


# Sustainability of Islamic Bank Financing across Macroeconomic and Internal Factors

Aryadimas Suprayitno<sup>\*1</sup>, Arva Athallah Susanto<sup>2</sup>, Weni Hawariyuni<sup>3</sup>

<sup>1,2</sup>Universitas Airlangga, Surabaya, Indonesia

<sup>3</sup>University of Buraimi, Buraimi, Oman

\*Corresponding Author: [aryadimas.suprayitno-2023@feb.unair.ac.id](mailto:aryadimas.suprayitno-2023@feb.unair.ac.id)

## ARTICLE INFO

### Article history:

Received: October 8, 2024

Revised: November 20, 2024

Accepted: November 23, 2024

Available online: November 30, 2024

E-ISSN: 3021-8179

### How to cite:

Suprayitno, A., Susanto, A. A. & Hawariyuni, W. (2024). Sustainability of Islamic Bank Financing across Macroeconomic and Internal Factors. *Journal of Sustainable Economics*, 2(2), 83-93.

<https://doi.org/10.32734/jse.v2i2.18433>



This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International

## ABSTRACT

The sustainability of Islamic banking financing can be evaluated by examining the dynamics of financing risk, as an escalation in financing risk may lead to significant losses for banks. This study aims to investigate the long-term and short-term effects of internal factors and macroeconomic conditions on the financing risk encountered by Islamic banks in Indonesia. This study utilizes quarterly time series data from 2015 to 2023, with Financing Risk as the endogenous variable and Macroeconomics, Capital, Efficiency, and Bank Performance as the exogenous factors. This study utilizes Autoregressive Distributed Lag (ARDL) analysis technique. The results indicate that, over the long term, internal factors such as capital, efficiency, and performance substantially affect financing risk. Capital exerts a detrimental influence, although both efficiency and the performance of Islamic banks positively affect financing risk. In contrast, macroeconomic factors are found to exert no substantial influence on financing risk. In the short term, capital and efficiency exert considerable effects, with capital adversely influencing financing risk and efficiency favorably improving it. The performance of Islamic banks does not substantially influence financing risk throughout this period. Macroeconomic conditions are observed to positively affect financing risk. This study's conclusions offer significant insights for analysts of Islamic banking risk, facilitating educated short-term and long-term decision-making to more effectively predict variations in financing risks.

**Keyword:** Sustainability, Financing Risk, ARDL, and Macroeconomy.

## 1. Introduction

The emergence of Islamic finance is a significant instrument for promoting global development, especially in enhancing wealth and alleviating poverty ([Alawode, 2015](#)). According to the Islamic Financial Service Board (IFSB) Stability Report 2024, Islamic banking constitutes 70.21% of global Islamic financial assets, totaling USD 2,372 billion, followed by Sukuk and Islamic Funds Assets. Regionally, Indonesia is categorized within East Asia and the Pacific (EAP), which possesses the third largest Islamic banking assets among the seven regions identified by the IFSB.

The banking sector serves as the primary instrument for addressing societal requirements, shaped by existing conditions and circumstances ([Hassan & Lewis, 2009](#)). The evolution of Islamic banking in Indonesia signifies the populace's desire for an alternative banking system. Islamic banking services primarily focus on the allocation of funding to meet societal requirements. According to the Islamic Banking Statistics for June 2024 released by the Financial Services Authority, funding in Islamic banking is mostly comprised of Murabahah contracts amounting to IDR 191,599 billion, followed by Musyarakah contracts totaling IDR 175,305 billion.

The sustainability of financing in Islamic banks can be evaluated by examining the management of financing risks linked to diverse Shariah-compliant contracts ([Aliyu et al., 2017](#)). Higher risks are associated with financing that is primarily based on murabahah and musyarakah in Islamic banking ([Yustiardi et al., 2020](#)). Murabahah, a sale-based arrangement wherein the bank acquires goods and subsequently resells them for a

profit, entails significant credit risk. Collateral is crucial in these transactions; in the event of client default, the bank is required to liquidate the collateral to recover the loan (Jiménez & Saurina, 2004; Saifurrahman & Kassim, 2022; Wasiaturrahma et al., 2020). The bank may face risks from non-performing financing (NPF) throughout this protracted process. Musyarakah, as a profit-and-loss sharing contract, engages both partners in the enterprise, hence increasing risks associated with liquidity and operations. Losses incurred by an underperforming firm are distributed between the bank and the client. This arrangement complicates risk management for the bank and elevates exposure to greater operational risk. Musyarakah is also vulnerable to moral hazard, since clients may not completely reveal their financial circumstances, resulting in asymmetric information and complicating the bank's ability to monitor performance efficiently (Mateev et al., 2024; Mirzaei et al., 2024).

The precepts of Islam establish an ethical framework and impose financial limitations that intensify the necessity of managing financing risk in Islamic banks. Although these principles foster equity, clarity, and risk distribution, they also provide challenges that traditional banks do not encounter, especially regarding prohibitions on interest, ambiguity, and speculative risk-mitigation instruments (Abdullah & Chee, 2023). Heightened financing risk may result in a possible source of bank losses. The escalating financing risk in Islamic banking is demonstrated by the rising Non-Performing Financing (NPF) (Rozalinda, 2016). An elevated NPF rate negatively impacts the revenue of Islamic Banks, thereby diminishing their ability to offer future financing and participate in more economic endeavors (Alabbad & Schertler, 2022; Grassa, 2012; Mateev et al., 2024; Miklaszewska et al., 2021).

