Journal of Enterprise and Development (JED)
Vol. 6, No. 2, 2024
ISSN (PRINT): 2715-3118, ISSN (ONLINE): 2685-8258

Enhancing financial stability in Islamic banks: An investigation of determinants during the COVID-19 in Indonesia

Ardita Herniati Putri[1], Zulpawati Zulpawati[2], Imronjana Syapriatama[3], Riduan Mas'ud[4], Muhammad Muhajir Aminy[5,*], Mohamed Saleem Ahamed Riyad Rooly[6]
Universitas Islam Negeri Mataram, Indonesia[1,2,3,4,5]
South Eastern University of Sri Lanka, Sri Lanka[6]
Corresponding e-mail: azeer.elkhawarizm@uinmataram.ac.id*

ABSTRACT

Purpose — *This study investigates the determinants of Islamic banks' stability in Indonesia amidst the Covid-19 pandemic.*

Method — *Employing a causality-associative quantitative approach, the research utilizes purposive sampling and secondary data collection from monthly financial reports on the official websites of OJK (Financial Services Authority) and BI (Bank Indonesia). Statistical techniques including normality test, multicollinearity test, t-test, f-test, R^2 test, and multiple linear regression, aided by SPSS version 22 and Microsoft Excel, are employed for data analysis.*

Result — *The results reveal that Islamic banks' total assets significantly positively influence their stability in Indonesia. Additionally, variables such as Operational Costs to Operational Income (OCOI) ratio and BI 7-Day Reverse Repo Rate (BI7DRR) exhibit significant negative effects on Islamic banks' stability.*

Practical implications — *Understanding the influence of total assets, Operational Costs to Operational Income (OCOI) ratio, and the BI 7-Day Reverse Repo Rate (BI7DRR) on Islamic banks' stability in Indonesia during the Covid-19 pandemic can guide policymakers and bank management in implementing measures to strengthen resilience and mitigate risks, such as strategic asset management and cost optimization strategies.*

Keywords: *islamic banks stability, BI7DRR, OCOI, covid-19*

INTRODUCTION

Islamic banks play a crucial role in the financial system of Indonesia, and their stability is of paramount importance, particularly during challenging times such as the Covid-19 pandemic (Abbas & Frihatni, 2020). Understanding the determinants of stability for Islamic banks can provide valuable insights for policymakers, regulators, and financial institutions to effectively manage risks and ensure the resilience of the banking sector (Kanapiyanova et al., 2023).

The stability of Islamic banks is influenced by various factors, and identifying these determinants is crucial for maintaining the soundness of the banking system (Bitar et al., 2017). The stability of Islamic banks is a complex interplay of various financial metrics and economic factors. One key factor that has been examined in relation to bank stability is the total assets of Islamic banks. Generally, a larger asset base can contribute to greater stability as it signifies the bank's capacity to absorb potential losses and shocks. However, the connection between total assets and bank stability is not straightforward. While a substantial asset base can enhance resilience, excessive growth without proper risk management could lead to overexposure and increased vulnerability to market fluctuations (Roncalli & Weisang, 2015). Therefore, it is crucial for Islamic banks to strike a balance between asset expansion and risk mitigation strategies to maintain stability.

Another metric of interest is the Operational Costs to Operational Income (OCOI) ratio, which measures the efficiency of a bank's operations. A lower OCOI ratio indicates that operational costs are relatively lower compared to the income generated from core banking activities

(Suartini et al., 2019). This efficiency is positively correlated with bank stability, as lower costs can lead to higher profitability and better risk management. Islamic banks that maintain a favorable OCOI ratio tend to navigate financial challenges more effectively, since they have the capacity to withstand downturns and absorb unexpected losses without jeopardizing their stability.

The BI 7-Day Reverse Repo Rate, on the other hand, is a monetary policy tool utilized by central banks to control liquidity in the financial system (Suartini et al., 2019). It influences short-term interest rates and has implications for bank stability. When the central bank raises the reverse repo rate, it tends to reduce liquidity in the market, leading to higher borrowing costs for banks. This can impact the profitability of Islamic banks by increasing their funding costs and potentially squeezing their margins. However, a higher reverse repo rate might also be employed by the central bank to curb inflation, which in the long run can contribute to a more stable economic environment (Sanica et al., 2018). Thus, the connection between the BI 7-Day Reverse Repo Rate and bank stability is indirect and hinges on broader economic considerations.

