE}_{i,t-1}) + \gamma(\text{LDPK}_{i,t} - \text{LDPK}_{i,t-1}) + (\varepsilon_{i,t} - \varepsilon_{i,t-1})$ (4)

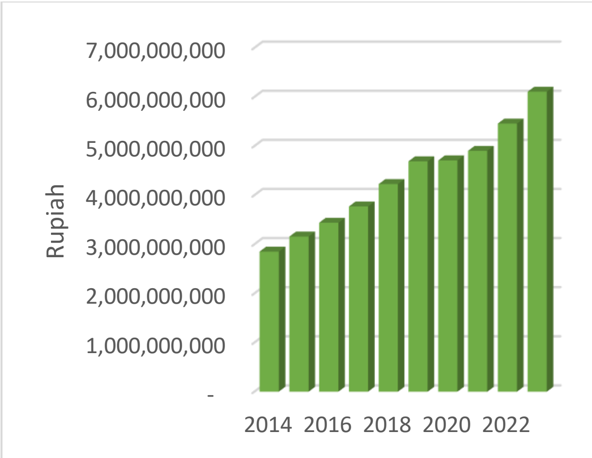
$\text{LCR}_{i,t}$ (log credit) is modeled as a function of credit persistence, the reserve requirement policy (GWM), the BI Rate, macroeconomic conditions (log GDP and inflation), and bank-specific characteristics (log assets and log third-party funds/DPK), while $\mu_i$and $\lambda_t$control for unobserved bank heterogeneity and common year-specific shocks. Estimator consistency is assessed using instrument validity tests (Sargan/Hansen) and Arellano–Bond serial-correlation tests for AR (1)–AR (2).

RESULT AND DISCUSSION

This section deepens the discussion by (i) clarifying the economic meaning of coefficients in a dynamic log-linear credit equation, (ii) triangulating mechanisms with the bank-lending-channel and macroprudential literatures, and (iii) explicitly reconciling signs that may appear counter-intuitive (e.g., a positive GWM coefficient) considering policy endogeneity and regime timing. The dependent variable is the natural logarithm of bank credit (LCR). Key policy variables are the reserve requirement ratio (GWM) and the policy rate (BI Rate), controlling for macro conditions (log GDP and inflation) and bank balance-sheet capacity (bank size and third-party funds/DPK).

According to the Financial Services Authority, credit is a financial service that enables individuals or companies to borrow money from financial institutions and repay it over an agreed period with interest. Banking regulations define credit as the distribution of funds or receivables regulated in a loan agreement between a bank and another party, requiring the borrower to repay the loan within a specified period along with interest payments.

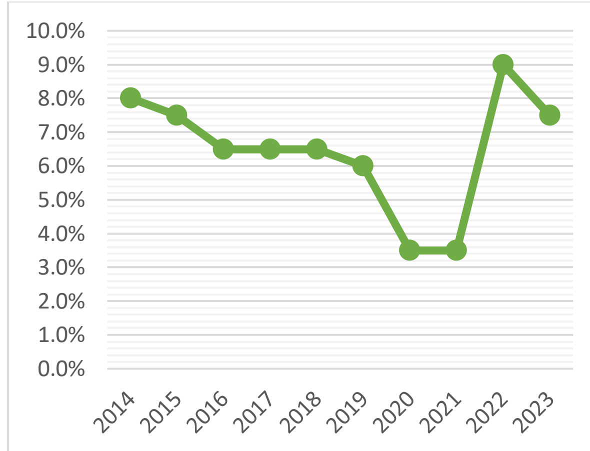
Figure 2 Development of Conventional Commercial Banks Listed on the IDX for the 2014-2023 Period



Source: Annual Financial Report of the Bank, data processed

The development of conventional commercial bank credit in Indonesia from 2014 to 2023 shows a continuous increase. In 2014, total credit disbursed was recorded at IDR 2,852,003,645 million, rising to IDR 6,108,480,396 million by 2023. During the COVID-19 pandemic in 2020, credit growth slowed, increasing by only IDR 19,369,950 million from the previous year. The highest credit disbursement increase occurred in 2023, reaching IDR 648,670,843 million, in line with Indonesia's post-pandemic economic recovery.

