

Shirkah: Journal of Economics and Business

Vol. 9, No. 2 (2024), page 245-260 p-ISSN: 2503-4235_ e-ISSN: 2503-4243







Factors Affecting Financial Stability of Sharia Banks in Indonesia

Ulfi Kartika Oktaviana a,1, Titis Miranti a,2*

- ^a Faculty of Economics, Universitas Islam Negeri Maulana Malik Ibrahim Malang, Indonesia
- ¹ ulfi@akuntansi.uin-malang.ac.id, ² titis@uin-malang.ac.id*

ARTICLE INFO

Keywords

Bank Ownership; Financial Stability; Sharia Banks in Indonesia

Article history

Received: 06 November

2022

Revised: 10 December 2023 Accepted: 17 January 2024 Available online: 15 March

2024

To cite in APA style

Oktaviana, U. K. & Miranti, T. (2024). Factors affecting financial stability of sharia banks in Indonesia. Shirkah: Journal of Economics and Business, 9(2), 245-260.

ABSTRACT

To ensure the financial stability of Indonesian banks, especially Sharia banks, it is essential to focus on various factors and elements. This study investigates the endogenous and exogenous factors influencing the financial stability of Sharia banks in Indonesia. The study utilized data from the annual financial statements of Sharia banks in Indonesia spanning from 2010 to 2021. Panel data regression served as the analytical tool for the research. The findings indicate that the stability of Sharia commercial banks in Indonesia is influenced by both capital structure and credit risk. Financial leverage also affects sharia bank's financial stability. While ownership distinguishes a bank in terms of organizational structure, it does not necessarily guarantee stability. Islamic commercial banks remain stable amid the COVID-19 pandemic, showing no significant impact on their overall stability. These findings will enhance bank understanding of the risks faced by banks and form the basis for new regulatory efforts to strengthen overall risk management, including liquidity risk and credit risk.

This is an open access article under CC-BY-NC 4.0 license.



Introduction

Banking stability involves assessing the factors that may lead to instability in the banking system. Two key measures of bank stability include a bank's capacity to enhance economic performance and its ability to rectify imbalances caused by internal factors or unexpected risks (Djebali & Zaghdoudi, 2020). The banking sector stability is a factor of economic stability, making it crucial to uphold stability in both conventional and Sharia-



^{*}Corresponding author

e-ISSN: 2503-4243

based banking industries for the overall continuity of global financial sustainability (Banna, 2022). Several factors affect bank's stability. Mateev et al. (2021) stated that banking stability is supported by capital strength, highlighting the critical role of high-quality bank capital in ensuring the sustainability of lending activities. This condition can also reduce banks' possibility of default, especially during and after periods of crisis (Carlson et al., 2015; Doku et al., 2019). Central bank policy is an important factor in the components of bank capital, especially during the COVID-19 recession period. Moreover, capital adequacy policies act as risk protection measures and increase bank performance and efficiency (Benes & Kumhof, 2015).

Credit and liquidity risks are considered to be the main risk factors for bank stability. The debate on the relationship between bank risk and stability is inconclusive because the empirical results differ. Some researchers have shown that these two risks negatively impact banking stability (Ghenimi et al., 2017; Imbierowicz & Rauch, 2014; Ririt & Setiawati, 2020). However, these two risks have a positive effect on banking stability (Albaity et al., 2019; Dutta & Saha, 2021; Zaghdoudi, 2019). Djebali and Zaghdoudi (2020) show a nonlinear relationship between credit risk and liquidity risk on bank stability. The results of several studies were classified into three categories. The first category negatively influences the bank stability caused by these two risks. The second category has a positive effect and the last category has no significant effect on bank stability due to credit risk and liquidity risk.

Other sources find banking or financial instability related to the banking sector's environment, characterized by an ownership structure (Bermpei et al., 2018). This is because banks, as companies, have an organizational framework that is influenced by interested parties, especially in their ownership structure. Cross-country evidence consistently shows that a higher share of government ownership results in banking vulnerability and a higher likelihood of crisis (Duan et al., 2021; Özlem Dursun-de Neef & Schandlbauer, 2021). Guo et al. (2021) report a strong negative impact of state ownership on the capitalization and liquidity of Chinese banks and a positive effect on credit losses compared with foreign banks. Foreign banks in developing countries show better performance and probability of survival (Le et al., 2019; Natsir et al., 2019). Regarding funding stability, Duan et al. (2021) found that state-owned banks in Europe generally have a wider maturity mismatch between assets and liabilities.

The stability of Sharia banks is an important issue in the economic context that attracts attention from the perspective of both economic theory and the theory of economic sustainability. Based on economic theory, the stability of Sharia banks has significant implications for the stability of the financial system. Economic theory states that when Sharia banks are stable, they contribute positively to the economy. Nonetheless, Sharia banks need to be careful in extending their credit and investment, which can reduce systemic risk and financial market turmoil. There are empirical differences from previous research, encouraging researchers to review the factors that influence the stability of banks in Sharia, especially in Indonesia. Bermpei et al. (2018) found that Sharia banks in Indonesia could still generate profits despite the COVID-19 pandemic (Shaikh, 2021; Suwanan et al., 2021). Azhari and Wahyudi (2020) show that Sharia banks experienced fluctuations in third-party funds and debt financing at the start of the pandemic. Furthermore, they refer to Alwi et al. (2021), who stated that bank size and age can control bank stability. The main management of a bank plays an important role in its stability.

