

THE INFLUENCE OF FINANCING MODEL AND CREDIT RISK ON FINANCIAL STABILITY (STUDY OF ISLAMIC RURAL BANKS IN JAVA ISLAND)

Multazam Mansyur Addury¹ and Aprilia Kinasih Putri Ramadhani²

¹ Institut Agama Islam Negeri Parepare, Indonesia, multazam.mansyur@gmail.com

² Institut Agama Islam Al-Hikmah Tuban, Indonesia, apriliakinasihputriramadhani@gmail.com

ABSTRACT

This study examines the impact of profit-sharing financing and profit-margin financing on financial stability of Islamic Rural Banks (IRBs) in Java Island and incorporates credit risk as an intervening variable. Utilizing a panel dataset of 90 registered IRBs operating in Java Island from 2011 to 2021 and applying path analysis, we find that profit margin financing has a significant negative impact on the financial stability of IRBs, both directly and indirectly through its association with credit risk. In contrast, profit sharing financing shows a positive and significant direct effect on financial stability. This result implies that profit margin financing may pose a greater risk to the financial stability of IRBs than profit-sharing financing. The study highlights the need for IRBs to carefully manage their financing strategies, taking into consideration the potential risks associated with profit margin financing. Effective risk management practices are crucial for mitigating credit risk and ensuring the overall stability of IRBs. The research emphasizes the importance of a selective approach in providing profit-sharing financing to mitigate potential risks. It also underscores the significance of striking a balance between profitability and credit risk management to ensure the long-term stability of IRBs.

Keywords: Profit-sharing financing, Profit margin financing, Financial stability, Islamic rural banks.

JEL classification: G21; G24; Z12.

Article history:

Received : July 12, 2023

Revised : March 9, 2024

Accepted : August 30, 2024

Available online : September 20, 2024

<https://doi.org/10.21098/jimf.v10i3.1788>

I. INTRODUCTION

Based on the application of business principles, banking institutions in Indonesia are categorized into two types: conventional banks and Islamic banks (Marimin et al., 2015). In accordance with Law No. 21 of 2008, banks that operate based on Sharia principles are referred to as Islamic banks. The Sharia principles encompass the prohibition of interest in transactions, prioritizing fairness in business activities, adhering to halal principles, paying zakat from business profits, prohibiting monopolies, and fostering societal development through permissible business and trade activities by Islam (Zainur, 2021). The establishment of Islamic banks aims to enhance societal welfare (El Ayyubi et al., 2018).

Islamic banks perform an intermediary function to fulfill their objectives. This function involves channeling funds from surplus units to deficit units (Simatupang, 2019). In conventional banks, these funds are provided as loans, whereas in Islamic banks, they are referred to as financing (Nuraini & Muttaqin, 2018). Unlike conventional banks that charge interest, Islamic banks operate under a partnership model, where the bank and the customer share profit, losses, and risks (Abrar et al., 2018; Nofinawati, 2016).

Islamic banks primarily rely on financing as their main source of income (Ghoniya & Hartono, 2019), which can be categorized into two main types: profit-sharing financing and profit margin financing (Belkhaoui et al., 2020). Profit-sharing financing is based on *musharakah* and *Mudarabah* contracts, while profit margin financing involves contracts like *Murabaha*, *ijarah*, *salaam*, and *istishna*. Effective management of financing is crucial for Islamic banks to optimize their outcomes, as any deviations can increase credit risk and impact the financial stability of the bank (Khaki & Sangmi, 2011; Utami & Silaen, 2018).

Islamic rural banks, henceforth IRBs, are Islamic banks that operate in specific rural and urban areas within cities or regencies. Despite limitations in service availability and invested capital (Anwar et al., 2018), IRBs play a vital role in the Indonesian economy by providing financing services to low-income individuals and fulfilling the capital needs of small and micro-scale industries. This is done to reduce poverty and improve people's welfare (A'yun, 2020; Muhammad et al., 2020). In 2016, IRBs contributed 53.59% of the total financing provided to micro and small industries (Muhammad et al., 2020).

This research focuses on IRBs located in Java Island. Java has the highest number of micro and small industries compared to other regions in Indonesia, with 63.11% of such industries are located in the island it has a greater number of IRBs compared to other regions in Indonesia, with 90 out of the total 164 (54.9%) operating in Java, as per Sharia Banking Statistics as of December 2021. The main objective of this research is to analyze the effects of profit-sharing financing and profit margin financing on financial stability of Islamic rural banks. By examining these two financing models, the study aims to understand how they contribute to or influence the overall stability of Islamic banks.

This analysis is important in providing insights into the impact of different financing approaches on the financial health and stability of Islamic banking institutions. The findings of this research can have implications for the management and strategic decision-making of Islamic banks, as well as contribute to the broader understanding of the factors influencing financial stability in the Islamic banking

sector. The study also considers credit risk as an intervening variable in this relationship. Previous studies have highlighted the importance of examining the impact of financing models on credit risk and subsequently on financial stability (Abusharbeh, 2014; Ariffin et al., 2009; Kabir et al., 2022). Moreover, the influence of credit risk on financial stability has been documented in the literature (Hassan et al., 2019; Maritsa & Widarjono, 2021). However, this study focuses specifically on Islamic Rural Banks (IRBs), providing valuable insights into the context of these banks.

While numerous investigations have explored financial stability in Islamic banks, there is a noticeable shortage of research on financial stability in specific area and institutions such as Islamic Rural Banks (IRBs) in Java Island. In addition, this study also developed a model by examining the effect of profit-sharing financing and profit margin financing on bank financial stability, with credit risk as an intervening variable.