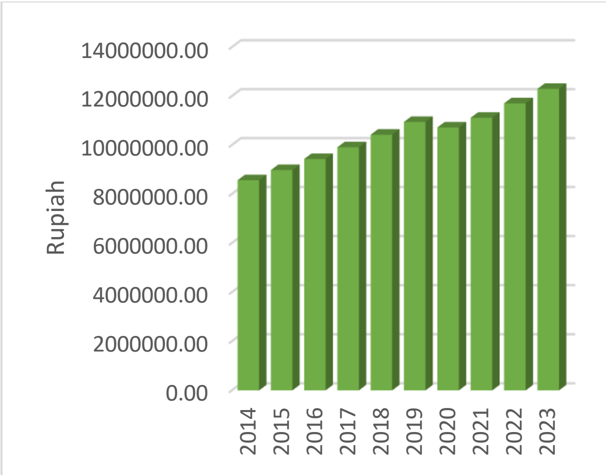
Figure 3 Development of the Minimum Mandatory Statutory Reserve Requirement for the 2014-2023 Period



Source: Bank Indonesia, data processed

The **Statutory Reserve Requirement (GWM)**, which represents a minimum percentage of third-party funds that commercial banks must hold at Bank Indonesia, fluctuated over the 2014-2023 period. It was initially set at 8% in 2014, decreased to 7.5% in 2015 due to monetary easing, and continued to drop until reaching 3.5% in 2020 as a crisis response to the pandemic. However, in 2022, GWM was sharply increased to 9% to absorb banking liquidity and control inflation.

Figure 4 Development of Indonesia's Gross Domestic Product for the 2014-2023 Period

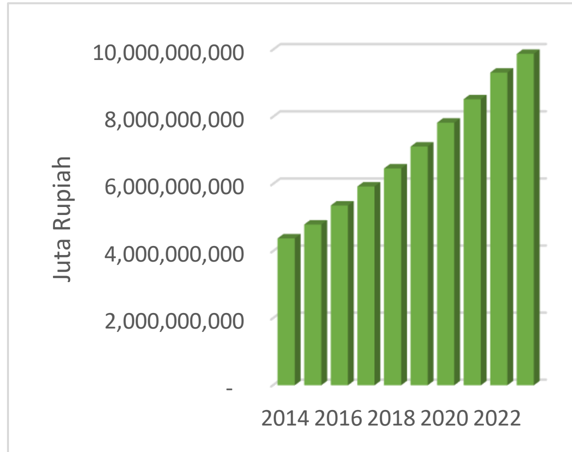


Source: BPS, data processed

Gross Domestic Product (GDP) in Indonesia showed steady growth from 2014 to 2019, rising from IDR 8,564,867 billion to IDR 10,949,155 billion. However, the pandemic caused a decline in 2020, with GDP contracting by IDR 226,156 billion. Growth resumed from 2021 onward as economic activity recovered.

Inflation in Indonesia fluctuated between 2014 and 2023, peaking at 6.42% in 2014 and reaching its lowest level at 1.56% in 2021 due to weakened domestic demand during the pandemic. In subsequent years, inflation rebounded as economic activity normalized.

Figure 5 Development of the Size of Conventional Commercial Banks Listed on the IDX for the Period 2014-2023

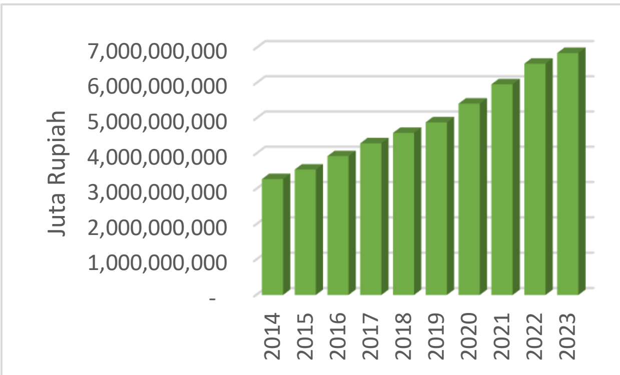


Source: Annual Financial Report of the Bank, data processed

Bank size, measured by total assets, consistently increased throughout the study period. In 2014, the total assets of conventional commercial banks listed on the Indonesia Stock Exchange (IDX) amounted to IDR 4,383,171,112 million, rising to IDR 9,879,240,095 million in 2023, reflecting expanded banking capacity.