This study investigates the factors that may disrupt the stability of Sharia banks in Indonesia. Moreover, considering the global disruption caused by the Covid-19 pandemic on the world economy (Banna, 2022), these factors are yet to be included in research on the stability of Sharia banks in Indonesia. Therefore, there is a need for studies related to this topic. The diversity of research models provided by previous studies confirms the empirical results of this study.

Hypotheses Development

Increasing bank capital can minimize the level of systematic risk faced by banks to increase stability (Naili & Lahrichi, 2022; Quang Trinh et al., 2023). Similarly, Birru (2016) explains that bank capital significantly reduces systematic risk, thereby reducing bank instability, especially in jurisdictions with weak institutional structures. Higher capital requirements significantly increase financial instability (Bahloul et al., 2021).

H1: The value of capital adequacy has a significant effect on bank financial stability.

The financial crisis proved that liquidity and credit risk are two important factors in the banking sector that can affect bank viability (Barnett et al., 2022; Taylor, 2022). Patel et al. (2022) describe how liquidity and credit risk affect bank probabilities. Empirical results show that credit risk threatens banks' stability (Zaghdoudi, 2019). A study conducted by Djebali and Zaghdoudi (2020) finds that Tunisian bank stability is measured by credit risk and liquidity interaction.

H2: Credit risk has a significant effect on bank financial stability.

H3: Liquidity risk has a significant effect on bank financial stability.

The leverage ratio measures the amount of debt used by Islamic companies and banks to finance asset purchases, aiming for new assets to exceed the debt they have. This financial leverage compares a company's overall debt burden with its assets or equity, showing how much of the company's assets belong to shareholders and creditors. Financial leverage ratios help managers and investors understand the level of risk of a company's capital structure. Research has shown that leverage has a significant effect on bank stability. Banks with low leverage are more stable (Restianti & Agustina, 2018; Riaz, 2015).

H4: Financial leverage has a significant effect on bank financial stability.

Credit and Financing Growth measures banks provide to their customers. Banks must mitigate their lending behavior after a global crisis. Strengthening capital requirements is insufficient to ensure prudent lending behavior in Sharia banking (Sobarsyah et al., 2020). Furthermore, stable banks tend to expand their credit faster and are more profitable. The growth of bank credit does not seem to affect banking stability to a certain extent; however, at higher credit growth rates, banks become less stable (Al-Khouri & Arouri, 2016).

H5: Credit and financing growth have a significant effect on banks' financial stability.

Through a robustness test, Le (2020) shows that ownership affects the stability of banks in Vietnam. Le et al. (2019) describe that state-owned banks in Vietnam are more

developed than private banks. This may be attributed to the mitigation differences in bank ownership, which affect the stability of banks in China (Wang et al., 2020).

H6: Ownership of Islamic commercial banks has a significant effect on bank financial stability.

Moudud-Ul-Huq et al. (2021) stated that the COVID-19 pandemic significantly affected the bank stability in Bangladesh. Mateev et al. (2021) stated the impact of crisis years on the stability of banks in MENA. Sharia banks experienced fluctuations in third-party funds and debt financing at the beginning of the pandemic (Azhari & Wahyudi, 2020).

H7: The Covid-19 pandemic has a significant effect on bank financial stability.

Method

e-ISSN: 2503-4243

Sample and Data Resource

The sampling technique was then saturated. Therefore, the entire study population was used as the data sample. The Financial Services Authority (OJK, 2021), there are 14 Sharia Commercial Banks in Indonesia, aligning with the chosen research sample size of 14 banks. Secondary data consist of financial statements of Islamic Commercial Banks obtained through the OJK official website or the official website of each bank. The financial statements considered for analysis cover annual financial reports from 2010 to 2021.

Model Estimation

The Z-score value approximates an Islamic commercial bank's stability value (Moudud-Ul-Huq, 2019; Moudud-Ul-huq et al., 2018; Moudud-Ul-Huq et al., 2021). The research data structure was in the form of panel data. Thus, the appropriate analytical technique used in this study is panel data regression. Wang et al. (2021) conducted panel data regression analysis using control variables. The research model is shown in Equations (1) and (2): The difference between the two models was related to the presence of a control variable. In this study, bank size and bank age are control variables (Alwi et al., 2021). Control variables are able to stabilize the model so that the influence of the independent variables is clearly visible (Johnsson, 2005). However, further research is needed for certain cases.

$$Z_{score(i,t)} = \alpha + \beta 1_{i,t} CAR_{i,t} + \beta 2_{i,t} CR_{i,t} + \beta 3_{i,t} LR_{i,t} + \beta 4_{i,t} FL_{i,t}$$

$$\beta 5_{i,t} CFG_{i,t} + \beta 6_{(i,t)} OWN_{i,t} + \beta 7COVID_{i,t}$$
(1)

$$Z_{score(i,t)} = \alpha + \beta 1_{i,t} CAR_{i,t} + \beta 2_{i,t} CR_{i,t} + \beta 3_{i,t} LR_{i,t} + \beta 4_{i,t} FL_{i,t}$$

$$\beta 5_{i,t} CFG_{i,t} + \beta 6_{(i,t)} OWN_{i,t} + \beta 7COVID_{i,t} + \beta 8_{i,t} Size_{i,t} + \beta 9_{i,t} UB_{i,t}$$
(2)

Note:

CAR : Capital Adequacy

CR : Credit Risk
LR : Liquidity Risk
FL : Financial Leverage

CFG : Credit and Financing Growth

OWN : Ownership of Islamic Commercial Banks

COVID : Covid-19 pandemic

Size : Total Asset UB : Age of Bank

Ownership (Own) indicates the status of the bank, whether it chooses a country (symbolized 1) or not (symbolized 0). Moreover, the observation of the Covid pandemic is worth one (1) during the pandemic period and zero (0) before the COVID-19 pandemic.