II. LITERATURE REVIEW

The existing literature has extensively explored the financial stability of Islamic banks, investigating different factors that contribute to their stability (See Albaity et al., 2019; Lassoued, 2018; Paltrinieri et al., 2021; Rizvi et al., 2020). However, many of these studies primarily focus on assessing financial stability of Islamic banks in comparison with conventional banks. In contrast to previous studies that have explored various determinants of financial stability in Islamic banks, this current study takes a unique approach by focusing specifically on the influence of the financing model. The research investigates the effects of profit-sharing financing and profit margin financing on the financial stability of Islamic banks, while also considering the role of credit risk as an intervening variable in this relationship. By examining these specific aspects, the study aims to shed light on the direct and indirect impact of different financing models on the financial stability of Islamic banks. This research contributes to the existing body of knowledge by providing a more focused and nuanced understanding of the relationship between financing models and financial stability in the context of Islamic banking. The insights gained from this study can have practical implications for Islamic banks in terms of their financing strategies and risk management practices, ultimately enhancing their financial stability and sustainability.

Albaity et al. (2019) analyze the impact of competition on bank stability in MENA countries. His research model includes several control variables, i.e., bank size, efficiency, diversification, and leverage. It finds that banks with low levels of competition are more resilient, have low credit risk, and have high levels of profitability. In addition, the effect of competition is higher in Islamic banks compared to conventional banks in MENA countries.

Lassoued (2018) conducts a study on the relationship between corporate governance and the financial stability of Islamic banking in Malaysia. Corporate governance is measured by the number of Sharia Supervisory Board (DPS) members, board members, and the proportion of independent directors on the board. The research finds that the percentage of independent members on the board of directors has a significant positive impact on IB's financial stability.

However, DPS and the size of the board of directors do not influence financial stability.

Paltrinieri et al. (2021) examine the impact of income diversification on the profitability and financial risk of banks in OIC countries. The study employs a dataset of 47 Islamic banks and 154 conventional banks. The results show that income diversification provides lower returns for Islamic banks compared to conventional banks. The non-interest income portion has a significant impact on profitability. In addition, it also indicates that there is no relationship between income diversification and stability in both conventional and Islamic banks.

Ibrahim & Rizvi (2017) analyze the impact of bank size on financial stability. They use panel data of 45 Islamic banks from 13 countries. The results suggest that Islamic banks that have a larger size tend to be more stable. This relationship can increase if there are regulations on activity restrictions and capital tightening. Conversely, this relationship is weakened if there is more supervision from the private sector.

Rizvi et al. (2020) analyze whether competition in Islamic banks can increase financial stability and profitability. The results of his research suggest that the presence of Islamic banking has no impact on profitability but can increase a bank's financial stability through the path of assets and liabilities.

A study conducted by Rashid et al. (2017) examines the role of Islamic banks in contributing to financial stability in Pakistan. Their research reveals a positive correlation between the loan-to-assets ratio and financial stability. This implies that a higher proportion of loans to total assets is associated with increased stability for Islamic banks in Pakistan. The findings suggest that effective allocation of funds for lending purposes and prudent management of loan portfolios can contribute to the overall stability of Islamic banks. However, it is important to consider that these findings are specific to the context of the Pakistani banking sector and may be influenced by various factors such as regulations and market conditions. Similarly, Khasawneh (2016) compares the profitability and financial stability of Sharia banking with conventional banking in the MENA region and finds a positive association between the loan-to-assets ratio and financial stability.

In contrast to Rashid et al. (2017), Hassan et al. (2019) discover that loan growth has a negative impact on financial stability, particularly in the aftermath of a financial crisis. This suggests that rapid expansion of loans can potentially undermine the stability of banks. Similarly, Kabir et al. (2022) conduct a comparative analysis of credit risk in Sharia banking and conventional banking, and their results indicate a negative impact of the loan-to-assets ratio on bank stability as measured by the z-score. This implies that a higher proportion of loans to total assets could adversely affect the financial stability of banks.

Another study by Le (2020) also highlights the detrimental effect of loan growth on bank stability, emphasizing the trade-off between pursuing financing growth and maintaining stability. These studies underscore the importance of considering the potential risks associated with loan expansion and the need for banks to strike a balance between growth objectives and stability concerns. It is worth noting that these findings may vary across different banking contexts and should be interpreted in the specific context of each study.

Credit risk presents a significant challenge for achieving financial stability in Sharia banking. High levels of credit risk can have adverse effects on a bank's profitability. Brewer III et al. (2008) emphasize that credit risk can lead to reduced profitability and potentially result in bank failures. In terms of stability, research conducted by Kamran et al. (2019) reveals that non-performing loans (NPL), which serve as a proxy for measuring credit risk, have a negative and significant impact on bank stability in Pakistan. Similar findings are observed by Rajhi & Hassairi (2013), indicating that credit risk can decrease the z-score value of small Islamic banks in the MENA countries and also reduce the z-score value of large Islamic banks in Southeast Asia.

The research mentioned can be grouped into several categories that reveal various aspects that affect stability, especially in Islamic banks. First, research exploring the effect of competition levels on bank stability and profitability, such as Albaity et al. (2019) and Rizvi et al. (2020). Furthermore, research that highlights the role of corporate governance in influencing the financial stability of Islamic banks, as in Lassoued (2018). In addition, some also look at the impact of bank size and income diversification on stability and profitability, for examples, Ibrahim & Rizvi (2017) and Paltrinieri et al. (2021). Furthermore, several studies have focused on the contribution of Islamic banks to financial stability, by evaluating factors such as loan growth and credit risk, as in Rashid et al. (2017), Hassan et al. (2019), and Kabir et al. (2022). The last one is research that highlights the challenges faced by Islamic banks in managing credit risk and its impact on financial stability, as in Brewer III et al. (2008), Kamran et al. (2019), and Rajhi & Hassairi (2013).