In summary, the stability of Islamic banks is intricately tied to various financial metrics and economic indicators. While a larger total asset base and efficient operational management can enhance stability, these factors must be balanced with prudent risk management practices. The influence of the BI 7-Day Reverse Repo Rate on bank stability is more nuanced, as it depends on the broader economic context and its impact on the banks' profitability and liquidity. Islamic banks aiming for stability must therefore consider a holistic approach that encompasses these metrics while remaining responsive to the evolving economic landscape.

Several studies have examined the stability of Islamic banks and identified various factors that contribute to their stability. For instance, empirical studies have found that capital adequacy, asset quality, management efficiency, and liquidity are significant factors affecting the stability of Islamic banks (Anjom & Faruq, 2023; Isamail et al., 2023). Similarly, profitability, credit risk, and liquidity have been highlighted as important determinants of Islamic bank stability (Joudar et al., 2023; Raza & Arshed, 2023). These previous studies provide a foundation for understanding the factors influencing the stability of Islamic banks, but there is a need for further research in the context of Indonesia, particularly during the Covid-19 period.

This study contributes to the existing literature by specifically examining the stability of Islamic banks in Indonesia during the Covid-19 period. The unprecedented circumstances caused by the pandemic have created unique challenges for the banking sector, making it essential to investigate the factors that influence the stability of Islamic banks during this period. By focusing on Indonesia, this study offers insights that are particularly relevant to the country's banking industry and contributes to the literature on Islamic banking stability in emerging economies.

The findings of this study have significant academic contributions. By identifying the determinants of the stability of Islamic banks in Indonesia during the Covid-19 period, this research enhances the understanding of the factors that can help ensure the resilience of Islamic banks in challenging times. The study's findings can also provide valuable insights for policymakers and regulators to formulate effective measures for maintaining financial stability and promoting sustainable growth in the banking sector.

The primary purpose of this study is to investigate the determinants of the stability of Islamic banks in Indonesia during the Covid-19 period. By analyzing the impact of factors such as total assets, Operational Costs to Operational Income (OCOI) ratio, and BI7DRR (BI 7-Day Reverse Repo Rate), this research aims to identify the key drivers of stability for Islamic banks. The study utilizes a causality-associative quantitative approach and secondary data collected from monthly financial reports published on the official websites of OJK (Financial Services Authority) and BI (Bank Indonesia). The findings of this research will provide insights into the factors that significantly influence the stability of Islamic banks in Indonesia during the Covid-19 period, both individually and collectively.

METHOD

To achieve the research objectives, a causality-associative quantitative approach was utilized in this study. The research relied on secondary data collected from March 2020 to August 2022. The research data consisted of three independent variables: total assets of Islamic banks, Operational Costs to Operational Income (OCOI) ratio, and BI7DRR (BI 7-Day Reverse Repo Rate). The dependent variable was the stability of Islamic banks. The data for these variables were obtained from the official websites of the Otoritas Jasa Keuangan (OJK) and Bank Indonesia (BI). The study included a sample of 30 Islamic banks selected through purposive sampling technique.

The collected data underwent various data analysis techniques to examine the relationship between the independent and dependent variables. These techniques included normality test, multicollinearity test, autocorrelation test, t-test (partial), f-test (simultaneous), coefficient of determination test, and multiple linear regression analysis. SPSS version 22 and Microsoft Excel 2010 were employed to perform these analyses. The normality test assessed the distribution of the variables, while the multicollinearity test examined the presence of multicollinearity among the independent variables. Autocorrelation test ensured the absence of serial correlation in the data. The t-test and f-test assessed the significance of individual and simultaneous effects of the independent variables on the stability of Islamic banks, respectively. The coefficient of determination was used to measure the proportion of variance in the dependent variable explained by the independent variables. Multiple linear regression analysis was conducted to estimate the relationship between the independent and dependent variables.

RESULT AND DISCUSSION

Normality test

The normality test is conducted to determine whether the research data being analyzed is derived from a normal distribution. It is crucial to perform this test as parametric statistical calculations rely on the assumption of a normal distribution. In this study, we conducted the normality test using the Kolmogorov-Smirnov test with a significance level of 5%. A data set is considered to have a normal distribution if the coefficient is greater than α (0.05). The results of the normality test conducted using SPSS 22 are presented in Table 1 below.