Results

Table 1 reveals that the research data show the highest Z-score value of 3.81, attained by Bank BTPN Syariah. A greater and more positive Z-score signifies improved financial stability for Sharia banks (Moudud-Ul-Huq, 2020; Moudud-Ul-Huq et al., 2021; Zaghdoudi, 2019). Conversely, if the Z-score value becomes smaller and even negative, then the financial stability of Sharia banks is disrupted. In 2015, Maybank Shariah recorded the lowest Z-score, reaching -5.39. Notably, Maybank Syariah consistently garnered negative Z-scores in 2016, 2018, and 2021, based on these observations. Moreover, the overall average Z-score across all research data was positive, at 0.41, with nearly 75% falling below 0.67.

Tables 2 and Table 3 show that, for most of the measures used in the study, the highest maximum value was in the private Sharia group. Examples include bank stability, bank age, credit ratio, liquidity ratio, and capital adequacy. In 2021, the state-owned Sharia Bank, Bank Syariah Indonesia, emerged as the leader in growth, both in financing and total assets. These two tables highlight differences in data characteristics, especially in the Z-score value. Based on the average value, state-owned sharia banks relatively have a slightly higher stability value compared to private sharia banks. In this way, private sharia banks are able to achieve a higher Z-score than state-owned sharia banks.

Table 4 presents the results of the correlation analyses of the research variables. Correlation analysis examines the relationship between the research variables (Gogtay & Thatte, 2017). Correlation analysis did not reveal a causal relationship between the research variables. Therefore, further analysis is essential to understand the impact of the explanatory variables on the dependent variable. According to Table 4, the Z-score is significantly associated with CAR, CR, and bank age. Specifically, the correlation between the Z-score and CAR was positive, with a coefficient of 0.1425. This indicates a consistent and significant relationship between Z-Score and CAR, implying that an increase in CAR has the potential to elevate Z-score. Conversely, a decrease in CAR may lead to a decline in the Z-score. Given this unidirectional nature, fluctuations in CAR could influence the corresponding variations in the Z-score, underscoring the interconnectedness of these variables.

Table 1. Descriptive All Observation Data - Including Data from State-Owned Banks and Private Banks

		•			0					
	Z-Score (Y)	CAR (X1)	CR (X2)	LR (X3)	FL (X4)	Ln (CFG) (X5)	OWN (X6)	Covid (X5)	Size (Z1)	UB (Z2)
Max	3.81	0.89	43.99	1.18	1.22	18.96	1.00	1.00	19.40	30.00
Min	-5.39	0.00	0.00	0.17	0.03	8.53	0.00	0.00	12.61	3.00
Median	0.37	0.13	2.84	0.94	0.21	15.53	0.00	0.00	15.93	13.50
Average	0.41	0.17	3.53	0.91	0.39	15.44	0.36	0.25	16.02	15.43
Proportion (%) 0	-	-	-	-	-	-	108 (64,29%)	42 (25%)	-	-
Proportion (%) 1	-	-	-	-	-	-	60 (35,71%)	126 (75%)	-	-

Table 2. Overview of Research Data from State-owned Sharia Bank

`	Z-Score (Y)	CAR (X1)	CR (X2)	LR (X3)	FL (X4)	Ln (CFG) (X5)	Covid (X5)	Size (Z1)	UB (Z2)
Max	1.76	0.26	22.04	1.06	0.87	18.96	1.00	19.40	23.00
Min	-2.18	0.00	0.86	0.73	0.04	14.29	0.00	14.47	4.00
Median	0.39	0.10	2.94	0.95	0.17	16.24	0.00	16.48	22.00
Average	0.58	0.04	3.39	0.05	0.22	1.12	0.25	1.23	7.33
Proportion (%) 0	-	-	-	-	-	-	15 (25%)	-	-
Proportion (%) 1	-	-	-	-	-	-	45 (75%)	-	-

^{**} The highest Z-Score value of 1.76 was achieved by Bank NTB Syariah (2010). Lowest Z-score -2.18 by BJB Syariah (2016)

Table 3. Overview of Research Data from Private Sharia Banks

	Z-Score (Y)	CAR (X1)	CR (X2)	LR (X3)	FL (X4)	Ln (CFG) (X5)	Covid (X5)	Size (Z1)	UB (Z2)
Max	3.81	0.89	43.99	1.18	1.22	17.58	1.00	17.95	30.00
Min	-5.39	0.03	0.00	0.17	0.03	8.53	0.00	12.61	3.00
Median	0.36	0.15	2.34	0.93	0.26	15.36	0.00	15.74	13.00
Average	0.43	0.21	3.41	0.90	0.46	14.97	0.25	15.63	14.56
Proportion (%) 0	-	-	-	-	-	-	27 (25%)	-	-
Proportion (%) 1	-	-	-	-	-	-	33 (75%)	-	-

^{**} The highest Z-Score value of 3.81 was achieved by Bank BTPN Syariah (2019). Lowest Z-score -5.39 by Maybank Syariah (2015)

