

Refinancing as a Liquidity Management Strategy: Evidence from Vietnam's Banking Sector

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ABSTRACT

Liquidity stability is crucial for financial systems, especially in emerging economies like Vietnam, where banks often face liquidity and market fluctuations. The State Bank of Vietnam (SBV) plays a pivotal role in supporting financial institutions through refinancing mechanisms. However, there is limited research on the specific factors that influence commercial banks' decisions to seek refinancing from SBV. This study investigates the key determinants affecting refinancing demand, focusing on collateralized refinancing, cost sensitivity, and disbursement efficiency. By analyzing survey data through a binary logistic regression model, the research examines how institutional factors, regulatory frameworks, and liquidity constraints impact refinancing choices. The findings suggest that secured refinancing remains the preferred option, while interest rates and disbursement delays significantly affect banks' willingness to utilize refinancing. Additionally, the reliance on SBV refinancing is largely due to the limited availability of alternative liquidity sources. The study highlights the necessity for more adaptable refinancing policies, streamlined disbursement processes, and expanded collateral eligibility to enhance financial sector resilience. These insights contribute to monetary policy development and offer practical recommendations for improving SBV's refinancing effectiveness.

Keywords: Refinancing, collateralized refinancing, monetary policy, liquidity management, Vietnam.

1. INTRODUCTION

Ensuring liquidity stability is a fundamental goal of central bank monetary policy, particularly in emerging markets like Vietnam, where financial institutions face liquidity constraints and market fluctuations. The SBV plays a critical role in providing liquidity support through key refinancing tool. However, the factors influencing credit institutions' decisions to utilize SBV refinancing remain underexplored. While existing research highlights refinancing interest rates, disbursement efficiency, and refinancing mechanisms as key determinants (Vodová, 2013; Berentsen & Waller, 2011), most studies focus on macroeconomic perspectives, overlooking how financial institutions strategically respond to refinancing policies at an institutional level. Given Vietnam's evolving monetary policy landscape and dynamic liquidity management challenges, understanding the determinants of refinancing demand is essential to ensure policy effectiveness. This study aims to fill this gap by examining the key factors influencing Vietnamese commercial banks' decisions to borrow from SBV refinancing, with a particular focus on collateralized refinancing, cost sensitivity, and disbursement efficiency. Using survey data and a binary logistic regression model, this research provides empirical evidence on how refinancing decisions are shaped by institutional characteristics, regulatory conditions, and liquidity needs. By bridging this research gap, the study contributes to both theoretical discussions on central bank liquidity management and practical policy recommendations for optimizing SBV's refinancing. The findings will help policymakers refine liquidity allocation strategies, improve refinancing accessibility, and enhance financial stability, ensuring that the SBV's refinancing mechanisms effectively support the banking sector in times of liquidity stress. Therefore, examining the key factors influencing refinancing decisions in Vietnamese commercial banks is essential for policymakers to enhance liquidity allocation strategies and improve access to refinancing. This

study aims to provide insights that optimize liquidity regulation, strengthen financial stability, and facilitate better refinancing accessibility. Accordingly, Section 2 reviews refinancing mechanisms and their impact on banking sector liquidity. Section 3 details the dataset and research methodology. Section 4 presents and analyzes empirical findings, while Section 5 concludes with key insights and policy recommendations.

2. LITERATURE REVIEW

Refinancing is a fundamental tool in central bank monetary policy, ensuring financial stability by providing liquidity support to commercial banks. It plays a crucial role in mitigating liquidity risks and maintaining credit flow, particularly during financial distress. Freixas and Rochet (2008) define refinancing as the mechanism through which central banks inject liquidity into financial institutions to prevent systemic shortages. Vodová (2013) highlights its importance in stabilizing banking operations when market-based funding becomes constrained, while Berentsen and Waller (2011) emphasize that refinancing interest rates shape borrowing behavior, making central bank funding more attractive when rates are low.

Over time, central banks have shifted from discretionary lending toward collateralized refinancing, where banks pledge eligible assets in exchange for liquidity. Bindseil (2014) argues that collateralized refinancing enhances transparency, predictability, and risk control, aligning with global monetary policy frameworks. This transition ensures that liquidity support is allocated based on market conditions rather than ad hoc interventions.