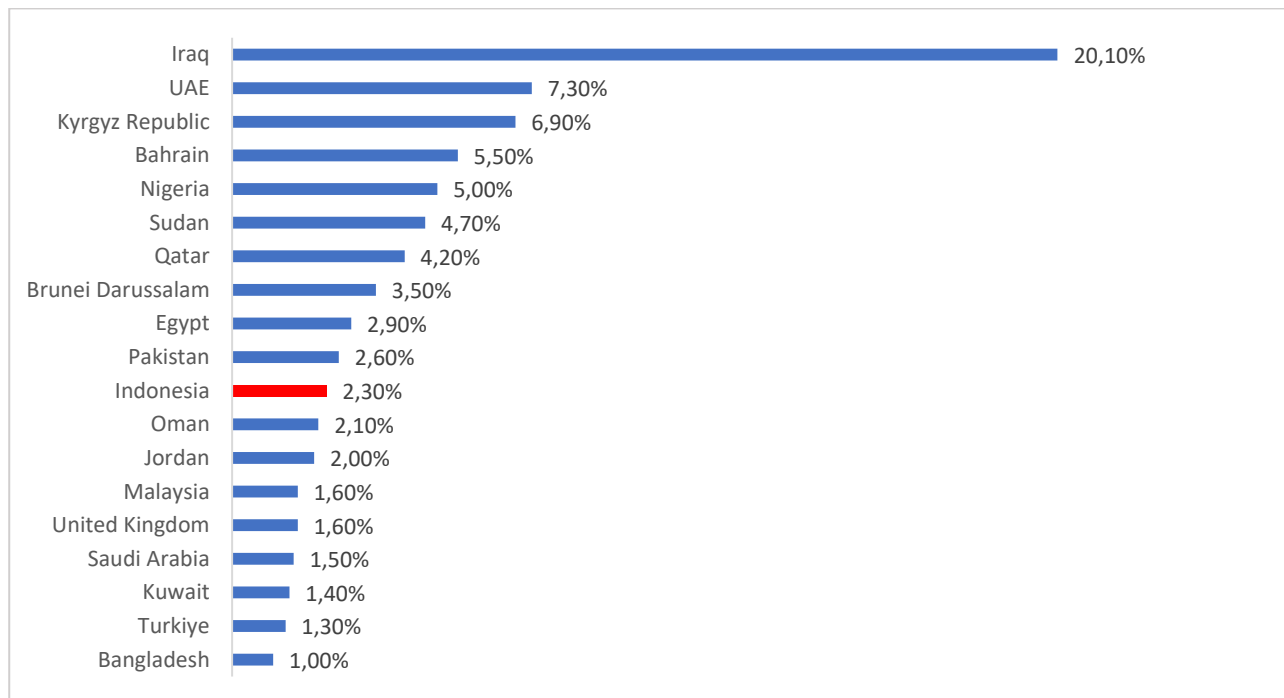


Figure 1. Islamic Banking's NPF for Each Country

According to 2022 statistics from the IFSB, Indonesia was placed eleventh among nineteen nations with the highest rates of non-performing finance (NPF). Regionally, Indonesia ranks seventh among fifteen Asian countries with the highest Non-Performing Financing (NPF) rates. In Southeast Asia, Indonesia exhibits a greater financing risk compared to Malaysia, although Brunei Darussalam possesses the highest non-performing loan (NPF) rate in the area.

Indonesia's national NPF has exhibited a declining trend from 2015 to 2023. In 2015, the NPF rate was 4.84%, subsequently decreasing to 4.42% in 2016. Nonetheless, this trend was not sustained, as the NPF rate escalated to 4.77% in 2017, signifying financial or economic constraints impacting borrowers' capacity to fulfill their financing obligations during that period. In 2018, a notable enhancement was observed, as the NPF rate decreased to 3.26%. This favorable trend persisted into 2019, with a modest decline to 3.23%. In spite of the economic difficulties presented by the COVID-19 pandemic in 2020, Indonesia sustained a Non-Performing Financing (NPF) rate of 3.13%, demonstrating the robustness of its financial industry, presumably bolstered by government stimulus initiatives and credit restructuring programs. In the following years, the NPF rate

persisted in its decrease, attaining 2.59% in 2021, 2.35% in 2022, and ultimately reaching a nadir of 2.10% in 2023. Numerous prior studies have aimed to uncover characteristics affecting financing risk in Islamic banking. Abdurraheem et al. (2023) determined that inflation rates can elevate financing risk in the context of macroeconomic conditions. Consistent with this finding, Munifatussa'idah (2020) also indicated that efficiency levels can increase financing risk. Moreover, the performance of Islamic banks has been demonstrated to augment financing risk. Conversely, Jayanto (2020) discovered that capital adequacy in Islamic banks might mitigate financing risk.

This study aims to investigate the long-term and short-term roles of internal factors within Islamic banking, which include efficiency, bank performance, and capital, as well as macroeconomic conditions, on financing risk of Islamic banks in Indonesia. The findings of this study inform Islamic banking risk analysts in making both short-term and long-term assessments to predict variations in financing risks. Subsequently, these factors might be organized into a proactive risk reduction strategy. The importance of this research variable can offer insights for strategy formulation.

