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Impact Analysis of Inflation, ROA, FDR, and Financing on Non-Performing Financing in Indonesian Islamic Banks

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ABSTRACT

This study aims to analyze the influence of Inflation, ROA, FDR, and financing on the NPF in Indonesia Islamic Banks. The research employs a quantitative approach and an associative research design. Secondary data is utilized for the study, with a monthly time series spanning the period 2011-2021. The analysis is conducted using OLS analysis with the R Studio 4.1.3 software.

The results of this study indicate that, in partial terms: 1) The inflation variable has a significant positive impact on NPF individually; 2) The ROA variable has a significant negative impact on NPF individually; 3) The FDR variable has a non-significant positive impact on NPF individually; 4) The total financing variable has a significant negative impact on NPF individually; 5) Simultaneously, there is a significant influence of Inflation, ROA, FDR, and Total Financing on NPF. There was no growth in NPF in Indonesian Islamic Banks following the Covid-19 epidemic. On the contrary, NPF decreased compared to the previous year, which was 2019. This was attributed to Islamic banks extending financing to the real sector. Additionally, the government issued policies related to financing restructuring through the Financial Services Authority Regulation No. 11/POJK.03/2020 concerning National Economic Stimulus as a Countercyclical Policy.

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Introduction

The emergence of Covid-19 in early 2020 in Indonesia had far-reaching impacts across various sectors. The business world was severely affected by this outbreak, prompting the government to implement policies related to physical distancing and the like. This had repercussions for companies, leading them to undertake workforce reductions through layoffs. Non-Performing Financing (NPF) in Islamic banks fluctuates annually, generally showing a downward trend. The highest NPF rate occurred in the third quarter of 2014 at 4.86%, whereas the lowest NPF rate was recorded in 2012 at 2.22%. In 2019, before the onset of Covid-19, NPF stood at 3.23%. During the Covid-19 period in 2020, NPF decreased to 3.19%, and in 2021, it further declined to 3.07%. This suggests that there were no significant impact on NPF, and financing figures tended to decrease annually.

The substantial number of furloughed workers led to reduced consumer purchasing power. A decrease in consumer purchasing power can potentially have worrisome implications for the country's economy. This, in turn, affects the overall economic growth of the nation and consequently impacts the development of the banking sector in Indonesia. Such consequences are likely to result in an increase in Non-Performing Financing (NPF) in Islamic banking. The following section provides an overview of the NPF figures in the Islamic banking sector in Indonesia.

Table 1
Development of Islamic Commercial Banks and Sharia Business Units in Indonesia from 2017 to 2022

Ratio	2017	2018	2019	2020	2021	2022
NPF	2.36%	3.26%	3.23%	3.19%	2.59%	2.41%

Table 1 illustrates that the development of Non-Performing Financing (NPF) in Islamic banking in Indonesia has been unstable over the past 6 years. NPF in Islamic banking in Indonesia is still below 5%, which is the maximum threshold for the health of the banking sector in Indonesia. However, the increasing instability in NPF from year to year raises concerns among shareholders, investors, and Islamic bank customers. When compared to the Non-Performing Loan (NPL) rate in conventional banking, which stands at 1.15%, it further exacerbates the concerns of stakeholders associated with Islamic banks. Therefore, a more in-depth and detailed analysis is needed to understand the impact of inflation, Return on Assets (ROA), Financing to Deposit Ratio (FDR), and the distribution of financing on the NPF levels in Islamic banking in Indonesia.

Literature Review

Various previous studies have indicated that numerous macroeconomic factors can influence Non-Performing Financing (NPF). Studies by (Sukiyat & Anwar, 2021; Windasari & Diatmika, 2021) have shown a positive impact of inflation on NPF, while the study by (Khosim, 2016) has indicated a negative influence on NPF. Hence, there is a need for a reassessment of the impact of inflation on NPF during the COVID-19 era.

