Contents list available at: https://ejournal.iainpalopo.ac.id/index/

Journal of Institution and Sharia Finance

Journal homepage: https://ejournal.iainpalopo.ac.id/index.php/sharia_finance

Market Concentration, Asset Growth, And Islamic Bank Performance In Indonesia: A Panel Data Approach With NPF As Moderator

Hamida [1], Wini Indah Lestari [2]

Universitas Islam Negeri Palopo, Palopo, Indonesia
Universitas Islam Negeri Palopo, Palopo, Indonesia

Article Info

Keywords:
Asset Growth, Financial Performance, Market Concentration, NPF, ROA.

Paper type:
Research Paper

****Corresponding author:***
email:
hamidah_pbs@iainpalopo.ac.id

Abstract

This study aims to examine and analyze the effect of market concentration and asset growth on the financial performance of nine Islamic banks in Indonesia from 2019 to 2023. Market concentration is measured using the market share indicator, while financial performance is assessed using the Return on Assets (ROA) ratio. The research employs a quantitative approach. The data used in this study are panel data, as the analysis involves nine Islamic banks over a five-year period (2019–2023). The data are secondary, obtained from the banks' financial statements or annual reports, relevant literature, and documentation.The findings reveal that market concentration (X1) does not have a significant effect on Return on Assets (ROA) (Y), while asset growth (X2) has a significant effect on ROA. The moderation analysis shows that Non-Performing Financing (NPF) (Z) has a significant direct effect on ROA (Y); however, NPF (Z) does not moderate the relationship between market concentration (X1) and asset growth (X2) with ROA (Y).

Cite this document:
Hamida, Lestari W, I. (2025). Market Concentration, Asset Growth, And Islamic Bank Performance In Indonesia: A Panel Data Approach With NPF As Moderator. *Journal of Institution and Sharia Finance, 8 (1) . 48-66.* https://doi.org/10.24256/joins.v8i1.6967

BACKGROUND

The financial performance of Islamic banks has become a widely discussed issue, particularly amid the dynamics of the global economy and the growing public interest in Sharia-based financial services. In line with the global development of the Islamic economy, Islamic banks have demonstrated significant growth over the past few decades. This growth is reflected not only in the increase in assets and market share but also in the improvement of the quality of services offered to customers (Ali & Azmi, 2017). In Indonesia, this development is evident from the increasing number of Islamic banks and the growing public interest in Sharia-based financial products.

According to data from the Financial Services Authority (Otoritas Jasa Keuangan, OJK), the total assets of Islamic banks in Indonesia accounted for more than 10% of the total assets of the national banking industry in 2023, indicating a stable and positive trend over the past several years. (OJK, 2024). However, this growth also presents new challenges, particularly in terms of risk management related to Non-Performing Financing (NPF). A high NPF ratio may indicate issues in financing risk management, which can negatively impact the overall financial performance of the bank. (Ariffin & Kassim, 2011).

One of the key factors influencing the financial performance of Islamic banks is market concentration (Iqbal & Mirakhor, n.d.). High market concentration can influence the competitive structure among banks, where large banks with dominant market shares tend to have greater power in setting prices and market strategies. On the other hand, excessive market concentration may pose concentration risks that could potentially undermine the financial stability of banks, particularly in the event of significant economic disruptions. In this context, it is important to evaluate how market concentration affects the financial performance of Islamic banks, as well as how these banks can leverage market concentration to enhance their efficiency and profitability. (Bank Indonesia, 2024).

In addition to market concentration, asset growth also plays an equally important role in determining the financial performance of Islamic banks. Asset growth reflects a bank's ability to manage its funds effectively and to capitalize on available investment opportunities (Srairi, 2015). However, asset growth that is not accompanied by sound risk management may lead to an increase in the Non-Performing Financing (NPF) ratio, which can ultimately reduce the bank's profitability and financial stability. Therefore, it is essential to understand how asset growth influences the financial performance of Islamic banks and how these banks can manage their assets effectively to minimize risk (Mollah & Zaman, 2015).

The Non-Performing Financing (NPF) ratio is one of the key indicators used to assess the quality of assets held by Islamic banks. A high NPF ratio indicates that a significant portion of the financing provided by the bank is not performing as expected, suggesting potential issues in financing risk management (Bank Indonesia, 2024). In some cases, a high NPF ratio may be driven by external factors such as economic

instability or tight monetary policies. However, in many instances, a high NPF ratio also results from ineffective risk management, which may stem from inadequate internal supervision or the poor quality of the financing portfolio. Therefore, it is crucial for Islamic banks to strengthen their risk management practices in order to reduce NPF risk and improve their financial performance (Hassan et al., 2023).

Internationally, Islamic banks face similar challenges. In the Middle East region, which serves as the global center of Islamic finance, Islamic banks also contend with high market concentration and rapid asset growth. (Saputra & Fasa, 2024). In this region, effective management of Non-Performing Financing (NPF) has been proven to be a key factor in maintaining the financial stability of banks and enhancing customer confidence. Research conducted in the area indicates that Islamic banks capable of managing their NPF levels effectively tend to exhibit better financial performance compared to banks with high NPF ratios.

In recent years, studies on the impact of market concentration and asset growth on the financial performance of Islamic banks have increasingly gained attention. This research is important to provide a more comprehensive understanding of the factors influencing the financial performance of Islamic banks, as well as how these factors may be moderated by the NPF ratio. Previous studies have shown that market concentration and asset growth significantly affect the financial performance of Islamic banks; however, the results vary depending on macroeconomic conditions and prevailing government policies. Therefore, further research is necessary to explore how the interaction between market concentration, asset growth, and the NPF ratio influences the financial performance of Islamic banks across different economic and market contexts.

Previous studies, such as those conducted by Sufian and Habibullah, found that market concentration has a positive effect on the profitability of Islamic banks in Malaysia (Sufian & Habibullah, 2012). However, these studies were conducted in other countries with Islamic banking industry conditions that differ from those in Indonesia. Therefore, further research is necessary to analyze the effects of market concentration and asset growth on the financial performance of Islamic banks in Indonesia.

