Examining the Impact of Liquidity and Deposits on Loan Growth in the Philippines[1,2]

This article explores the influence of recent shifts in liquidity and deposit trends on shaping loan growth in the Philippine banking system. Specifically, it analyzes the roles of both sides of the bank balance sheet: on the asset side, how variations in the composition of liquid assets—such as cash, central bank deposits,[3] and government securities (GS)—affect banks' lending behavior; and on the liability side, how different deposit types shape loan growth, with emphasis on dynamics during the pandemic.

Stulz et al. (2024) noted two competing theoretical frameworks explaining the relationship between liquid assets and lending decisions. The deposit view treats liquid assets and loans as substitutes for each other. When deposits decline, banks with ample liquid assets tend to reduce their liquid holdings rather than cut back on lending to help preserve their loan portfolios. In contrast, the lending view considers liquid assets as complements to each other. Banks hold liquid assets to facilitate new lending, but reduce both liquid assets and lending when credit becomes less profitable.

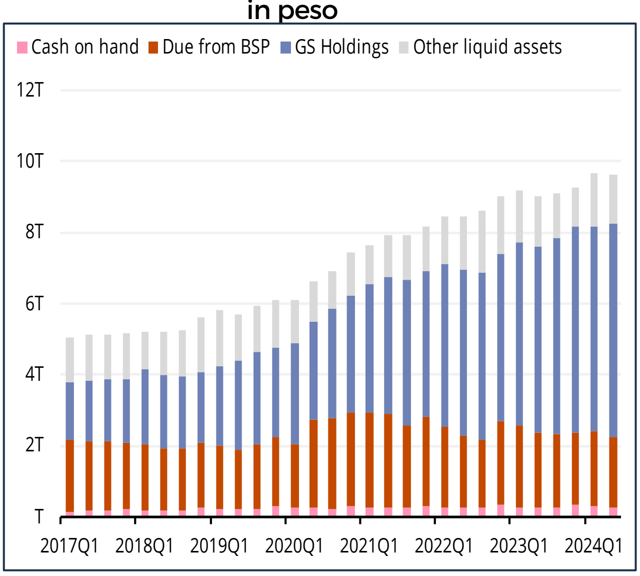
Some studies have shown that the type of deposit is crucial in determining a bank's lending capacity. For instance, Gambacorta and Mistrulli (2004) and Cornett et al. (2011) found that banks with a larger share of time deposits typically experience stronger loan growth, particularly during periods of funding stress or tight liquidity. These deposits are less prone to withdrawals, making them a reliable funding source for long-term lending. In contrast, demand and savings deposits, although abundant, are inherently more volatile, as they can be withdrawn at any time with limited penalty. Kashyap and Stein (2000) observed that banks with a higher proportion of demand deposits are less able to shield lending from liquidity shocks. Meanwhile, banks with more time deposits are better positioned to maintain or grow their loan portfolios.

Different effects of liquid assets on bank lending

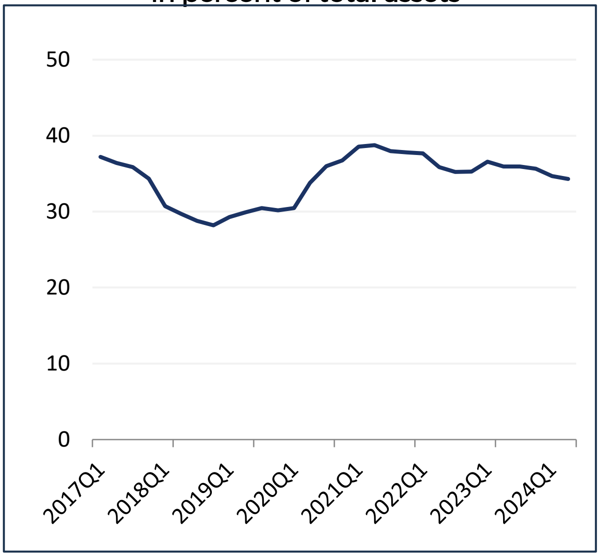
Since 2017, the various types of liquid assets in the Philippine banking system have exhibited diverging trends. BSP deposits have declined, GS holdings have increased, and cash levels have remained stable (*Figure 1-a*).[4] Nonetheless, the ratio of high-quality liquid assets (HQLAs) to total assets has remained relatively stable (*Figure 1-b*), as the diverging trends tended to offset one another. In addition, banks primarily hold Level 1 assets, which retain full value under regulatory liquidity coverage requirements due to the absence of haircuts.