Table 4. Correlation Analysis

			Tabl	e 4. Correla	ition Anaiy	SIS				
Correlation t-Statistic										
Probability	ZSCORE_Y	CAR_X1	CR_X2	LR_X3	FL_X4	CFG_X5	OWN_X6	COVID_X7	SIZE_Z1	UB_Z2
ZSCORE_Y	1.000000									
CAR_X1	0.142548	1.000000								
	1.855556									
	0.0653									
CR_X2	-0.559719	-0.003535	1.000000							
	-8.702340	-0.045551								
	0.0000	0.9637								
LR_X3	-0.037441	0.025393	0.078616	1.000000						
	-0.482733	0.327273	1.016042							
	0.6299	0.7439	0.3111							
FL_X4	-0.034519	-0.121300	-0.163896	-0.095185	1.000000					
	-0.445012	-1.574473	-2.140604	-1.231965						
	0.6569	0.1173	0.0338	0.2197						
CFG_X5	0.007068	-0.753940	0.026589	0.043891	0.045995	1.000000				
	0.091068	-14.78641	0.342698	0.566047	0.593238					
	0.9275	0.0000	0.7323	0.5721	0.5538					
OWN_X6	-0.020587	-0.318014	0.034536	0.172197	-0.308731	0.365858	1.000000			
	-0.265306	-4.321683	0.445234	2.252246	-4.182007	5.064903				
	0.7911	0.0000	0.6567	0.0256	0.0000	0.0000				
COVID_X7	0.041399	0.095600	-0.097186	0.050916	-0.090394	0.074107	3.82E-17	1.000000		
	0.533842	1.237384	-1.258112	0.656859	-1.169436	0.957437	4.92E-16			
	0.5942	0.2177	0.2101	0.5122	0.2439	0.3397	1.0000			
SIZE_Z1	0.049183	-0.593087	-0.056584	0.078454	-0.044200	0.907481	0.379599	0.225319	1.000000	
	0.634442	-9.490788	-0.730199	1.013935	-0.570037	27.83206	5.286481	2.979648		

Shirkah: Journal of Economics and Business *Vol. 9, No. 2 (2024), page 245-260*

	0.5267	0.0000	0.4663	0.3121	0.5694	0.0000	0.0000	0.0033		
UB_Z2	-0.310538	-0.382097	0.146179	-0.075950	-0.111425	0.413168	0.165239	3.79E-17	0.485701	1.000000
	-4.209095	-5.327198	1.903840	-0.981379	-1.444605	5.845572	2.158628	4.88E-16	7.158944	
	0.0000	0.0000	0.0587	0.3278	0.1505	0.0000	0.0323	1.0000	0.0000	

An effect test analysis was used to address research problems. In the first model, we examine the influence of the independent variable on the dependent variable. The second model explored the impact of independent variables on the dependent variable, incorporating control variables, such as bank size and bank age. Both models were analyzed using panel data regression, encompassing continuous and categorical data for independent variables.

The stages of panel data regression analysis involved data processing through various approaches tailored to the nature of panel data. These approaches include the common effect model (CEM), fixed effect model (FEM), and random effect model (REM). Once the three models were established, their goodness of fit was tested, ultimately determining that the random effect model (REM) performed the best. Table 5 presents the estimated parameters of the REM in Equation 1.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAR_X1	3.130529	0.895088	3.497453	0.0006
CR_X2	-0.112540	0.012002	-9.376779	0.0000
LR_X3	0.256667	0.466112	0.550655	0.5826
FL_X4	-0.247505	0.196990	-1.256435	0.2108
CFG_X5	0.169659	0.069623	2.436803	0.0159
OWN_X6	0.006511	0.293370	0.022195	0.9823
COVID_X7	-0.196252	0.130381	-1.505228	0.1342
C	-2.441265	1.208094	-2.020758	0.0450

Table 5. Random Effect Model (REM)-Model 1

Table 6 presents the REM model for Equation 2. Based on the results of the second model, the CAR, CR, FL, and CFG ratios have a significant effect on bank financial stability. These results differ when there is no additional control variable, as shown in Table 5 (Model 1). Bank age has a significant effect on the Z-scores of the two control variables. However, bank size had no significant effect on the Z-score.

		`	,	
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAR_X1	2.143875	0.696957	3.076052	0.0025
CR_X2	-0.112902	0.012822	-8.805344	0.0000
LR_X3	-0.380123	0.484839	-0.784019	0.4342
FL_X4	-0.507921	0.200094	-2.538409	0.0121
CFG_X5	0.214007	0.113536	1.884917	0.0613
OWN_X6	-0.104547	0.142709	-0.732583	0.4649
COVID_X7	-0.212150	0.147664	-1.436706	0.1528
SIZE_Z1	0.035091	0.129380	0.271226	0.7866
UB_Z2	-0.042586	0.010207	-4.172138	0.0000
C	-2.132613	1.056367	-2.018819	0.0452

Table 6. Random Effect Model (REM)-Model 2

Discussion

The financial stability of Sharia banks refers to the capability of the bank's financial system to fulfil all its financial obligations, handle unexpected financial imbalances, and prevent possible negative effects. Numerous studies suggest that Sharia bank finance

e-ISSN: 2503-4243

exhibits greater stability than other financial systems do. The main reason is that they operate based on Islamic principles (Budiman et al., 2021; Hasan & Risfandy, 2021). In this study, capital adequacy significantly affects the stability of Sharia banks in Indonesia. Moreover, this effect was positive. The higher the capital adequacy value, the more stable the bank is (Arnold et al., 2012). Maintaining a solid financial foundation is possible when a bank possesses a significant amount of capital. In addition, Amran et al. (2017) describe that bank equity capital not only strengthens incentives for bank monitoring but also increases probabilities. However, attention needs to be paid to regulations on capital requirements by supervisory institutions that are strict and binding. In building capital, banks must adhere to compliance requirements to reduce the impact of capital on upholding bank financial stability (Berger et al., 2009; Wang et al., 2020).