Another study conducted by (Qwader, 2022), explored the effect of market concentration on the profitability of Islamic banks in other countries such as Bangladesh. This research remains relevant for Indonesia. The novelty of this study lies in testing a moderating variable, specifically how market concentration and asset growth are moderated by Non-Performing Financing (NPF) in influencing the financial performance of Islamic Commercial Banks in Indonesia.

LITERATUR REVIEW

Konsentrasi Pasar

There is a significant relationship between service quality and the perceived

value of a product (Iskandar et al., 2025), where the value of a product is reflected through the quality of services provided by a company—in this context, banks. Service quality, in turn, is influenced by the structure of the market in which the company operates. Markets play a crucial role in a country's economic development, as they facilitate the efficient functioning of the economy.

According to Marfels and Dickson, the concentration ratio refers to the cumulative market share of the k-largest banks within the industry. The magnitude of market concentration is expressed as a value ranging from zero to one. The greater the proportion of market share held by the largest firms relative to the entire industry, the higher the level of market concentration (i.e., the concentration ratio approaches one) (Irawati, 2021). Based on this definition, the formula to determine the market share of Islamic banking is as follows: (Fernando Halim, 2020)

$$Market\ share = \frac{Total\ asset}{Total\ assets\ of\ all\ Islamic\ banks} \times 100\%$$

Pertumbuhan Aset

Assets are resources that provide future financial benefits to a company (Kusmuriyanto, 2005). These resources, referred to as assets, are controlled by the company and may take the form of tangible or intangible items of value, such as patents or trademarks. The ability to generate future economic benefits is a defining characteristic of any asset (Warren et al., 2014).

An increase or decrease in a company's total assets is referred to as asset growth (Brigham & Houston, 2011). Asset growth, also known as the change in total assets, is calculated as the rate of change in assets in a given year compared to the previous year (Simamora, 2000). Asset growth is typically associated with increases in both physical and financial assets, and the total asset value reflects the wealth of a company. Rapidly growing companies often rely on external capital and frequently face uncertain challenges. In this study, the indicator used to measure asset growth is adopted from (Bhaduri, 2002), namely the percentage change in total assets from the previous year.

Financial Performance

Performance refers to the outcome produced by a specific task within a defined time frame. According to Sudarmanto, performance can be defined as a record of the results of activities over a given period or as behavior relevant to the goals of the organization in which an individual is employed. (Sudarmanto, 2009). Financial performance is the company's ability to manage and control its available resources (Ikatan Akuntansi Indonesia, 2007). One theoretical framework that underscores the importance of performance measurement is the signalling theory introduced by (Spence, 1973).

In signalling theory, management's motivation to present financial statements is expected to send a signal of prosperity to owners and shareholders. A company's financial statements serve as a descriptive report of business activities and provide an

overview of its financial condition. These statements act as feedback reflecting the outcomes of business operations and their impacts (Ikram.S et al., 2024).

In this study, financial performance is measured using the Return on Assets (ROA) indicator. ROA is a financial performance metric used to assess a bank's management efficiency in generating profits from its total assets. A bank's profitability level is positively correlated with asset utilization (Dendawijaya, 2005). The higher a bank's ROA, the greater its profit, which also indicates better efficiency in managing its assets to generate earnings (Hamida & Kulkarni, 2021)

The formula to calculate a bank's ROA is as follows:

$$ROA = \frac{Earning\ Before\ Tax}{Total\ asset} \times 100\%$$

Non Performing Financing (NPF)

Non-Performing Financing (NPF) is a ratio that measures a bank's ability to manage problematic financing. NPF typically arises when a debtor defaults—failing or refusing to fulfill obligations as stipulated in the financing agreement. This default becomes the initial factor contributing to the emergence of non-performing financing, which is reflected in the bank's NPF ratio (Siregar, 2021).

NPF includes financing cases where the financed party (customer) is unable to fulfill the agreed-upon terms due to various reasons, thereby necessitating contract reviews or modifications. As a result, the credit risk may increase (Suryadi & Burhan, 2022). The formula for calculating NPF is as follows: (Putranta & Ambarwati, 2019).

$$NPF = \frac{Non\ Performing\ Financing\ (KL, D, M)}{Total\ Financing}\ 100\%$$

Hypotheses of this study are as follows:

H1 : Market concentration has a significant effect on Return on Assets (Financial Performance)

H2 : Asset growth has a significant effect on Return on Assets (Financial Performance).

H3 : Non-Performing Financing (NPF) moderates the effect of market concentration and asset growth on Return on Assets (Financial Performance).

RESEARCH METHODOLOGY

This study employs a quantitative research approach. Quantitative research involves the study of a specific population or sample, utilizing instruments and numerical data analysis to test research hypotheses. The research was conducted in 2024, with an observation period covering the years 2019 to 2023, in order to obtain data that illustrate the influence of market concentration and asset growth on the financial performance of Islamic banking institutions. The data sources used in this study were

obtained from the official websites of Bank Indonesia, the Financial Services Authority (OJK), and the respective banks under study.

The population in this research consists of all Islamic Commercial Banks (Bank Umum Syariah or BUS) operating in Indonesia, totaling 12 BUS as listed by the Financial Services Authority (OJK) in 2024. The sampling technique employed is purposive sampling, which involves deliberately selecting samples based on specific characteristics relevant to the research objectives. The sample in this study includes 9 Islamic commercial banks in Indonesia. The banks selected as research objects are as follows: Bank Muamalat, Bank Syariah Indonesia, Bank NTB Syariah, Bank Panin Dubai Syariah, Bank Victoria Syariah, Bank Aladin Syariah, Bank Bukopin Syariah, Bank Aceh Syariah, and Bank Jabar Banten Syariah.

