



The Comparative Analysis of Financial Distress Precipitating Factors in Islamic Banking in Indonesia and Malaysia Based on Bankometer Variables

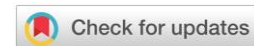
Amelia Pratiwi^{a,1*}, Tri Verani^{b,2}, Asyarf Rayhan^{c,3}

^{1,2,3}Department of Sharia Economics, Faculty of Islamic Studies,
Universitas Muhammadiyah Yogyakarta, Indonesia

Email: ^aameliapратиwi@fai.umy.ac.id, ^btri.verani.fai19@mail.umy.ac.id,
^casyarf.rayhan.fai19@mail.umy.ac.id

*Corresponding Author

DOI: <https://doi.org/10.22219/jes.v8i2.27973>



ABSTRACT

Keywords:
Financial distress; Islamic banking; Bankometer; Cost-to-income ratio; Loan-to-assets ratio.

This study seeks to identify and compare descriptively the factors that influence the likelihood of financial distress in Indonesian and Malaysian Islamic banking. This study selected some variables and standard ratio values based on the Bankometer model such as Islamic banks' capital adequacy, leverage level, credit risk, efficiency, and liquidity. The financial ratio data collected from published financial reports from five Indonesian Islamic banks and four Malaysian Islamic banks then analyzed using binary logistic regression. The results indicate that during the observation periods, the capital level (CA and CAR), leverage level (EA), and credit risk (NPF) of Islamic banking in Indonesia and Malaysia met the Bankometer standard. Meanwhile, the liquidity level (LA) of Islamic banks in both countries slightly exceeded the Bankometer's maximum standard, especially before the pandemic period. The findings in this study may enrich the discourse on the factors that trigger possible financial distress in Islamic banking by collaborating with the Bankometer model and binary logistic regression.

Article Info:

Submitted:
01/06/2023
Revised:
10/07/2023
Published:
29/08/2023



This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International \(CC BY-SA 4.0\)](https://creativecommons.org/licenses/by-sa/4.0/)

How to cite: Pratiwi, A., Verani T., Rayhan A. (2023). The Comparative Analysis of Financial Distress Precipitating Factors in Sharia Banking in Indonesia and Malaysia Based on Bankometer Variables. *Falah: Jurnal Ekonomi Syariah*, 8(2), 32-46. <https://doi.org/10.22219/jes.v8i2.27973>

INTRODUCTION

Islamic finance, including Islamic banking, has experienced significant development with an annual growth rate of 17% since 2009. Particularly in the Southeast Asia region, the growth of Islamic banking achieved systemic significance, led by Malaysia and Indonesia. Both countries control, respectively, 81% and 15% of Islamic banking assets in the region (The ADB, 2023; S&P Global Ratings, 2022; Anand et al., 2022).

According to IMF, Malaysian banks have greater liquidity, funding, and asset quality than Indonesian banks. However, Indonesia's national banking is still superior to Malaysia's in terms of capital strength and profitability (The IMF, 2022a). Despite the fact that the capital and profitability of Indonesian banks are relatively high, they still have operational efficiency issues, as evidenced by their relatively high cost-to-income (CI) ratio (Otoritas Jasa Keuangan (OJK), 2022). Several internal and external factors have contributed to the inadequacy of Islamic banking in Indonesia (Rini, 2015; Sitanggang & Cicilia, 2023). In the long run, such a situation is undesirable for Indonesian Islamic banking, and strategic steps need to be taken immediately to anticipate possible financial problems in the future (Mutamimah, et al., 2022; Wijaya, et al., 2022; Alshater, et al., 2022).

Financial distress describes the condition of an Islamic bank that faces financial problems where it cannot meet obligations due to insufficient cash flow (Kalbuana, et al., 2022; Ben Jedidia & Hamza, 2023; Thinwa & Matanda, 2023). A number of studies characterize financially troubled banks under several diverse conditions. Banks begin to show symptoms of problems when short-term liquidity problems occur (Bhunia & Sarkar, 2011; Morris & Shin, 2016; Triwahyuningtias & Muharam, 2012). Banks with the potential to experience financial problems can also start with weak capital and solvency levels (Sahut & Mili, 2011). Furthermore, financial distress can also be triggered by a decrease in the level of profitability of companies, which makes them not have sufficient funds to maintain their solvency level (Fallahpour, 2004; Kordestani et al., 2011).

Alber et al. (2019) classified banking efficiency into three factors: strategy, execution, and environment. Banks can choose product and customer mix, geographic location, distribution methods, and organisational structure in the first element. The financial risks a bank takes affect how it serves its clients. On the other hand, the profitability of Islamic banks, generally measured by ROA, describes how efficiently the bank manages assets to create profits. Islamic banks with high profitability can avoid the potential to experience financial problems (Chou & Buchdadi, 2016; Cole & White, 2012; Lin & Yang, 2016; Sufian & Shah Habibullah, 2010) because they have sufficient funds to maintain liquidity and solvency positions, strengthen internal capital and have a defense against losses from credit impairment.

Cole & White (2012) found that profitability has a significant negative impact on financial problems in several American banks. The more profitable banks are, the farther they are from financial distress. Similar results were found by Lin & Yang (2016)

in various East Asian banks, where profitability measured by ROA was adversely and significantly related to bankruptcy. Similarly, [Mostofa et al. \(2016\)](#) found that profitability factors, such as EBIT on total assets, are more accurate predictors of banking financial distress than activity, solvency, leverage, and market value. In contrast, [Pessarossi et al. \(2020\)](#) found that high profitability (ROA) did not improve financial difficulty in various European banks. Even highly profitable banks are more likely to experience financial distress in the next few periods.

Several studies were conducted to measure the potential for bankruptcy using financial ratios from various models, such as CAMELS ([Cole & White, 2012](#); [Lin & Yang, 2016](#)), Altman's Z-score ([Mostofa et al., 2016](#)), and Bankometer ([Budiman et al., 2017](#); [Laila & Widihadnanto, 2017](#); [Pristianti & Musdholifah, 2020](#)). Although Altman's Z-score and Bankometer are useful for measuring banking performance in relation to financial distress levels, the model cannot reveal the most significant variables influencing a bank's bankruptcy potential.