The BI Rate, Indonesia's benchmark interest rate, fluctuated significantly over the years. The highest rate, 7.75%, was set in 2014 to stabilize the rupiah following a fuel price hike. In contrast, the lowest rate of 3.5% was recorded in 2021 as Bank Indonesia implemented monetary easing to support post-pandemic economic recovery.

Figure 6 Development of Third-Party Funds of Conventional Commercial Banks Listed on the IDX for the Period of 2014-2023



Source: Annual Financial Report of the Bank, data processed

Third-Party Funds (DPK), sourced from public savings, deposits, and current accounts, play a crucial role in bank liquidity and credit distribution. DPK increased consistently each year, from IDR 3,279,554,980 million in 2014 to IDR 6,859,911,449 million in 2023, strengthening banks' ability to provide financing to the economy.

Table 1 FD-GMM, SYS-GMM, FEM dan PLS Estimation Result

Variable	FD-GMM	SYS-GMM	FEM	PLS
L1.LCR	0.26358922***	0.56564673***	0.53313615***	0.69911793***
GWM	0.03513937***	0.04022619***	0.04022954**	0.03500841*
LGDP	-0.46813863***	-0.32233965***	-0.77362355***	-0.35893749
INF	-0.04692309***	-0.02267928***	-0.0396222	-0.01740949
LBANK	0.45888382***	0.33687085***	0.48114003***	0.40379921***
BIRATE	0.04115653***	0.01825716***	0.03502229	0.01761815
LDPK	0.21302538***	0.04950973***	0.05885906	-0.10317512*
cons.	11.364233***	7.837057***	16.095299**	7.8946525

Note: significant probability at the rate of α * 0.05; ** 0.01; *** 0.001
Source: Output Stata

Across specifications in Table 1, credit displays strong persistence. The SYS-GMM coefficient on lagged credit (α=0.5656; p<0.001) indicates gradual adjustment, consistent with relationship lending and adjustment costs documented in the bank-lending-channel literature (Kashyap & Stein, 2000; Gambacorta, 2005; Berger & Udell, 2002). In dynamic panels, this persistence also implies that short-run impacts can cumulate into larger long-run effects.

Table 2 Sargan Test and Arellano-Bond Estimation Result

Sargan-Test	P_{value}
39.76524	0.1627
A-B Test	P_{value}
AR (1)	0.1459
AR (2)	0.7299

Source: Stata Output

Diagnostics (Table 2) are supportive. The overidentification test does not reject instrument validity (Sargan p=0.1627). The Arellano–Bond test shows no evidence of second-order serial correlation in differenced residuals (AR (2) p=0.7299), the key requirement for consistency (Arellano & Bond, 1991; Roodman, 2009).

Tabel 3 SYS-GMM Estimation Results

LCR	**Coefficient**	**Error Standards**	**p-value**
L1.LCR	0.5656467	0.0040176	0.000
GWM	0.0402262	0.0015462	0.000
LGDP	-0.3223397	0.0371132	0.000
INF	-0.0226793	0.0030295	0.000
LBANK	0.3368709	0.0165424	0.000
BIRATE	0.0182572	0.0020066	0.000
LDPK	0.0495097	0.0115485	0.000
cons.	7.837057	0.8356852	0.000

Source: Stata Output

Based on the SYS-GMM estimates, the intercept (7.837) represents a baseline log level of lending; however, because several regressors are logged and a "zero-covariate" scenario is not economically meaningful, the analysis focuses on the slope coefficients and their dynamic effects.

The specification is empirically well-justified for bank credit because lending is typically persistent, and this is confirmed by the positive and highly significant coefficient on the lagged dependent variable **(*L1.LCR* = 0.5656)**. This magnitude implies partial adjustment: ceteris paribus, a 1% increase in last year's credit is associated with a 0.566% increase in current credit, consistent with relationship lending, multi-period credit contracts, and balance-sheet adjustment costs that make lending growth inherently inertial.