The present study differs from previous research in several aspects. First, this research specifically focuses on IRBs on the island of Java and aims to provide a deep understanding of the factors that influence financial stability. Second, this research highlights the financing model and credit risk, two crucial aspects of the operation of financial institutions. The focus on these variables allows the research to provide more direct insight related to the operational practice and management of credit risk that is specific to IRBs. Third, the use of path analysis methods in this study can be a significant advantage because it allows a better understanding of cause-and-effect relationships between the variables studied. Thus, this study can provide a more complete picture of the mechanisms involved in influencing the stability of IRBs in Java.

III. METHODOLOGY

3.1. Data

The dataset in this study comprises Islamic Rural Banks (IRBs) in Java Island spanning the period from 2010 to 2021. The sample is until 2021, taking into consideration the potential anomalies in the analysis results due to the Covid-19 pandemic. The following criteria are utilized for sample selection: (i) IRBs registered in The Financial Authority Services during the period of 2011- 2021, (ii) availability of financial reports the period of 2011 – 2021, and (iii) no outliers or extreme values observed in the published data. Based on these criteria, we arrive at a sample of 64 IRBs amounting to 704 bank-year observations.

3.2. Variables

The variables employed in this study are summarized in the following table:

Table 1.
Research Variable

Variable	Measurements
Financial Stability	$Z\text{-score}_{it} = (ROA_{it} + Eq_{it}/TA_{it}) / \partial ROA_{it}$
Credit Risk	Non Performing Financing (NPL)
<i>Profit Sharing Financing</i>	Form of natural logarithm of financing based on profit sharing.
<i>Profit Margin Financing</i>	Form of natural logarithm of financing based on profit margin.
Likuidity	Financing to Deposit Ratio (FDR)
Capital	Capital Adequacy Ratio (CAR)
Economic Growth	Growth of Regional GDP
Inflation	Consumer Prices
BI Rate	Bank Indonesia's benchmark interest rate

The definition of financial stability varies across different studies. Elbadri & Bektaş (2017) provide one perspective on financial stability, defining it as the state in which financial institutions can allocate funds efficiently to the most profitable investments without experiencing disruptions. This definition emphasizes the ability of financial institutions to function smoothly and effectively in allocating resources and generating profits without facing significant disruptions or instability. However, it is important to note that other definitions and conceptualizations of financial stability may exist in the literature, reflecting the multifaceted nature of the concept and its various dimensions. In the banking context, an institution is considered financially stable if it can fulfill its intermediary role without significant issues. While there exists a significant body of literature discussing financial stability in the Sharia banking system (Lassoued, 2018), empirical evidence is required to determine whether Islamic banks exhibit greater resilience to disturbances in the financial system due to their risk-sharing principles and asset diversity (Boumediene & Caby, 2009).

The z-score is a widely used measure of financial stability in the literature (Albaity et al., 2019; Lassoued, 2018; Paltrinieri et al., 2020; Rizvi et al., 2020). It is a composite indicator that incorporates multiple financial ratios to assess the overall financial health and stability of banks (Mare et al., 2017). A higher z-score indicates a greater level of financial stability for banks. The calculation of the z-score typically involves several financial metrics, including return on assets (ROA), capital, and total assets. It is represented as follows:

$$Z\text{-score}_{i,t} = \frac{ROA_{i,t} + Eq_{i,t}/TA_{i,t}}{\partial ROA_{i,t}}$$

Where ROA_{it} is return on assets, Eq_{it} is total capital, TA_{it} is total assets, and δROA_{it} is the standard deviation of ROA. This paper primarily focuses on examining the impact of the financing model on financial stability, with credit risk acting as an intervening variable. Our conceptual model is depicted in Figure 1 and explained in more detail below.

Financing Model on Credit Risk: The profit-sharing financing model offered by Islamic banks can be utilized by customers for investment needs and working capital, while the profit margin financing model is more suitable for consumption needs. The distribution of financing has a dual impact on banks: it can enhance profitability and also increase credit risk. Belkhaoui et al. (2020) find that a high rate of financing distribution through Mudarabah and Musharakah contracts can lead to an increase in credit risk faced by banks (Belkhaoui et al., 2020). Similar findings Abusharbeh (2014) and Kabir et al., (2022) suggest that an increase in equity financing is associated with higher credit risk for Islamic banks due to customers' inability to repay their loans. However, comparing the credit risk between Sharia banking and conventional banking, Kabir et al. (2022) find that the financing ratio has a negative and significant impact on credit risk.

H1: Profit sharing financing has a positive and significant impact on a bank's credit risk.

H2: Profit margin financing has a positive and significant impact on a bank's credit risk.

Financing Model on Bank's Stability: Sharia banking encompasses two primary financing models: equity financing and debt financing (Antonio, 2001). Equity financing involves Mudarabah and Musyarakah contracts, while debt financing utilizes Murabaha and Ijarah contracts. Debt financing holds a larger market share compared to equity financing in Sharia banking, indicating a higher preference for meeting consumption needs. Previous studies consistently demonstrate the positive impact of financing on financial stability.