Therefore, to determine the factors that significantly affect the potential for financial distress, some previous studies used statistical techniques, such as panel data regression analysis ([Wilevy & Kurniasih, 2021](#)), multiple discriminant analysis (MDA) ([Bhunias & Sarkar, 2011](#)), and logit regression ([Lin & Yang, 2016](#); [Nurtjahjo et al., 2022](#); [Zaki et al., 2011](#)). The latter model is believed to have better accuracy in the comparison of banking performance between countries because it has fewer assumptions in its modeling ([Davis & Karim, 2008](#); [Lin & Yang, 2016](#)).

In practise, bank capital comprises several components with diverse availability and capabilities to overcome losses. If these capital components are provided individually, they can better indicate a bank's ability to withstand losses ([Evans et al., 2000](#)). Banks can withstand crisis and excessive financing expansion risks with greater quality and amount of capital ([Otoritas Jasa Keuangan \(OJK\), 2017](#)), thus reducing the potential for failure in the bank. [Nurtjahjo et al. \(2022\)](#) and [Pristianti & Musdholifah \(2020\)](#) found that capital negatively affects financial distress. These findings contradict the analysis of [Sistiyarini & Supriyono \(2017\)](#) on Indonesian conventional banks. Since the banks studied have strong capital under BI requirements, none are at risk of failure.

The study by [Lin & Yang \(2016\)](#) shows a negative and significant relationship between EAs and potential bankruptcy. This differs from [Zaki et al. \(2011\)](#), who examined financial distress in many UAE banks and found a substantial positive association. The NPL ratio shows how well banks the occurrence of bad financing to maintain asset quality. [Lin & Yang \(2016\)](#) found that low credit quality increases the risk of bank failure with unidirectional relationships, making Islamic banks more vulnerable to bankruptcy. However, [Pristianti & Musdholifah \(2020\)](#) found that NPL does not influence the probability of financial distress. According to [Sistiyarini & Supriyono \(2017\)](#), Islamic banks can overcome credit risk if a large NPL is followed by substantial bank capital.

According to the study of [Pratiwi et al. \(2019\)](#) on Indonesian Islamic rural banks, efficiency is a factor that has the most significant discriminating power in distinguishing

between problematic and healthy banks. However, Pappas et. al. (2017) found that Islamic banks can avoid financial distress if their human capital investment improves managerial performance, even though their operations are less efficient than conventional banks in Middle and Far Eastern countries. The first possits that banks with high liquid assets have greater opportunities to fund markets in symmetric information conditions to minimize financing costs and boost profits (Bordeleau & Graham, 2010; Muhtar et al., 2020). Therefore, it can be argued that a bank’s liquidity is positively correlated with its profitability (Morris & Shin, 2016), resulting in a reduced likelihood of encountering financial difficulties (Lin & Yang, 2016; Mun & Thaker, 2016).

Meanwhile, the possibility of banks failing to fulfill their maturing obligations due to strong liquidity, the trend of bank liquidity can be opposite to their profitability (Arif & Anees, 2012; Daoud & Kammoun, 2020). When associated with financial distress probability, the higher the LA ratio, the more likely a bank will be exposed to financial problems.

Comparing the potential financial distress of Islamic banking between Indonesia and Malaysia can provide a better understanding of the banking sector's stability in both countries. The differences and similarities in identified banking stability factors can provide insight into the risks, policies, and measures that effectively maintain banking sector stability in each country. Therefore, the author needs to know what factors can significantly increase the potential for financial distress in Islamic banking in Indonesia and Malaysia.

RESEARCH METHOD

This study used the quantitative approach that combines associative, comparative, and descriptive methods. The samples of Indonesian and Malaysian Islamic banks were selected based on ease of access to obtaining financial reports per semester for 2015–2021. As a result, data on a number of financial ratios were obtained from five Indonesian Islamic banks and four Malaysian Islamic banks.

The variables selection to determine the factors that most influence the possibility of bankruptcy in Indonesian and Malaysian Islamic banks is based on Bankometer variables. The goal is to uniformly standardize financial ratios between the two countries to be 'apple to apple.' The definition of each Bankometer variable is shown in the following table.

Table 1. Definition of Variables

Variables	Definitions	Expected impact on financial distress
Capital to adequacy ratio (CAR)	(Tier-1 and 2 capital)/risk-weighted assets	–
Capital to assets (CA)	Total capital/total assets	–
Loan to assets (LA)	Total financing/total assets	– / +
Equity to assets (EA)	Total equity/total assets	–

Variables	Definitions	Expected impact on financial distress
Cost to income (CI)	Total operating expenses/total operating income	+
Non-performing loan (NPL)	Total non-performing financing/total financing	+

In answering the research problem of factors determining the potential for financial distress in Islamic banking in Indonesia and Malaysia, ROA was used to quantify profitability, which measures banking efficiency (Demirguc-kunt & Huizinga, 2018). It can indicate the potential for banking financial stability issues (Fallahpour, 2004; Kordestani et al. 2011). The chances of banks experiencing financial problems can be minimized if they have high profitability (Chou & Buchdadi, 2016; Pratiwi et al., 2019; Sufian & Shah Habibullah, 2010). In this study, Indonesian Islamic banks with a ROA of $\leq 1.25\%$ are considered to be facing financial difficulties (Bank Indonesia, 2013).

As for Malaysian Islamic banks, considering that information on ROA standards for their banks cannot be obtained, the profitability performance grouping refers to the hierarchical cluster analysis. Given that such an analysis is very susceptible to outliers, an outlier test was carried out first. The determination of the cluster number referred to the occurrence of a sudden jump in the agglomeration schedule (Hair et al., 2019), and the results were double-checked using a two-step cluster analysis. The result showed two groups of Malaysian Islamic banks based on their profitability performance.