The analytical technique employed in this study is panel data regression analysis, in which cross-sectional data and time series data are combined to form panel data. Panel data regression can be estimated using three main approaches: the Common Effect Model, the Fixed Effect Model, and the Random Effect Model. To determine the most appropriate model for managing panel data, several statistical tests can be applied: the Chow Test (to choose between the common effect and fixed effect models), the Hausman Test (to compare the fixed effect and random effect models), and the Lagrange Multiplier Test (to determine whether the random effect or common effect model is more suitable).

Since this study incorporates a moderating variable, the panel data regression equation involving the moderator is formulated using the Moderated Regression Analysis (MRA) approach. The MRA equation can be expressed as follows:

$$\gamma = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Z + \beta_4 X_1 Z + \beta_5 X_2 Z + \varepsilon$$

HASIL DAN PEMBAHASAN

Research Sample Data

Table 1. Research Sample

Periode	Code	Market Consentrations (%)	Assets Growth (%)	NPF (%)	ROA (%)
2019	BMI	22.45	-11.66	5.22	0.05
	BRIS	49.87	14.19	2.44	1.69
	NTB	3.84	22.76	1.36	2.56
	PNBS	4.95	26.96	3.81	0.25
	BVIS	1.00	6.42	3.94	0.05
	BANK	0.32	8.11	0.00	11.15
	KBBS	2.99	6.50	5.89	0.04
	ACEH	11.16	8.77	1.29	2.33
	BJBS	3.43	14.56	3.54	0.60
2020	BMI	21.13	1.36	4.81	0.03
	BRIS	52.34	13.02	2.51	1.65

	NTB	4.30	20.59	1.26	1.74
	PNBS	4.66	1.49	3.38	0.06
	BVIS	0.95	1.48	4.73	0.16
	BANK	0.30	0.81	0.00	6.19
	KBBS	2.15	-22.50	7.49	0.04
	ACEH	10.51	1.43	1.53	1.73
	BJBS	3.66	15.03	5.28	0.41
	BMI	14.78	14.94	0.67	0.02
	BRIS	66.59	109.04	2.93	1.61
	NTB	2.81	7.63	1.18	1.64
	PNBS	3.62	27.64	1.19	-6.72
2021	BVIS	0.42	-27.66	9.54	0.71
	BANK	0.55	201.24	0.00	-8.81
	KBBS	1.56	19.09	8.83	-5.48
	ACEH	7.07	10.56	1.35	1.87
	BJBS	2.60	16.60	3.42	0.96
	BMI	13.64	4.18	2.78	0.09
	BRIS	67.95	15.24	2.42	1.98
	NTB	2.89	15.93	1.05	1.93
	PNBS	3.29	2.54	3.31	1.79
2022	BVIS	0.47	27.09	1.81	0.45
	BANK	1.05	117.81	0.00	-10.85
	KBBS	1.56	12.75	4.63	-1.27
	ACEH	6.39	2.12	0.96	2.00
	BJBS	2.77	20.15	2.91	1.14
	BMI	13.02	9.11	2.06	0.02
	BRIS	68.74	15.67	2.08	2.35
	NTB	2.77	9.75	0.90	2.07
	PNBS	3.37	17.25	3.78	1.62
2023	BVIS	0.60	46.02	0.73	0.64
	BANK	1.38	49.83	0.00	-4.22
	KBBS	1.54	12.94	3.86	-7.13
	ACEH	5.92	5.92	1.28	2.05
	BJBS	2.65	9.67	3.35	0.62

In this study, market concentration is represented by variable X1, defined as the percentage of market share held by a specific Islamic bank relative to the total market share of the Islamic banking industry. Asset growth serves as variable X2, measured by comparing current asset levels with those of the previous period. Financial performance is the dependent variable (Y), assessed using the Return on Assets (ROA) ratio, which measures return by comparing total income to total assets. Additionally, the Non-Performing Financing (NPF) ratio is used as a moderating variable, to examine whether it strengthens or weakens the influence of the independent variables (X1 and X2) on the dependent variable (Y).

Descriptive Statistics

Table 2. Descriptive Statistics

	N	Minimum	Maksimum	Mean	Std. Deviasi
Market Consentration	45	0.297511	68.74429	11.11111	18.79570
Asset Growth	45	-27.66427	201.2436	20.05283	37.39398
ROA	45	-10.85000	11.15000	0.262444	3.594593
NPF	45	0.000000	9.540000	2.788889	2.241974

Based on the data, it can be observed that the market concentration variable ranges from 0.297 to 68.74, with a mean of 11.1111 and a standard deviation of 18.795. The asset growth variable ranges from -27.664 to 201.24, with a mean of 20.0528 and a standard deviation of 37.394. The financial performance variable, measured by Return on Assets (ROA), ranges from -10.85 to 11.15, with a mean of 0.2624 and a standard deviation of 3.595. Meanwhile, the Non-Performing Financing (NPF) variable ranges from 0.00 to 9.54, with a mean of 2.7889 and a standard deviation of 2.242.

Panel Data Regression

Common Effect Model

Table 3. Common Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.858578	0.837913	3.411546	0.0015
Konsentrasi Pasar (X1)	0.040786	0.022074	1.847704	0.0719
Pertumbuhan Aset (X2)	-0.067527	0.012063	-5.597965	0.0000
NPF (Z)	-0.607849	0.200800	-3.027144	0.0043

Root MSE	2.619317	R-squared	0.456954
Mean dependent var	0.262444	Adjusted R-squared	0.417219
S.D. dependent var	3.594593	S.E. of regression	2.744115
Akaike info criterion	4.941482	Sum squared resid	308.7369
Schwarz criterion	5.102074	Log likelihood	-107.1833
Hannan-Quinn criter.	5.001349	F-statistic	11.50003
Durbin-Watson stat	1.356123	Prob(F-statistic)	0.000013

Based on the regression results using the Common Effect Model shown in the table above, the coefficient for Market Concentration is 0.040786, the coefficient for Asset Growth is -0.067527, and the coefficient for NPF is -0.607849. The significance values are 0.07 for Market Concentration ($p > 0.05$), 0.000 for Asset Growth ($p < 0.05$), and 0.004 for NPF ($p < 0.05$). The model has an R-squared value of 0.4569 and an F-statistic of 11.500.

