Mutanaqishah: Journal of Islamic Banking
2025, 5(2), 238-249

Funding Liquidity Risk-Profitability Nexus: Evidence from Islamic Rural Banks

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Article History
Received : 2025-07-08
Revised : 2025-10-19
Accepted : 2025-10-30
Published : 2025-11-02

Keywords:
Funding Liquidity Risk; Fundamental Banks; Profitability; Islamic Rural Banks

DOI:
https://doi.org/10.54045/Mutanaqishah.v5i2.2946

JEL Clasification:
G21, G24, G28

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Paper type:
Research paper

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Abstract

Purpose– This study examines the effect of funding liquidity risk and several control variables on the profitability of Shariah rural banks (SRBs), with a specific focus on SRBs located on Java Island, Indonesia**.**

Methodology— A panel regression approach is employed to estimate the relationships between funding liquidity risk and profitability. The analysis covers a panel of 98 SRBs from 2019 to 2023 using quarterly data**.** For further study, SRBs are categorized by their total assets as a proxy of bank size.

Findings – The findings document that funding liquidity risk hurts profitability. Smaller SRBs are more vulnerable to funding liquidity risk than larger SRBs**.** Furthermore, the results highlight the significant roles of financing and operational efficiency in encouraging bank profitability.

Implications – The implications of this study recommend that Shariah rural banks must strengthen their management of funding liquidity risk to maintain profitability. Moreover, enhancing fundamental aspects, particularly efficiency**,** is essential for improving profitability.

Originality— This study contributes to Islamic bank empirical studies by including funding liquidity risk variables, in addition to internal bank variables, in its analysis of profitability.

Cite this article:

Widarjono, A. (2025). Funding Liquidity Risk-Profitability Nexus: Evidence from Islamic Rural Banks. *Mutanaqishah: Journal of Islamic Banking*, 5(*2*), 238-249. https://doi.org/10.54045/Mutanaqishah.v5i2.2946

1. Introduction

Following the 2008 global financial crisis, in addition to the capital adequacy factor, funding liquidity risk management is a key factor in maintaining bank stability (Dahir et al., 2019; Abbas et al., 2021). Funding liquidity risk, by definition, is the risk that a bank will be unable to pay its debts at maturity due to a mismatch between short-term deposits and long-term loans, also known as a maturity mismatch. Evidence suggests that banks generally face excessive maturity mismatches. As a result, banks may face a potential liquidity shortage, which could ultimately lead to a liquidity crisis. Thus, funding liquidity risk management has become increasingly important for both conventional and Islamic banks following the global financial crisis (Smaoui et al., 2020).

Islamic banks are intermediary financial institutions, like conventional banks. Islamic banks in Indonesia comprise large Islamic Commercial Banks and small Islamic commercial banks, known as Shariah rural banks (SRBs). Currently, there are 173 SRBs throughout Indonesia, with total assets of IDR 23.177 trillion as of 2023. The role of IBRs is crucial for the Indonesian economy, given their significant contribution to distributing funds to micro, small, and medium

enterprises (MSMEs) in Indonesia (Widarjono et al., 2020a; Widarjono et al., 2020b). The number of MSMEs is a business unit that dominates the Indonesian economy (Hendri et al., 2025). Currently, there are 36,000 MSMEs, while large businesses number around 1,000. In addition, profit-sharing financing (Mudharabah) is an advantage of SRBs compared to BPR because Mudharabah financing provides flexibility in repaying funding, which aligns with the nature of MSMEs.

The 1998 economic crisis is evidence that Sharia banks, including SRBs, can withstand financial crises. However, economic sluggishness has returned to the world since the COVID-19 pandemic. Indonesia's economic growth has declined since the second quarter of 2020. This economic sluggishness will increase the risk of liquidity in bank funding. This increase in funding liquidity risk affects the ability of IBRs to disburse their funds to MSMEs, thereby worsening the performance of Islamic banks, including SRBs. (Hassan et al., 2019; Smaoui et al., 2020; Widarjono et al., 2022). More importantly, the increase in funding liquidity risk will affect MSMEs and the Indonesian economy.