Furthermore, the data was analyzed using the binary logistic regression (BLR) model to find the factors that most impact the likelihood that Islamic banking will have financial problems. Furthermore, the results were compared descriptively by analyzing each factor significantly associated with the probability of financial distress.

Data Analysis Methods

BLR analysis is suitable to see the effect of each independent variable (x_i) on a binary dependent variable ($\text{logit}(Y) = \ln\left(\frac{\hat{p}}{1-\hat{p}}\right)$ with $Y = \{0,1\}$) that follows Bernoulli's distribution (Hilbe, 2016), where the dependent variable is 0 (banks have no potential to experience financial distress) and 1 (banks have the potential to experience financial distress). The general BLR model for both countries is as follows.

$$\text{logit}(Y) = \beta_0 + \sum_{i=1}^n \beta_i X_i + \varepsilon$$

β_0 is the intercept for the BLR equation, β_i is the coefficient for each i -th independent variable, and X_i is the i -th independent variable, with $i = 1, 2, \dots, n$.

RESULT AND DISCUSSION

The Data Descriptive Analysis

Applying Minitab 20.4 and IBM SPSS 26, the analysis results of the five Indonesian and four Malaysian Islamic banks' performance during the research period are illustrated in Figure 1. In general, the growth of Malaysian Islamic banking financial performance has been relatively stable throughout the observation period, compared to Indonesia, which is more volatile.

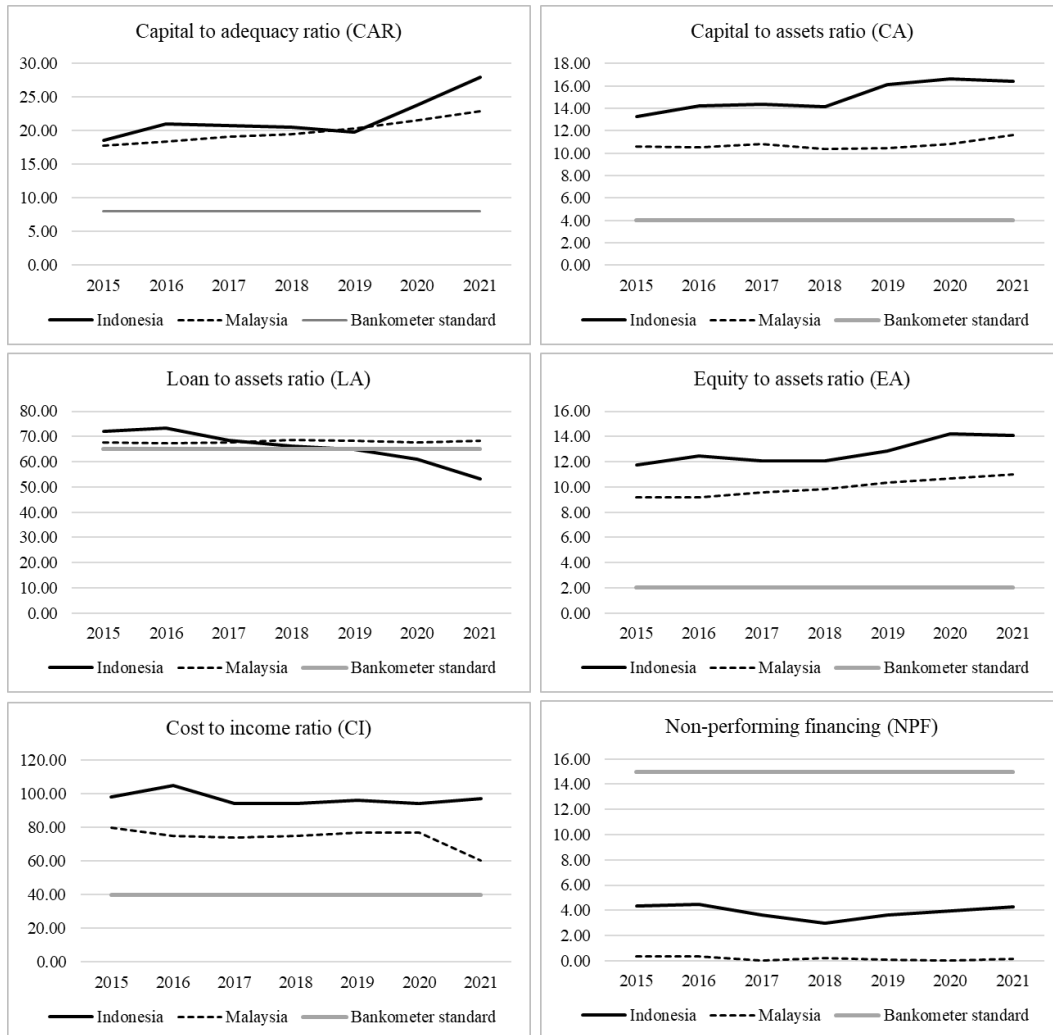


Figure 1. The Comparison of Average of Indonesian and Malaysian Islamic Banks Subjects Performance during 2015-2021

The Islamic banking performance of the two countries, as shown in Figure 1, has met Bankometer standards, especially for capital adequacy, leverage, and credit risk. The annual CAR and CA ratios reveal that Indonesian Islamic banks sampled have higher capitalization than Malaysia's. Regarding leverage, Indonesian Islamic banks use more investor cash to fund bank assets than Malaysia to reduce their capital costs. Moreover,

regarding non-performing financing, Figure 1 shows that Indonesian Islamic banks sampled have higher credit risk than Malaysia, with an upward trend, especially during the pandemic. In contrast, Malaysia's Islamic banks were able to manage their financing portfolio better in the same period and experienced a downward trend.

Comparing the two countries' Islamic banking LA ratios revealed an interesting fact. Figure 1 illustrates that Indonesia has a higher average Islamic banking financing disbursement than Malaysia at the beginning of the observation periods. Despite Indonesian Islamic banks limiting lending significantly during the pandemic, Malaysian Islamic banks' loans remain consistent, although with a ratio that exceeds the Bankometer criteria. It indicates Malaysia's Islamic banking is relatively more aggressive in financing distribution than Indonesia, even during the pandemic.