Rashid et al. (2017) examine the role of Sharia banks in contributing to financial stability in Pakistan. Their research reveals a positive correlation between the loan-to-assets ratio and financial stability. Similarly, Khasawneh (2016) compares the profitability and financial stability of Sharia banking with conventional banking in the MENA region and finds a positive association between the loan-to-assets ratio and financial stability. In contrast to Rashid et al. (2017), Hassan et al. (2019) find that loan growth has a negative impact on financial stability, particularly in the aftermath of a financial crisis. This suggests that rapid expansion of loans can potentially undermine the stability of banks.

Overall, while financing is generally associated with positive impacts on financial stability, the specific outcomes may vary depending on the context and conditions, such as the presence of a financial crisis and the comparative analysis between Sharia and conventional banking.

H3: Profit sharing financing has a negative and significant impact on a bank's stability.

H4: Profit margin financing has a negative and significant impact on a bank's stability.

Credit Risk on Bank's stability: Credit risk presents a significant challenge for achieving financial stability in Sharia banking. High levels of credit risk can have adverse effects on a bank's profitability. Brewer III et al. (2008) emphasize that financing of poor quality can lead to reduced profitability and potentially result in bank failures. In terms of stability, Kamran et al. (2019) suggest that non-performing loans (NPL), which serve as a proxy for measuring credit risk, have a negative and significant impact on bank stability in Pakistan. Similar findings are uncovered Rajhi and Hassairi, indicating that credit risk can decrease the z-score value of small Sharia banks in the MENA countries and also reduce the z-score value of large Sharia banks in Southeast Asia (Rajhi & Hassairi, 2013).

H5: Credit risk has a negative and significant impact on a bank's stability.

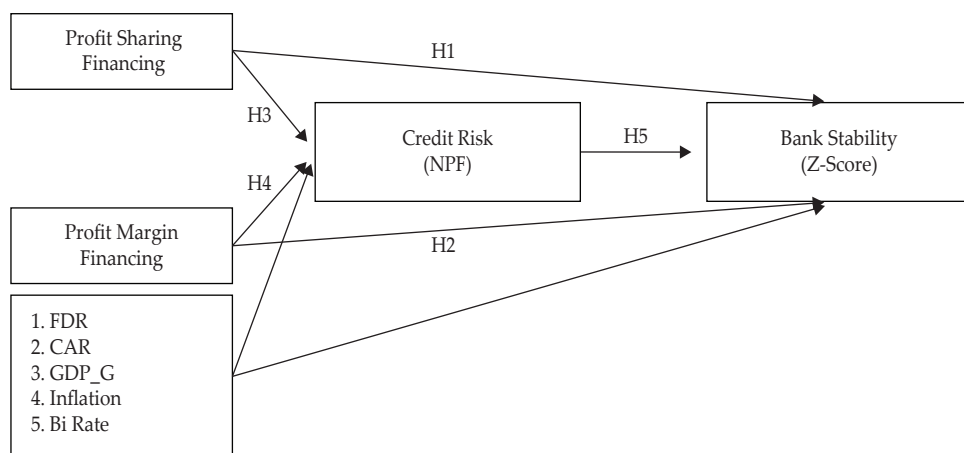


Figure 1.
The Conceptual Framework

3.3. Statistical Test and Model

In this study, the data analysis technique utilized is path analysis, which is a variation of linear multiple regression. Path analysis involves conducting a series of analyses on the dependent variable, where the previous dependent variable becomes an independent variable in the subsequent regression (Stage et al., 2004). The panel data analysis is implemented using the E-views statistical software. The research model, as depicted in Figure 1, can be represented by the following two equations:

$$NPF_{it} = \beta_0 + \beta_{11}PSF_{it} + \beta_2PMF_{it} + \varepsilon_{it} \quad (1)$$

$$Zscore_{it} = \beta_0 + \beta_1NPF_{it} + \beta_2PSF_{it} + \beta_3PMF_{it} + \varepsilon_{it} \quad (2)$$

where NPF is non-performing financing, PSF is natural logarithm of *Profit-Sharing Financing*, PMS is natural logarithm of *Profit Margin Financing*, and Zscore is Z-score representing financial stability.

To assess the impact of the intervening variable, this study employs the Sobel test. The Sobel test is used to examine the hypothesis that establishes a relationship between an independent variable and a dependent variable through an intervening variable. It aims to determine whether the intervening variable attenuates the effect of the independent variable on the dependent variable (Preacher & Hayes, 2004). The Sobel test is based on the formulation developed by Sobel in 1982. It employs a z-statistics to determine the statistical significance of the indirect effect:

$$z = \frac{ab}{\sqrt{(b^2 SE_a^2) + (a^2 SE_b^2)}}$$

- a = Regression coefficient of independent variable on mediating variable
 b = Regression coefficient of mediating variable on the dependent variable
 SEa = Standard error of the impact of independent variable on mediating variable
 SEb = Standard error of the impact of mediating variable on the dependent variable

The regression coefficients (a and b) capture the strength and direction of the relationships between the independent variable, mediating variable, and dependent variable. The standard errors (SEa and SEb) provide information about the precision or uncertainty associated with the estimated coefficients.