The purpose of this study is to analyze the effect of funding liquidity risk on the profitability of SRBs in Indonesia. Studies on the performance of Shariah rural banks continue to focus on the influence of fundamental bank variables, such as market strength, stability, size, capital, efficiency, and financing (Widarjono et al., 2020a; Widarjono, 2020b; Hidayah & Karimah, 2023). Indeed, Jusuf and Widarjono (2024) investigated the impact of funding liquidity risk on SRBs' profitability in Sumatra Island, and Putri and Misbah (2025) examined the effect of funding risk on SRB's stability. There have been limited studies that analyze the impact of funding liquidity risk on IBR's profitability. This research is expected to contribute to theoretical and practical aspects. First, this research is expected to contribute to the existing empirical literature in Islamic banking because there is still limited research on the influence of funding liquidity risk on SRB performance. Second, from a practical perspective, this research is expected to yield important insights for the effective governance of SRBs, thereby supporting the Indonesian economy.

This research takes the case of SRBs located on the island of Java. SRBs on Java Island were chosen in this study for two reasons. First, most Shariah rural banks are located on the island of Java. As of 2023, 175 Shariah rural banks exist, with 98 (56%) located on the island of Java. Second, Java is a representation of Indonesia's economic and financial activities.

2.1 Literature Review

Two fundamental theories explain the relationship between funding liquidity risk and bank performance. First, high asset liquidity leads to strong financial performance of banks (Wagner, 2007). Second, banks with high funding liquidity risk take high risks by providing aggressive loans (Acharya & Naqvi, 2012). The two models suggest that banks will take on more risk in generating income when the bank has low funding liquidity risk, as the ratio of deposits to total assets is high.

Empirical studies on the effect of funding liquidity risk on bank performance have been widely carried out on conventional banks. Funding liquidity risk hurts loan growth (Dahir et al., 2019; Tran, 2020; Nguyen & Nguyen, 2022). The funding liquidity risk also increases the risk for conventional banks (Abbas et al., 2021; Wang & Zhuang, 2022). Research on the impact of funding liquidity risk on the performance of Islamic banks has also been conducted, but it remains limited. Berger et al. (2019) documented that funding liquidity risk has a positive effect on the stability of Islamic banks. Hassan et al. (2019) indicated that liquidity of the financing risk hurts the stability of Islamic banks in the 10 countries of the Organization of Islamic Cooperation (OIC). Smaoui et al. (2020) found that liquidity risk had no influence on the stability of Islamic banks in 18 countries.

The influence of funding liquidity risk on banking performance in Indonesia remains understudied. Hartono and Sutarmin (2022) analyzed the effect of funding liquidity risk on bank risk-taking, as measured by the Z-score, in 43 conventional banks in Indonesia from 2015 to 2019. The results show that the risk of funding liquidity does not affect bank risk-taking. Muharyadi et al., (2023) analyzed the effect of funding liquidity risk on credit distribution in banks categorized as BUKU III and BUKU IV in the 2020-2021 period. The results indicate that funding liquidity

has a negative impact on loan availability. This shows that lower funding liquidity makes it difficult for banks to distribute their fund to customers during the pandemic.

Studies on the effect of funding liquidity risk on the profitability of small Islamic banks, such as Indonesian Shariah rural banks, are limited. Studies on SRBs focus on the impact of fundamental banks on profits (Trinugroho, et al., 2018; Widarjono et al., 2020b; Widarjono & Anto, 2020; Sudarsono et al., 2021; Hidayah & Karimah, 2023), the effect of bank-specific variables on financing risk (Hosen & Muhari, 2019; Widarjono et al., 2020a; Muhammad et al., 2020; Priyadi et al., 2021), the impact of bank fundamentals on efficiency (Sukmana et al., 2020; Endri et al., 2022).

Several empirical papers have examined the effect of funding liquidity risk on the performance of Shariah rural banks. Widarjono et al. (2022) examined the impact of funding liquidity risk on the risk of Shariah rural banks in the period 2013-2018 using quarterly data for 143 banks. Risk is measured by Z-score and Financing Loss Provision (FLP). The results of the study documented that funding liquidity risk increases risk. Small Shariah rural banks face greater risks than large Shariah rural banks in terms of funding liquidity risk. In addition, the influence of funding liquidity risk on risk is greater for Shariah rural banks located in Java than for those located outside Java. Jusuf and Widarjono (2024) investigated the impact of funding liquidity risk on the profitability of Shariah rural banks located in Sumatra Island from 2019 to 2023, using quarterly data. They documented that funding liquidity risk lowers profitability, but small banks faced a greater risk associated with the negative impact of funding liquidity risk on profitability than large banks.