Furthermore, the Indonesian Islamic banks sampled are less efficient at cost management than the Malaysian, as shown by their high CI ratio. Figure 1 demonstrates that during observation, Indonesia's Islamic banking CI ratio grew above 90%. Meanwhile, Islamic banks in Malaysia can reduce their CI ratio to 60% by 2021, demonstrating better operational efficiency. However, this condition still cannot be considered good compared to Bankometer standards.

The Binary Logistic Regression (BLR) Analysis

One of the assumptions that must be met in the BLR analysis is the non-multicollinearity among independent variables. Table 2 shows that the equity to assets (EA) variable for both countries has a very large VIF value, so the variable is excluded from the analysis because it has a VIF value of > 10.0 .

Table 2. The Non-Multicollinearity Assumption Test Results

		Coef.	SE coef.	z-value	p-value	VIF
Indonesian Islamic banks	Constant	-108.50	55.20	-1.97	0.05	0.00
	ICAR	-0.33	0.25	-1.33	0.18	5.29
	ICA	-0.07	0.24	-0.31	0.76	5.62
	ILA	0.07	0.11	0.59	0.56	2.53
	IEA	0.78	0.42	1.85	0.06	19.32
	ICI	1.17	0.55	2.15	0.03	8.62
	INPF	-0.65	0.39	-1.67	0.10	3.26
Malaysian Islamic banks	Constant	5.77	9.40	0.61	0.54	0.00
	MCAR	0.09	0.21	0.42	0.68	1.46
	MCA	-0.25	0.60	-0.41	0.68	28.64
	MLA	-0.14	0.10	-1.38	0.17	1.54
	MEA	0.27	0.59	0.45	0.65	26.53
	MCI	0.05	0.05	0.95	0.34	1.28
	MNPF	8.10	10.50	0.78	0.44	1.60

In constructing the BLR model of Islamic banking between the two countries, the data were analyzed separately, and the comparative analysis of the two was carried out

descriptively. The results of the BLR analysis with stepwise methods for Islamic banking of the two countries are in Table 3.

Table 3. Results of Indonesian and Malaysian Sharia Banking Data Processing

	Indonesian Islamic banks		Malaysian Islamic banks	
	Constant	ICI	Constant	MLA
Coef.	-29.0	0.338	14.65	-0.194
SE coef.	10.4	0.116	5.25	0.073
95% CI	(-49.4; -8.6)	(0.112; 0.565)	(4.36; 24.95)	(-0.3371; -0.0501)
z-value	-2.78	2.93	2.79	-2.64
p-value	0.005	0.003	0.005	0.008
Hosmer-Lemeshow	df	8		8
	Chi-Sq	8.13		9.88
	p-value	0.420		0.274
Odds Ratio	Value	1.4024		0.824
	95% CI	(1.1181; 1.7591)		(0.7138; 0.9511)
Nagelkerke R-Sq		0.382		0.235
Area under ROC curve		0.865		0.763

Based on table 3, it can be seen that the BLR model for Islamic banking in Indonesia and Malaysia is as follows.

$$P_{IND}(1) = \exp(Y_{IND}') / (1 + \exp(Y_{IND}'))$$

$$Y_{IND}' = -29.0 + 0.338 \text{ ICI}$$

$$P_{MLY}(1) = \exp(Y_{MLY}') / (1 + \exp(Y_{MLY}'))$$

$$Y_{MLY}' = 14.65 - 0.194 \text{ MLA}$$

The BLR model of Indonesian Islamic banking shows that only variable cost to income (ICI) significantly affects the likelihood of Indonesian Islamic banking experiencing financial distress. As for Malaysia, the loan-to-assets (MLA) variable is a variable that significantly affects the likelihood of their Islamic banks being exposed to financial distress. Both models passed the model feasibility test, which is noticed in their p-values of the Hosmer-Lemeshow test (Table 4).

According to the Nagelkerke R-square value in Table 3, the Islamic banks' efficiency in the Indonesian Islamic banks BLR model explains 38.2% of the financial distress likelihood. Meanwhile, the liquidity ratio explains 23.5% of the financial hardship potential in the BLR model for Malaysian Islamic banking. Other factors explain the rest. The relatively small ability of the BLR models of the two countries to explain the dependent variable tends to be because each model includes only one independent variable. In practice, the likelihood of a bank being exposed to financial problems is caused by several internal and external factors, which were not observed in this study.

The odds ratio of 1,402 shows how efficiency positively affects bankruptcy risk in Indonesia's BLR Islamic banking model. Thus, Indonesian Islamic banks with inadequate efficiency are 1,402 times more likely to encounter financial difficulties. On the other

hand, in the Malaysian Islamic banking BLR model, the liquidity has a negative coefficient with an odds ratio of 0.824. It suggests a counter-directional relationship between LA and the likelihood of bankruptcy. The probability < 1 can be interpreted as a low probability of Malaysian Islamic banks being exposed to financial distress when they become less liquid. After exponentiating the independent variable coefficient to simplify the interpretation, as suggested by Hilbe (2016), we obtained an odds ratio of 1.214. Thus, it can be concluded that every one-unit increase in the LA ratio in Malaysian Islamic banking will increase their chances of not being exposed to financial distress by 1,214 times. These findings are also observed in Figure 2.