IV. RESULTS AND ANALYSIS

4.1. Descriptive Statistics

Table 2 presents descriptive statistics of the variables used in this study:

Table 2.
Descriptive Statistics

Variables	Mean	Median	Maximum	Minimum	Std. Dev.
Zscore	23.79	23.70	27.67	20.73	1.30
NPF	20.01	21.51	26.37	0.00	5.81
PMF	7.33	5.56	37.69	0.00	6.57
PSF	9.45	7.66	37.60	-1.31	6.91
FDR	85.12	85.17	705.00	0.00	41.28
CAR	22.88	18.00	210.00	0.00	17.22
GDP_G	4.71	5.34	7.03	-3.39	2.42
Inflation	4.17	3.81	6.41	1.56	1.68
Bi Rate	5.63	5.75	7.75	3.50	1.43

From Table 2, we may observe that none of the variables show outlier data, as indicated by the smaller standard deviation compared to the mean for each variable (Osborne & Overbay, 2004). The measurement of financial stability in this study is based on the z-score. The z-score has a mean of 23.79 and a standard deviation of 1.30. The maximum value observed for the z-score is 27.67, while the minimum value is 20.73. Credit risk has a mean of 20.01 and a standard deviation of 5.81. The maximum value of credit risk recorded is 26.37, with a minimum value of 0.00. These values indicate the presence of Islamic Rural Banks (IRBs) that are in an unfavorable condition due to high levels of credit risk. It is important to note that profit margin financing has a larger share compared to profit-sharing financing. This finding is consistent with Belkhaoui et al. (2020), who observe a similar composition in countries such as the UAE, where murabahah-based financing has a higher percentage compared to musharakah/mudharabah financing.

4.2. Results

4.2.1. Regression Results - Model 1

Table 3 presents regression results of model 1 to assess the significance of financing modes on credit/financing risk, which is taken as an intervening variable in the relationship between financing modes and bank stability. The results reported are based on the common-effect, fixed-effect, and random-effect panel models. Applying Lagrange Multiplier (LM), Chow Test, and Hausman test (Widarjono, 2018), we find that the random-effect panel model is most appropriate (see Table 4)

Table 3.
Regression Results – Model 1

Variable	Common Effect		Fixed Effect		Random Effect	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
PMF	-1.341	0.000	-1.199	0.007	-1.281	0.000
PSF	0.108	0.018	0.058	0.362	0.080	0.138
FDR	-0.004	0.532	0.002	0.760	0.000	0.965
CAR	-0.004	0.775	-0.009	0.588	-0.008	0.617
GDP_Growth	0.083	0.482	0.033	0.753	0.045	0.665
Inflation	-0.477	0.256	-0.431	0.278	-0.452	0.233
BI_Rate	0.192	0.691	0.181	0.675	0.188	0.659
C	38.006	0.000	35.366	0.001	36.966	0.000
R ²	0.048		0.335		0.027	
F-statistic	6.075		4.553		2.735	
Prob(F-statistic)	0.000		0.000		0.008	

Table 4.
Testing Model 1

Test		Result	
LM	0,000	Fixed Effect/Random Effect	
Breusch-Pagan			
Chow	0,000	Fixed Effect	Random Effect
Cross-section F			
Hausman	1,000	Random Effect	
Cross-section random			

Based on the random-effects model, the results indicate that profit margin financing has a significant negative impact on credit risk. However, there is no significant influence observed for profit sharing financing.

4.2.2. Regression Results - Model 2

The test result on the second model is presented in Table 5 below:

Table 5.
Regression Analysis Model 2

Variable	Common Effect		Fixed Effect		Random Effect	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
NPF	-0.146	0.000	-0.039	0.026	-0.041	0.018
PMF	-0.106	0.648	-1.367	0.000	-1.243	0.000
PSF	0.180	0.000	0.054	0.055	0.060	0.031
FDR	-0.004	0.486	-0.001	0.691	-0.001	0.641
CAR	0.077	0.000	0.045	0.000	0.046	0.000
GDP_Growth	0.097	0.430	0.082	0.081	0.086	0.066
Inflation	0.840	0.055	0.246	0.162	0.296	0.090
BI_Rate	-0.391	0.436	-0.120	0.528	-0.147	0.441
C	6.304	0.270	39.518	0.000	36.367	0.000
R ²	0.075		0.883		0.199	
F-statistic	7.077		67.087		21.528	
Prob(F-statistic)	0.000		0.000		0.000	

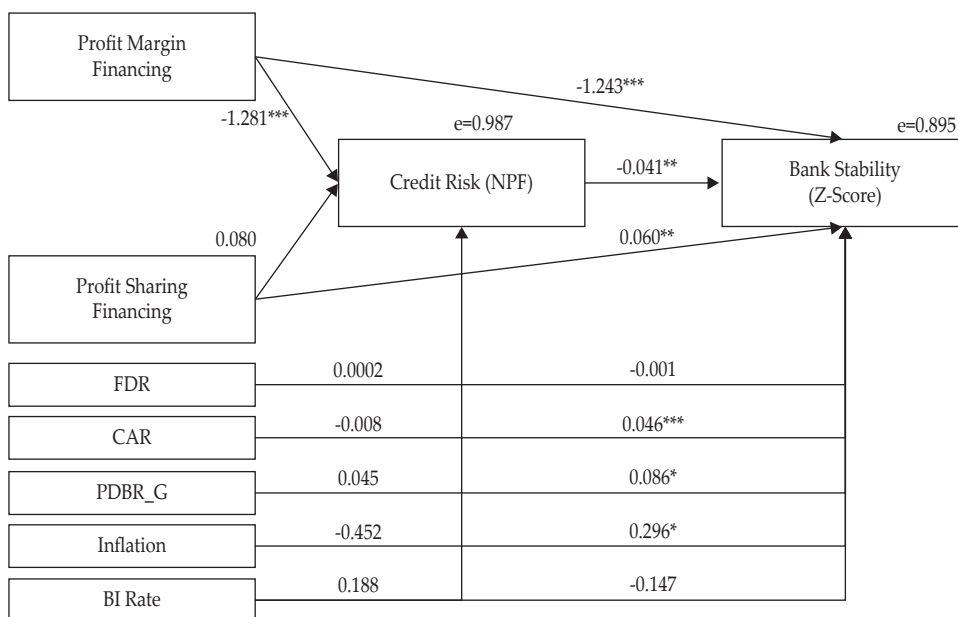
From Table 5, all panel data regressions are in agreement in that credit risk and profit margin financing have a significant and negative on financial stability of IRBs, while we should note that Lagrange Multiplier (LM) test, Chow test, and Hausman test prefer the random-effect panel estimator (see Table 6).

