

DETERMINANTS OF BANK LIQUIDITY IN SELECTED ASIAN COUNTRIES

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Abstract: *Liquidity is essential to the stability and operational continuity of commercial banks, particularly in emerging markets with varying regulatory maturity and macroeconomic conditions. This study proposes a framework to examine the determinants of liquidity among commercial banks in Asian countries, mainly India, Indonesia and Turkiye. Specifically, this study evaluates the interconnectedness of asset size, capital adequacy ratio, profitability and credit risk in shaping a bank's liquidity position. The study develops a conceptual framework and corresponding hypotheses to explain how these internal financial characteristics may shape a bank's ability to maintain adequate liquid reserves. By integrating multiple bank-specific determinants into a single framework, this study addresses gaps in prior research that examined these factors in isolation, offering deeper insight into liquidity management across diverse Asian banking environments. The proposed framework is intended to guide future empirical analysis and offers practical implications for bank managers and regulators seeking to strengthen liquidity management practices in the region.*

Keywords: *Bank Liquidity, Asset Size, Capital Adequacy Ratio, Profitability, Credit Risk*

Introduction

Bank liquidity refers to a bank's ability to maintain enough cash or liquid assets to meet its short-term financial obligation. Maintaining adequate liquidity is important because it allows banks to continue their operations smoothly while maintaining the confidence of customers and investors. However, insufficient liquidity may disrupt banking operations and weaken the stability of the financial system (Vodova, 2013). Therefore, understanding the factors that influence bank liquidity is essential for banks to improve liquidity management and maintain financial stability, particularly in the Asian banking sector where financial systems seem to differ across countries.

Furthermore, the Asian banking sector provides an important setting for studying liquidity because countries within the region have different regulatory frameworks, economic conditions, and levels of financial development. With these differences, it may influence how banks manage their liquidity positions. Although bank liquidity is widely recognized as an important factor in financial stability, previous studies have shown mixed findings on the determinants of bank liquidity. The findings remain inconsistent regarding how bank-specific factors such as asset size, capital adequacy, profitability and credit risk influence liquidity. In addition, many previous studies have examined these factors individually instead of considering their overall impact on bank liquidity (Ghenimi et al., 2020). This makes it difficult to understand how multiple factors collectively influence bank liquidity and financial risk.

Therefore, to address these gaps, this study aims to examine the determinants of bank liquidity by analysing four bank-specific variables which is asset size (SIZE), capital adequacy (CAR), profitability measured by return on assets (ROA), and credit risk measured by non-performing loans (NPL). The study analyses data from 122 commercial banks across three countries, namely India, Turkiye and Indonesia over the period from 2015 to 2025. By examining these variables together, this study provides a broader understanding of the factors that influence bank liquidity in the Asian banking sector.

The findings of this study are expected to provide benefits and useful insight for bank managers and regulators in improving liquidity management practices and strengthening financial stability in the banking sector. Furthermore, this study contributes to existing literature by providing research findings on the determinants of bank liquidity among selected Asian countries.

Literature Review

This section defines bank liquidity and explains how it is measured using financial ratios. Second, it looks at asset size as one of the key determinants of bank liquidity. Third, it examines the capital adequacy ratio and its relationship with liquidity. Fourth, it discusses profitability and how it influences a bank's liquidity position. Finally, it reviews credit risk and its effect on bank liquidity.

Liquidity

Liquidity refers to a bank's ability to meet its short-term financial obligations and unexpected cash demands without affecting its normal operations. In the banking industry, It is widely acknowledged as a vital indicator of a bank's financial health because it allows banks to meet withdrawal demands, support lending activities and maintain operational stability. According to Al-Homaidi et al. (2019), sufficient liquidity is crucial for maintaining effective banking functions and fostering financial success. Likewise, Ahamed, (2021) noted that liquidity allows banks to fulfil their commitments when required, thus minimizing the chances of financial hardship and operational interruptions. Therefore, liquidity is extensively utilized in banking research as an indicator of a bank's capability to handle its financial assets efficiently.

Furthermore, previous research has emphasized the significance of liquidity management for sustaining banking stability and reducing financial risk. Banks commonly maintain liquidity buffers and liquid assets to protect themselves against unexpected withdrawals and adverse market conditions (Ke et al., 2025). Inadequate liquidity management may expose banks to liquidity shortages, reduce public confidence and threaten overall financial stability (Agarwal, 2019). In addition, previous studies have reported that bank liquidity is influenced by both bank-specific and macroeconomic factors, including asset size, capital adequacy ratio, profitability and credit risk. Therefore, liquidity remains an important area of study in banking research, particularly in developing and emerging economics where banking systems operate under different economic conditions.

Asset Size

Asset size is one of the important aspects of a bank's financial strength and is measured by the total assets. Based on liquidity theory, stronger financial resources and better access to external financing and being able to manage liquidity more effectively refer to larger banks. Several studies support this positive relationship, namely Rashid et al. (2020) found that larger banks in Malaysia hold more liquid reserves, as their greater resources and stronger management systems help them handle credit supply more effectively. In addition, Ke et al. (2025) also argues that bank liquidity in emerging Asian markets is affected by the positive and significant effects of its location. Similarly, Çakmak and Sunal (2024) found that diversifying investments can maintain better liquidity for larger Islamic banks. Meanwhile, Shaheen et al. (2025) concluded that larger banks in Pakistan hold higher levels of liquid assets due to their stronger financial position.