From an identification standpoint, the credibility of the SYS-GMM results is supported by the overidentifying restrictions and serial-correlation diagnostics: the Sargan test does not reject instrument validity ($p = 0.1627$), and the Arellano–Bond tests show no evidence of second-order serial correlation in the differenced residuals (AR(2) $p = 0.7299$), which is the key condition for lagged instruments to be valid in dynamic panel GMM (Arellano & Bond, 1991). Taken together, these diagnostics indicate that the estimator is appropriate for capturing the dynamic relationship between policy instruments and lending in a setting where simultaneity and endogeneity are plausible.

The statutory **reserve requirement (GWM)** enters with a positive and statistically significant coefficient (0.0402; $p < 0.001$), meaning that holding other factors constant a 1 percentage point increase in GWM is associated with a 0.040 increase in log credit (a semi-elasticity in this specification). At first glance, the positive sign appears to contradict the conventional "reserve tax" view (often associated with the idea that higher reserve requirements mechanically reduce loanable funds and thus constrain lending).

However, recent literature emphasizes that reserve requirements are not purely a mechanical constraint; rather, they are frequently deployed as a state-contingent liquidity-management and macroprudential instrument whose reduced-form association with credit can differ across regimes, policy mixes, and bank balance-sheet structures. For example, (Cantú et al., 2024) a trade-off in which tightening reserve requirements tends to reduce the amplitude of the credit cycle and lower the probability of financial stress episodes, while the size and even the timing of credit responses depend on institutional design and broader policy conditions especially in emerging markets.

Complementing this perspective, recent theoretical work also treats reserve requirements as an “old-but-new” instrument that can be actively used to steer funding and lending conditions alongside the policy rate in ample-reserves environments, rather than as a blunt substitute for interest-rate policy (Fegatelli, 2024).

In the Indonesian context (2014–2023), a positive reduced-form coefficient is consistent with two non-mutually-exclusive mechanisms: (i) a policy-reaction channel, in which GWM is adjusted in response to cyclical conditions (eg, raised when credit and liquidity are strong to absorb excess liquidity, and lowered during stress to support intermediation), so that GWM and credit may move in the same direction in annual data; and (ii) a balance-sheet adaptation channel, whereby banks—especially those with stronger deposit bases and larger balance sheets—absorb higher reserve requirements by adjusting funding composition and liquid-asset holdings without proportionately contracting credit, as suggested by studies highlighting that regulatory constraints and reserve distribution shape banks’ ability to convert liquidity into lending (Kuang et al., 2024).

This interpretation also aligns with the mixed empirical evidence you cite:

while several studies find negative or insignificant effects of reserve requirements on lending in other settings, other findings (Bush et al., 2021; Ertan & Kıran, 2021; Orji et al., 2019; Yang & Yi, 2020) support non-negative or heterogeneous responses once policy interactions and bank adjustment margins are considered. Macroeconomic controls behave in economically meaningful ways but also reveal important non-linearities in the credit–cycle nexus.

GDP (log) has a negative and significant coefficient (−0.3223; $p < 0.001$), implying that a 1% increase in GDP is associated with a 0.322% decline in bank credit in the short run, conditional on other controls. This runs counter to the simplest Harrod–Domar intuition (growth → investment → credit) but is consistent with a more banking-centered view in which stronger output growth can coincide with tighter underwriting or shifting financing patterns.

One plausible mechanism is that, during expansions—particularly in post-shock or normalization phases—banks may adopt more conservative credit standards to protect asset quality, increasing collateral requirements and tightening screening to prevent future NPL deterioration, which can dominate the demand-side effect (Tao & Xu, 2019); (Shingjergji & Hyseni, 2015). Another mechanism is financing substitution: as the economy strengthens, larger firms may rely more on internal funds or market-based financing, reducing incremental demand for bank credit, so aggregate bank lending can decelerate even when output rises. In this sense, the negative GDP coefficient can be read as evidence that, over 2014–2023, Indonesian bank lending was shaped not only by procyclical demand, but also by bank risk management and structural shifts in financing an interpretation that is consistent with findings of GDP–credit sign reversals in some bank-panel settings (Kim Nguyen et al., 2022; Tao & Xu, 2019).

Inflation, in turn, is negative and significant (−0.0227; $p < 0.001$), consistent with Fisher-type channels and credit-risk considerations: higher inflation raises nominal rates and uncertainty, erodes real repayment capacity, and typically prompts banks to tighten underwriting due to higher default risk, reducing loan growth (Riani et al., 2018; Sinaga et al., 2020). This result is also coherent with broader macroprudential arguments that price instability worsens intermediation quality and increases precautionary behavior by lenders, reinforcing the importance of maintaining a stable inflation environment for sustained credit expansion.