Table 1. Normality test

		Unstandardized residual
N		30
Normal parameters[a,b]	Mean	.0000000
	Std. Deviation	.15360390
Most extreme differences	Absolute	.142
	Positive	.094
	Negative	-.142
Test statistic		.142
Asymp. Sig. (2-tailed)[c]		.128
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Source: Processed data (2023)

Based on the table provided, it is evident that the significance value obtained through the Kolmogorov-Smirnov method is 0.128, exceeding the predetermined α value of 0.05. This implies that the data adheres to a normal distribution, thus satisfying the normality assumption for the normality test.

Multicollinearity test

The Multicollinearity test is employed to determine if there is a relationship among the independent variables. To detect the presence of multicollinearity, we examine the Variance Inflation Factor (VIF). A VIF value of less than 10 indicates the absence of multicollinearity (non-multicollinearity), while a VIF value greater than 10 indicates the presence of multicollinearity. The results of the multicollinearity test can be found in Table 2 below.

Table 2. Multicollinearity test

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
		B	Std. error	Beta			Tolerance	VIF
1	(Constant)	437.16	90.792		4.815	<.001		
	Total assets of Islamic banks	2.317	.651	.764	3.562	.001	.182	5.486
	OCOI	-46.702	10.153	-.909	-4.600	<.001	.215	4.648
	BI7DRR	-9.253	1.584	-.842	-5.840	<.001	.403	2.478

Source: Processed data (2023)

Based on the information provided in Table 2, it can be concluded that the VIF values are all less than 10. To be more specific, the VIF value for total assets of Islamic banks is 5.486, for OCOI it is 4.648, and for BI7DRR it is 2.478. Therefore, we can infer that there is no multicollinearity among these three variables. In simpler terms, the test for multicollinearity is satisfied.

Autocorrelation test

The autocorrelation test determines whether there is any correlation between the disturbance errors in period t and the errors in the previous period, t-1. The results of the autocorrelation test are presented in Table 3 below.

Table 3. Autocorrelation test

Model	R	R-Squared	Adjusted R-Squared	Std. error of the estimate	Durbin-Watson
1	.884[a]	.782	.757	.16222	1.678

Source: processed data (2023)

Hypotheses testing

The t-test was conducted to examine the individual or partial effects of the independent variables on the dependent variable.

Table 4. Hypotheses test

No	Variable	Sig.	t-value	Decision
1	Total assets of Islamic banks (X_1)	.001	3,562	Significant influence
2	OCOI (X_2)	<.001	-4,600	Significant influence
3	BI7DRR (X_3)	<.001	-5,840	Significant influence

Source: processed data (2023)

The calculations presented in Table 4 show that the variable "total assets of Islamic banks" produced a calculated t-value of 3.562 and a significance value of 0.001. The decision to accept or reject a hypothesis is made based on the significance level. In this study, the obtained significance value of 0.001 is lower than the predetermined threshold of 0.05. Additionally, the positive direction of the t-value indicates a significant positive influence. Therefore, the hypothesis (H1) stating "There is an influence of total assets of Islamic banks on the stability of Islamic banks in Indonesia" is accepted.

The second finding, the variable "OCOI" resulted in a calculated t-value of -4.600 and a significance value of 0.001. According to the significance level criteria, if the significance value is less than or equal to 0.05, the hypothesis is accepted. In this study, the obtained significance value of 0.001 is smaller than the predetermined threshold. Furthermore, the negative direction of the t-value suggests a significant negative influence. Hence, the hypothesis (H2) stating "There is an influence of OCOI on the stability of Islamic banks in Indonesia" is accepted.

Lastly, the variable "BI7DRR" yielded a calculated t-value of -5.840 and a significance value of 0.001. Similarly, the obtained significance value of 0.001 is below the predetermined threshold of 0.05. Moreover, the negative direction of the t-value indicates a significant negative influence. Consequently, the hypothesis (H3) stating "There is an influence of BI7DRR on the stability of Islamic banks in Indonesia" is accepted.

In summary, the t-test results demonstrate that the variables "total assets of Islamic banks," "OCOI," and "BI7DRR" have significant effects on the stability of Islamic banks in Indonesia. The positive effect of total assets and the negative effects of both OCOI and BI7DRR indicate the importance of these variables in influencing the stability of Islamic banks in the country.