Fixed Effect Model

Table 4. Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.335892	1.636995	0.816064	0.4203
Konsentrasi Pasar (X1)	0.092029	0.132874	0.692598	0.4934
Pertumbuhan Aset (X2)	-0.074480	0.014115	-5.276758	0.0000
NPF (Z)	-0.216032	0.310002	-0.696874	0.4908
Effects Specification				
Cross-section fixed (dummy variables)				
Root MSE	2.352203	R-squared		0.562065
Mean dependent var	0.262444	Adjusted R-squared		0.416086
S.D. dependent var	3.594593	S.E. of regression		2.746781
Akaike info criterion	5.081915	Sum squared resid		248.9786
Schwarz criterion	5.563691	Log likelihood		-102.3431
Hannan-Quinn criter.	5.261516	F-statistic		3.850328
Durbin-Watson stat	1.631573	Prob(F-statistic)		0.001274

Based on the regression results using the Fixed Effect Model as presented in the table above, the coefficient for Market Concentration is 0.092029, the coefficient for Asset Growth is -0.074480, and the coefficient for NPF is -0.216032. The significance values are 0.49 for Market Concentration ($p > 0.05$), 0.000 for Asset Growth ($p < 0.05$), and 0.49 for NPF ($p > 0.05$). The model yields an R-squared value of 0.5620 and an F-statistic of 3.8503.

Random Effect Model

Table 5. Random Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.858578	0.838727	3.408235	0.0015
Konsentrasi Pasar (X1)	0.040786	0.022095	1.845911	0.0721
Pertumbuhan Aset (X2)	-0.067527	0.012074	-5.592533	0.0000
NPF (Z)	-0.607849	0.200995	-3.024206	0.0043
Effects Specification				
			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			2.746781	1.0000
Weighted Statistics				

Root MSE	2.619317	R-squared	0.456954
Mean dependent var	0.262444	Adjusted R-squared	0.417219
S.D. dependent var	3.594593	S.E. of regression	2.744115
Sum squared resid	308.7369	F-statistic	11.50003
Durbin-Watson stat	1.356123	Prob(F-statistic)	0.000013
Unweighted Statistics			
R-squared	0.456954	Mean dependent var	0.262444
Sum squared resid	308.7369	Durbin-Watson stat	1.356123

Based on the regression results using the Random Effect Model as presented in the table above, the coefficient for Market Concentration is 0.040786, the coefficient for Asset Growth is -0.067527, and the coefficient for NPF is -0.607849. The significance values are 0.72 for Market Concentration ($p > 0.05$), 0.000 for Asset Growth ($p < 0.05$), and 0.004 for NPF ($p < 0.05$). The model shows an R-squared value of 0.4569 and an F-statistic of 11.5000.

Chow Test

This test is conducted to determine whether the Common Effect Model or the Fixed Effect Model is more appropriate for use.

Table 6. Uji Chow

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.989901	(8,33)	0.4616
Cross-section Chi-square	9.679145	8	0.2883

Based on the results of the test, the probability value is 0.2883, which is greater than 0.05. Therefore, H_1 is rejected and H_0 is accepted, indicating that the Common Effect Model is more appropriate than the Fixed Effect Model. Subsequently, the researcher conducted the Lagrange Multiplier (LM) Test to determine the most suitable model between the Common Effect Model and the Random Effect Model.

Uji *Lagrange Multiplier*

The Lagrange Multiplier (LM) Test is conducted to determine the most appropriate model between the Random Effect approach and the Common Effect approach for panel data modeling.

Table 7. Uji Lagrange Multiplier

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	0.703389	0.040979	0.744368
	(0.4016)	(0.8396)	(0.3883)

Based on the test results, the p-value is greater than 0.05, specifically 0.4016, indicating that H_0 is accepted and H_1 is rejected. Therefore, between the Common

Effect Model and the Random Effect Model, the Common Effect Model is deemed more appropriate. Although the Hausman Test is generally used to determine the best model between the Fixed Effect Model and the Random Effect Model, it is no longer necessary in this case, as the previous tests have already identified the Common Effect Model as the most suitable model for panel data regression.

Normality Test

To test the normality of the data in this study, the statistical software EViews 12 was used by examining the Jarque-Bera probability value. The decision rule is as follows: if the probability value is less than 0.05, it indicates that the data are not normally distributed. However, if the probability value is greater than 0.05, it means that the data are normally distributed.

Table 8. Normality Test

Model	*Probability*
Jarque-Bera	0.063265

The probability value is 0.063265, which is greater than 0.05. Therefore, it can be concluded that the data are normally distributed, and the normality assumption is satisfied.

Multicollinearity Test

A key requirement for a robust regression model is the absence of high correlation among independent variables. This test assesses multicollinearity by examining the Variance Inflation Factor (VIF) values.

Table 9. Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.702098	4.195710	NA
X1	0.000487	1.365373	1.005873
X2	0.000146	1.538519	1.188858
Z	0.040320	3.058342	1.184227

Based on the test results, the VIF values of the independent variables in this regression model are equal to 1, which is less than the threshold of 10. It can therefore be concluded that there is no correlation among the independent variables, indicating the absence of multicollinearity in the regression model.

Autocorrelation Test

The autocorrelation test in a regression model is conducted using the Durbin-Watson (D-W) method. The decision rules for determining the presence of

autocorrelation are as follows:

DW < DL or DW > 4 – DL → Autocorrelation is present
DU < DW < 4 – DU → No autocorrelation
DL < DW < DU or 4 – DU < DW < 4 – DL → No conclusion can be made

To determine the critical values DL and DU, one must refer to the Durbin-Watson statistical table.