Financial factors can also have an impact on NPF in Islamic banking. Research conducted by (Hakimul 'Izza & Utomo, 2022; Putra & Syaichu, 2021) has stated that Return on Assets (ROA) and Financing to Deposit Ratio (FDR) positively affect NPF in Islamic banking. However, (Mandasari, 2021) and (Sukiyat & Anwar, 2021) have suggested a negative influence. Therefore, a reevaluation of the effects of ROA and FDR on NPF from a financial perspective is warranted.

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Studies by (Marjani, 2020; Wahyuningtyas & Utami, 2021), and (Purnamasari & Musdholifah, 2018) have shown a positive relationship between financing provided by Islamic banks and NPF. In contrast, research by (Pratama, 2014; Sari et al., 2022) has found no significant influence between financing and NPF. Hence, there is a need for a reexamination of the impact of financing on NPF.

This study reevaluates the effects of inflation, ROA, FDR, and financing during the COVID-19 period on NPF in Islamic banking in Indonesia for the period 2011-2021. In this context, it is hypothesized that inflation, ROA, FDR, and financing have an impact on NPF in Islamic banking in Indonesia.

Methods

Based on the problem under investigation, the researcher employed a quantitative approach in this study. This research is associative, aimed at assessing and examining the potential impact of inflation, Return on Assets (ROA), Financing to Deposit Ratio (FDR), and financing during the COVID-19 period on the Non-Performing Financing (NPF) of Islamic Banks in Indonesia. The data utilized for this research is secondary in nature, consisting of monthly time series data on NPF in Islamic banking in Indonesia. Inflation, ROA, FDR, and financing data for the period from 2011 to 2021 were obtained from official websites, namely the Central Statistics Agency at www.bps.go.id, the Financial Services Authority at www.ojk.go.id, and the Central Bank of Indonesia at www.bi.go.id.

Result and Discussion

Normality of Residuals

The assessment of univariate normality assumptions can be performed through various methods, such as the Kolmogorov-Smirnov test, Anderson-Darling test, Jarque-Bera test, and Shapiro-Wilk test. In this study, the Shapiro-Wilk test was employed, as it is highly effective for both small samples ($n<30$) and large samples ($n\geq30$). The results of the calculations using R Studio software are presented in Table 2 as follows:

Table 2
Normality of Residuals

Test	Statistic	**p value**
Kolmogorov-Smirnov	0.076	0.610

The p-value of the Shapiro-Wilk test on the regression residuals is 0.610. Since $P > 0.05$, H0 is accepted, indicating that the regression residuals satisfy the assumption of a normal distribution.

Heteroscedasticity Test

One of the assumptions made about residuals/errors in OLS (Ordinary Least Squares) regression is that the residuals have the same but unknown variance. This is known as constant residual variance or homoscedasticity. When this assumption is violated, the issue is known as heteroscedasticity. We test for heteroscedasticity using the Breusch-Pagan approach. The Breusch-Pagan test was introduced by Trevor Breusch and Adrian Pagan in 1979. It is used to test for heteroscedasticity in linear regression models and assumes that error terms are normally distributed. This test examines whether the residual variance in the regression depends on the values of the independent variables (Ghozali, 2016). The Breusch-Pagan test for heteroscedasticity in the R program can be evaluated based on probability, with a threshold probability greater than the significance level ($\alpha=0.05$) leading to the acceptance of the null hypothesis (H0), meaning that the residual variance of the regression is constant or homoscedastic, and conversely, if the probability

is less than 0.05, H0 is rejected, indicating that the residual variance of the regression is not constant, or heteroscedasticity is present.

Table 3
Pagan Breusch Heteroscedasticity Test

χ^2	Probability	Degress of Freedom
1.828	0.176	1

Based on the results of the Breusch-Pagan test in Table 3, a chi-square statistic of χ^2=1.828 with a probability of 0.176 was obtained. Since the probability is greater than the significance level (α=0.05), the null hypothesis (H0) is accepted. This means that the residual variance in the regression in this study is constant or exhibits homoscedasticity.