2.1 Hypotheses

The model developed by Wagner (2007) empirically verified the link between liquidity and bank performance. It suggests that high liquidity worsens a bank's performance. Some empirical research also indicated that bank risk-taking is associated with funding liquidity. Lower funding liquidity risk leads to higher bank risk-taking, as Khan et al. (2017) found. Additionally, liquidity risk negatively impacts the bank's performance, as low liquidity risk is often associated with high risk-taking and lower profitability (Dahir et al., 2018). Therefore, this study hypothesizes that funding liquidity risk harms profitability.

3.1 Research Methods

3.1 Data

This study analyzes Indonesian Shariah rural banks located on the island of Java, where there are as many as 98 Shariah banks in 2023. The research period is 2019-2023, using quarterly data. This study uses secondary data. The financial data is obtained from the financial statements and income statements of each Shariah rural bank reported to the Financial Services Authority (OJK). These data can be accessed from the OJK website (www.ojk.go.id)

3.2 Research Variables

This research method uses the panel regression method. The dependent variable in this study is profitability. Profitability is measured using Return on Assets (ROA) (Widarjono & Anto, 2020; Rita & Sugiarti, 2025). The ROA is calculated as follows:

$$ROA = \frac{Net\ income\ \ after\ tax}{Total\ assets} \quad (1)$$

The primary independent variable in this study is funding liquidity risk (FLR). The primary activity of SRBs is to distribute funds, generating income that is used to repay the funds saved by customers. Shariah rural banks must make illiquid investments by financing long-term assets, but must pay their short-term obligations. As a result, Shariah rural banks often face a mismatch in maturity. This maturity mismatch will impact the bank's ability to channel its funds and, consequently, affect its profits. Funding liquidity risk occurs when a bank is unable to satisfy a

depositor's claim promptly over a specific period (Smaoui et al., 2020; Tran, 2020; Wang & Zhuang, 2022). Funding liquidity risk is measured by the ratio of total deposits to total assets (Dahir et al., 2019; Smaoui et al., 2020; Widarjono et al., 2022). Some studies have shown that fund management, in the form of funding liquidity risk, affects the performance of both conventional banks and Islamic banks (Smaoui et al., 2020; Widarjono et al., 2022; Abbas et al., 2021; Nguyen & Nguyen, 2022; Wang & Zhuang, 2022). Funding liquidity risk is measured as follows:

$$FLR = \frac{Total\ deposits}{Total\ assets} \quad (2)$$

This study also included other independent variables as control variables that affect profits. Many studies have documented that profits are associated with market power and concentration (Widarjono et al., 2020b; Widarjono & Anto, 2020), bank fundamentals and bank-specific variables (Trinugroho et al., 2018; Sudarsono et al., 2021; Hidayah & Karimah, 2023), and macroeconomic variables (Widarjono et al., 2020a; Widarjono & Anto, 2020). Bank fundamentals as independent variables consist of size, capital**,** financing, efficiency, and non-performing loans.

Assets are total assets that measure the size of a bank, expressed in the form of a natural logarithm (Ardana & Nurmalia, 2025). The capital adequacy of Islamic banks is crucial for maintaining the stability of the bank. Capital adequacy is often measured by the Capital Adequacy Ratio (CAR). CAR is measured from the ratio of equity to risk-weighted assets (Yanikkaya et al., 2018). CAR is calculated using the following formula:

$$CAR = \frac{Total\ Equity}{Asssets\ weighted\ risk} \quad (3)$$

The primary source of profit of Islamic banks is from financing activities for customers. Financing (FIN) refers to the amount of funding disbursed by Shariah Rural Banks. The ratio of total financing to total assets measures it (Sutrisno & Widarjono, 2024). The formula is as follows:

$$FIN = \frac{Total\ Financing}{Total\ asssets} \quad (4)$$

Efficiency is a crucial element for generating profit. High efficiency enables Islamic bank products to be offered at a lower price. Operational efficiency is typically used to describe the efficiency of a Shariah-compliant rural bank. Operating efficiency is measured by the cost-to-income ratio (CIR) (Rizvi et al., 2020). CIR is calculated using the following formula:

$$CIR = \frac{Operating\ cost}{Operaring\ income} \quad (5)$$

Every Islamic bank will face the problem of bad financing. This bad financing represents the risks faced by Islamic banks. Bad financing is generally measured by non-performing financing (NPF). NFP is measured by the ratio of funding non-performing to total financing (Alandejani & Asutay, 2017) using the following formula:

$$NPF = \frac{total\ financing\ default}{Total\ financing} \quad (6)$$

COVID-19 is the spread of the coronavirus disease outbreak, which caused the government to impose restrictions on community activities (lockdown) in the second quarter of 2022. Indonesia's economic growth has declined drastically, resulting in negative economic growth in 2020. COVID-19 is a pandemic that began in the second quarter of 2020. COVID-19 is a dummy variable, which is one from the 2020 quarter 2 to the 2021 quarter 4. Table 1 presents Variable measurement and hypothesis

Table 1. Variable measurement and hypothesis

Variable	Measurement	Hypothesis
Variable dependent		
ROA	The ratio of net income after tax divided by assets weighted risk.	
Variable independent		
Funding liquidity risk	Total financing divided by total assets	-
Asset	Total assets	+
CAR	Equity divided by risk-weighted assets	+
FIN	Total financing divided by total assets	+
CIR	Total operating costs divided by total operating income	-
NPF	Bad financing divided by total financing	-
COVID	Pandemic Covid-19	-

3.3 Estimation Method

This study employs panel data regression to analyze the influence of funding liquidity risk on the profits of Shariah rural banks (Smaoui et al., 2020). The panel data regression model is as follows:

$$\text{Profit}_{it} = \emptyset_0 + \emptyset_1 \text{FLR}_{it} + \emptyset_2 \text{Lasset}_{it} + \emptyset_3 \text{CAR}_{it} + \emptyset_4 \text{Fin}_{it} + \emptyset_5 \text{CIR}_{it} + \emptyset_6 \text{NPF}_{it} + \emptyset_7 \text{Covid19}_{it} + e_{it} \quad (7)$$

COVID-19 has caused Indonesia's economic growth to decline, thereby increasing the funding liquidity risk. For this reason, this study also analyzes the impact of COVID-19 on SRB's profits. Additionally, the size of the bank impacts the performance of Islamic banks (Ibrahim, 2017). For this reason, this study categorizes SRBs into two types: large and small SRBs. If the Islamic bank's assets exceed the average of the total assets of all SRBs, it is grouped into a large bank. At the same time, the Islamic bank is categorized as a small bank if its assets are smaller than the average of the total assets of all SRBs (Putri & Widarjono, 2023).

4. Results and Discussion

4.1 Result

Our paper begins with a summary of Shariah rural banks (SRBs) in Indonesia. In 2023, there were 176 Shariah-compliant rural banks. Figure 1 illustrates the relationship between profitability and funding liquidity risk. Return on assets (ROA) and the ratio of total deposits to total assets (FLR) represent profitability and funding liquidity risk, respectively, during 2016-2023. The average ROA was 2.21%, which is above the threshold of 1.5% and suggests that Shariah rural banks are well-managed.

Nevertheless, profitability has decreased since the COVID-19 outbreak, but it has tended to increase since 2022. The average FLR was 65.05% with a standard deviation of 1.47. FLR tends to increase but decreases during the COVID-19 pandemic. FLR then increased drastically in May 2021, approaching 70%, but a downward trend has been observed since May 2022. More interestingly, there is a strong correlation between profitability and funding liquidity risk. The correlation between ROA and FLR is -0.5493. This negative correlation indicates that banks with higher FLR tend to exhibit lower profitability. A high FLR suggests that banks are becoming increasingly aggressive in their financing, and if not carefully monitored, this financing can lead to high non-performing loans, ultimately reducing profits.