Discussion

Based on the results of partial hypothesis testing, it is evident that the variable "total assets of Islamic banks" demonstrates a positive relationship with a significant t-value. The finding suggests that the total assets of Islamic banks significantly contribute to the stability of Islamic banks in Indonesia. Consequently, the first hypothesis (H1), asserting the influence of total assets of Islamic banks on the stability of Islamic banks in Indonesia, is confirmed. This indicates that as total assets increase, the stability of Islamic banks in Indonesia also tends to rise, reducing the likelihood of instability. Effective asset management can positively impact the banking sector by addressing liquidity, leverage, and capital concerns, thereby enhancing stability.

Additionally, the finding aligns with prior research by Onsongo et al. (2019), which suggests that larger total assets enable companies to meet future obligations more effectively, thus averting financial difficulties that could lead to bank instability. Hence, the total assets of Islamic banks play a crucial role in maintaining stability. These results underscore the importance of managing and maintaining sufficient total assets in Islamic banks to ensure stability and resilience, ultimately contributing to the stability of the banking sector.

Furthermore, the results of partial hypothesis testing reveal a negative relationship with a significant value for the variable OCOI (Operating Cost to Operating Income). This indicates that OCOI has a detrimental effect on the stability of Islamic banks in Indonesia. Therefore, the second hypothesis (H2) positing the influence of OCOI on the stability of Islamic banks in Indonesia is affirmed. Lower OCOI values indicate more efficient management practices, reducing the likelihood of problematic situations for banks. Conversely, higher OCOI values signify increased operational costs for banks, potentially reducing profitability.

This finding is consistent with a study by Fatoni & Sidiq (2019), which emphasizes the significant impact of OCOI on the stability of the Islamic banking system. They emphasize the importance of efficient management of operational costs to maintain stability in the Islamic banking sector. Thus, effective cost management practices, particularly regarding operational costs, are crucial for ensuring the stability and profitability of Islamic banks in Indonesia.

Moreover, the results of partial hypothesis testing indicate a negative relationship with a significant value for the variable "BI7DRR" (Bank Indonesia's 7-Day Reverse Repo Rate). This suggests that BI7DRR negatively influences the stability of Islamic banks in Indonesia. Consequently, the third hypothesis (H3) proposing the influence of BI7DRR on the stability of Islamic banks in Indonesia is validated. A decrease in BI7DRR affects the cost of capital and leads to changes in investments. During economic downturns, Bank Indonesia may implement loose monetary policies by reducing the benchmark interest rate, stimulating economic activities. This decrease prompts banks to reduce loan interest rates, thereby lowering capital costs for companies to finance their investments.

This finding is consistent with a study by Ridho Kismawadi et al. (2023), indicating that BI7DRR significantly impacts mudarabah financing in Sharia commercial banks. They highlight the influence of changes in BI7DRR on the cost of capital and financing activities in Islamic banks. Consequently, monitoring and understanding the impact of BI7DRR on the stability and financing activities of Islamic banks in Indonesia are crucial. Effective monetary policies and regulatory measures are needed to ensure the stability and resilience of the Islamic banking sector in response to changing economic conditions.

CONCLUSION

In conclusion, this study aimed to examine the determinants of the stability of Islamic banks in Indonesia during the Covid-19 period. The research focused on the variables of total assets of Islamic banks, OCOI, and BI7DRR and their influence on the stability of Islamic banks.

The findings of this study revealed that the total assets of Islamic banks had a significant positive impact on the stability of Islamic banks in Indonesia. On the other hand, both OCOI and BI7DRR exhibited significant negative effects on the stability of Islamic banks. These results indicate the importance of managing and maintaining sufficient total assets, efficient operational costs, and reserve requirements to ensure the stability and resilience of Islamic banks, especially during challenging times such as the Covid-19 pandemic.

Practical implications of this study highlight the need for Islamic banks in Indonesia to focus on strategies that enhance their total assets and effectively manage their operational costs. Additionally, policymakers and regulators can utilize the findings to develop policies that encourage the stability and sustainability of the Islamic banking sector. The results emphasize the importance of maintaining sound financial practices and adherence to reserve requirements to ensure the stability and integrity of the banking system.