This study shows that credit risk significantly affects bank stability. However, the forms of these relationships are not comparable. Credit risk management, a key focus of the Basel Committee, is highly effective at enhancing bank profitability. This, in turn, contributes to the overall bank system stability and plays a role in stabilizing the financial system (Pham, 2019). This study is in line with Ghazali et al. (2022), revealing that heightened non-performing loans diminish financial stability in commercial banks. In addition, bank-specific variables, such as equity-to-asset ratio, return on equity, bank size, and macroeconomic variables, affect bank financial stability. This study shows that, in both models, the liquidity ratio has no significant effect on bank stability. If a bank invests too much but has low equity, it might face a higher chance of credit problems, which could lead to increased liquidity issues. This is a crucial aspect of maintaining stability in banks, as many still face the challenges associated with liquidity risks in stabilizing their operations (Pulatovich, 2019). The combination of credit and liquidity risks threatens many banks' stability. Therefore, these two risk categories play an important role in banks' stability.

This study also shows that financial leverage has a significant effect on banks' financial stability. A company is considered less leveraged when shareholders hold more assets, whereas it is deemed highly leveraged if most assets are owned by creditors. Further analysis shows that leverage is a risk-based capital framework. Thus, they can strengthen each other's financial conditions, including risks that cannot be captured by other parties. Banks must ensure that they are not operating with excessive leverage and simultaneously have sufficient incentives to keep risk-taking under control. The accumulation of leverage can trigger financial vulnerability, because high debt levels make banks more vulnerable to adverse shocks (Albaity et al., 2019; Restianti & Agustina, 2018). When unexpected shocks occur and financial conditions tighten, the risk of financial stability may emerge because of abrupt corrections in asset prices and rapid deleveraging by firms.

The credit and financing growth in the study models have a lower probability than the researcher's real level of 10%. This indicates a significant effect on bank financial stability. The nature of this influence is either positive or unidirectional. The rapid growth of financing is a natural phenomenon and positive consequence of an increase in the economy. However, on the other hand, this credit growth has direct implications for financial stability and macro conditions, especially when rapid credit growth is followed by a weakening of the current account and a weakening of the macro condition of the vulnerable financial sector. Excessive credit and financing growth threatens

macroeconomic stability. Setbacks in business cycles and crises in emerging markets are generally preceded by periods of rapid credit growth and asset price bubble. The results of this study are in line with studies on financial stability; that is, excessive credit growth can be considered one of the most reliable indicators of future problems of banking stability (Arnold et al., 2012; Kaur et al., 2023; Taylor, 2022).

Bank size and age are related to credit growth (Ben Zeineb & Mensi, 2018; Golubeva, 2021). It shows that larger banks have the flexibility to channel their financing so that if the distribution is increased, the bank must also prepare enough capital to absorb the risk from financing distribution. In addition, bank size is important to soften the spillover of monetary policy on domestic borrowing in foreign currencies so that it can become a financial stabilizer.

Sharia banks' ownership, whether by state-owned or private companies, does not have a significant impact on the financial stability of the bank. This was observed in the first and second models. Both entities, whether state-owned or private, exhibit financial stability levels that surpass the researcher's expected threshold (Abalo et al., 2007; Olayinka, 2021; Shi et al., 2021). Sometimes, institutional investors lack sufficient incentives or authority to actively supervise, resulting in a passive role. This passive stance increases the likelihood of self-serving decisions by management and the risk of financial distress. State-owned and private banks exhibit similar average stability, with the government owning a portion of the banks and the rest being privately owned. Banks may choose to go public to enhance capital, expand credit, improve liquidity, and enhance transparency, thus allowing broader community participation in ownership to strengthen control and promote good corporate governance.

This study indicates that the COVID-19 pandemic has had an insignificant effect. Both the first and second models produce probability values higher than the actual significance level, suggesting that banks' financial stability is not influenced by the COVID-19 pandemic. This could be due to macroprudential policies that function to avoid financial instability, such as the banking crisis, which has a long-term and damaging impact on the economy that the Government has implemented. Macroprudential policies effectively change the possibility of a banking crisis through credit and financing channels. Nevertheless, its effectiveness depends on its macroeconomy (Ji et al., 2020). The threat of a deteriorating financial system due to COVID-19 calls for joint efforts from the government and coordinated policies to ensure stability. Research indicates that despite the pandemic, there is no significant difference in the financial stability of Sharia banks, implying their resilience in facing unexpected conditions and maintaining financial operations.

Based on the economic sustainability theory perspective, the stability of Sharia banks is relevant in building a sustainable and inclusive economy. Sharia banks that focus on Islamic ethics and values tend to focus on environmental, social, and corporate governance aspects (environmental, social, and governance/ESG). In the context of the theory of economic sustainability, the stability of ESG-oriented Sharia banks enables them to contribute to sustainable economic development. It considers the interests of all stakeholders, including society and the environment.

Authorities and supervisory institutions need to adopt an appropriate framework to achieve sustainable Sharia banking stability. Strong regulation and supervision are needed to ensure that Sharia banks operate according to the right principles, minimize risks, and

comply with economic sustainability standards. In addition, public education and awareness regarding the benefits and advantages of Sharia banks in the context of a sustainable economy are key to strengthening the stability of Sharia banks. Thus, economic and economic sustainability theories provide a solid basis for discussing and understanding the stability of Sharia banks and their role in achieving a sustainable and inclusive economy.