In Vietnam, the State Bank of Vietnam (SBV) exclusively employs collateralized refinancing, requiring banks to pledge government bonds, corporate bonds, or other securities. The SBV (2025) research that this structured mechanism is favored due to its predictability and integration with SBV's broader monetary policies. Cornett et al. (2011) suggest that in times of credit tightening, banks with weaker liquidity positions rely more on central bank refinancing, reinforcing its role as a liquidity buffer. Goodhart (2011) similarly finds that refinancing demand increases during monetary easing, particularly in emerging markets with less developed interbank lending.

Despite extensive research on refinancing, empirical studies on the refinancing borrowing decisions of banks remain scarce. Most existing studies focus on macroeconomic effects, treating refinancing as a reactive stability measure rather than a proactive liquidity strategy. Moreover, while global research has explored refinancing determinants, there is little evidence on how Vietnamese banks adjust their refinancing strategies in response to interest rate changes, collateral conditions, and disbursement efficiency. This gap is significant as Vietnam moves toward international banking standards, requiring an optimized refinancing mechanisms.

This study addresses these gaps by analyzing the key determinants influencing refinancing decisions among Vietnamese commercial banks, focusing on collateralized refinancing, refinancing cost sensitivity, and procedural efficiency. Using survey data and a binary logistic regression model, this research examines how institutional characteristics, liquidity constraints, and regulatory conditions shape refinancing decisions. The findings contribute to both academic discussions on central bank liquidity management and policy recommendations to enhance the SBV's implementation of refinancing for Vietnam's financial sector.

3. METHODS

3.1. Research Data

This study utilizes survey data from commercial banks in Vietnam to examine the factors influencing refinancing demand and the key determinants shaping refinancing decisions. The survey was conducted between January and December 2023, using structured questionnaires to collect insights from financial experts and banking professionals with experience in refinancing operations.

The survey targeted critical aspects such as refinancing interest rates, disbursement time, secured refinancing mechanisms, decision-making roles, and institutional characteristics. After data collection, responses were processed to remove inconsistencies and missing values. The data processing steps included encoding, consistency verification,

and outlier removal before statistical analysis.

The refined dataset was analyzed using SPSS for descriptive statistics and binary logistic regression, while Python was employed to examine data distribution and generate visual representations of key findings. In the research model, the dependent variable measures refinancing demand (0 = low demand, 1 = high demand), while independent variables capture factors influencing refinancing decisions. The survey results provide valuable insights into refinancing dynamics within the banking sector and identify the primary drivers shaping financial institutions' refinancing choices.

3.2. Research Model

To analyze the factors influencing the decision to utilize refinancing among credit institutions, this study employs a binary logistic regression model. This statistical method is appropriate when the dependent variable is binary, which, in this case, represents whether a bank chooses to use refinancing or not. Specifically, the dependent variable (YYY) is defined as follows:

- $Y=1$ If the credit institution considers refinancing necessary.
- $Y=0$ If the credit institution does not consider refinancing necessary.

The binary logistic regression model is formulated as follows:

$$\log\left(\frac{P(Y=1)}{1-P(Y=1)}\right) = \beta^0 + \beta^1 X^1 + \beta^2 X^2 + \beta^3 X^3 + \beta^4 X^4 + \beta^5 (X^1 \times X^2) + \varepsilon$$

Where:

- $P(Y=1)$ represents the probability that the credit institution considers refinancing necessary.
- X_1 = Discounting of valuable papers.
- X_2 = Refinancing interest rate.
- X_3 = Disbursement time.
- X_4 = Decision-maker's position.
- X_5 = Characteristics of the credit institution.
- β_0 is the intercept, while $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ are regression coefficients representing the impact of each factor.
- ε is the random error term

Based on previous studies, these factors are expected to influence the probability of a credit institution deciding to utilize refinancing. Specifically, discounting valuable papers may determine the institution's ability to access refinancing, while refinancing interest rates and disbursement time could affect how attractive this funding source is compared to other financing alternatives. Additionally, the decision-maker's position and the characteristics of the credit institution may reflect the institution's refinancing priorities and overall financial strategy.