For future studies, it is recommended to explore additional determinants and factors that may influence the stability of Islamic banks in Indonesia, considering the dynamic nature of the banking industry and the evolving economic landscape. Further research can also investigate the specific impacts of other external factors, such as economic shocks or regulatory changes, on the stability of Islamic banks. Additionally, comparative studies across different countries or regions could provide valuable insights into the unique challenges and opportunities faced by Islamic banks in various contexts.

REFERENCES

1. Abbas, A., & Frihatni, A. A. (2020). The Social Role of Islamic Banks in Indonesia during the Pandemic of COVID-19: Reflection of Market Share. *EJIF – European Journal of Islamic Finance*, *16*.
2. Anjom, W., & Faruq, A. T. M. O. (2023). Financial Stability Analysis of Islamic Banks in Bangladesh. *European Journal of Business and Management Research*, *8*(3). https://doi.org/10.24018/ejbmr.2023.8.3.1953

3. Bitar, M., Hassan, M. K., & Walker, T. (2017). Political systems and the financial soundness of Islamic banks. *Journal of Financial Stability*, *31*. https://doi.org/10.1016/j.jfs.2017.06.002

4. Fatoni, A., & Sidiq, S. (2019). ANALISIS PERBANDINGAN STABILITAS SISTEM PERBANKAN SYARIAH DAN KONVENSIONAL DI INDONESIA. *Ekspansi: Jurnal Ekonomi, Keuangan, Perbankan Dan Akuntansi*, *11*(2). https://doi.org/10.35313/ekspansi.v11i2.1350

5. Isamail, M. Z., Hosin, H., Ya'acob, F. F., Abu-Hussin, M. F., Abdul Hamid, M. F., Azhar, S. N. A. S., Hehsan, A., Junaidi, J., Aziz, A., Yaakob, S. N. A., & Jailani, M. R. (2023). The Role of Asset-Liability Management on Financial Stability in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, *13*(5). https://doi.org/10.6007/IJARBSS/v13-i5/17257

6. Joudar, F., Msatfa, Z., Metwalli, O., Mouabid, M., & Dinar, B. (2023). Islamic Financial Stability Factors: An Econometric Evidence. *Economies*, *11*(3). https://doi.org/10.3390/economies11030079

7. Kanapiyanova, K., Faizulayev, A., Ruzanov, R., Ejdys, J., Kulumbetova, D., & Elbadri, M. (2023). Does social and governmental responsibility matter for financial stability and bank profitability? Evidence from commercial and Islamic banks. *Journal of Islamic Accounting and Business Research*, *14*(3). https://doi.org/10.1108/JIABR-01-2022-0004

8. Onsongo, S. K., Muathe, S., & Mwangi, L. (2019). Firm Size, Operational Risk and Performance: Evidence from Commercial and Services Companies Listed in Nairobi Securities Exchange. *International Journal of Current Aspects*, *3*(VI). https://doi.org/10.35942/ijcab.v3ivi.93

9. Raza, F., & Arshed, N. (2023). Macroeconomic determinants of multidimensional risk of Islamic banks across the world. *Journal of Management Info*, *9*(3). https://doi.org/10.31580/jmi.v9i3.2681

10. Ridho Kismawadi, E., Annisa Shafira Tania, Iskandar, & Bahri, M. I. (2023). INTERCONNECTION OF INFLATION, BI RATE, AND EXCHANGE RATE ON MUDHARABAH AND MURABAHAH FINANCING. *Jurnal Ekonomi Dan Bisnis Islam (Journal of Islamic Economics and Business)*, *9*(1). https://doi.org/10.20473/jebis.v9i1.39202

11. Roncalli, T., & Weisang, G. (2015). Asset Management and Systemic Risk. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2610174

12. Sanica, I. G., Nurcita, I. K., Mastra, I. M., & Sukarnasih, D. M. (2018). Effectiveness and Forecasting of Interest Rate Reversal BI 7-Day Repo Rate in Indonesia: Lower Bound on Monetary Policy? *Mediterranean Journal of Social Sciences*, *9*(1). https://doi.org/10.2478/mjss-2018-0016

13. Suartini, S., Sulistiyo, H., & Indrianti, W. (2019). THE EFFECT OF NON PERFORMING FINANCING, FINANCING TO DEPOSIT RATIO AND OPERATING EXPENSE TO OPERATING INCOME RATIO (BOPO) TO PROFITABILITY. *AFEBI Economic and Finance Review*, *3*(02). https://doi.org/10.47312/aefr.v3i02.207