Conclusion

e-ISSN: 2503-4243

Bank financial stability is key to a country's economic development success. The stability of Sharia banks in Indonesia is caused by their capital structure and credit risk. This study also shows that financial leverage has a significant effect on bank financial stability. Although ownership influences a bank's organizational structure, it does not ensure stability. It can maintain stability despite being affected by the COVID-19 pandemic. The COVID-19 pandemic had no significant effect on the stability of Sharia banks in Indonesia. Moreover, increasingly advanced technology contributes to bank stability through the adoption of new systems. Therefore, there is a need for research focusing on financial technology. Additionally, Islamic financial institutions in Indonesia exhibit considerable diversity at various levels. It is crucial to conduct stability studies on other Islamic financial institutions to ensure the sustainability of these institutions.

Authors' Declaration

The authors made substantial contributions to the conception and design of the study. The authors took responsibility for data analysis, interpretation and discussion of results. The authors read and approved the final manuscript.

Acknowledgement

This research is fully supported by the Institute for Research and Community Service (LP2M) UIN Maulana Malik Ibrahim Malang Fiscal Year 2022.

ORCID

Ulfi Kartika Oktaviana https://orcid.org/0000-0002-5222-4423
Titis Miranti https://orcid.org/0000-0002-8720-3809

References

Abalo, J., Varela, J., & Manzano, V. (2007). Importance values for Importance-Performance Analysis: A formula for spreading out values derived from preference rankings. *Journal of Business Research*, 60(2), 115–121. https://doi.org/10.1016/j.jbusres.2006.10.009

Al-Khouri, R., & Arouri, H. (2016). The simultaneous estimation of credit growth, valuation, and stability of the Gulf Cooperation Council banking industry. *Economic Systems*, 40(3), 499–518. https://doi.org/10.1016/j.ecosys.2015.12.005

Albaity, M., Mallek, R. S., & Noman, A. H. M. (2019). Competition and bank stability in the MENA region: The moderating effect of Islamic versus conventional banks. *Emerging*

- Markets Review, 38, 310–325. https://doi.org/10.1016/j.ememar.2019.01.003
- Alwi, H. H., Parmitasari, N. A., & Pamungkas, I. D. (2021). The Role of Non-Performing Asset, Capital, Adequacy and Insolvency Risk on Bank Performance: A Case Study in Indonesia. *Journal of Asian Finance, Economics and Business*, 8(3), 319–329. https://doi.org/10.13106/jafeb.2021.vol8.no3.0319
- Amran, A., Hasan, F., Yadi, P., Faizah, D., Haslinda, Y., Mustaffa, M. Z., Dayang, M. A. N., & Mehran, N. (2017). Social Responsibility Disclosure in Islamic banks: A Comparative Study of Indonesia and Malaysia. *Journal of Financial Reporting and Accounting*, 15(1), 99–115. https://doi.org/10.1108/JFRA-01-2015-0016
- Arnold, B., Borio, C., Ellis, L., & Moshirian, F. (2012). Systemic risk, macroprudential policy frameworks, monitoring financial systems and the evolution of capital adequacy. *Journal of Banking and Finance*, 36(12), 3125–3132. https://doi.org/10.1016/j.jbankfin.2012.07.023
- Azhari, A. R., & Wahyudi, R. (2020). Analisis Kinerja Perbankan Syariah di Indonesia: Studi Masa Pandemi Covid-19. *Jurnal Ekonomi Syariah Indonesia*), 10(2), 96–102. http://dx.doi.org/10.21927/jesi.2020.10(2).96-102
- Bahloul, S., Mroua, M., & Naifar, N. (2021). Are Islamic indexes, Bitcoin and gold, still "safe-haven" assets during the COVID-19 pandemic crisis? *International Journal of Islamic and Middle Eastern Finance and Management*, 15(2), 372-385. https://doi.org/10.1108/IMEFM-06-2020-0295
- Banna, H. (2022). The role of digital financial inclusion on promoting sustainable economic growth through banking stability: Evidence from Bangladesh Digital Financial Inclusion and Banking Stability/Bank risk-taking View project The role of digital financial inclusion on. August 2020. https://www.researchgate.net/publication/343569152
- Barnett, W. A., Wang, X., Xu, H. C., & Zhou, W. X. (2022). Hierarchical contagions in the interdependent financial network. *Journal of Financial Stability*, 61, 101037. https://doi.org/10.1016/j.jfs.2022.101037
- Ben Zeineb, G., & Mensi, S. (2018). Corporate governance, risk and efficiency: evidence from GCC Islamic banks. *Managerial Finance*, 44(5), 551–569. https://doi.org/10.1108/MF-05-2017-0186
- Benes, J., & Kumhof, M. (2015). Risky bank lending and countercyclical capital buffers. *Journal of Economic Dynamics and Control*, 58, 58–80. https://doi.org/10.1016/j.jedc.2015.06.005
- Berger, A. N., Klapper, L. F., & Turk-Ariss, R. (2009). Bank competition and financial stability. *Journal of Financial Services Research*, 35(2), 99–118. https://doi.org/10.1007/s10693-008-0050-7
- Bermpei, T., Kalyvas, A., & Nguyen, T. C. (2018). Does institutional quality condition the effect of bank regulations and supervision on bank stability? Evidence from emerging and developing economies. *International Review of Financial Analysis*, 59, 255–275. https://doi.org/10.1016/j.irfa.2018.06.002
- Birru, M. W. (2016). The Impact of Caiptal Structure on Financial Performance of Commercial Banks in Ethiopia. *Global Journal of Management and Business Research*: *C Finance*, 16(8), 42–52.
- Budiman, T., Satyakti, Y., & Febrian, E. (2021). Islamic bank sustainability: An econometric approach. *Asian Economic and Financial Review*, 11(2), 141–159. https://doi.org/10.18488/JOURNAL.AEFR.2021.112.141.159