Figure 1
High-Quality Liquid Assets and Components

(a) Components of aggregate liquid assets
in peso



(b) High-quality liquid assets
in percent of total assets



Source: Bangko Sentral ng Pilipinas staff calculations
Data is based on a sample of 60 universal, commercial, and thrift banks.
BSP – Bangko Sentral ng Pilipinas
GS – government securities

Results from dynamic panel generalized method of moments (GMM) models analyzing the assets and liabilities of Philippine banks from 2017 to 2024 confirm differences across liquid asset categories in influencing lending behavior (*Table 1*). Cash on hand and deposits with the BSP demonstrate a statistically significant positive relationship with lending growth. This supports the lending view of highly liquid assets complementing loan activities. In contrast, GS holdings appear to have a negative relationship with lending, consistent with the deposit view. These opposing effects explain why HQLA, when treated as a portfolio, does not show a significant overall effect on loan growth.

Table 1
Dynamic Panel Generalized Method of Moments Results

Dependent variable: Total loan portfolio	**1**	**2**
Lag of total loan portfolio	0.596***	0.695***
High-quality liquidity asset	**0.101**	
Cash and due from the Bangko Sentral ng Pilipinas		**0.085****
Government securities		**-0.049****
Capital adequacy ratio	-0.020	0.005
Non-performing loan ratio	-0.049**	-0.043*
Real gross domestic product growth	0.099	0.222**
Change in real weighted monetary operations rate	-0.015***	-0.011*
Change in credit standards	-0.001*	-0.001**
COVID-19 dummy	-0.001***	-0.001**
Autoregressive (2)	0.64	0.23
Hansen test	0.50	0.67
Instruments	31	32
Groups	45	45
Modified model selection criterion–Bayesian information criterion	-40.39	-61.99

Source: Bangko Sentral ng Pilipinas staff calculations

***, **, * denote significance at 1.0 percent, 5.0 percent, and 10.0 percent levels, respectively.

The Arellano-Bond estimator uses the first differences of endogenous variables along with their available lags. Robust standard errors were used to account for any patterns of heteroskedasticity and autocorrelation within panels. The number of groups dropped to 45–47 due to missing data.

Deposit growth drives future loan expansion

Evidence from Philippine banking data suggests that deposit growth serves as a forward-looking indicator for loan growth. Time-varying Granger-causality tests show that deposits (both M1 and M2, net of currency in circulation) help predict changes in the total loan portfolio. This predictive link weakened at the onset of the pandemic but has since re-emerged (*Figure 2*). Time deposits provide the most consistent predictive power, while demand and savings deposits display more episodic effects.

Figure 2
Time-Varying Granger Causality
total deposits growth to total loan portfolio growth