## 2. Method

### 2.1 Data

This analysis employs quarterly time series data from 2015 to 2023. The endogenous variable employed is Financing Risk. The exogenous variables employed include Macroeconomics, Capital, Efficiency, and Bank Performance. Variable descriptions are shown in Table 1.

Table 1. Research Variables Description

Variables	Proxy	Definition	Source
Endogenous Variable			
Financing Risk	Non Performing Financing (NPF)	Non Performing Financing / Total Financing	OJK
Exogenous Variables			
Macroeconomic	Inflation	An increase in the overall level of prices in the economy. The data is presented in the form of Inflation Rate which is calculated based on the percentage change in the price index compared to the previous period.	Bank Indonesia
Capital	Capital Adequacy Ratio (CAR)	(Tier 1 Capital + Tier 2 Capital) / Risk Weighted Assets	OJK
Efficiency	Operating Expenses to Operating Income Ratio	Operating Expenses / Operating Income	OJK
Bank Performance	Return on Assets (ROA)	Net Income / Total Assets	OJK

### 2.2 Methodological Approach

This study utilizes the Autoregressive Distributed Lag (ARDL) regression model. Ekananda (2016) asserts that the Autoregressive Distributed Lag (ARDL) model integrates autoregressive (AR) and distributed lag (DL) techniques, with "lag" denoting the utilization of historical values to forecast future values. The AR approach employs one or more historical values of the dependent variable, whereas DL incorporates regressions that involve both current and past values of the independent variable.

The regression model of this study is as follows:

$$FR_t = f(\text{MAC}_t, \text{CAP}_t, \text{EFC}_t, \text{PER}_t) \quad (1)$$

In consideration of the time lagging in the financing risk, this study selected an ARDL model to study the influence of macroeconomic, capital, efficiency, and bank performance. The ARDL model was calculated in three steps:

Step 1: The cointegration test ARDL model used to test whether there was a long term causal relationship between the variables. The following model was established:

$$\Delta FR_t = \beta_0 + \beta_1 FR_{t-1} + \beta_2 MAC_{t-1} + \beta_3 CAP_{t-1} + \beta_4 EFC_{t-1} + \beta_5 PER_{t-1} + \sum_{i=1}^a \beta_6 \Delta FR_{t-1} + \sum_{i=0}^b \beta_7 \Delta MAC_{t-1} + \sum_{i=0}^c \beta_8 \Delta CAP_{t-1} + \sum_{i=0}^d \beta_9 \Delta EFC_{t-1} + \sum_{i=0}^e \beta_{10} \Delta PER_{t-1} + \varepsilon_t \tag{2}$$

where  $\Delta$  was the first-order differential operator,  $\varepsilon_t$  was the white noise and a, b, c, d were the maximum lag orders as determined by AIC or BIC. Whether there was a long-term equilibrium relationship between horizontal variables was tested using F-statistic, and the null hypothesis was that there was no long-term equilibrium relationship.

Step 2: The estimation ARDL model used to analyze the long and short term relationship between the variables. The long term relationship can be estimated using the ARDL model:

$$FR_t = \beta_0 + \beta_1 FR_t + \beta_2 MAC_t + \beta_3 CAP_t + \beta_4 EFC_t + \beta_5 PER_t + \varepsilon_t \tag{3}$$

While the short term relationship can be estimated using the ARDL ECM model:

$$\Delta FR_t = \beta_0 + \sum_{i=0}^{p1} \beta_1 \Delta FR_{t-1} + \sum_{i=0}^{p2} \beta_2 \Delta MAC_{t-1} + \sum_{i=0}^{p3} \beta_3 \Delta CAP_{t-1} + \sum_{i=0}^{p4} \beta_4 \Delta EFC_{t-1} + \sum_{i=0}^{p5} \beta_5 \Delta PER_{t-1} + ECT_{t-1} + \varepsilon_t \tag{4}$$

Step 3: Model stability test, used to avoid errors in concluding. model stability using the CUSUM and CUSUM Square plots. This process use to know model is stable from the possibility of one or more structural breaks if the plot does not cross the threshold at 5% significance ([Brown et al., 1975](#)).

### 3. Result and Discussion

#### 3.1 Results

##### 3.1.1 Unit Root Test Results

The first step is check the stationarity of the variables through the Unit Root Test. Table 1 shows that four variables are stationary at the level and one variable is stationary at the first difference level. The five variables have fulfilled the stationarity requirements in ARDL analysis, which requires different order levels in testing variable stationarity ([Ekananda, 2016](#)).

Table 2. ADF Unit Root Test

Variables	Level		First Difference		Order of Integration
	t-statistics	Probability	t-statistics	Probability	
Financing Risk	-1.1312	0.6923	-6.6535	0.0000*	I(1)
Macroeconomy	-3.3751	0.0190*	-3.5523	0.0130	I(0)
Capital	-0.9580	0.7572	-5.8539	0.0000*	I(1)
Efficiency	-1.0042	0.7410	-6.4714	0.0000*	I(1)
Bank Performance	-1.3912	0.5741	-9.4453	0.0000*	I(1)

Note: The null hypothesis are “the series has a unit root”. \*denotes prob. < 0.05 and the null hypothesis is rejected at the 5% level

##### 3.1.2 ARDL Model Selected

Following are the results of the AIC test to determine the maximum lag of ARDL, namely (4,3,4,4,4) for each of the five variables:

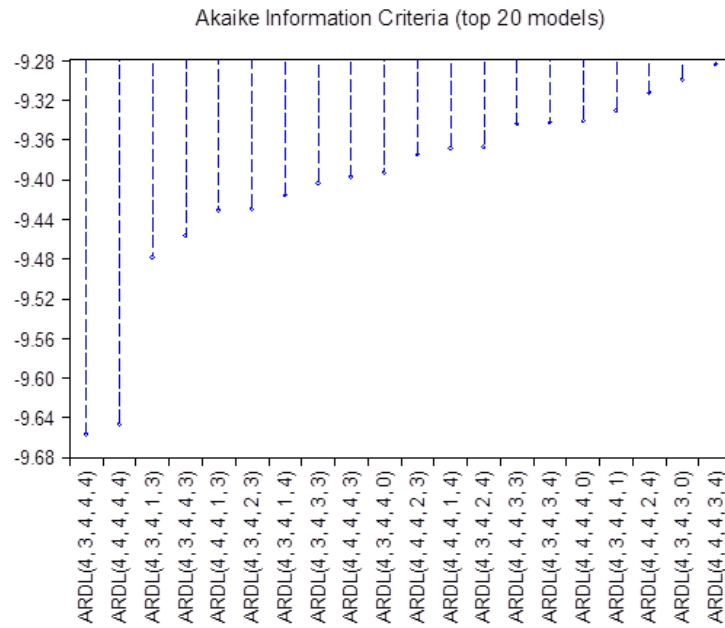


Figure 2. Result of Akaike Information Criteria

3.1.3 ARDL Cointegration Bound Test Result

The next step is to analyze the long-term balance of exogenous variables on endogenous variable. Table 2 presents the results of the Bound Test which shows the long-term balance between the variables of Bank Performance, Capital, Efficiency, and Macroeconomic on Financing Risk.

Table 3. Bound Test Results

Test Statistics	Value	Significant	I(0)	I(1)
F-statistic	5.720647	10%	2.45	3.52
		5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

The results of the Bounds Test indicate that the F-Statistic value (5.720647) exceeds both I(0) and I(1), suggesting the presence of both long-term and short-term relationships between the exogenous variables and the endogenous variable.

3.1.4 Long Term ARDL Result

The following are the results of the estimation of the long term effect of the exogenous variables on endogenous variable which can be seen from Table 1.

Table 4. Long Term Results

Variables	Coefficient	t-statistics	Prob.
Macroeconomic	-0.3356	-1.2149	0.2590
Capital	-0.0842	-2.4722	0.0386*
Efficiency	0.0655	2.7689	0.0243*
Bank Performance	0.1329	4.4903	0.0020*
C	-0.0027	-0.1036	0.9200

\*denote statistical significance of 5%

The results indicate that Bank Performance has a significant positive effect on Financing Risk in Islamic banking in Indonesia. Similarly, Efficiency has a positive influence on Financing Risk. Meanwhile, Capital has a negative impact on Financing Risk. However, Macroeconomic factor do not has a significant effect on Financing Risk. These findings suggest that improvements in bank performance and efficiency policies may increase the risk faced by Islamic banks in Indonesia, whereas an increase in capital can reduce the risks encountered by these banks.

### 3.1.5 Short Term ARDL Results

The following are the results of the estimation of the short term effect of the exogenous variables on endogenous variable which can be seen from Table 1.

Table 5. Short Term Results

Variables	Coefficient	t-statistics	Prob.
Financing Risk (-1)	0.0917	0.4749	0.6475
Financing Risk (-2)	-0.8216	-4.0160	0.0039*
Financing Risk (-3)	-0.5476	-2.4482	0.0400*
Financing Risk (-4)	-0.7293	-3.1793	0.0130*
Macroeconomic	0.3880	2.9392	0.0187*
Macroeconomic (-1)	-0.0468	-0.5203	0.6169
Macroeconomic (-2)	-0.0906	-1.3040	0.2285
Macroeconomic (-3)	0.1490	2.6022	0.0315*
Capital	0.0545	0.9187	0.3851
Capital (-1)	0.0925	1.3350	0.2186
Capital (-2)	-0.1128	-1.6304	0.1416
Capital (-3)	-0.0090	-0.1607	0.8763
Capital (-4)	-0.2784	-3.5352	0.0077*
Efficiency	0.1513	3.0856	0.0150*
Efficiency (-1)	0.1419	2.9224	0.0192*
Efficiency (-2)	-0.0025	-0.0538	0.9584
Efficiency (-3)	0.0086	0.1989	0.8473
Efficiency (-4)	-0.1023	-1.9121	0.0922
Bank Performance	0.3650	0.7626	0.4676
Bank Performance (-1)	0.0277	0.0683	0.9472
Bank Performance (-2)	0.0449	0.1270	0.9020
Bank Performance (-3)	-0.6450	-1.7606	0.1163
Bank Performance (-4)	-0.8019	-1.5472	0.1604
CointEq(-1)	-3.0068	-5.6517	0.0005
R-squared = 0.9903			
Adjusted R-squared = 0.9624			
F-statistic = 35.5751			
Prob(F-statistic) = 0.0000			

\*denote statistical significance of 5%

### 3.1.6 Stability Test

In this ARDL model, CUSUM and CUSUMQ are used to test the stability of the model. Following are the results of CUSUM:

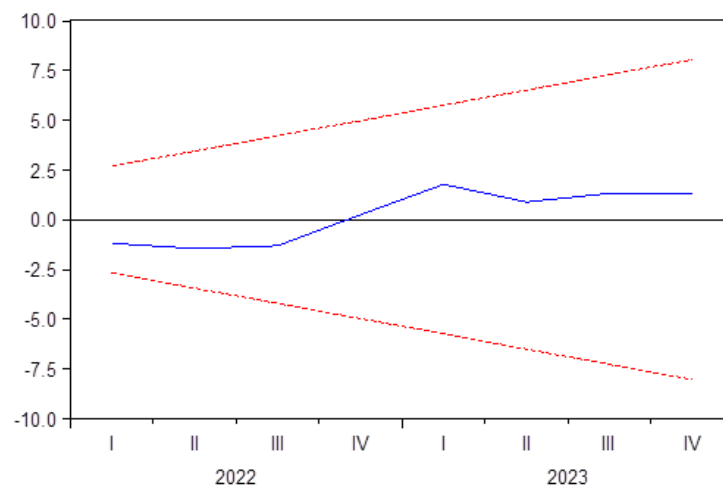


Figure 3. CUSUM Plot

During the observation period, it can be seen that the ARDL model tested has been stable and the coefficients statistically can explain the interaction between the endogenous variable and exogenous variables. This is evidenced by the CUSUM graph above, as well as the CUSUMQ figure where the CUSUMQ plot still enters the critical interval below 5%.

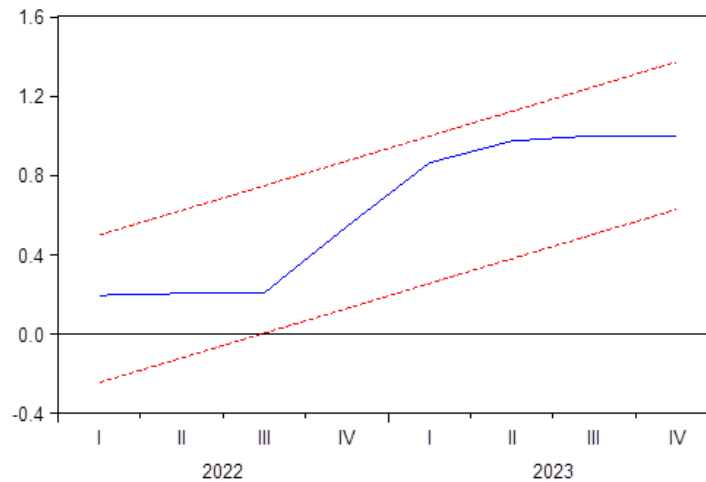


Figure 4. CUSUMQ Plot

### 3.1.7 Model Assumptions

Diagnostic tests for serial correlation, normality, and heteroscedasticity were performed, with the results displayed in Table 6. The findings demonstrate that the model fulfills the econometric assumptions, such as the residuals are serially uncorrelated, normally distributed, and homoscedastic. Consequently, the results can be reliably interpreted.

Table 6. Diagnostics Checks: Model Assumptions

Test	Value	Prob.
Jarque-Berra Normality	1.1224	0.5705
Breusch-Godfrey Serial Correlation LM	0.3144	0.2192
Breusch-Pagan-Godfrey Heteroskedasticity	1.0860	0.4824

The Jarque-Berra Normality Test, which assumes the residuals are normally distributed, yields a probability of 0.5705, indicating that the null hypothesis is accepted. Thus, it can be concluded that the residuals are normally distributed. Likewise, the Breusch-Godfrey Serial Correlation LM test, with the null hypothesis of no serial correlation in the residuals, yields a probability of 0.2192. This indicates that the null hypothesis is accepted, confirming the absence of serial correlation. Finally, the Breusch-Pagan-Godfrey Heteroscedasticity test, assuming homoskedasticity, yields a probability of 0.4824, leading to the conclusion that the null hypothesis is accepted, thus confirming that the residuals are homoskedastic.

## 3.2 Discussion

### 3.2.1 Effect Macroeconomic on Financing Risk

In the long run, macroeconomics has an insignificant negative influence on financing risk. This is due to the interest rate adjustment through monetary policy implemented to stabilize the economy. During the initial phases of escalating inflation, the effect on financial risk is pronounced, particularly in the short term, as individuals prioritise meeting their needs over fulfilling debts. In the long term, the central bank will address inflation by increasing the benchmark interest rate to alleviate inflationary pressure and ensure price stability. The elevation of interest rates can mitigate inflation, so promoting the stabilisation of economic conditions (Akram & Eitrheim, 2008; Granville & Mallick, 2009; Kotcofana et al., 2021).

A substantial rise in inflation in the short term induces an escalation in financial risk. This aligns with the assertion that inflation positively influences financing risk, as demonstrated by Abid et al. (2014) and Klein (2013). Inflation dynamics can influence both the advantageous and detrimental aspects of finance quality. An escalation in inflation results in heightened prices, prompting consumers to prioritise expenditure on shopping above the settlement of financing installments. This circumstance also heightens the risks encountered by Islamic banking. Consequently, low inflation rates may influence the financial status of borrowers, enabling

them to fulfil their loan obligations. For individual homeowners, house finance constitutes a major personal liability and substantially impacts their financial security. Conversely, residential mortgage receivables are regarded as one of the most significant assets influencing the liquidity of property firms. Ahmed (2010) elucidates that unwise mortgage financing can elevate the risk of financial crises for banks.