Table 10. Autocorellation Test

F-statistic	11.50003	Durbin-Watson stat	1.946985
Prob(F-statistic)	0.000013		

Based on the test results, the Durbin-Watson (DW) value obtained is 1.9469. Referring to the Durbin-Watson critical value table and adjusting for the criteria in this study where N = 45, K = 3, and α = 5%, the following values are obtained: DL = 1.3832, 4 – DL = 2.6168, DU = 1.6662, and 4 – DU = 2.3338. Comparing these values, the relationship DU < DW < 4 – DU = 1.6662 < 1.9469 < 2.3338 is formed, indicating that no autocorrelation is present in the data, and the model passes the autocorrelation test.

Heteroskedasticity Test

The heteroskedasticity test within the classical assumption testing is conducted to detect whether heteroskedasticity exists in the regression model. The most commonly used method for this test is the Glejser Test. The decision is based on the probability value of Obs*R-squared:

If the probability value of Obs*R-squared < 0.05, it indicates the presence of heteroskedasticity.

If the probability value of Obs*R-squared > 0.05, it indicates the absence of heteroskedasticity.

Table 11. Heteroskedasticity Test

F-statistic	1.768605	Prob. F(3,41)	0.1682
Obs*R-squared	5.156193	Prob. Chi-Square(3)	0.1607
Scaled explained SS	7.437423	Prob. Chi-Square(3)	0.0592

Based on the test results, the probability value of Obs*R-squared is 0.1607, which is greater than 0.05. Therefore, it can be concluded that the data do not exhibit heteroskedasticity, and the regression model meets the required assumptions.

Hypothesis Testing

t-Test

To determine whether the independent variables have a significant effect on the dependent variable, a comparison is made between the t-statistic and the t-table.

Table 12. T-Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.858578	0.837913	3.411546	0.0015
X1	0.040786	0.022074	1.847704	0.0719
X2	0.067527	0.012063	5.597965	0.0000

Based on the test results, it is known that:

For variable X1, Market Concentration, the probability value (significance) is 0.0719 > 0.05, and the t-statistic is 1.8477, which is less than the critical t-value of 2.01954 (1.8477 < 2.01954). Therefore, it can be concluded that variable X1, Market Concentration, does not have a significant effect on variable Y, Return On Asset. Thus, Hypothesis 1 (H1) is rejected.

For variable X2, Asset Growth, the probability value (significance) is 0.000 < 0.05, and the t-statistic is 5.5979, which is greater than the critical t-value of 2.01954 (5.5979 > 2.01954). Therefore, it can be concluded that variable X2, Asset Growth, has a significant effect on variable Y, Return On Asset. Thus, Hypothesis 2 (H2) is accepted.

Moderate Regression Analysis (MRA)

Table 13. Moderate Regression Analysis (MRA)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.105053	0.914997	3.393513	0.0016
Konsentrasi Pasar (X1)	-0.023180	0.085931	-0.269749	0.7888
Pertumbuhan Aset (X2)	-0.072094	0.013054	-5.522529	0.0000
NPF (Z)	-0.689169	0.236531	-2.913658	0.0059
Konsentrasi Pasar*NPF (X1*Z)	0.023365	0.032994	0.708158	0.4831
Pertumbuhan Aset*NPF (X2*Z)	0.004197	0.006202	0.676650	0.5026

Regression Equation Model with Moderating Variable:

$$\gamma = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Z + \beta_4 X_1 Z + \beta_5 X_2 Z + \varepsilon$$

$$Y = 3{,}105 - 0{,}023.X_1 - 0{,}072.X_2 + 0{,}689.Z + 0{,}023.X_1 Z + 0{,}004.X_2 Z + \varepsilon$$

From the estimation results, the first analysis on the effect of Z on Y yielded a significant result, as the p-value was 0.005 < 0.05. The second analysis involved the interaction terms X1*Z and X2*Z, where the significance values were 0.483 > 0.05 (not significant) for X1*Z and 0.502 > 0.05 (not significant) for X2*Z. Therefore, it can be concluded that NPF (Z) does not moderate the effect of Market Concentration (X1) and Asset Growth (X2) on ROA (Y). According to the theory of Dedi and Miftah, NPF in this study falls under the category of a predictor moderator, meaning that the moderating variable only acts as an independent variable within the formed relationship model. Thus, Hypothesis 3 (H3) is rejected.

The Effect of Market Concentration on Return On Asset (Financial Performance)

Based on the test results, the significance value obtained was 0.0719, which is greater than 0.05 (0.0719 > 0.05), and the calculated t-value was smaller than the critical t-value (1.8477 < 2.01954). Therefore, it can be concluded that Hypothesis 1 (H1) is rejected, meaning that market concentration does not have a significant effect on Return On Asset. This finding aligns with previous research conducted by Nurhalimah, which stated that there is no significant effect of market concentration on Return On Asset. (Nurhalimah, 2021).

This explains that the size or degree of market concentration cannot adequately determine the profitability of a company. In this case, Islamic banks with a large market share do not automatically experience higher profitability, because fundamentally, banks employ various instruments such as services, financing, and investments to enhance profits and maintain their financial performance.

The results of this study are also supported by Demsetz's theory, known as the efficiency hypothesis, which states that good bank performance, reflected in high profit levels, is achieved due to the efficient behavior of the bank. (Garcia et al., 2019). This hypothesis challenges the traditional Structure-Conduct-Performance (SCP) paradigm, which asserts that the level of market concentration directly affects competition within the banking industry, thereby increasing profit levels as a measure of performance.

Demsetz argues that high market concentration does not necessarily indicate anti-competitive behavior or monopoly, but may instead reflect the superior efficiency of large firms that are able to provide products or services of better quality or at lower costs compared to their competitors. In other words, financial performance (such as ROA) is more determined by a company's ability to compete efficiently than by the market structure itself.