Table 6.
Testing Model 2

Test	Result		
LM	0,000	Fixed Effect/Random Effect	
Breusch-Pagan			
Chow	0,000	Fixed Effect	Random Effect
Cross-section F			
Hausman	1,000	Random Effect	
Cross-section random			

4.2.3. Path Analysis

The regression results of the two models are summarized in Figure 2:



Description:

e = Error term obtained from the formulation $e = \sqrt{1 - R^2}$

*** = Significance $\alpha=1\%$

** = Significance $\alpha=5\%$

* = Significance $\alpha=10\%$

Figure 2.
Path Analysis Conceptual Model

The total effect given by profit margin financing and profit-sharing financing on financial stability can be seen in Table 7.

Table 7.
The Relation between Variables

Correlation	Direct Effect	Indirect Effect	Total Effect
PMF à NPF	-1.281		
PSF à NPF	0.080		
FDR à NPF	0.0002		
CAR à NPF	-0.008		
GDP à NPF	0.045		
Inflation à NPF	-0.452		
BI Rate à NPF	0.188		
NPF à Z-score	-0.041		
PMF à Z-score	-1.243		
PSF à Z-score	0.060		
FDR à Z-score	-0.001		
CAR à Z-score	0.046		
GDP_G à Z-score	0.086		
Inflation à Z-score	0.296		
BI Rate à Z-score	-0.147		
PMF à NPF à Z-score		0.053	-1.189
PSF à NPF à Z-score		-0.003	0.056
FDR à NPF à Z-score		-0.00001	-0.001
CAR à NPF à Z-score		0.00031	0.046
GDP à NPF à Z-score		-0.002	0.084
Inflation à NPF à Z-score		0.019	0.314
BI Rate à NPF à Z-score		-0.008	-0.154

4.2.4. Sobel Test

Sobel statistics to test the hypothesis of the correlation between the independent variable and dependent variable through intervening variable is using Sobel Test computer calculator from <http://quantpsy.org/sobel/sobel.htm>. The Sobel test result can be seen in Table 8.

Table 8.
Sobel Test Model 1

Input	Output			
		Test statistic	Std. Error	p-value
A	-1.281			
B	-0.041	Sobel test:	2.098	0.025
Sa	0.301	Aroian test:	2.056	0.026
Sb	0.017	Goodman test:	2.144	0.025

From Table 8, it is known that in model 1, credit risk can mediate the relationship between profit margin financing and financial stability. In addition, the result of sobel test model 2 is given in Table 9:

Table 9.
Sobel Test Model 2

Input	Output				
		Test statistic	Std. Error	p-value	
A	0.080				
B	-0.041	Sobel test:	-1.262	0.003	0.207
Sa	0.054	Aroian test:	-1.190	0.003	0.234
Sb	0.017	Goodman test:	-1.349	0.002	0.177

Table 9 gives the conclusion that credit risk cannot significantly mediate the influence of profit-sharing financing on financial stability.

4.2.5. Robustness Check

Robustness check is performed using the Generalized Method of Moments Panel. The results are given in Table 10.

Table 10.
Robustness Check

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Zscore(-1)	0.216	0.066	3.302	0.001
NPF	0.220	0.022	10.005	0.000
PMF	-2.016	0.332	-6.079	0.000
PSF	0.144	0.041	3.522	0.001
FDR	0.000	0.006	-0.034	0.973
CAR	0.108	0.012	8.741	0.000
GDP_Growth	0.103	0.017	6.061	0.000
Inflation	0.222	0.086	2.576	0.010
BI_Rate	-0.093	0.087	-1.067	0.286
J-statistic	41.651			
Prob(J-statistic)	0.238			

The results of the robustness check show that they are generally consistent with the base results. The exception is credit risk, which now has a positive and significant impact on the financial stability of Islamic banks.

4.3. Discussion

The findings of this study provide evidence that profit margin financing has a significant negative impact on credit risk. This suggests that profit margin financing, as channeled by IRBs in Java Island, maintains a high quality and does not contribute to an increase in credit risk. This finding is consistent with Farooq & Ahmed (2013). They indicate that profit margin financing in Islamic banks tends to have low credit risk. The nature of profit margin financing, which involves fixed returns through transactions such as Murabaha, Salaam, Istisna, and Ijarah,

helps mitigate credit risk (Hassan & Lewis, 2007). Additionally, the study reveals that profit margin financing directly and significantly impacts financial stability in a negative manner, suggesting that an increase in profit margin financing can significantly reduce the financial stability of IRBs in Java Island. This finding aligns with research by Le (2020), emphasizing the importance of banks adopting appropriate strategies in channeling financing to balance profitability and financial stability. It also aligns with Hassan et al.'s (2019) study, which demonstrates that loan growth has a negative impact on financial stability, especially after a financial crisis. A comparative analysis by Kabir et al. (2015) also reveals that the loan-to-asset ratio has a negative impact on the financial stability of Islamic banks.

The study provides evidence supporting the significant and negative impact of credit risk on the financial stability of Islamic Rural Banks (IRBs). This finding is consistent with previous research conducted by Kamran et al., which shows that non-performing loans (NPL) have a detrimental effect on the financial stability of banks in Pakistan. Additionally, Rajhi and Hassairi's study indicates that credit risk can decrease the z-score of small Islamic banks in MENA countries and large Islamic banks in Southeast Asia. These findings highlight the importance of effectively managing credit risk in order to maintain the financial stability of IRBs and align with the broader literature on the subject.