### 3.2.2 Effect Capital on Financing Risk

In the long run, a decrease in capital in Islamic banks has significant potential to increase financing risk. Reduced capital may diminish the bank's capacity to withstand losses stemming from non-performing loans or defaults. This may deteriorate the bank's solvency, thereby undermining its capacity to sustain financial stability. A reduction in capital can also impact a bank's liquidity, which is crucial for sustaining the bank's capacity to fulfil its short-term obligations. Over time, a bank's failure to align capital with financing risk can heighten the probability of a liquidity crisis, amplify exposure to credit risk, and deteriorate overall financial performance (Bitar et al., 2018; Isnurhadi et al., 2021; Sobarsyah et al., 2020).

In the short term, an increase in Islamic banking capital can reduce financing risk. Sufficient capital is a crucial measure of a bank's ability to absorb losses from non-performing loans. A high CAR ratio signifies that the bank possesses adequate capital reserves to mitigate these risks, hence enabling stable operations without concern for financial instability. Abbas & Ali (2022) discovered that an increase in bank capital can mitigate financing risk, enabling banks to more effectively absorb possible losses. Moreover, Ismail & Shahimi (2003) demonstrated that the adoption of risk-based capital requirements in Islamic banking incentivises banks to augment their core capital ratio. By augmenting this ratio, Islamic banks can more readily satisfy the minimum regulatory standards while concurrently mitigating their exposure to the risk of non-performing financing. Finally, Rahman (2010) concluded that a stable financial system, bolstered by adequate capital, can mitigate short-term bankruptcy risk. Nonetheless, this stability does not consistently endure in the medium term, underscoring the significance of sustainable risk management in Islamic banking.

### 3.2.3 Effect Efficiency on Financing Risk

An increase in the Operating Expenses to Operating Income Ratio, both in the short and long term, signifies a decline in efficiency, hence elevating the risk associated with Islamic bank financing. This discovery is significant, since it underscores the direct correlation between operational inefficiencies and the decline of financial health. Increasing operating expenses without proportional revenue expansion can significantly impede a bank's capacity to manage financing risks, a concern especially pertinent for Islamic banks, where profitability and cost control are closely linked to adherence to Sharia norms. This aligns with (Munifatussa, 2020), indicated that rising operational expenses can heighten financing risk. Efficient operations, indicated by the BOPO ratio, serve not only as a metric of profitability but also as a crucial risk mitigator. Through the optimisation of the equilibrium between expenditures and revenues, Islamic banks can more effectively allocate resources, diminish the probability of default, and improve overall financial performance (Setiawan, 2021; Wahyuni, 2023). A declining efficiency ratio frequently indicates underlying structural problems, such as inadequate cost management, escalating technological expenditures, or unsustainable labour practices. This may indicate inadequate business possibilities, compelling banks to incur higher expenses to maintain operations without sufficient income generating. From a strategic management viewpoint, banks ought to prioritise the evaluation of their cost structures and concentrate on enhancing operational efficiency via digital transformation and talent development initiatives. By minimising transaction costs and augmenting employee competencies, banks can realise sustained efficiency improvements. Moreover, benchmarking against industry best practices can yield critical insights for more effective management of BOPO and the maintenance of financial health in a progressively competitive market (Lee & Chih, 2013; Setiawan, 2021). Enhancing these initiatives through regulatory compliance, demonstrated by the impact of financial regulation on efficiency and risk management, can assist Islamic banks in bolstering resilience and financial sustainability (Lee & Chih, 2013).

### 3.2.4 Effect Bank Performance on Financing Risk

In the long run, good Islamic bank performance can increase financing risk. Substantial earnings frequently entice investors to pursue long-term investment strategies. Excessively aggressive financing expansion to attain a substantial net profit aim may indeed elevate financing risk. This is evidenced by the 101.41% surge in Islamic banking earnings from 2020 to 2023. This circumstance underscores the imperative for Islamic banks to assess the quality of the financing provided. Enhanced performance coupled with elevated risk can influence investor views in decision-making (Cheng et al., 2017). The long-term effect is that investors may



perceive the allocation of financing as disregarding prudential banking rules (Cheng et al., 2017; Harford et al., 2018).

In the short term, the enhancement of Islamic bank performance does not exhibit a substantial correlation with the rise in financing risk. During this period, banks continue to gain from financing expansion, bolstered by elevated liquidity and capital adequacy. The evaluation of short-term financing risk may be skewed by several measures, including financial restructuring and fiscal stimulus, which inadequately represent customers' capacity to fulfil payment obligations. This study also identified an inverse relationship between performance and financing risk. Multiple research, including one examining Turkish deposit banks, demonstrate a negative correlation between credit risk and performance (Ekinici & Poyraz, 2019). Islamic banks frequently experience diminished performance due to heightened financing risk, which arises from the characteristics of risk-sharing financial instruments and stringent compliance with Shariah standards. Unlike conventional banks, Islamic banks typically employ profit-loss sharing procedures, resulting in a distinct risk profile that may yield reduced profitability under specific circumstances (Kabir et al., 2015; Lassoued, 2018).