The Effect of Asset Growth on Return on Assets (Financial Performance)

Based on the test results, a significance value of 0.000 was obtained, which is less than 0.05 (0.000 < 0.05), and the calculated t-value was greater than the critical t-value (5.5979 > 2.01954). Therefore, it can be concluded that Hypothesis 2 (H2) is accepted, meaning that asset growth has a significant effect on Return on Assets. This finding is consistent with the research conducted by Isgiyarta and Aryani, which stated that the asset growth variable significantly influences Return on Assets. (Isgiyarta & Aryani, 2020). This is because the ability of Islamic banks to generate profits is closely related to asset growth within the banking sector.

This finding aligns with the Growth-Asset and Scale Efficiency theory, which states that asset growth often enables companies to achieve economies of scale. In Islamic banking, asset growth allows banks to distribute fixed costs (such as operational or infrastructure costs) over a larger asset base. This reduces the average cost per unit of asset, increases efficiency, and ultimately improves profitability (ROA).

Berger & Humphrey (1997) explain that scale efficiency in financial institutions can enhance profitability because banks can utilize additional assets to generate greater revenue without a proportional increase in costs. Therefore, the total size of a company's assets serves as a benchmark for the outcomes achieved from its operational activities.

The Effect of NPF in Moderating the Relationship Between Market Concentration and Asset Growth on Return On Assets (Financial Performance)

Based on the test results, the first analysis on the effect of Z on Y showed a significant result with 0.005 < 0.05. The second analysis, which examined the interactions X1Z and X2Z, yielded significance values of 0.483 > 0.05 (not significant) for the X1Z interaction and 0.502 > 0.05 (not significant) for the X2Z interaction. Therefore, it can be concluded that NPF (Z) is unable to moderate the effect of Market Concentration (X1) and Asset Growth (X2) on ROA (Y). Consequently, Hypothesis 3 (H3) is rejected, meaning that the NPF variable does not moderate the influence of Market Concentration and Asset Growth on Return On Assets.

NPF reflects the risk of problematic financing within Islamic banks. When NPF is high, banks face increased costs due to provisions for financing losses and losses on non-performing assets, which directly reduce profitability. Conversely, low NPF indicates good risk management, which can reduce loss provision costs and enhance profitability.

In this study, NPF falls under the predictor moderation criterion, meaning this variable acts more as an independent variable rather than a moderator within the modeled relationship. NPF is not sufficiently strong to alter or moderate the relationship between market concentration and asset growth on ROA. In this context, NPF is more relevant as a variable that directly affects ROA without influencing the strength or direction of relationships among other variables.

These findings can be explained by the Moral Hazard Theory (Stiglitz & Weiss, 1981), which posits that in credit relationships within banking, risk increases when borrowers tend to engage in excessive risk-taking, with most of the negative impacts borne by the banking or financial institution. In Islamic banking, high financing risk (reflected by NPF) tends to have a direct effect on financial performance, thus NPF does not function as a moderating factor.

CONCLUSION

Based on the results of the study on the effect of market concentration and asset growth on the financial performance of Islamic banks moderated by Non-Performing Financing (NPF), the following conclusions can be drawn:

1. Market concentration has an insignificant effect on Return On Assets (Financial Performance). This indicates that the size of a company's market concentration does not influence or explain the financial performance of Islamic banks.
2. Asset growth has a significant effect on Return On Assets (Financial Performance).

This means that asset growth is able to influence and explain the financial performance of Islamic banks.

3. NPF does not moderate the effect of market concentration and asset growth on Return On Assets (Financial Performance). NPF can directly affect the financial performance of Islamic banks without influencing the direction of the relationship between other variables.

For future research, it is suggested to include or explore other variables that may affect financial performance. Additionally, the measurement of financial performance could use ratios other than ROA, such as NPF, ROE, Yield, and others. Extending the time period of the study is also recommended to provide more robust results.

BIBLIOGRHAPY

Ali, Mohsin, and Wajahat Azmi. "Impact of Islamic Banking on Economic Growth and Volatility: Evidence from the OIC Member Countries BT - Islamic Banking : Growth, Stability and Inclusion." edited by Nafis Alam and Syed Aun R Rizvi, 15–32. Cham: Springer International Publishing, 2017. https://doi.org/10.1007/978-3-319-45910-3_2.

Ariffin, Noraini Mohd, and Salina Kassim. "Risk Management Practices and Financial Performance of Islamic Banks: Malaysian Evidence," 2011. https://api.semanticscholar.org/CorpusID:150469991.

Berger, Allen N., and David B. Humphrey. "Efficiency of Financial Institutions : International Survey and Directions for Future Research." *European Journal Of Operational Research* 98, no. 2 (1997): 175–212. https://doi.org/https://doi.org/10.1016/S0377-2217(96)00342-6.

Bhaduri, Saumitra N. "Determinants of Capital Structure Choice: A Study of the Indian Corporate Sector." *Applied Financial Economics* 12, no. 9 (September 1, 2002): 655–65. https://doi.org/10.1080/09603100010017705.

Brigham, Eugene F., and Joel F. Houston. *Dasar-Dasar Manajemen Keuangan Buku 1*. 11th ed. Jakarta: Salemba Empat, 2011.

Dendawijaya, Lukman. *Manajemen Perbankan*. Jakarta: Ghalia Indonesia, 2005.

Dharma, Budi, Yus Ramadhani, and Reitandi Reitandi. "Pentingnya Laporan Keuangan Untuk Menilai Kinerja Suatu Perusahaan." *El-Mujtama: Jurnal Pengabdian Masyarakat* 4, no. 1 SE-Articles (January 13, 2024): 46–52. https://doi.org/10.47467/elmujtama.v4i1.395.

Fernando Halim. "Faktor – Faktor Yang Mempengaruhi Market Share Bank Syariah Indonesia." Institut Informatika dan Bisnis Darmajaya, 2020. http://repo.darmajaya.ac.id/2413/.