- e-ISSN: 2503-4243
- Carlson, J., O'Cass, A., & Ahrholdt, D. (2015). Assessing customers' perceived value of the online channel of multichannel retailers: A two country examination. *Journal of Retailing and Consumer Services*, 27, 90–102. https://doi.org/10.1016/j.jretconser.2015.07.008
- Djebali, N., & Zaghdoudi, K. (2020). Threshold effects of liquidity risk and credit risk on bank stability in the MENA region. *Journal of Policy Modeling*, 42(5), 1049–1063. https://doi.org/10.1016/j.jpolmod.2020.01.013
- Doku, J. N., Kpekpena, F. A., & Boateng, P. Y. (2019). Capital Structure and Bank Performance: Empirical Evidence from Ghana. *African Development Review*, 31(1), 15–27. https://doi.org/10.1111/1467-8268.12360
- Duan, Y., El Ghoul, S., Guedhami, O., Li, H., & Li, X. (2021). Bank systemic risk around COVID-19: A cross-country analysis. *Journal of Banking and Finance*, 133, 106299. https://doi.org/10.1016/j.jbankfin.2021.106299
- Dutta, K. D., & Saha, M. (2021). Do competition and efficiency lead to bank stability? Evidence from Bangladesh. *Future Business Journal*, 7(1). https://doi.org/10.1186/s43093-020-00047-4
- Ghazali, E. M., Mutum, D. S., Waqas, M., Nguyen, B., & Ahmad-Tarmizi, N. A. (2022). Restaurant choice and religious obligation in the absence of halal logo: A serial mediation model. *International Journal of Hospitality Management*, 101, 103109. https://doi.org/10.1016/j.ijhm.2021.103109
- Ghenimi, A., Chaibi, H., & Omri, M. A. B. (2017). The effects of liquidity risk and credit risk on bank stability: Evidence from the MENA region. *Borsa Istanbul Review*, 17(4), 238–248. https://doi.org/10.1016/j.bir.2017.05.002
- Gogtay, N. J., & Thatte, U. M. (2017). Principles of correlation analysis. *Journal of Association of Physicians of India*, 65(MARCH), 78–81. https://pubmed.ncbi.nlm.nih.gov/28462548/
- Golubeva, O. (2021). Firms' performance during the COVID-19 outbreak: international evidence from 13 countries. *Corporate Governance: The International Journal of Business in Society*, 21(6), 1011–1027. https://doi.org/10.1108/CG-09-2020-0405
- Guo, X., Wang, Y., Zhou, N., & Zhu, X. (2021). Optimal weighted two-sample t-test with partially paired data in a unified framework. *Journal of Applied Statistics*, 48(6), 961–976. https://doi.org/10.1080/02664763.2020.1753027
- Hasan, A. I., & Risfandy, T. (2021). Islamic Banks' Stability: Full-Fledged vs Islamic Windows. *Journal of Accounting and Investment*, 22(1), 192–205. https://doi.org/10.18196/jai.v22i1.10287
- Imbierowicz, B., & Rauch, C. (2014). The relationship between liquidity risk and credit risk in banks. *Journal of Banking and Finance*, 40(1), 242–256. https://doi.org/10.1016/j.jbankfin.2013.11.030
- Ji, Q., Zhang, D., & Zhao, Y. (2020). Searching for safe-haven assets during the COVID-19 pandemic. *International Review of Financial Analysis*, 71, 101526. https://doi.org/10.1016/j.irfa.2020.101526
- Johnsson, I. D. A. (2005). Review of Economics and Statistics. *Encyclopedia of Statistical Sciences*. https://doi.org/10.1002/0471667196.ess7028.pub2
- Kaur, B., Kaur, R., Sood, K., & Grima, S. (2023). Impact of non-performing assets on the profitability of the Indian banking sector. *Contemporary Studies of Risks in Emerging Technology, Part A*, 6(1), 257–269. https://doi.org/10.1108/978-1-80455-562-020231017
- Le, P. T., Harvie, C., Arjomandi, A., & Borthwick, J. (2019). Financial liberalisation, bank