Overall, asset size has a positive relationship with bank liquidity as shown by these studies. By having larger financial resources, diverse primary sources and better liquidity management practices, larger banks are generally better able to maintain adequate liquidity than smaller banks. This finding is supported by the Financial Intermediation Theory, which explains that banks perform the role of financial intermediaries and collect deposits and allocate funds efficiently. Therefore, in order to maintain financial stability and manage liquidity, it is necessary to increase asset size to improve bank capacity.

Capital Adequacy Ratio

Capital Adequacy Ratio (CAR) is recognised as one of the key indicators of a banks' financial strength and its ability to maintain adequate liquidity. Previous empirical studies have found that there is a positive relationship between CAR and bank liquidity (Agarwal, 2019), (Al-

Homaidi et al., 2019), (Ahamed, 2021), (Chi Teoh & Chandra Kumar, 2023). Based on the result, capital adequacy ratios help reduce the danger of insolvency by lowering the risk of liquidity (Agarwal, 2019). The Reserve Bank of India (RBI) should establish benchmarks for the capital adequacy ratio to ensure seamless liquidity for commercial banks in India by prioritising asset quality to enhance bank performance (Al-Homaidi et al., 2019). The study also showed a positive relationship but insignificant between liquidity level and capital adequacy, yet the bank must carefully evaluate the factors to avoid future liquidity risk (Ahamed, 2021).

Collectively, previous studies demonstrate that banks with stronger capital positions are generally more capable of maintaining adequate liquidity in the Asian banking sector. This finding can be explained by Shiftability Theory, it advises the banks to have enough assets that can be turned into cash to meet liquidity demands during times of financial crisis. Although the capital adequacy ratio focuses on a bank's capital strength rather than the asset liquidity. A larger capital base provides an additional financial buffer against unexpected losses and improves the bank's capacity to maintain liquidity stability. This implies that liquidity is directly connected with capital adequacy, as more capital is needed to raise the bank's liquidity (Chi Teoh & Chandra Kumar, 2023).

Profitability

Profitability reflects a bank's ability to generate earnings effectively and is widely regarded as an important indicator of financial performance. It is typically measured using ratios such as Return on Assets (ROA) or Return on Equity (ROE) to standardize performance comparisons. Higher profitability strengthens a firm's financial position by providing an internal capital buffer, increasing investor confidence, and improving long-term liquidity management. Previous studies on the relationship between profitability and liquidity have yielded varied results across different markets and sectors. Wasiuzzaman (2018) found that profitability significantly influences liquidity among Malaysian SMEs, though its impact diminishes at exceptionally high liquidity levels where firms have less incentive to accumulate additional cash. Next, Iswardhani (2025) demonstrated that higher profitability (ROA) signals management quality and capital growth, driving positive market responses and higher stock prices in Indonesian banking while Al-Homaidi et al. (2019) revealed mixed internal impacts on Indian commercial banks, where ROA had a significant positive impact on liquidity, but ROE exhibited a significant negative impact. However, (Aqel, 2022), conversely, found that profitability was not statistically significant in determining bank liquidity for commercial banks in Palestine.

Overall, the existing literature indicates that profitability plays an important role in influencing bank liquidity. This relationship is strongly supported by Agency Theory, which posits that high profitability reflects efficient management choices and the optimal use of resources. Profitable banks build robust internal funds, reducing their dependence on costly external financing and enabling management to maintain adequate liquidity and long-term financial stability.

Credit Risk

Credit risk is the risk that a borrower will default on its payments on the loan, causing an economic loss to banks Anthony. Generally, its magnitude is measured by the Non-Performing

Loan (NPL) ratio, the ratio of loans defaulted to all the loans. The higher the NPL ratio, the lower the quality of the loans and the higher the exposure to credit risk, and its adverse impact on the bank's ability to keep their liquidity adequate. In the past, credit risk has been among the factors which has been identified as an important factor in bank liquidity. Al-Homaidi et al. (2019) emphasized that proper risk management is crucial to minimize liquidity risk and ensure stability in the banking sector. In addition, banks with a higher credit risk are less liquid. Likewise, Bouslimi et al (2024) said that as the credit risk increased, it led to a decrease in the liquidity of banks, as they would need to spend more resources to absorb possible losses on their loans.

Overall, existing empirical literature indicates that the credit risk is significantly negatively associated with bank liquidity. Higher credit risk banks could face liquidity problems as their non-performing loans grow. The relationship is consistent with the Liquidity Risk Theory which provides that an increase in the credit risk will lead to increase in liquidity pressure due to decreasing liquid resources.