#### 4. Conclusion

The sustainability of Islamic banking financing is evident in the dynamics of financing risk. Heightened financing risk may result in a possible source of bank losses. Over the long run, internal factors such as capital, efficiency, and performance substantially affect financing risk. Capital exerts a detrimental effect, but the efficiency and performance of Islamic banks have a beneficial impact. Nonetheless, macroeconomic conditions exhibit no substantial impact on financing risk. In the short term, among internal determinants, both capital and efficiency exert considerable influence, with capital negatively impacting and efficiency positively affecting outcomes. Furthermore, the performance of Islamic banks does not substantially influence financing risk. Macroeconomic considerations positively impact financing risk.

#### 5. Recommendation

The recommendations from this study are crucial for enhancing the sustainability of financing risk in Islamic banking. Emphasising the significance of internal elements and macroeconomic conditions, especially inflation, financial analysts are urged to adopt a prudent approach to disbursement, conducting comprehensive feasibility studies to avoid potential risks. Moreover, Islamic banks are encouraged to devise creative and sharia-compliant solutions for managing financing risk, reconciling regulatory compliance with their ethical responsibilities. This dual emphasis not only sustains the stability and competitiveness of banks within the global financial arena but also underscores that proficient financing risk management is both a regulatory necessity and a Shariah obligation, thus bolstering the long-term sustainability of Islamic financial institutions.

#### References

- Abbas, F., & Ali, S. (2022). Economics of loan growth, credit risk and bank capital in Islamic banks. *Kybernetes*, 51(12), 3591–3609. <https://doi.org/10.1108/k-03-2021-0232>
- Abdullah, D. V., & Chee, K. (2023). *Islamic Finance*. ElexMediaKomputindo.
- Abdurraheem, A. A., Alam, M. M., & Ahmad Nadzri, F. A. (2023). Financing concentration and credit risks: empirical study on the Islamic banks in Malaysia. *Management & Accounting Review (MAR)*, 22(3), 466–489. <https://doi.org/10.24191/mar.v22i03-18>
- Abid, L., Ouertani, M. N., & Zouari-Ghorbel, S. (2014). Macroeconomic and Bank-specific Determinants of Household's Non-performing Loans in Tunisia: A Dynamic Panel Data. *Procedia Economics and Finance*, 13(December 2013), 58–68. [https://doi.org/10.1016/s2212-5671\(14\)00430-4](https://doi.org/10.1016/s2212-5671(14)00430-4)
- Ahmed, A. (2010). Global financial crisis: an Islamic finance perspective. *International Journal of Islamic and Middle Eastern Finance and Management*, 3(4), 306–320. <https://doi.org/10.1108/17538391011093252>
- Akram, Q. F., & Eitrheim, Ø. (2008). Flexible inflation targeting and financial stability: Is it enough to stabilize inflation and output? *Journal of Banking & Finance*, 32(7), 1242–1254. <https://doi.org/10.1016/j.jbankfin.2007.10.008>
- Alabbad, A., & Schertler, A. (2022). COVID-19 and bank performance in dual-banking countries: an empirical analysis. In *Journal of Business Economics* (Vol. 92, Issue 9). Springer Berlin Heidelberg. <https://doi.org/10.1007/s11573-022-01093-w>
- Alawode, A. A. (2015). *Islamic Finance*. World Bank. <https://www.worldbank.org/en/topic/financialsector/brief/islamic-finance#1>