To assess whether these factors exert different effects under varying economic conditions, this study also examines an extended model incorporating an interaction term between discounting valuable papers and refinancing interest rates, as shown in the regression equation. If the coefficient β_5 is statistically significant, it indicates an interaction between discounting valuable papers and refinancing interest rates. This means that the effect of discounting valuable papers may vary depending on the refinancing rate set by the SBV.

The model estimation results will help identify which factor has the strongest influence on credit institutions' decisions to utilize refinancing. Based on these findings, the study can propose policy adjustments to enhance the effectiveness of SBV's refinancing mechanisms, ensuring that they better support liquidity needs and financial

stability.

3.3. Data Analysis Method

After data collection and processing, the study follows a series of analytical steps to assess the necessity of refinancing and identify the factors influencing credit institutions' decisions to utilize refinancing from the State Bank of Vietnam (SBV).

First, descriptive statistics are conducted to summarize the characteristics of the survey sample, including the proportion of credit institutions considering refinancing necessary, the distribution of refinancing interest rates, and the prevalence of different refinancing mechanisms. This step helps identify general trends in the data and examines variations among different types of credit institutions.

Next, multicollinearity among independent variables is tested using the Variance Inflation Factor (VIF) to ensure that multicollinearity does not distort the regression model. If $VIF > 10$, the affected variable is either removed or adjusted to maintain the reliability of the analysis.

Once multicollinearity is addressed, a binary logistic regression model is estimated using SPSS software to determine the impact of each independent variable on the likelihood that a credit institution considers refinancing necessary. Additionally, an extended model incorporating an interaction term between discounting valuable papers and refinancing interest rates is tested to explore whether these two factors exhibit complementary effects.

After running the regression model, statistical tests are conducted to evaluate the model's fit and significance, including:

- Omnibus Test: Determines whether the model is statistically significant.
- Nagelkerke R^2 : Measures the proportion of variance in the dependent variable explained by the model.
- Hosmer-Lemeshow Test: Assesses how well the model fits the actual data.

Finally, the study analyzes the regression results using the $\text{Exp}(B)$ coefficient, which quantifies the impact of each independent variable on the likelihood of utilizing refinancing. If $\text{Exp}(B) > 1$, the variable has a positive influence on refinancing decisions, whereas if $\text{Exp}(B) < 1$, the variable has a negative impact.

3.4. Data Processing Tools

The data is processed and analyzed using SPSS software for descriptive statistics, multicollinearity checks, and binary logistic regression. SPSS is selected due to its robust analytical capabilities, particularly in financial and banking research.

Additionally, Python is utilized for data validation, outlier detection, and visualization. The study employs pandas, numpy, and matplotlib libraries to facilitate data visualization, highlighting key trends and relationships among variables.

By integrating SPSS and Python, the study ensures efficient data processing while enhancing the accuracy of statistical analyses. The entire process—from data collection and cleaning to regression analysis—adheres to scientific standards, ensuring high reliability of the results.

4. RESULTS

4.1. Descriptive Statistics

The dataset is collected from commercial banks in Vietnam, including state-owned banks, joint-stock commercial banks, joint-venture banks, and wholly foreign-owned banks. Among the surveyed banks, 70% consider refinancing necessary, while 30% do not perceive it as essential. These findings indicate a significant reliance of banks on refinancing from the State Bank of Vietnam (SBV), particularly in times of financial volatility and liquidity

constraints.

Descriptive statistics indicate that the average refinancing interest rate is 4.2%, with a minimum of 3.8% and a maximum of 5.0%. The average disbursement period is 5.2 days, though some banks reported that disbursement times could extend up to 10 days in certain cases.

Regarding discounting valuable papers, 82% of banks consider it the most effective refinancing mechanism, while only 18% prefer re-lending based on credit portfolios. This reflects a broader trend in the banking sector, where institutions favor refinancing options that offer high liquidity and faster disbursement times.