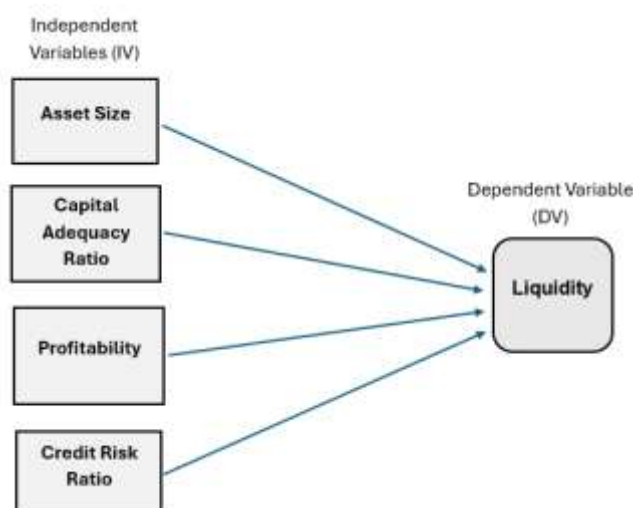


Figure 1: Theoretical Framework

Figure 1 illustrates the theoretical framework adopted in this study to examine the relationship between the independent variables (IV) and the dependent variable (DV). Under this framework, liquidity is identified as the dependent variable while the four independent variables are proposed to influence the liquidity, namely Asset Size, Capital Adequacy Ratio, Profitability and Credit Risk Ratio.

H1: Asset Size has a significant positive relationship with bank liquidity.

H2: Capital Adequacy Ratio has a significant positive relationship with bank liquidity.

H3: Profitability has a significant positive relationship with bank liquidity.

H4: Credit Risk Ratio has a significant negative relationship with bank liquidity.

Discussion

The framework suggested that research focuses on four specific characteristics of banks anticipated to influence the liquidity results among commercial banks in India, Turkiye and Indonesia namely asset size, capital adequacy ratio, profitability and credit risk. Each variable

has its own theoretical rationale and collectively tackles a crucial gap by examining these interrelated variables. This framework integrates them into a single model to provide a more comprehensive understanding of liquidity that drives liquidity across diverse Asian banking environments.

The hypothesis of a significant positive relationship between asset size and bank liquidity is based on the expectation that larger banks have more funds to finance and more deposits to manage. That being said, generally it will establish a more robust reputational presence and easier access to obtain external funding like interbank lending. This enables them to keep more liquidity than smaller financial institutions. It is consistent with the (Rashid et al, 2020) study in Malaysia and (Ke et al, 2024) study of emerging Asian countries which found that larger banks were better able to maintain sufficient liquidity reserves. Thus, if this pattern persists across the four countries examined, it suggests that scale makes a major contribution to the liquidity resilience of smaller institutions, which may not enjoy the same ability to access funding markets.

In the context of capital adequacy ratio, it also has a significant positive relationship with bank liquidity. Banks that possess higher levels of capital are typically more capable of absorbing unforeseen losses and enduring financial disruptions while continuing their regular operations. A solid capital position improves a bank's financial stability and decreases the chances of facing liquidity difficulties during uncertain times. Because of this, banks with sufficient capital are better equipped to have adequate liquidity available to fulfill withdrawals and other commitments. Thus, increased capital levels enhance trust among depositors and investors, leading to a more stable funding foundation and aiding in liquidity management.

Profitability is a strong internal variable of liquidity but this does not necessarily hold true in all economic scenarios. This relationship can be best illustrated by Al-Homaidi et al. (2019) who showed that ROA has a strong positive impact on institutional liquidity with confirmation that the better management performs in terms of utilizing assets to accumulate enough internal buffers, the more positive the effect of ROA on institutional liquidity in Indian commercial banks. As in Agency Theory, good profitability signals good management, in turn enabling companies to generate good internal financing, which will reduce the need for external financing.

The relationship between credit risk and bank liquidity is likely to be negative and significant due to the fact that banks with high levels of non-performing loans will be more likely to suffer from liquidity constraints Bouslimi et al. (2024). If borrowers do not pay their loans, the lenders must make extra provisions to cover the losses and decrease their liquid assets to pay off their short-term obligations. Thus, well-managed credit risk allows banks to keep their financial stability and liquidity in good shape. This expectation is consistent with the results of Bouslimi et al. (2024), who found that higher credit risk leads to a decrease in banks' liquidity position, as it decreases the amount of financial resources at their disposal. Thus, if such a pattern holds true for the Indian banking sector as well as for the other countries studied, it would suggest that enhancing liquidity resilience through effective credit risk management is crucial for the stability of the banking sector in the longer-term.

Conclusion

Overall, this study highlights how asset size, capital strength and profitability work together to support bank liquidity, while credit risk tends to reduce it since non-performing loans use up funds that should be available for immediate needs. This means that banks, especially smaller ones with limited access to external funding, need to manage their credit risk properly and maintain sufficient capital in order to avoid liquidity constraints. Additionally, this research aids in providing a more transparent insight into the factors influencing liquidity in banking markets across emerging Asia, typically vulnerable to rapid expansion and economic fluctuations. For future studies, it would be good to include other factors such as macroeconomic conditions or regulatory policies to get a clearer picture of what affects bank liquidity in these emerging Asian countries.

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