- Aliyu, S., Hassan, M. K., Mohd Yusof, R., & Naiimi, N. (2017). Islamic banking sustainability: A review of literature and directions for future research. *Emerging Markets Finance and Trade*, 53(2), 440–470. <https://doi.org/10.1080/1540496x.2016.1262761>
- Bitar, M., Hassan, M. K., & Hippler, W. J. (2018). The determinants of Islamic bank capital decisions. *Emerging Markets Review*, 35, 48–68. <https://doi.org/10.1016/j.ememar.2017.12.002>
- Brown, R. L., Durbin, J., & Evans, J. M. (1975). Techniques for testing the constancy of regression relationships over time. *Journal of the Royal Statistical Society Series B: Statistical Methodology*, 37(2), 149–163. <https://doi.org/10.1111/j.2517-6161.1975.tb01532.x>
- Cheng, M., Geng, H., Gao, Y., & Lin, J. W. (2017). The effects of Foreign strategic investors on Bank Prudential behavior: Evidence from China. *Emerging Markets Finance and Trade*, 53(3), 688–709. <https://doi.org/10.1080/1540496x.2016.1254022>
- Ekananda, M. (2016). *Analisis Ekonometrika Time Series*. MitraWacanaMedia.
- Ekinci, R., & Poyraz, G. (2019). The effect of credit risk on financial performance of deposit banks in Turkey. *Procedia computer science*, 158, 979-987. <https://doi.org/10.1016/j.procs.2019.09.139>
- Granville, B., & Mallick, S. (2009). Monetary and financial stability in the euro area: Pro-cyclicality versus trade-off. *Journal of International Financial Markets, Institutions and Money*, 19(4), 662–674. <https://doi.org/10.1016/j.intfin.2008.11.002>
- Grassa, R. (2012). Islamic Banks' Income Structure and Risk: Evidence from GCC Countries. *SSRN Electronic Journal*, May. <https://doi.org/10.2139/ssrn.1733018>
- Harford, J., Kecskés, A., & Mansi, S. (2018). Do long-term investors improve corporate decision making? *Journal of Corporate Finance*, 50, 424–452. <https://doi.org/10.2139/ssrn.2505261>
- Hassan, K., & Lewis, M. (2009). *Handbook of Islamic banking*. Edward Elgar Publishing.
- Ismail, A. G., & Shahimi, S. (2003). Do Risk-Based Capital Requirements Allocate Financing and Cause a "Bigger" Loan Loss Provision for Islamic Banks? *Jurnal Iqtisad*, 4(1). <https://doi.org/10.20885/iqtisad.vol4.iss1.art1>
- Isnurhadi, I., ADAM, M., Sulastri, S., ANDRIANA, I., & Muizzuddin, M. (2021). Bank capital, efficiency and risk: evidence from Islamic banks. *The Journal of Asian Finance, Economics and Business*, 8(1), 841–850.
- Jayanto, P. Y. (2020). Factors affecting non-performing financing at islamic commercial banks in Indonesia. *Accounting Analysis Journal*, 9(1), 38–45. <https://doi.org/10.15294/aaaj.v9i1.20778>
- Jiménez, G., & Saurina, J. (2004). Collateral, type of lender and relationship banking as determinants of credit risk. *Journal of Banking and Finance*, 28(9), 2191–2212. <https://doi.org/10.1016/j.jbankfin.2003.09.002>
- Kabir, M. N., Worthington, A., & Gupta, R. (2015). Comparative credit risk in Islamic and conventional bank. *Pacific-Basin Finance Journal*, 34, 327-353. <https://doi.org/10.1016/j.pacfin.2015.06.001>
- Klein, N. (2013). *Non-performing loans in CESEE: Determinants and impact on macroeconomic performance*. International Monetary Fund.
- Kotcofana, T., Bazzhina, V., & Altunyan, A. (2021). Inflation and Redistribution Processes in the Modern World. *SHS Web of Conferences*, 92, 07033. <https://doi.org/10.1051/shsconf/20219207033>
- Lassoued, M. (2018). Comparative study on credit risk in Islamic banking institutions: The case of Malaysia. *The Quarterly Review of Economics and Finance*, 70, 267-278. <https://doi.org/10.1016/j.qref.2018.05.009>
- Lee, T., & Chih, S. (2013). North American Journal of Economics and Finance Does financial regulation affect the profit efficiency and risk of banks ? Evidence from China ' s commercial banks. *North American Journal of Economics and Finance*, 26, 705–724. <https://doi.org/10.1016/j.najef.2013.05.005>
- Mateev, M., Nasr, T., & Nair, K. (2024). Navigating crisis: marketing dynamics and resilience in the MENA's dual-banking system amidst the SAR-COV-2 pandemic. *Humanities and Social Sciences Communications*, 11(1), 1–21. <https://doi.org/10.1057/s41599-024-03675-1>
- Miklaszewska, E., Kil, K., & Idzik, M. (2021). How the covid-19 pandemic affects bank risks and returns: Evidence from eu members in central, eastern, and northern europe. *Risks*, 9(10). <https://doi.org/10.3390/risks9100180>
- Mirzaei, A., Saad, M., & Emrouznejad, A. (2024). Bank stock performance during the COVID-19 crisis: does efficiency explain why Islamic banks fared relatively better? *Annals of Operations Research*, 334(1–3), 317–355. <https://doi.org/10.1007/s10479-022-04600-y>
- Munifatussa, A. (2020). Determinants Non-Performing Financing ( NPF ) in Indonesia Islamic Banks. *EQUILIBRIUM: Jurnal Ekonomi Syariah*, Volume 8,(2020). <https://doi.org/10.21043/equilibrium.v8i2.7874>

- Rahman, A. A. (2010). Financing structure and insolvency risk exposure of Islamic banks. *Financial Markets and Portfolio Management*, 24, 419–440. <https://doi.org/10.1007/s11408-010-0142-x>
- Rozalinda. (2016). *Fikih Ekonomi Syariah*. Rajawali Pers.
- Saifurrahman, A., & Kassim, S. (2022). Collateral imposition and financial inclusion: a case study among Islamic banks and MSMEs in Indonesia. *Islamic Economic Studies*, 30(1), 42–63. <https://doi.org/10.1108/ies-04-2022-0023>
- Setiawan, I. (2021). The Impact Of Financing Risk On Islamic Banking Performance In Indonesia. *Share: Jurnal Ekonomi Dan Keuangan Islam*, 10(2), 208–229. <https://doi.org/10.22373/share.v10i2.9400>
- 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>
- Wahyuni, F. N. (2023). The influence of NPF , FDR , and BOPO on ROA at BPRS Amanah Rabbaniyah Banjaran. *International Journal of Business, Economics and Social Development*, 4(3), 123–131. <https://doi.org/10.46336/ijbesd.v4i3.478>
- Wasiaturrahma, Ajija, S. R., Sukmana, R., Sari, T. N., & Hudaifah, A. (2020). Breadth and depth outreach of Islamic cooperatives: do size, non-performing finance, and grant matter? *Heliyon*, 6(7), e04472. <https://doi.org/10.1016/j.heliyon.2020.e04472>
- Yustiardi, A. F., Diniyya, A. A., Faiz, F. A. A., Subri, N. S., & Kurnia, Z. N. (2020). Issues and challenges of the application of Mudarabah and Musharakah in Islamic bank financing products. *Journal of Islamic Finance*, 9(2), 26–41.