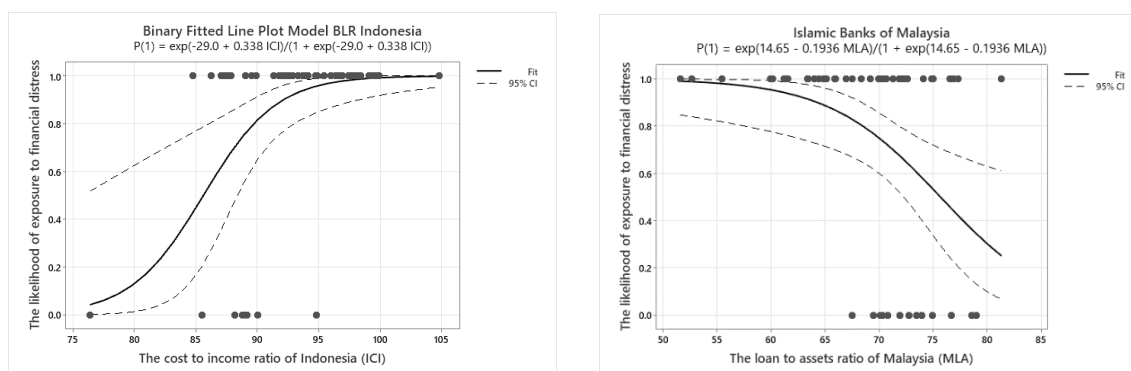


Figure 2. The Binary-Fitted Line Plot of Indonesian and Malaysian Islamic Banking

The Comparison of Financial Distress Potential Factors in Indonesian and Malaysian Islamic Banking

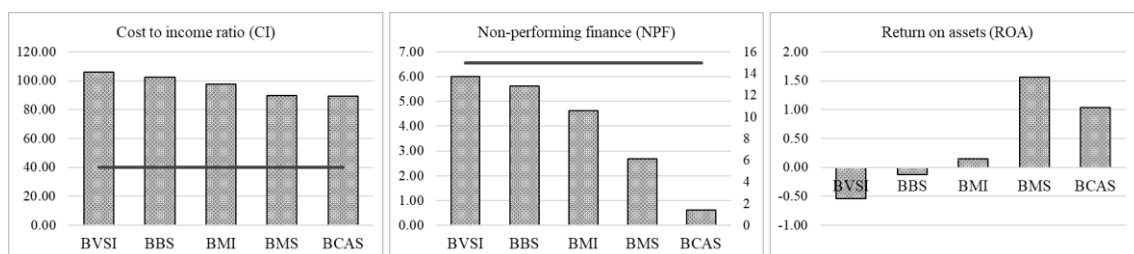
The investigation found that the level of efficiency (CI) significantly affects the financial distress likelihood of Islamic banks in Indonesia. The positive correlation between the two factors indicates that inefficient Islamic banks are more likely to experience financial problems. Furthermore, Figure 3 informs that all Islamic banks sampled have efficiency levels that must be improved since they have exceeded Bankometer standards ($CI \leq 40$) and BI provisions ($REO^1 < 89\%$). A bank's efficiency level is influenced by expenses related to its operational activities, including the amount of non-performing financing, which will ultimately be reflected in its profitability (Choong, 2012). The problem of inefficiency in Indonesia's Islamic banking has been happening even before entering the pandemic sourced from their internal and external sides.

The OJK (2023) data shows that the inefficiency in Indonesian Islamic banking nationally tends to be caused by the considerable burden of losses on the impairment of financial assets and high labor expenses. Islamic banks' high impairment losses suggest they need to enhance asset quality management. In Figure 3, it can be seen that several Islamic banks sampled have an average NPF ratio of $> 5\%$, which exceeds the 'healthy bank' standard set by BI. Therefore, it is not surprising that their profits are small, and

¹ REO is an operational efficiency ratio also known as the BOPO, which has similar formula as CI.

some even have negative ROA. Meanwhile, from the external side, tight liquidity and high cost of funds are also the causes of this problem (Rini, 2015; Sitanggang & Cicilia, 2023).

Training costs are part of labour expenses. Hence, high labour costs should support the increase in banking performance. The high costs indicate that Islamic banks need to maximize the technological developments utilization, which will improve banking performance. Mulla et al. (2019) demonstrate that using advanced technology has a considerable positive impact on Islamic bank assets and profits. They even affect Islamic banks' efficiency more than managerial quality. However, it should be noted that banking requires considerable capital and continuous efforts over time when investing in high technology, while the benefits will only be felt in the long term. Thus, only those who are able to adopt "a more diversified investment acquisition strategy" can increase efficiency (Aldiansyah & Khairana, 2019; Borello et al., 2022). Therefore, based on the results of the analyses and the preceding explanations, Islamic banks in Indonesia should reevaluate their strategies, particularly those of human resource development and full utilization of technology.



* Note: — is the limit line of the Bankometer standard.

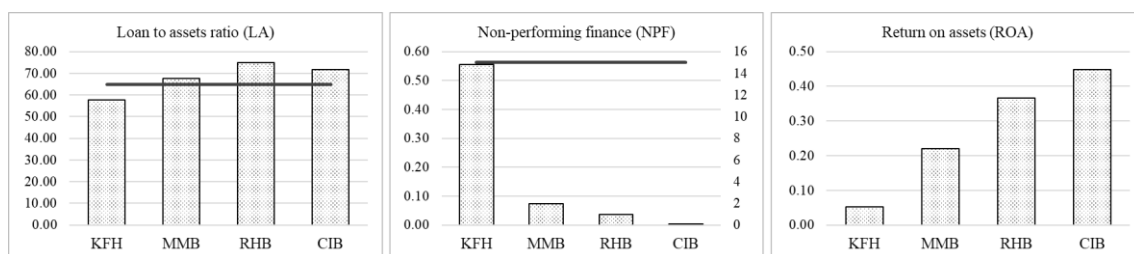
Figure 3. The CI, NPV, and ROA Ratios on Average of Indonesian Islamic Banks Sampled with Bankometer Standards during the Research Period

This finding is in line with the research of Asyikin & Chandrarin (2018), Lin & Yang (2016), Pratiwi et al. (2019), and Saeed (2019). However, the results are opposite to the study conducted by Bakhtiar (2019), arguing that high operating costs allow banks to generate large revenues as well. Therefore, a high CI ratio is not always a trigger for possible financial problems.