- ownership type and performance in a transition economy: The case of Vietnam. *Pacific Basin Finance Journal*, *57*, 101182. https://doi.org/10.1016/j.pacfin.2019.101182
- Le, T. D. Q. (2020). The interrelationship among bank profitability, bank stability, and loan growth: Evidence from Vietnam. *Cogent Business and Management*, 7(1), 1840488. https://doi.org/10.1080/23311975.2020.1840488
- Mateev, M., Tariq, M. U., & Sahyouni, A. (2021). Competition, capital growth and risk-taking in emerging markets: Policy implications for banking sector stability during COVID-19 pandemic. *PLoS ONE*, 16(6), e0253803. https://doi.org/10.1371/journal.pone.0253803
- Moudud-Ul-Huq, S. (2019). Banks' capital buffers, risk, and efficiency in emerging economies: are they counter-cyclical? *Eurasian Economic Review*, 9(4), 467–492. https://doi.org/10.1007/s40822-018-0121-5
- Moudud-Ul-Huq, S. (2020). Does bank competition matter for performance and risk-taking? empirical evidence from BRICS countries. *International Journal of Emerging Markets*, 16(3), 409–447. https://doi.org/10.1108/IJOEM-03-2019-0197
- Moudud-Ul-Huq, S., Ahmed, K., Chowdhury, M. A. F., M. Sohail, H., Biswas, T., & Abbas, F. (2021). How do banks' capital regulation and risk-taking respond to COVID-19? Empirical insights of ownership structure. *International Journal of Islamic and Middle Eastern Finance and Management*, 15(2), 406-424. https://doi.org/10.1108/IMEFM-07-2020-0372
- Moudud-Ul-huq, S., Zheng, C., & Gupta, A. Das. (2018). Does bank corporate governance matter for bank performance and risk-taking? New insights of an emerging economy. *Asian Economic and Financial Review*, 8(2), 205–230. https://doi.org/10.18488/journal.aefr.2018.82.205.230
- Naili, M., & Lahrichi, Y. (2022). Banks' credit risk, systematic determinants and specific factors: recent evidence from emerging markets. *Heliyon*, 8(2), 1–16. https://doi.org/10.1016/j.heliyon.2022.e08960
- Natsir, M., Soedarmono, W., April Yudhi, W. S., Trinugroho, I., & Warokka, A. (2019). Foreign penetration, competition, and credit risk in banking. *Borsa Istanbul Review*, 19(3), 249–257. https://doi.org/10.1016/j.bir.2019.05.003
- Olayinka, O. M. (2021). Corporate governance and economic sustainability reporting in Nigeria. *Journal of Accounting and Taxation*, 13(4), 243–254. https://doi.org/10.5897/jat2021.0478
- Özlem Dursun-de Neef, H., & Schandlbauer, A. (2021). COVID-19 and lending responses of European banks. *Journal of Banking and Finance*, 133. https://doi.org/10.1016/j.jbankfin.2021.106236
- Patel, A., Sorokina, N., & Thornton, J. H. (2022). Liquidity and bank capital structure. *Journal of Financial Stability*, 62, 101038. https://doi.org/10.1016/j.jfs.2022.101038
- Pham, V. A. (2019). Exchange rate pass-through into inflation in Vietnam: evidence from VAR model. *Journal of Economics and Development*, 21(2), 144–155. https://doi.org/10.1108/JED-07-2019-0013
- Pulatovich, E. M. (2019). Impact of financial sustainability on enterprise value expansion. *International Journal of Engineering and Advanced Technology*, 9(1), 4640–4645. https://doi.org/10.35940/ijeat.A2926.109119
- Quang Trinh, V., Duong Cao, N., Li, T., & Elnahass, M. (2023). Social capital, trust, and bank tail risk: The value of ESG rating and the effects of crisis shocks. *Journal of*

- e-ISSN: 2503-4243
 - International Financial Markets, Institutions and Money, 83, 101740. https://doi.org/10.1016/j.intfin.2023.101740
- Restianti, T., & Agustina, L. (2018). The Effect of Financial Ratios on Financial Distress Conditions in Sub Industrial Sector Company. *Accounting Analysis Journal*, 7(1), 25–33. https://doi.org/10.15294/aaj.v5i3.18996
- Riaz, S. (2015). (2015). Impact of Capital Structure on Firm's Financial Performance: *Journal of Poverty, Investment and Development*, 12, 85–93. www.iiste.org
- Ririt, I., & Setiawati, S. (2020). Analisis Pengaruh Faktor-Faktor Fundamental Kinerja Bank Dan Makro Ekonomi Terhadap Stabilitas Perbankan Di Indonesia. *Jurnal Ilmiah Bisnis Dan Ekonomi Asia*, 14(2), 123–132. https://doi.org/10.32812/jibeka.v14i2.194
- Shaikh, I. (2021). On the relation between Pandemic Disease Outbreak News and Crude oil, Gold, Gold mining, Silver and Energy Markets. *Resources Policy*, 72, 102025. https://doi.org/10.1016/j.resourpol.2021.102025
- Shi, Y., Ahmed, K., & Paramati, S. R. (2021). Determinants of stock market development and price volatility in ASEAN plus three countries: The role of institutional quality. *International Journal of Finance and Economics*, 26(1), 560–572. https://doi.org/10.1002/ijfe.1804
- Sobarsyah, M., Soedarmono, W., Yudhi, W. S. A., Trinugroho, I., Warokka, A., & Pramono, S. E. (2020). Loan growth, capitalization, and credit risk in Islamic banking. *International Economics*, 163, 155–162. https://doi.org/10.1016/j.inteco.2020.02.001
- Suwanan, A. F., Putro, A. C., Triyanto, A., Munir, S., & Merlinda, S. (2021). Halal Development: Trends, Opportunities and Challenges. In *Halal Development: Trends, Opportunities and Challenges*. https://doi.org/10.1201/9781003189282-6
- Taylor, D. (2022). Did diversified and less risky banks perform better amid the pandemic? *Economics Letters*, 211, 110251. https://doi.org/10.1016/j.econlet.2021.110251
- Wang, H., Luo, T., Tian, G. G., & Yan, H. (2020). How does bank ownership affect firm investment? Evidence from China. *Journal of Banking and Finance*, 113, 105741. https://doi.org/10.1016/j.jbankfin.2020.105741
- Zaghdoudi, K. (2019). The effects of risks on the stability of Tunisian conventional banks. *Asian Economic and Financial Review*, 9(3), 389–401. https://doi.org/10.18488/journal.aefr.2019.93.389.401