In the indirect effect model, the analysis shows that credit risk significantly mediates the impact of profit margin financing on financial stability. This means that if profit margin financing channeled by IRBs exhibits low credit risk, it can mitigate the negative impact on financial stability and contribute to better stability. Additionally, the study finds that profit-sharing financing has a positive impact on credit risk and financial stability, although not statistically significant. This could be attributed to the limited utilization of profit-sharing financing by IRBs in Java Island during certain periods. This finding aligns with Abusharbeh (2014) and Belkhaoui et al. (2020) suggesting that profit-sharing financing has a positive impact on credit risk. However, the result of this study does not reach statistical significance at the 5% level.

In the indirect effect model, it is also observed that credit risk does not mediate the influence of profit-sharing financing on financial stability. This could be attributed to the lower proportion of profit-sharing financing provided by IRBs in Java Island compared to profit margin financing. These findings provide valuable insights into the relationships between different financing models, credit risk, and financial stability in the context of Islamic Rural Banks (IRBs) in Java Island. It highlights the importance of carefully managing profit margin financing and addressing credit risk to ensure sustainable financial stability for IRBs.

V. CONCLUSION AND RECOMMENDATION

The study assesses the influence of profit-sharing financing and profit margin financing on the financial stability of Islamic Rural Banks (IRBs) in Java Island, with credit risk acting as a mediating variable. The findings suggest that profit margin financing has a noteworthy negative effect on financial stability, both directly and indirectly through its impact on credit risk. Conversely, profit-sharing financing does not exhibit a significant influence on financial stability. These results imply

that profit margin financing may pose greater risks to the financial stability of IRBs compared to profit-sharing financing. It emphasizes the importance of careful consideration and effective management of financing models to ensure the long-term stability of IRBs.

The findings suggest that profit margin financing is relatively safer in terms of credit risk due to its fixed return nature. In contrast, profit-sharing financing carries more risk due to the uncertainty of returns. This implies that IRBs need to be more selective in providing profit-sharing financing, leading to a larger share of profit margin financing. The study highlights the inherent risks associated with financing in IRBs, emphasizing the importance of effective management of funding sources to maintain financial stability.

One limitation of the study is its limited scope, focusing only on IRBs in Java Island and using data from quarterly financial reports for December. Future research should aim to include a wider range of IRBs and analyze the impact of different financing characteristics and contractual arrangements on financial stability.

The findings have implications for Islamic banking institutions. It underscores the importance of effective risk management in mitigating credit risk and maintaining financial stability. IRBs offering profit-sharing financing need robust risk management strategies. The study also emphasizes the need for careful consideration of financing strategies, balancing profitability and credit risk. Selectivity in providing profit-sharing financing is crucial to mitigate risks. Future research and regulatory considerations should further explore these findings to promote stability in the Islamic banking sector.

REFERENCES

- Abrar, T., Ahmed, F., & Kashif, M. (2018). Financial stability of Islamic versus conventional banks in Pakistan. *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah*, 10(2), 341–366.
- Abusharbeh, M. T. (2014). Credit risks and profitability of Islamic banks: Evidence from Indonesia. *World Review of Business Research*, 4(3), 136–147.
- Albaity, M., Mallek, R. S., & Noman, A. H. Md. (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>
- Antonio, M. S. (2001). *Bank syariah dari teori ke praktik*. Jakarta: Gema Insani Press.
- Anwar, M., Layyinaturobbaniyah, L., Komara, R., & Rahman Nidar, S. (2018). Rural bank technical efficiency in West Java Indonesia: Evaluation by ownership and district. *Jurnal Bisnis Dan Manajemen*, 19(2), 61–71.
- Ariffin, N. M., Archer, S., & Karim, R. A. A. (2009). Risks in Islamic banks: Evidence from empirical research. *Journal of Banking Regulation*, 10(2), 153–163.
- A'yun, A. A. (2020). Micro, small and medium enterprises financing in Islamic rural banks in Indonesia. *AL-FALAH: Journal of Islamic Economics*, 5(2), 149–168.
- Belkhaoui, S., Alsagr, N., & van Hemmen, S. F. (2020). Financing modes, risk, efficiency and profitability in Islamic banks: Modeling for the GCC countries. *Cogent Economics & Finance*, 8(1), 1750258.