Figure 1. ROA and FLR, 2016-2023

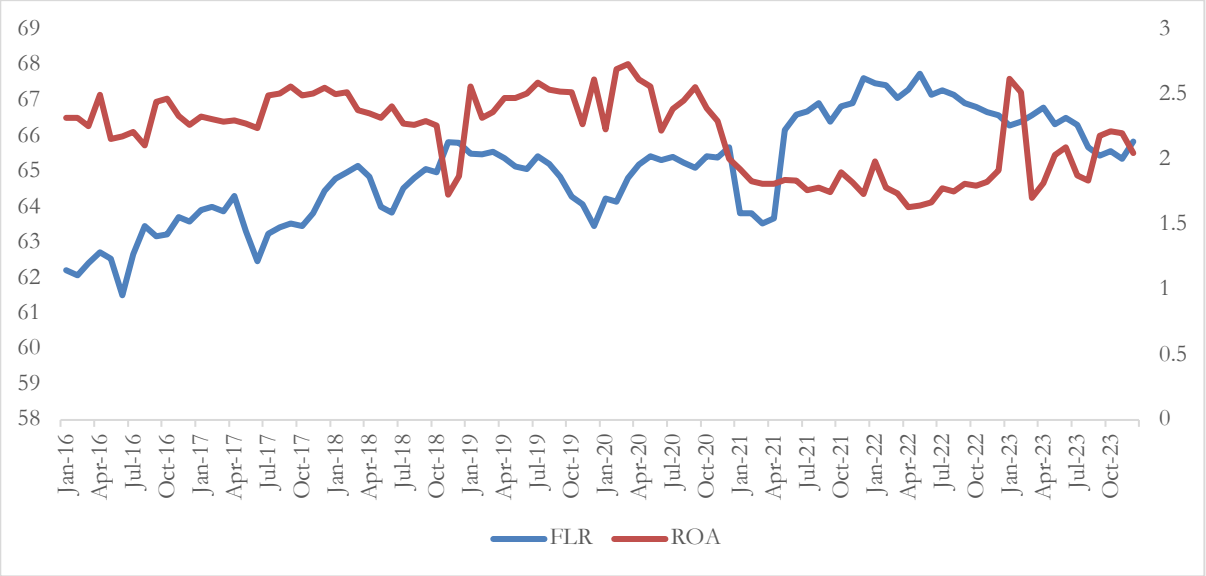

Table 2 displays the performance of Sharia Rural Banks (SRBs) on Java Island, along with summary statistics for all variables analyzed. The average Return on Assets (ROA) was 2.10%, with a standard deviation of 6.4, indicating considerable variation in profitability. The margin variable also showed significant dispersion, as its standard deviation exceeded the mean. The average funding liquidity risk (FLR), which serves as the main independent variable, was 47%. In terms of bank size, measured by total assets, the average was IDR 124.986 billion, with a standard deviation of IDR 198.968 billion, reflecting substantial variation in SRB sizes. The average Capital Adequacy Ratio (CAR) stood at 19.9%, well above the minimum regulatory requirement of 15%. The Financing to Deposit Ratio (FIN) averaged 82.8%, suggesting that SRBs maintain a high level of financing activity within acceptable limits. The average Cost-to-Income Ratio (CIR) was 87.9%, indicating a relatively efficient operational performance. Lastly, the average Non-Performing Financing (NPF) was 8.431%, which exceeds the 5% threshold and signals elevated credit risk among SRBs.

Table 2. Summary statistics

Variable	Mean	Std. dev.	Min	Max
ROA	0.021	0.064	-0.302	1.850
FLR	0.470	1.590	0.000	42.943
Asset	124.986	198.968	0.065	1911.345
CAR	0.199	0.615	0.000	16.233
FIN	0.828	2.610	0.000	72.531
CIR	0.879	0.320	0.097	5.856
NPF	8.431	7.977	0.000	69.610
COVID	0.351	0.477	0.000	1.000

Now, we discuss the impact of funding liquidity risk (FLR) on profitability. Three methods are widely used for estimating static panel regression, consisting of a common effect (CE), fixed effect (FE), and random effect (FE). Additionally, there are three statistical tests to determine the best method for static panel regression. First, the F-test is used to select between CE and FE. Second, the Bruesch-Pagan (BP) test checks between CE and RE. Third, the Hausman test chooses between FE and RE. The estimation findings of the static panel regression are presented in Table 3. The bottom part of Table 2 presents all diagnostic tests. Model 1 is the regression without Covid-19, and Model 2 is the regression with Covid-19. Model 1 and 2 generates the same findings.

The diagnostic tests indicate that the fixed method is the most suitable for estimating our panel data, based on the F-test, BP-test, and Hausman tests.

Table 3 indicates that funding liquidity risk (FLR) negatively influences profitability at α = 5%. Assets are negative but not statistically significant. CAR is negative but not statistically significant. Financing (FIN) is positive and statistically significant at α=1%. CIR negatively affects profitability at α=1%. NFP is positively linked to profitability at α=1%. COVID-19 negatively affects profitability at α=1%.