Meanwhile, in the Malaysian Islamic banks sampled, liquidity is a factor that significantly affects the potential exposure to financial problems in a negative direction. It means that the higher the LA ratio, the smaller the probability that they will be exposed to financial problems. Figure 1 shows that their liquidity levels were relatively stable throughout the observation period, even during the pandemic, when most Indonesian Islamic banks restricted their credits. Based on the IMF (2022b) data, such performance was caused by increased household financing while financing for the private sector was tightened. Despite this condition, their liquidity level has exceeded the maximum limit of the Bankometer standard.

Further analysis of the four Malaysian Islamic banks shows that, on average, they have a much smaller ratio of non-performing financing than Indonesia. It means that their aggressiveness in distributing funding is supported by good managerial skills in managing the quality of their assets. Meanwhile, the profitability of Malaysian Islamic banks sampled is known to be smaller than that of Indonesia (Figure 4). However, this performance is caused by the narrowing of interest rate spreads during the pandemic (The IMF, 2022b) due to one of the Malaysian Government's policies providing financing waivers to overcome economic problems (Anand et al., 2022). Thus, their low profitability cannot be attributed to their managerial inability to manage their total assets.

This study confirms the results of Lin & Yang (2016) and Muhtar et al. (2020) that liquidity inversely affects bank failure. When managed effectively, Mun & Thaker (2016) found that a higher LA ratio can improve Islamic banks' profit and reduce their risk of financial difficulties. This study contradicts Jaffar & Manarvi (2011) and Daoud & Kammoun (2020). Their research showed a favorable association between liquidity and financial distress likelihood since a larger LA ratio increases credit risk and lowers profitability.



* Note: — is the limit line of the Bankometer standard.

Figure 4. The LA, NPF, and ROA Ratios on Average of Malaysian Islamic Banks Sampled with Bankometer Standards during the Research Period

Overall, the evidence suggests that the financial distress probability is significantly impacted by the Islamic banks' effective management of operational costs, leading to enhanced profitability. Furthermore, liquidity also plays a crucial role in determining the bankruptcy risk for Islamic institutions. Low bank liquidity, as evidenced by the active credit distribution, can enhance performance and mitigate the bankruptcy risk, provided that it is accompanied by competent management of high-quality assets.

CONCLUSION

This research focuses on identifying and comparing factors that influence the possibility of financial difficulties in Indonesian and Malaysian Islamic banks. The financial ratios analyzed refer to the Bankometer model variables. They are compared descriptively and statistically using the Bankometer model and binary logistic regression (BLR) analysis, where ROA, as a proxy for the level of profitability, is used to determine which groups of banks have the potential to be exposed to financial difficulties and which do not. The findings of this study have the potential to enhance the academic discussion

around the determinants of potential financial distress in Islamic banking, particularly with the integration of the Bankometer model and binary logistic regression analysis. Therefore, the results do not simply describe the performance of Islamic banking according to Bankometer criteria but also identify the key elements that substantially influence their performance.

In spite of the impact of the study as stated above, this study have limitation. This study only analyzes the internal factors of Islamic banking in the two countries without involving macroeconomic factors. Therefore, it is recommended for further research to use the financial ratio standards determined by the Malaysian banking authorities and include several macroeconomic factors in the model.

REFERENCES

- Alber, N., Elmoftly, M., Walied, I., & Sami, R. (2019). Banking Efficiency: Concepts, Drivers, Measures, Literature and Conceptual Model. *SSRN Electronic Journal*, 1–24. <https://doi.org/10.2139/ssrn.3310982>
- Aldiansyah, & Khairana. (2019). Bank Syariah Bisa Kuat dengan Teknologi. In *Knks.Go.Id*. Komite Nasional Ekonomi dan Keuangan Syariah (KNEKS). Retrieved from <https://knks.go.id/berita/137/bank-syariah-bisa-kuat-dengan-teknologi?category=1>
- Alshater, M. M., Saba, I., Supriani, I., & Rabbani, M. R. (2022). Fintech in islamic finance literature: A review. *Heliyon* 8, e10385 Retrieved from [https://www.cell.com/heliyon/pdf/S2405-8440\(22\)01673-5.pdf](https://www.cell.com/heliyon/pdf/S2405-8440(22)01673-5.pdf)
- Anand, N., Tan, I., Chugh, G., Damak, M., & Duan, R. (2022). *Growing Belief In Southeast Asia's US\$290 Billion Islamic Banking Market*. S&P Global Ratings. Retrieved from <https://www.spglobal.com/ratings/en/research/articles/220511>
- Arif, A., & Anees, A. N. (2012). Liquidity risk and performance of banking system. *Journal of Financial Regulation and Compliance*, 20(2), 182–195. <https://doi.org/10.1108/13581981211218342>
- Asyikin, J., & Chandrarin, G. (2018). Analysis of Financial Performance To Predict Financial Distress in Sharia Commercial Banks in Indonesia. *International Journal of Accounting*, 1(2), 11–20. Retrieved from <https://journal.stkipsingkawang.ac.id/index.php/IJAFE/article/view/1260>
- Bakhtiar, F. (2019). *Analisis financial distress pada perbankan syariah di Indonesia*. Theses, Universitas Islam Indonesia, Yogyakarta. Retrieved from <https://dspace.uii.ac.id/bitstream/handle/123456789/17842/17918001.pdf>
- Ben Jedidia, K., & Hamza, H. (2023). Does PLS in Islamic banking limit excessive money creation?. *Journal of Islamic Accounting and Business Research*, 7(10), 5769. <https://doi.org/10.1108/JIABR-02-2022-0047>
- Bhunia, A., & Sarkar, R. (2011). A Study of Financial Distress based on MDA. *Journal of Management Research*, 3(2). <https://doi.org/10.5296/jmr.v3i2.574>
- Borello, G., Pampurini, F., & Quaranta, A. G. (2022). Can high-Tech investments improve banking efficiency? *Journal of Financial Management, Markets and Institutions*, 10(1), 1–19. <https://doi.org/10.1142/S2282717X22500037>
- Budiman, T., Herwany, A., & Kristanti, F. T. (2017). An Evaluation of Financial Stress for Islamic Banks in Indonesia Using a Bankometer Model. *Journal of Finance and Banking Review*, 2(3), 14–20. Retrieved from