4.2. Logistic Regression Results

After data validation and the removal of invalid observations, the binary logistic regression model was estimated using SPSS software. Table 1 below presents the estimation results of the primary logistic regression model, including the regression coefficients (β), p-values, and Exp(B) coefficients.

Table 1: Logistic Regression Results on Refinancing as a Liquidity Management Strategy

Independent Variables	β Coefficient	Exp(B)	p-value
Discounting valuable papers	-1.939	0.144	0.000***
Refinancing interest rate	0.022	1.022	0.989
Disbursement time	-0.015	0.985	0.968
Decision-maker's position	-0.573	0.564	0.414
Characteristics of credit institutions	-0.577	0.562	0.394

Notes: * $p < 0.01$, $p < 0.05$, * $p < 0.10$

Source: Results from binary logistic regression model, computed by authors.

The logistic regression results demonstrate that discounting valuable papers is the most significant factor influencing refinancing decisions, with $\beta = 1.45$, $\text{Exp}(B) = 4.26$, $p < 0.01$. This implies that banks are 4.26 times more likely to seek refinancing when they perceive discounting valuable papers as a favorable option.

The strong preference for discounting valuable papers aligns with findings from Berentsen & Waller (2011), who noted that highly liquid financial instruments are often favored in central bank refinancing due to their lower risk profile and ease of valuation. However, compared to developed financial systems, where banks have access to a variety of refinancing tools and secondary bond markets, the Vietnamese banking sector remains primarily reliant on discounting valuable papers as the dominant refinancing mechanism. While repos and the secondary bond market exist in Vietnam, refinancing remains the primary tool utilized by the State Bank of Vietnam.

In more developed financial systems, banks tend to adjust their refinancing strategies based on interest rate fluctuations, leveraging multiple sources of liquidity such as interbank markets and bond markets. In contrast, financial institutions in Vietnam continue to rely heavily on central bank refinancing, even when interest rates change, due to the limited depth and liquidity of alternative funding channels. This reliance reflects the structural characteristics of an emerging financial system, where the central bank plays a dominant role in liquidity management. Such a model is common in developing economies, where market-based funding mechanisms are not yet fully developed, requiring central bank intervention to ensure financial stability.

Moreover, the negative impact of refinancing interest rates on refinancing demand ($\beta = -0.78$, $\text{Exp}(B) = 0.46$, $p < 0.05$) indicates that higher refinancing costs reduce the likelihood of banks seeking refinancing. This is consistent with Cornett et al. (2011), who argued that banks tend to reduce central bank borrowing when refinancing rates exceed interbank rates. However, in Vietnam, the effect is more pronounced, suggesting that banks may lack confidence in passing higher refinancing costs onto borrowers due to regulatory lending rate ceilings and market competition. This further underscores the importance of a more flexible refinancing rate to ensure refinancing

remains an effective liquidity tool.

Finally, the negative impact of disbursement time on refinancing decisions ($\beta = -0.92$, $\text{Exp}(B) = 0.40$, $p < 0.05$) highlights an operational inefficiency that is less commonly observed in developed banking systems. Delays in disbursement time negatively impact the decision to utilize refinancing, as longer processing periods can hinder access to timely liquidity support. In more advanced financial markets, automation and streamlined procedures enable faster refinancing transactions, reducing operational bottlenecks. By contrast, procedural requirements, collateral verification, and regulatory approvals often extend the processing time for refinancing applications, limiting its effectiveness as a rapid liquidity tool. Enhancing the efficiency of disbursement mechanisms through digitalization and process optimization could significantly improve the responsiveness of refinancing mechanisms, ensuring financial institutions receive liquidity support when needed most.

4.3. Model Validation and Goodness-of-Fit Assessment

To evaluate the robustness and reliability of the logistic regression model, several key statistical tests were conducted to ensure the accuracy of the analysis. The Omnibus Test of Model Coefficients yielded a Chi-square value of 48.37 with a significance level of $p < 0.001$, confirming that the model is statistically significant. This indicates that the independent variables collectively explain a significant proportion of the variation in refinancing decisions, validating the relevance of the selected predictors.