Bank-specific fundamentals reinforce standard intermediation theory. **Bank size (log assets)** is positive and highly significant (0.3369; $p < 0.001$), indicating that larger banks extend more credit, consistent with stronger capital buffers, better diversification, superior screening technology, and wider access to funding markets. This supports evidence from Indonesian banking that asset scale is associated with greater lending capacity (Adnan et al., 2016) and is theoretically aligned with liquidity creation arguments whereby banks transform deposits and other liabilities into illiquid loans, expanding the effective supply of liquidity (Diamond & Rajan, 2001). Third-party funds (log DPK) are also positive and significant (0.0495; $p < 0.001$), implying that a 1% increase in deposits is associated with about a 0.050% increase in credit; this finding is consistent with loanable-funds logic and Indonesian evidence that deposit growth strengthens banks' funding base and facilitates credit expansion (Sinaga et al., 2020; Wuryandani et al., 2014) Importantly, the joint significance of size and deposits also provides a coherent explanation for why reserve requirements do not necessarily appear contractionary in this sample: banks with large balance sheets and strong deposit franchises may be better able to accommodate higher reserve holdings while maintaining loan supply, especially if reserve changes are not binding for all banks equally and if the distribution of reserves is uneven across institutions precisely the type of heterogeneity highlighted in recent evidence on reserve holdings and lending responses (Kuang et al., 2024).

Finally, the **BI Rate** enters positively and significantly (0.0183; $p < 0.001$). While liquidity preference and standard demand-side channels predict a negative relationship between policy rates and credit demand, the positive coefficient is defensible in an emerging-market policy mix for at least two reasons. First, it can reflect a policy-reaction component: policy rates are typically raised when the economy is recovering or overheating periods in which credit is already strengthening so the reduced-form association can turn positive even if the structural demand effect is negative. Second, the supply-side margin channel can dominate in bank-level data: higher policy rates can widen spreads and improve bank earnings, strengthening capitalization and risk-bearing capacity and thereby supporting loan supply, particularly when borrowers' liquidity needs are relatively inelastic or when credit is essential for working-capital financing (Fegatelli, 2024; Kuang et al., 2024; Okey Onoh & Timothy Nwachukwu, 2017; Sinaga et al., 2020).

The coefficients indicate that Indonesian bank lending during 2014–2023 evolved within a multi-instrument policy setting where liquidity management (GWM), the conventional monetary stance (BI Rate), macroeconomic conditions (GDP and inflation), and banks' balance-sheet capacity (assets and deposits) jointly shaped credit dynamics. In this context, reserve requirements appear less as a purely mechanical constraint and more as a stabilizing device whose relationship with lending depends on banks' funding resilience and the prevailing policy regime consistent with post-2020 evidence that frames reserve requirements as an active, state-contingent tool within modern monetary and macroprudential policy frameworks.

CONCLUSION

This study examines the impact of the Statutory Reserve Requirement (GWM), Gross Domestic Product (GDP), Inflation, Bank Size, BI Rate, and Third-

Party Funds (DPK) on credit distribution in conventional commercial banks listed on the Indonesia Stock Exchange from 2014 to 2023. The findings indicate that GWM is ineffective in managing liquidity, as banks maintain stable credit distribution through diversified funding sources. GDP and inflation negatively affect credit distribution, with economic growth prompting cautious lending due to higher default risks, and inflation increasing credit risk. Conversely, larger banks and higher DPK levels positively influence credit distribution, while a rising BI Rate allows banks to expand credit financing by adjusting lending rates. To enhance monetary policy effectiveness, Bank Indonesia should reassess GWM policies to ensure alignment with liquidity management and economic stability. Banks must adopt adaptive credit distribution strategies, balancing interest income growth with borrowers' repayment capacity and strengthening liquidity through attractive deposit products. Future research should expand the scope to all conventional banks in Indonesia and consider additional macroeconomic variables to provide a more comprehensive analysis of credit distribution determinants. These efforts will contribute to a more resilient financial system and effective monetary policy implementation.

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