www.gatrenterprise.com/GATRJournals/index.html

- Choong, Y. V. (2012). Performance of Islamic Commercial Banks in Malaysia : An Empirical Study. *Journal of Islamic Economics, Banking and Finance*, 8(2), 67-80. Retrieved from https://ibtra.com/pdf/journal/v8_n2_article3.pdf
- Chou, T., & Buchdadi, A. D. (2016). Bank Performance and Its Underlying Factors: A Study of Rural Banks in Indonesia. *Accounting and Finance Research*, 5(3), 55-3. <https://doi.org/10.5430/afr.v5n3p55>
- Cole, R. A., & White, L. J. (2012). Déjà Vu All Over Again: The Causes of U.S. Commercial Bank Failures This Time Around. *Journal of Financial Services Research*, 42(1–2), 5–29. <https://doi.org/10.1007/s10693-011-0116-9>
- Daoud, Y., & Kammoun, A. (2020). Financial Stability and Bank Capital: the Case of Islamic Banks. *International Journal of Economics and Financial Issues*, 10(5), 361–369. <https://doi.org/10.32479/ijefi.10147>
- Demirguc-kunt, A., & Huizinga, H. (2018). Financial Structure and Bank Profitability. *Financial Structure and Economic Growth, The World Bank, Development Research Group Finance*. Retrieved from <https://openknowledge.worldbank.org/server/api/core/bitstreams/222d9df1-be3a-5714-839b-6f21c5987caf/content>
- Evans, O., Leone, A. M., Gill, M., & Hilbers, P. (2000). Macroprudential Indicators of Financial System Soundness. *IMF Occasional Papers*, 192(192). Retrieved from <https://www.imf.org/external/pubs/ft/op/192/op192.pdf>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis* (Eight Ed.). Cengage Learning EMEA.
- Hilbe, J. M. (2016). *Practical Guide to Logistic Regression*. Taylor & Francis Group, LLC.
- Jaffar, M., & Manarvi, I. (2011). Performance comparison of Islamic and Conventional banks in Pakistan. *Global Journal of Management And Business Research*, 11(1), 01-07. Retrieved from https://globaljournals.org/GJMBR_Volume11/7_Performance_comparison_of_Islamic_and_Conventional_banks_in_Pakistan.pdf
- Kalbuana, N., Taqi, M., Uzliawati, L., & Ramdhani, D. (2022). The effect of profitability, board size, woman on boards, and political connection on financial distress conditions. *Cogent Business & Management*, 9(1), 2142997. <https://doi.org/10.1080/23311975.2022.2142997>
- Kordestani, G., Biglari, V., & Bakhtiari, M. (2011). Ability of combinations of cash flow components to predict financial distress. *Business: Theory and Practice*, 12(3), 277–285. <https://doi.org/10.3846/btp.2011.28>
- Laila, N., & Widihadnanto, F. (2017). Financial distress prediction using Bankometer model on Islamic and conventional banks: Evidence from Indonesia. *International Journal of Economics and Management*, 11(1), 169–181. Retrieved from [http://www.ijem.upm.edu.my/vol11_noS1/13\).%20IJEM%2011\(S1\)2017%20-%20Nisful%20Laila%20\(Financial%20Distress...\).pdf](http://www.ijem.upm.edu.my/vol11_noS1/13).%20IJEM%2011(S1)2017%20-%20Nisful%20Laila%20(Financial%20Distress...).pdf)
- Lin, C. C., & Yang, S. L. (2016). Bank fundamentals, economic conditions, and bank failures in East Asian countries. *Economic Modelling*, 52, 960–966. <https://doi.org/10.1016/j.econmod.2015.10.035>
- Morris, S., & Shin, H. S. (2016). Illiquidity Component of Credit Risk. *International Economic Review*, 57(4), 1135–1148. Retrieved from https://economics.mit.edu/sites/default/files/publications/paper_81_illiquidity_com

[ponent.pdf](#)