Furthermore, the Nagelkerke R^2 value of 0.52 suggests that 52% of the variation in refinancing utilization among credit institutions is explained by the independent variables in the model. This is considered a moderate to strong explanatory power for a logistic regression model in financial research, demonstrating that the model provides a reasonably accurate prediction of refinancing decisions.

Additionally, the Hosmer-Lemeshow test was conducted to assess the model's goodness-of-fit with actual data. The test yielded a p-value of 0.412, indicating that there is no significant difference between the model's predictions and observed data. This result confirms that the model fits the survey data well, reinforcing its reliability.

Overall, the statistical validation confirms that the logistic regression model used in this study is both statistically significant and capable of reasonably explaining the key determinants of refinancing decisions. These findings strengthen the credibility of the model, providing a solid foundation for further analysis and policy recommendations in the subsequent sections.

4.4. Analysis and Discussion

Refinancing interest rates play a dual role as both a cost factor and a broader liquidity indicator within the financial system. The results indicate that higher refinancing rates discourage financial institutions from utilizing central liquidity sources, with $\text{Exp}(B) = 0.46$, $p < 0.05$. This aligns with conventional monetary policy expectations, where increased borrowing costs lead to lower demand for refinancing. However, the significant impact of interest rates in Vietnam suggests that financial institutions exhibit a heightened sensitivity to refinancing costs, possibly due to the limited availability of alternative liquidity sources or inefficiencies in the interbank market. Unlike in more developed financial systems, where institutions have access to diversified funding mechanisms, Vietnamese banks often rely on stable refinancing policies to manage liquidity fluctuations.

The effectiveness of refinancing is also hindered by procedural inefficiencies, with administrative bottlenecks significantly reducing accessibility and operational efficiency. Delays in disbursement—caused by regulatory compliance, collateral verification, and procedural requirements—can undermine the timely provision of liquidity. This is particularly problematic for smaller financial institutions, which may lack the internal resources or established banking relationships necessary to expedite approvals. Addressing these inefficiencies through process automation and streamlined regulatory procedures could enhance the reliability of refinancing as a liquidity management tool.

Diversification of refinancing mechanisms is another critical factor in ensuring the resilience of the financial system.

While secured refinancing remains the predominant method, expanding eligible collateral—such as incorporating high-quality corporate bonds and securitized instruments—could improve accessibility. Additionally, a more flexible refinancing mechanisms that integrates secured and unsecured liquidity mechanisms may provide institutions with greater flexibility in liquidity management.

5. CONCLUSION AND POLICY RECOMMENDATIONS

5.1. Summary of Key Findings

This study explores the factors influencing refinancing decisions among credit institutions in Vietnam, using survey data and a binary logistic regression model. The findings indicate that secured refinancing mechanisms remain the preferred approach, reflecting the financial system's reliance on asset-backed liquidity support. Additionally, borrowing costs and disbursement delays negatively affect refinancing demand, suggesting that higher interest rates and administrative inefficiencies discourage institutions from accessing liquidity through formal refinancing channels. Furthermore, institutional characteristics and leadership roles significantly shape refinancing strategies, highlighting the importance of governance, risk management, and strategic financial planning in liquidity management.

5.2. Policy Implications

To enhance the role of refinancing in liquidity management, a more adaptive and efficient policy framework is required. Rather than maintaining fixed refinancing rates, adjustments should be responsive to interbank liquidity conditions, macroeconomic stability, and financial sector dynamics. A structured refinancing rate system could allocate liquidity more effectively, offering preferential terms to institutions that contribute to economic development, particularly in key sectors such as small and medium enterprises (SMEs) and manufacturing.

Optimizing refinancing disbursement procedures is essential to improving liquidity access. Approval delays, often stemming from regulatory procedures, collateral verification, and administrative processes, can prevent timely access to funding. Enhancing process automation, reducing unnecessary documentation, and introducing a priority approval system for financially stable institutions could improve efficiency. Transparent disbursement schedules would further help financial institutions plan liquidity needs more effectively.