Table 3. All banks

Variable	Model 1: without COVID			Model 2: with COVID		
	Coeff.	t-value	Prob.	Coeff.	t-value	Prob.
FLR	-0.030**	-1.670	0.049	-0.030*	-1.597	0.057
Lasset	-0.000	-0.084	0.933	-0.001	-0.208	0.836
CAR	-0.022	-1.430	0.156	-0.020	-1.270	0.207
FIN	0.041***	2.913	0.004	0.040***	2.758	0.007
CIR	-0.106***	-14.243	0.000	-0.105***	-14.519	0.000
NPF	0.001***	3.440	0.001	0.001***	3.248	0.002
COVID	-	-	-	-0.003***	-2.005	0.024
Constant	0.099	1.181	0.240	0.111	1.247	0.216
No of obs.	1934			1934		
No of banks	98			98		
R-Squared	0.780			0.781		
Hausman	311.65***			64.59***		

***, **, * denote significant at α=1%, α=5%, α=10%.

As stated before, our study splits Shariah rural banks into two groups, large and small banks. The findings of large Shariah rural banks are shown in Table 4. According to the F-test, BP-test, and Hausman tests, the best method is the fixed effect model. Table 4 indicates that funding liquidity risk has a negative influence on profitability at α = 10%. Assets are negative but not statistically significant. CAR is negative and statistically significant at α=10%. Financing (FIN) is negative and not statistically significant. CIR negatively affects profitability at α=1%. NFP is positively linked to profitability at α=1%. COVID-19 negatively affects profitability at α=10%.

Table 4. Large Banks

Variable	Model 1: without COVID			Model 2: with COVID		
	Coeff.	t-value	Prob.	Coeff.	t-value	Prob.
FLR	-0.032*	-1.421	0.083	-0.032*	-1.401	0.085
Lasset	-0.007	-1.532	0.135	-0.007	-1.470	0.151
CAR	-0.028*	-1.755	0.089	-0.027*	-1.703	0.098
FIN	-0.006	-0.316	0.754	-0.007	-0.371	0.713
CIR	-0.127***	-9.536	0.000	-0.126***	-8.958	0.000
NPF	0.001***	2.603	0.014	0.001**	2.503	0.018
COVID	-	-	-	-0.002*	-1.322	0.098
Constant	0.278	3.337	0.002	0.287	3.076	0.004
No of obs.	652			652		
No of banks	37			37		
R-Squared	0.619			0.618		
Hausman	65.340***			109.35***		

***, **, * denote significant at α=1%, α=5%, α=10%.

The results of small Shariah rural banks are shown in Table 5. According to the F-test, BP-test, and Hausman tests, the best method is the fixed effect model. Table 5 indicates that funding liquidity risk negatively influences profitability at α = 5%. Assets are positive but not statistically significant. CAR is negative but not statistically significant at α=10%. Financing (FIN) is positive and statistically significant at α=1%. CIR negatively affects profitability at α=1%. NFP is positively linked to profitability at α=1%. COVID-19 is negative but not statistically significant.

Table 5. Small Banks

Variable	Model 1: without COVID			Model 2: with COVID		
	Coeff.	t-value	Prob.	Coeff.	t-value	Prob.
FLR	-0.033**	-1.826	0.036	-0.033**	-1.747	0.043
Lasset	0.003	0.571	0.570	0.003	0.447	0.656
CAR	-0.019	-1.149	0.255	-0.018	-1.068	0.290
FIN	0.043***	2.957	0.004	0.042***	2.818	0.006
CIR	-0.100***	-12.013	0.000	-0.099***	-12.420	0.000
NPF	0.001***	2.904	0.005	0.001***	2.716	0.008
COVID	-	-	-	-0.003	-1.249	0.216
Constant	0.025	0.229	0.820	0.036	0.304	0.762
No of obs.	1282			1282		
No of banks	61			61		
R-squared	0.802			0.802		
Hausman	173.90***			50.070***		

***, **, * denote significant at α=1%, α=5%, α=10%.

4.2 Discussion

The discussion initially begins with the funding liquidity risk as the main independent variable. The funding liquidity risk negatively influences profitability. The findings suggest that funding liquidity risk increases the insolvency risk of banks and lowers their profitability. Islamic banks have more incentive to take on risky investments due to lower funding liquidity risk, which supports the bank lending theory proposed by Acharya and Naqvi (2012). The theory of bank lending stems from the stylized reality that high deposits protect from bank failure. Banks experiencing low funding liquidity risk, as indicated by a high ratio of deposits to total assets, tend to take on more risk by distributing a large amount of financing. If this massive financing is not managed properly, it will lead to increased bad debt and subsequently reduce profits. Our findings support the previous results, such as those of Khan et al. (2017), Dahir et al. (2018), Smaoui et al. (2020), and Jusuf and Widarjono (2024).