- Mostofa, Md. and Rezina, Sonia and Hasan, Md., Predicting the Financial Distress in the Banking Industry of Bangladesh: A Case Study on Private Commercial Banks (2016). *Australian Academy of Accounting and Finance Review*, 2(1). Retrieved from <https://ssrn.com/abstract=2814922>
- Muhtar, O., Bamigbade, D., Fagbemi, T., & Abdurraheem, A. (2020). The Linear Effect of Bank Liquidity on Profitability in Selected African Economies. *Ago-Iwoye Journal of Behavioural Sciences*, 5(2), 1–17. Retrieved from <https://ssrn.com/abstract=3467454>
- Mulla, M., Ameen, A., Alrajawy, I., & Bhaumik, A. (2019). Influence of management quality and technology developments on islamic banking performance in UAE. *International Journal of Recent Technology and Engineering*, 8(2), 297–303. <https://doi.org/10.35940/ijrte.B1050.0982S1019>
- Mun, Y. L., & Thaker, H. M. T. (2016). Asset Liability Management of Conventional and Islamic Banks in Malaysia. *Al-Iqtishad: Journal of Islamic Economics*, 9(1), 33–52. <https://doi.org/10.15408/aiq.v9i1.3334>
- Nurtjahjo, F. M., Nursyamsiah, T., & Irfany, M. I. (2022). Financial Distress Before and During Pandemic Covid-19: Is Islamic Banking in Indonesia Resilience? *Falah: Jurnal Ekonomi Syariah*, 7(2), 14–26. Retrieved from <https://ejournal.umm.ac.id/index.php/JES/article/view/20115>
- Mutamimah, M., Zaenudin, Z., & Bin Mislan Cokrohadisumarto, W. (2022). Risk management practices of Islamic microfinance institutions to improve their financial performance and sustainability: a study on Baitut Tamwil Muhammadiyah, Indonesia. *Qualitative Research in Financial Markets*, 14(5), 679-696. <https://doi.org/10.1108/QRFM-06-2021-0099>
- Otoritas Jasa Keuangan (OJK). (2017). *Peraturan Bank Indonesia tentang Kewajiban Penyediaan Modal Minimum Bank Umum*. Retrieved from <https://ojk.go.id/id/regulasi/pages/pbi-tentang-kewajiban-penyediaan-modal-minimum-bank-umum.aspx>
- Otoritas Jasa Keuangan (OJK). (2022). *Statistik Perbankan Syariah*. Retrieved from <https://www.ojk.go.id/id/kanal/syariah/data-dan-statistik/statistik-perbankan-syariah/Default.aspx>
- Pappas, V., Ongena, S., Izzeldin, M., & Fuertes, A. M. (2017). A Survival Analysis of Islamic and Conventional Banks. *Journal of Financial Services Research*, 51(2), 221–256. <https://doi.org/10.1007/s10693-016-0239-0>
- Pessarossi, P., Thevenon, J. L., & Weill, L. (2020). Does high profitability improve stability for European banks? *Research in International Business and Finance*, 53, 01–28. <https://doi.org/10.1016/j.ribaf.2020.101220>
- Pratiwi, A., Puspita, B. N. D., & Wahyudi, S. (2019). Pengujian Potensi Kebangkrutan Grup Bank Pembiayaan Rakyat Syariah di Indonesia. *Economia*, 15(1), 114–134. <https://doi.org/10.21831/economia.v15i1.23932>
- Pristianti, R., & Musdholifah, M. (2020). Pengaruh Risk Based Bank Rating terhadap Financial Distress dengan Bankometer Model pada BUSN Non Devisa. *Jurnal Ilmu Manajemen*, 8(3), 717. <https://doi.org/10.26740/jim.v8n3.p717-733>
- Rini, A. S. (2015). *Beban Operasional Bank Syariah Masih Tinggi*. *Bisnis Indonesia*. Retrieved from <https://finansial.bisnis.com/read/20150722/232/455549/beban-operasional-bank-syariah-masih-tinggi>
- Saeed, K. (2019). Financial Distress Prediction in Islamic Banking Sector from

- ‘Bankometer Model.’ *SSRN Electronic Journal*.
<https://doi.org/10.2139/ssrn.3472649>
- Sahut, J. M., & Mili, M. (2011). Banking distress in MENA countries and the role of mergers as a strategic policy to resolve distress. *Economic Modelling*, 28(1), 138–146. <https://doi.org/10.1016/j.econmod.2010.09.017>
- Sistiyarini, E., & Supriyono, S. E. (2017). The Application of Risk Based Bank Rating on Bankruptcy Prediction of Banks in Indonesia. *Jurnal Keuangan Dan Perbankan*, 21(2), 302–311. <https://doi.org/10.26905/jkdp.v21i2.564>
- Sitanggang, L. M. S., & Cicilia, S. (2023). *Bank syariah belum efisien, BOPO di level 92%*. KONTAN. Retrieved from <https://keuangan.kontan.co.id/news/bank-syariah-belum-efisien-bopo-di-level-92>
- Sufian, F., & Shah Habibullah, M. (2010). Assessing the Impact of Financial Crisis on Bank Performance: Empirical Evidence from Indonesia. *ASEAN Economic Bulletin*, 27(3), 245–262. <https://doi.org/10.1355/ae27-3a>
- The Asian Development Bank (ADB). (2023). *Islamic Finance*. Finance Sector in Asia and the Pacific. Retrieved from <https://www.adb.org/what-we-do/sectors/finance/islamic-finance>.
- The International Monetary Fund (IMF). (2022a). Indonesia: 2022 Article IV Consultation-Press Release; Staff Report; Staff Statement; and Statement by the Executive Director for Indonesia. In *IMF Country Reports* (Issue 084). <https://doi.org/10.5089/9798400203886.002>
- The International Monetary Fund (IMF). (2022b). Malaysia: 2022 Article IV Consultation-Press Release; Staff Report; Staff Statement; and Statement by the Executive Director for Malaysia. In *IMF Country Reports* (Issue 22). Retrieved from <https://www.imf.org/en/Publications/CR/Issues/2022/04/28>
- Thinwa, B., & Matanda, J. (2023). Antecedents Of Financial Distress Among Agricultural Firms Listed At The Nairobi Securities Exchange. *International Journal of Social Sciences Management and Entrepreneurship (IJSSME)*, 7(1), 368-380. Retrieved from <http://mail.sagepublishers.com/index.php/ijssme/article/view/243>
- Triwahyuningtias, M., & Muharam, H. (2012). Analisis Pengaruh Struktur Kepemilikan, Ukuran Dewan, Komisaris Independen, Likuiditas dan Leverage terhadap Terjadinya Kondisi Financial Distress (Studi pada Perusahaan Manufaktur yang Terdaftar di BEI 2008-2010). Theses, Fakultas Ekonomika dan Bisnis. Retrieved from http://eprints.undip.ac.id/35907/1/SKRIPSI_TRIWAHYUNINGTIAS.pdf
- Wijaya, I. F., & Moro, A. (2022). Trustworthiness and margins in Islamic small business financing: Evidence from Indonesia. *Borsa Istanbul Review*. 22(1), 35-46. <https://doi.org/10.1016/j.bir.2022.10.010>
- Wilevy, W., & Kurniasih, A. (2021). Financial Distress of Registered Banking in Indonesia STOCK Exchange: Review of the Good Corporate Governance Aspect and Banking Performance. *European Journal of Business and Management Research*, 6(2), 181–186. <https://doi.org/10.24018/ejbmr.2021.6.2.832>
- Zaki, E., Bah, R., & Rao, A. (2011). Assessing probabilities of financial distress of banks in UAE. *International Journal of Managerial Finance*, 7(3), 304–320. <https://doi.org/10.1108/17439131111144487>