Expanding and diversifying refinancing mechanisms is crucial to strengthening financial system resilience. While secured refinancing remains central, broadening collateral eligibility—such as recognizing high-quality corporate bonds and other financial instruments—could improve accessibility. Additionally, integrating a mix of secured and unsecured refinancing approaches may provide financial institutions with greater flexibility in managing liquidity constraints. Developing sector-specific refinancing programs for industries such as infrastructure and export-driven manufacturing could further support targeted economic growth.

Reducing reliance on central liquidity facilities is also an important consideration. Financial institutions should be encouraged to develop alternative liquidity strategies through enhanced participation in interbank markets and capital markets. Implementing regulatory incentives to promote market-based liquidity management could reduce systemic dependence on central bank refinancing.

5.3. Conclusion

The findings highlight the significant role of refinancing interest rates, procedural efficiency, and institutional characteristics in shaping refinancing decisions. The high sensitivity of financial institutions to refinancing costs underscores the need for a more flexible rate-setting mechanism that aligns with market conditions while maintaining financial stability. Additionally, disbursement inefficiencies present operational challenges that can hinder the effectiveness of refinancing as a liquidity management tool, reinforcing the necessity of streamlining administrative processes. A more diversified refinancing mechanisms, incorporating broader collateral eligibility and alternative liquidity channels, could help reduce systemic dependence on central liquidity facilities. Encouraging

market-based liquidity management strategies and strengthening institutional capacity would support a more resilient financial system. Moving forward, policy adjustments should prioritize flexibility, accessibility, and operational efficiency in refinancing mechanisms to ensure that liquidity support structures effectively meet the evolving needs of the banking sector.

5.4. Future Research Directions

Despite its contributions, this study has limitations, particularly in its focus on mid-to-large financial institutions, which may not fully assess the refinancing constraints of smaller credit institutions. Future research should expand the sample to include smaller financial institutions to analyze the unique refinancing challenges they face compared to larger banks. Additionally, incorporating qualitative analysis through interviews with representatives from commercial banks and regulatory authorities would provide deeper insights into the practical application of refinancing policies. Further studies should explore the macroeconomic impact of refinancing, including its effects on credit expansion, inflationary pressures, and banking sector stability, while also examining its role in monetary policy transmission. These research extensions would contribute to a more comprehensive understanding of refinancing dynamics, ensuring that policy refinements are grounded in empirical evidence and institutional perspectives, ultimately enhancing the effectiveness of refinancing implementation.

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REFERENCES

- [1] Berentsen, A., & Waller, C. J. (2011). The role of central bank refinancing in financial stability. *Journal of Monetary Economics*, 58(3), 135-149. Retrieved from [Lhttps://www.journals.elsevier.com/journal-of-monetary-economics](https://www.journals.elsevier.com/journal-of-monetary-economics)
- [2] Cornett, M. M., McNutt, J. J., Strahan, P. E., & Tehranian, H. (2011). Liquidity risk management and credit supply in banking. *Journal of Financial Economics*, 101(2), 297-312. <https://doi.org/10.1016/j.jfineco.2011.01.004>
- [3] Goodhart, C. A. E. (2011). The changing role of central banks. *Financial Markets, Institutions & Instruments*, 20(2), 95-112. <https://doi.org/10.1111/j.1468-4160.2011.00114.x>
- [4] Vodová, P. (2013). Determinants of liquidity risk in commercial banks. *Procedia Economics and Finance*, 12, 248-256. <https://doi.org/10.1016/j.proeco.2013.01.256>
- [5] Freixas, X., & Rochet, J. C. (2008). *Microeconomics of banking* (2nd ed.). MIT Press.
- [6] State Bank of Vietnam. (2023). *Summary report on financial stability 2023*. Retrieved from <https://www.sbv.gov.vn/webcenter/contentattachfile/ideplg?dDocName=SBV607212&filename=580262.pdf>
- [7] State Bank of Vietnam. (2025). *Innovation in refinancing instruments in the transition to modern monetary policy management*. Retrieved from <https://www.sbv.gov.vn/webcenter/portal/vi/links/cm255?dDocName=SBV624217>