Garcia, Devin, Levent Kutlu, and Robin C. Sickles. "Market Structures in Production Economics." In *Handbook of Production Economics*, edited by Subhash C. Ray, Robert G. Chambers, and Subal C. Kumbhakar, 1:1–48. New York, 2019.

Hakim, Ratu Putri Lindasari, Efi Syarifudin, and Mukhlishotul Jannah. "Analisis ROA

Dan DER Terhadap Harga Saham Pada Sub Sektor Building Construction Di BEI (Studi Pada Perusahaan Yang Terdaftar Di ISSI 2012 -2018).” *Jurnal Online Universitas Islam Negeri Sultan Maulana Hasanuddin* 05 (2018): 220–47. https://doi.org/oai:ojs2.jurnal.uinbanten.ac.id:article/2373.

Hamida, Ambas, and Kulkarni Kulkarni. “Analisis Kinerja Keuangan Bank Aladin Syariah.” *Al-Kharaj: Journal of Islamic Economic and Business* 3, no. 1 (2021): 96–106. https://doi.org/10.24256/kharaj.v3i1.3766.

Hanafi, Mamduh M., and Abdul Halim. “Analisa Laporan Keuangan.” In *Analisa Laporan Keuangan*, 4th ed., 350. STIM YKPN, 2014.

Hassan, M Kabir, Abdel-Hameed Bashir, and Erf Paper. “Determinants of Islamic Banking Profitability,” May 27, 2005. https://doi.org/10.3366/edinburgh/9780748621002.003.0008.

Hassan, M Kabir, Muhammed Tarık İslam, Zobayer Ahmed, and Jahidul Islam Sarker. “Islamic Banking in Bangladesh: A Literature Review and Future Research Agenda.” *International Journal of Islamic and Middle Eastern Finance and Management* 16, no. 5 (2023): 1030–54. https://doi.org/https://doi.org/10.1108/IMEFM-05-2022-0185.

Hidayat, Bagus, Anggun Suseno, Elda Yanti, and Tri Danela. “Analysis Of The Influence Of Non-Performing Credit Policies On Conventional Bank Financial Stability In Indonesia.” *Indonesian Journal of Multidisciplinary Sciences (IJoMS)*, 2023, 45–55. https://doi.org/10.59066/ijoms.v2i1.300.

Ikatan Akuntansi Indonesia. *Standar Akuntansi Keuangan*. Jakarta: Salemba Empat, 2007. http://kin.perpusnas.go.id.

Ikram.S, Muhammad, Andi Nurrahma Gaffar, Arzalsyah Arzalsyah, Muh. Abdi Imam, Dwi Syahrani, and Didin Purniawan. “Kepemilikan Institusional Dalam Memoderasi Praktik Manajemen Laba Di Indonesia.” *JURNAL ILMIAH EDUNOMIKA* 8, no. 3 (2024): 287–301. https://doi.org/10.29040/jie.v8i3.14364.

Iqbal, Zamir, and Abbas Mirakhor. “Handbook of Ethics of Islamic Economics and Finance.” edited by Abbas Mirakhor, Zamir Iqbal, and Seyed Kazem Sadr, 1–20. De Gruyter Oldenbourg, n.d. https://doi.org/doi:10.1515/9783110593419-001.

Irawati, Dwi. *Sturktur Dan Dinamika Industri Perbankan Indonesia*. Yogyakarta: Bintang Pustaka Madani, 2021.

Isgiyarta, Jaka, and Habsyah Fitri Aryani. “Pengaruh Pertumbuhan Aset Terhadap Profitabilitas Perbankan Dengan Variabel Mediasi Diversifikasi Aset.” *Jurnal RAK (Riset Akuntansi Keuangan)* 5, no. 1 (2020): 70–84.

Iskandar, Ahmad Syarief, Muhammad Nur Alam Muhajir, Erwin Erwin, and Fasiha Fasiha. “Customer Loyalty Model in Islamic Bank: Mosque Perspective.” *Journal of Islamic Marketing* 16, no. 2 (January 20, 2025): 447–61. https://doi.org/10.1108/JIMA-11-2023-0349.

Jumingan. *Analisa Laporan Keuangan*. 1st ed. Jakarta: Bumi Aksara, 2006.

Kusmuriyanto. *Akuntansi Keuangan Dasar*. Semarang: UNNES Pres, 2005.

Lajnah Pentashihan mushaf Al-Qur’an. “Qur’an Kemenag,” 2022.

Mollah, Sabur, and Mahbub Zaman. "Shari'ah Supervision, Corporate Governance and Performance: Conventional vs. Islamic Banks." *Journal of Banking & Finance* 58 (2015): 418–35. https://doi.org/10.1016/j.jbankfin.2015.04.030.

Munawir. *Analisa Laporan Keuangan*. 4th ed. Yogyakarta: Liberty, 2002.

Naylah, Maal. "Pengaruh Struktur Pasar Terhadap Kinerja Industri Perbankan Indonesia." Universitas Diponegoro Semarang, 2019. http://eprints.undip.ac.id/23797/.

Nurhalimah. "Pengaruh Konsentrasi Pasar Dan Pertumbuhan Aset Terhadap Kinerja Keuangan Perbankan Syariah." *UIN SMH BANTEN*. UIN SMH Banten, 2021. http://repository.uinbanten.ac.id/id/eprint/7070.

Otoritas Jasa Keuangan. "Surat Edaran Otoritas Jasa Keuangan Nomor 28/SEOJK.03/2019 Tentang Penilaian Tingkat Kesehatan Bank Pembiayaan Rakyat Syariah." *Otoritas Jasa Keuangan*, 2019, 8–24. https://ojk.go.id/id/regulasi/Documents/Pages/-Sistem-Penilaian-Tingkat-Kesehatan-Bank-Pembiayaan-Rakyat-Syariah/seojk 28-2019.