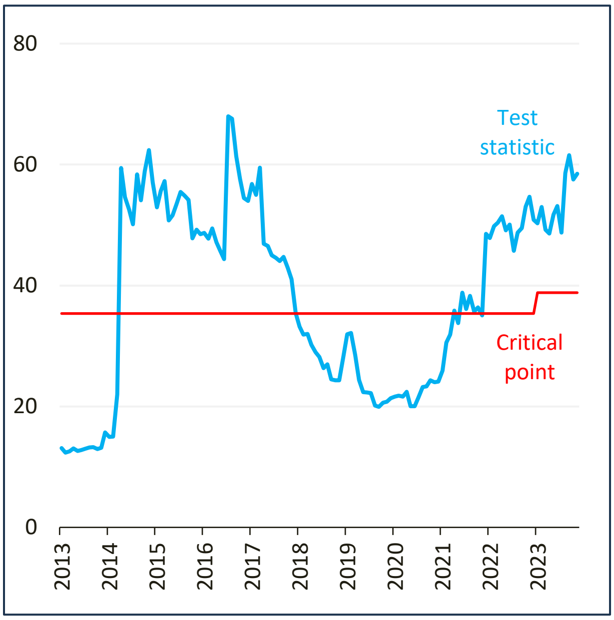
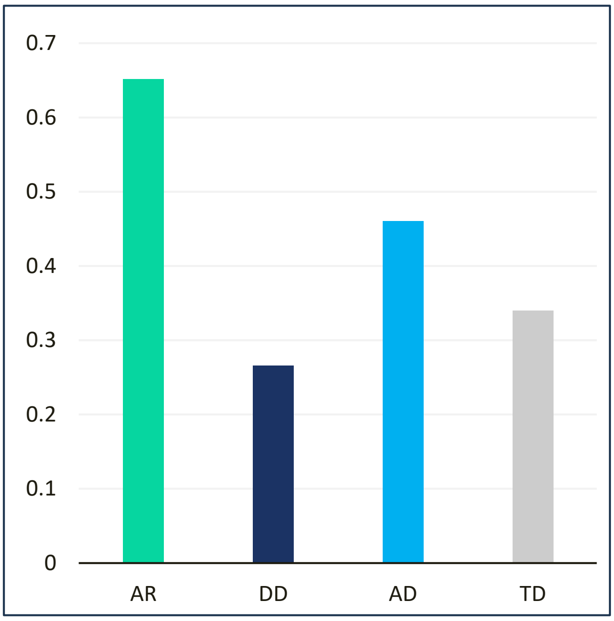


Figure 3
Forecast Errors of Vector Autoregression Models
mean absolute error; in percentage points
2024



Source: Bangko Sentral ng Pilipinas staff calculations

The red line shows the critical point at the 5 percent significance level. The blue line shows the test statistic. If the blue line exceeds the red line, it indicates that total deposit growth Granger causes loan growth.

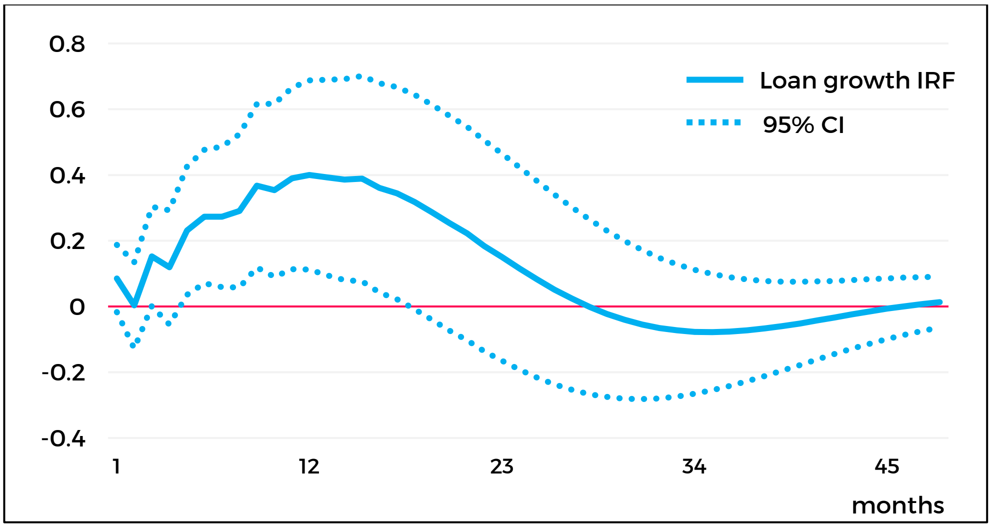
AR – autoregressive
DD – demand deposit
AD – all deposits
TD – time deposits

Forecasting exercises reinforce this finding. Models incorporating deposit growth outperform an autoregressive benchmark that relies only on past loan growth when predicting near-term loan growth (*Figure 3*). Impulse response estimates from a structural vector error correction model suggest that a positive deposit shock is followed by a meaningful rise in loan growth over the following year (*Figure 4*). This suggests that deposits not only predict but also fuel lending, consistent with the intuition that deposits are the source of loans.