Some other explanatory variables, such as control variables, are significant. Financing (FIN) has a positive influence on the profitability of Shariah rural banks. Thus, a rise in financing enhances an Islamic bank's profitability, and a fall in funding lowers an Islamic bank's profitability. As the latest player in the banking sector and with many Muslim consumers in Indonesia, Islamic banks carry out an aggressive policy in disbursing their funds. The aggressiveness of Islamic banks is evident in their high average financing deposit ratio of 101.455%. The high disbursement of funds and low non-performing financing lead to high incomes and further increase the profits of Islamic banks in Indonesia. Our findings confirm those of existing empirical studies, such as Zarrouk et al. (2016) and Danlami et al. (2022).

The level of bank efficiency (CIR) is negative and statistically significant, meaning that high operating efficiency enriches profitability. The magnitude of the CIR indicates that the greater the bank's operating costs, the higher the CIR will reduce the bank's profit, as the profit is derived from the bank's operating income minus its operating costs. Therefore, bank management must be able to manage operating costs efficiently to reduce CIR. Javaid and Alalawi (2018) and Setiawan (2021), who examined Islamic banks, also found a negative relationship between operating

efficiency and profitability. Likewise, in conventional banks, operating efficiency also has a negative effect on profitability (Al-Harbi, 2019; Sofyan, 2019; Lohano & Kashif, 2019).

COVID-19 is a statistically significant negative indicator, suggesting that the COVID-19 pandemic has negatively impacted the profitability of Islamic banks. The impact of COVID-19 was evident in the second quarter of 2020, when Indonesia's economic growth experienced negative growth in that quarter, as well as in the subsequent third and fourth quarters. During periods of negative economic growth, banks struggle to distribute funds, and customers face difficulties repaying their loans.

We now compare the impact of funding liquidity risk on the profitability of large and small Shariah-compliant rural banks. For large Shariah-compliant rural banks, funding liquidity risk hurts profits, with a coefficient of -0.032. Regarding the findings of both larger and smaller SRBs, several vital results are noted. Funding liquidity risk negatively affects both types of Shariah-compliant rural banks; however, the impact of funding liquidity risk on profits is less significant for large banks compared to small banks. These findings show that large SRBs face a smaller risk of declining profits if there is a maturity mismatch compared to small banks. The reasonable motive is that they have better facilities and infrastructure, allowing them to manage their maturity mismatch effectively (Smaoui et al., 2020). The impact of low operating efficiency on profitability is greater for large banks than for small banks. Interestingly, COVID-19 has hurt the profitability of large banks, but it has not affected the profitability of small banks.

5. Conclusion

This study examines the impact of funding liquidity risk and several bank variables, serving as control variables, on the profitability of Shariah rural banks. The number of banks studied was 98 in the 2019-2022 period, with quarterly data. The results indicate that funding liquidity risk has a negative impact on profits. However, small Shariah rural banks face a greater risk of declining profits compared to large Shariah rural banks in the event of a maturity mismatch. Variable control analysis reveals that strong bank fundamentals have a positive impact on the profitability of Shariah rural banks.

The results of this study are expected to provide valuable insights for banks and policymakers in developing effective banking policies to manage funding liquidity risk. First, policymakers must oversee the management of Shariah rural banks' funding liquidity risk, ensuring that the influence of maturity mismatch on profits is relatively small. Second, Shariah rural banks must strengthen bank fundamentals, such as efficiency, to increase their profitability.

Author Contributions

Conceptualization: Agus Widarjono
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Formal analysis: Agus Widarjono
Investigation: Agus Widarjono
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Supervision: Agus Widarjono
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Writing – original draft: Agus Widarjono
Writing – review & editing: Agus Widarjono

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