- Boumediene, A., & Caby, J. (2009). The stability of Islamic banks during the subprime crisis. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1524775>
- Brewer III, E., Kaufman, G. G., & Wall, L. D. (2008). Bank capital ratios across countries: Why do they vary? *Journal of Financial Services Research*, 34(2-3), 177-201.
- El Ayyubi, S., Anggraeni, L., & Mahiswari, A. D. (2018). Pengaruh bank Syariah terhadap pertumbuhan ekonomi di Indonesia. *Al-Muzara'ah*, 5(2), 88-106.
- Elbadri, M., & Bektaş, E. (2017). Measuring the financial stability of Islamic and conventional banks in Turkey. In N. Özataç & K. K. Gökmenoglu (Eds.), *New Challenges in Banking and Finance* (pp. 115-137). Springer International Publishing. https://doi.org/10.1007/978-3-319-66872-7_10
- Farooq, M., & Ahmed, M. M. M. (2013). Musharakah financing: Experience of Pakistani banks. *World Applied Sciences Journal*, 21(2), 181-189.
- Ghoniya, N., & Hartono, S. (2019). The contribution of Islamic banks towards the achievement of sustainable development goals: The case of Indonesia. *Economics and Finance in Indonesia*, 65(2), 93-110.
- Hassan, M. K., Khan, A., & Paltrinieri, A. (2019). Liquidity risk, credit risk and stability in Islamic and conventional banks. *Research in International Business and Finance*, 48, 17-31. <https://doi.org/10.1016/j.ribaf.2018.10.006>
- Hassan, M. K., & Lewis, M. K. (2007). Islamic finance: A system at the crossroads? *Thunderbird International Business Review*, 49(2), 151-160.
- Ibrahim, M. H., & Rizvi, S. A. R. (2017). Do we need bigger Islamic banks? An assessment of bank stability. *Journal of Multinational Financial Management*, 40, 77-91. <https://doi.org/10.1016/j.mulfin.2017.05.002>
- 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>
- Kabir, MD. N., Dulal Miah, M., & Huda, R. N. (2022). Determinants of credit risk: A comparative analysis between Islamic and conventional banks in Bangladesh. *The Singapore Economic Review*, 67(01), 349-379.
- Kamran, H. W., Arshad, S. B. bin M., & Omran, A. (2019). Country governance, market concentration and financial market dynamics for banks stability in Pakistan. *Research in World Economy*, 10(2), 136-146.
- Khaki, A. R., & Sangmi, M.-D. (2011). Islamic banking: Concept and methodology. *SSRN Electronic Journal*, 231-252. <https://doi.org/10.2139/ssrn.2184856>
- Khasawneh, A. Y. (2016). Vulnerability and profitability of MENA banking system: Islamic versus commercial banks. *International Journal of Islamic and Middle Eastern Finance and Management*, 9(4), 454-473.
- Lassoued, M. (2018). Corporate governance and financial stability in Islamic banking. *Managerial Finance*, 44(5), 524-539.
- Le, T. D. Q. (2020). The interrelationship among bank profitability, bank stability, and loan growth: Evidence from Vietnam. *Cogent Business & Management*, 7(1), 1840488. <https://doi.org/10.1080/23311975.2020.1840488>
- Mare, D. S., Moreira, F., & Rossi, R. (2017). Nonstationary Z-Score measures. *European Journal of Operational Research*, 260(1), 348-358.
- Marimin, A., Romdhoni, A. H., & Fitria, T. N. (2015). Perkembangan bank syariah di Indonesia. *Jurnal Ilmiah Ekonomi Islam*, 1(2), 75-87.

- Maritsa, F. H. N., & Widarjono, A. (2021). Indonesian Islamic banks and financial stability: An empirical analysis. *EkBis: Jurnal Ekonomi Dan Bisnis*, 5(1), 71–87.
- Muhammad, R., Suluki, A., & Nugraheni, P. (2020). Internal factors and non-performing financing in Indonesian Islamic rural banks. *Cogent Business & Management*, 7(1), 1823583. <https://doi.org/10.1080/23311975.2020.1823583>
- Nofinawati, N. (2016). Perkembangan perbankan syariah di indonesia. *JURIS (Jurnal Ilmiah Syariah)*, 14(2), 168-183.
- Nuraini, N., & Muttaqin, A. (2018). Korelasi antara penerapan akad mudharabah dan profitabilitas pada Bank Syariah Mandiri. *FALAH: Jurnal Ekonomi Syariah*, 3(1), 25-37.
- Osborne, J. W., & Overbay, A. (2004). The power of outliers (and why researchers should always check for them). *Practical Assessment, Research, and Evaluation*, 9(1), 6. <https://doi.org/https://doi.org/10.7275/qf69-7k43>
- Paltrinieri, A., Dreassi, A., Rossi, S., & Khan, A. (2021). Risk-adjusted profitability and stability of Islamic and conventional banks: Does revenue diversification matter? *Global Finance Journal*, 50, 100517. <https://doi.org/10.1016/j.gfj.2020.100517>
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, 36(4), 717–731.
- Rajhi, W., & Hassairi, S. A. (2013). Islamic banks and financial stability: A comparative empirical analysis between MENA and Southeast Asian countries. *Région et Développement*, 37(3), 149–179.
- Rashid, A., Yousaf, S., & Khaleequzzaman, M. (2017). Does Islamic banking really strengthen financial stability? Empirical evidence from Pakistan. *International Journal of Islamic and Middle Eastern Finance and Management*, 10(2), 130–148.
- Rizvi, S. A. R., Narayan, P. K., Sakti, A., & Syarifuddin, F. (2020). Role of Islamic banks in Indonesian banking industry: An empirical exploration. *Pacific-Basin Finance Journal*, 62, 101117.
- Simatupang, H. B. (2019). Peranan perbankan dalam meningkatkan perekonomian indonesia. *JRAM (Jurnal Riset Akuntansi Multiparadigma)*, 6(2), 136–146.
- Stage, F. K., Carter, H. C., & Nora, A. (2004). Path Analysis: An introduction and analysis of a decade of research. *The Journal of Educational Research*, 98(1), 5–13.
- Utami, U., & Silaen, U. (2018). Analisis pengaruh risiko kredit dan risiko operasional terhadap profitabilitas bank. *Jurnal Ilmiah Manajemen Kesatuan*, 6(3), 123–130.
- Widarjono, A. (2018). *Ekonometrika pengantar dan aplikasinya*. Yogyakarta: UPP STIM YKPN.
- Zainur, Z. (2021). Islamic finance and economic development: The impact of the Islamic finance sector on Indonesia's economic development. *Journal of Sharia Economics*, 3(1), 52–63.