Figure 4

Impulse Response of Loan Growth

estimated loan growth response to 1.0 percent deposit growth shock; in percent



Source: Bangko Sentral ng Pilipinas staff calculations
IRF – impulse response functions
CI – confidence interval

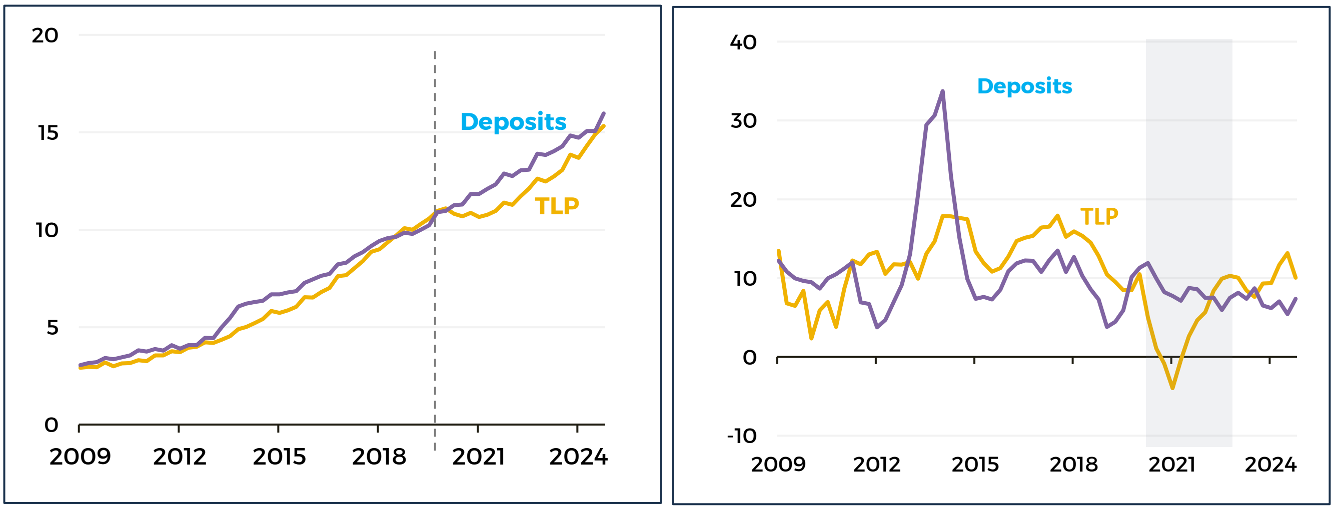
During the pandemic, liquidity surged while loan growth slowed amid heightened uncertainty, temporarily weakening the deposit-credit link (*Figure 5*). As economic uncertainty dissipated, the relationship between deposits and lending strengthened anew. Overall, the evidence supports the view that deposit growth is a useful predictor of and contributor to future loan growth, with the strongest and most reliable signal emanating from time deposits.

Figure 5

The total loan portfolio and deposits continue to show strong growth.

(a) Gross total loan portfolio and deposits
in trillion pesos

(b) Year-on-year total loan portfolio and deposits
in percent



Source: Bangko Sentral ng Pilipinas staff calculations
The deposit series is defined as M2, less currency in circulation.

In summary, this analysis found that the composition of liquid assets banks hold and the stability of their deposit base—especially the share of time deposits—are critical in supporting lending, particularly during periods of economic stress. This underscores that a strong, stable funding structure of the balance sheet allows banks to maintain and expand credit, thereby supporting financial system resilience and broader economic growth.

ENDNOTES

1/ This article was written by Shirra Jazel L. de Guia and Eduard Renzo D. Santos of the Department of Economic Research.

2/ This report was refined with the assistance of generative artificial intelligence (GenAI) tools on the Perplexity platform. The use of GenAI was limited to enhancing conciseness and readability.

3/ This includes banks' demand deposit accounts and placements in BSP liquidity facilities.

4/ Cash on hand, bank reserves, BSP deposits, and GS are classified as Level 1 assets under the HQLA framework, meaning they are highly liquid and retain their full value for regulatory purposes.

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