Putranta, Eka Ambara Harci, and Lilik Ambarwati. "Pengaruh Faktor-Faktor Internal Perbankan Terhadap Non Performing Financing Pada Bank Umum Syariah." *Jurnal Riset Manajemen Sekolah Tinggi Ilmu Ekonomi Widya Wiwaha Program Magister Manajemen* 6, no. 2 (2019): 115–30. https://doi.org/10.32477/jrm.v6i2.353.

Rahadi, Dedi Rianto, and Miftah Farid. *Analisis Variabel Moderating*. *CV. Lentera Ilmu Mandiri*. Vol. 7, 2021. https://www.researchgate.net/publication/354521951.

Rahmawati, Herlina Dwi. "Konsentrasi Pasar Dan Pertumbuhan Aset Terhadap Kinerja Keuangan Perbankan Syariah." *Al-Urban: Jurnal Ekonomi Syariah Dan Filantropfi Islam* 2, no. 2 (2018): 165–70. https://doi.org/10.22236/alurban.

S, Carl, Warren, James M. Reeve, Jonathan Duchac, Norrys Suhardianto, Devi Sulistyo Kalanjati, Amir Abadi Jusuf, and Chaerul D. Djakman. *Accounting: Indonesia Adaptation*. Jakarta: Penerbit Salemba Empat, 2014.

S, Muh Ikram, Suci, Andi Nurrahma Gaffar, and Nurjannah. "Analysis of Financial Ratios in the Drinking Water Company (PAM) Tirta Mangkaluku, Palopo City." *DINAMIS Journal of Islamic Management and Business* 4, no. 2 (2021). https://doi.org/10.24256/dinamis.v4i2.3420.

S, Uni Untari. "Pengaruh Pertumbuhan Aset Terhadap Profitabilitas Pada Pt Telekomunikasi Indonesia (Persero) Tbk." Universitas Negeri Makassar, 2019. https://eprints.unm.ac.id/13886/.

Sihombing, Paulus A. "Analisis Perbandingan Kinerja Keuangan Perusahaan Sebelum Dan Pada Masa Pandemi Covid-19 (Studi Kasus Pada Perusahaan Otomotif Dan Komponen Yang Terdaftar Di Bursa Efek Indonesia Tahun 2018-2021)." Sekolah Tinggi Ekonomi Indonesia, 2021. http://repository.stei.ac.id/id/eprint/8188.

Simamora, Henry. *Akuntansi : Basis Pengambilan Keputusan Bisnis; Jilid 1*. Jakarta: Salemba Empat, 2000. uri: https://lib.ui.ac.id/detail.jsp?id=12074.

Siregar, Siti Aisyah. "Pengaruh Capital Adequacy Ratio (CAR), Non Performing

Financing (NPF), Dan Financing Deposite Ratio (FDR) Terhadap Return On Aset (ROA) Pada Bank Umum Syariah Dan Unit Usaha Syariah Di Indonesia Tahun 2018-2020." *Jurnal Salman* 2, no. 2 (2021): 109–20.

Spence, Michael. "Job Market Signaling." *The Quarterly Journal of Economics* 87, no. 3 (August 1973): 355. https://doi.org/10.2307/1882010.

Srairi, Samir. "Corporate Governance Disclosure Practices and Performance of Islamic Banks in GCC Countries." *Journal of Islamic Finance* 4, no. 2 SE-Articles (November 17, 2015). https://doi.org/10.31436/jif.v4i2.88.

Sudarmanto. *Kinerja Dan Pengembangan Kompetensi SDM : Teori , Dimensi Pengukuran, Dan Implementasi Dalam Organisasi*. 1st ed. Yogyakarta: PUSTAKA BELAJAR, 2009.

Sufian, Fadzlan, and Muzafar Shah Habibullah. "Developments in the Efficiency of the Malaysian Banking Sector: The Impacts of Financial Disruptions and Exchange Rate Regimes." *Progress in Development Studies* 12, no. 1 (January 1, 2012): 19–46. https://doi.org/10.1177/146499341101200102.

Sulas Setiawati, Elva, and Joni Hendra K. "Pengaruh Pangsa Pasar Dan Pertumbuhan Aset Terhadap Kinerja Keuangan Bank Umum Syariah Di Indonesia." *MBISKU: Jurnal Manajemen Bisnis Dan Keuangan* 1, no. 1 (January 31, 2024): 1–11. https://doi.org/10.56633/mbisku.v1i1.621.

Suryadi, Nanda, and Burhan. "Pengaruh Pembiayaan Mudharabah, Murabahah, Dan Musyarakah Terhadap Profitabilitas Dengan NPF Sebagai Variabel Moderasi Pada Bank Umum Syariah." *Management Studies and Entrepreneurship Journal* 3, no. 1 (2022): 169–83.

Syah, Arzal, Muh. Abdi Imam, Putri, Rafiqah Asaff, and Andi Nurrahma Gaffar. "Analisis Rasio Likuiditas Dan Rasio Aktivitas Dalam Meningkatkan Pertumbuhan Laba Pada PT . Siantar Top Tbk . Yang Terdaftar Di Bursa Efek Indonesia." *DINAMIS Journal of Islamic Management and Business* 4, no. 1 (2021): 1–17. https://doi.org/https://doi.org/10.24256/dinamis.v4i1.3408.

Syaifullah, Muhammad, Muhammad Akmal, and M. Khairul Anwari. *Kinerja Keuangan Bank Syariah Dengan Aset Quality, Earnings, Liquidity, Dan Sharia Conformity*. Depok: Rajawali Pers, 2020.

Winawati, Dezara Yogi, and Choiril Anam. "Pengaruh FDR Dan NPF Terhadap Return On Asset (ROA) Pada Bank Syariah Mandiri Tahun 2009-2019." *Fakultas Ekonomi Dan Bisnis Islam IAIN Kediri*, 2019, 1–23.