Linearity and Precision Test

Multiple linear analysis is a component of non-parametric statistics that must adhere to a linear model. The examination of the linear model in linear regression analysis can be approached in various ways, including using visual methods such as scatter plots or estimation curves, as well as employing statistical approaches like the Ramsey Reset Test, correlation analysis, and the F-test.

This study hypothesizes the influence of four independent variables on a dependent variable. To assess the linear model, we used the Ramsey linearity test approach via R Studio software. The linearity criteria of the model are determined based on the probability value (P-Value). If P-Value > 0.05, then H0 is accepted, meaning that the hypothesized model conforms to a linear model. If P-Value < 0.05, then H0 is rejected, indicating that the hypothesized model deviates from a linear model.

Table 4
Ramsey Reset Linearity Test

Reset Statistics	DF1	DF2	P-Value	Model
4.4111	4	113	0.002376	NPF ~ Inflation + ROA + FDR + Total Financing

The results of the linearity test using the Ramsey Reset approach in Table 4, a statistical value of 4.411 was obtained, with 4 degrees of freedom in the numerator and 113 degrees of freedom in the denominator, yielding a probability of 0.002. Since the probability is less than 0.05, the null hypothesis (H0) is rejected. This implies that the appropriate model for this data is a non-linear model, or in other words, the hypothesis for a linear model is rejected. Non-linearity deviations can affect the accuracy of linear regression predictions. To understand the causes of non-linearity deviations, it is necessary to examine the regression prediction values and the residual regression.

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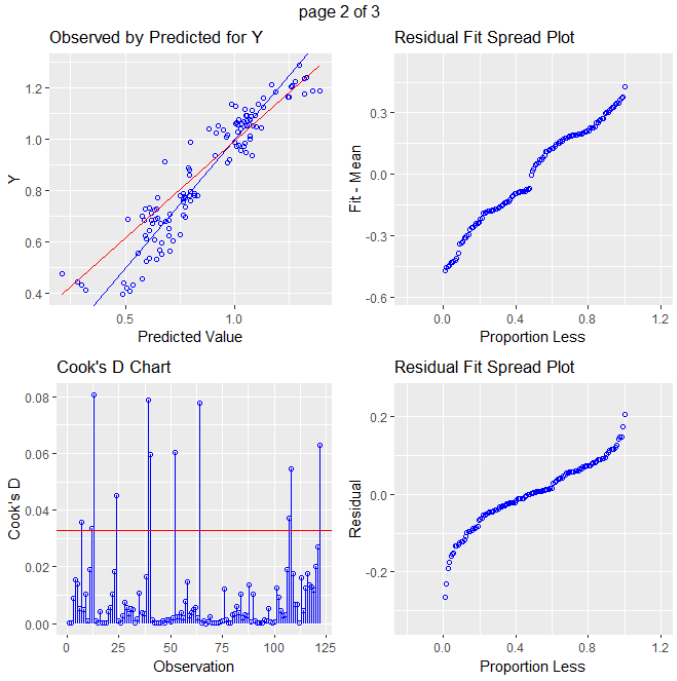

Figure 1 Plot of Y Predicted Values, Outliers and Regression Residuals.

In accordance with Figure 1, it can be observed that the departure from linearity is ascribed to various factors. These factors encompass the impact of extreme data outliers, as illustrated in Cook's D plot, as well as residual plots that do not manifest a linear trend. Consequently, this phenomenon results in inaccurate predictions, as exemplified by the non-parallel and non-converging red and blue lines. To tackle this challenge, two methodologies can be employed: the examination of outlier data and/or the transformation of the data.

Outlier Data Check

The examination of outlier data was conducted using Cook's Distance and DFFITs methods. The criteria or threshold for identifying outliers were $|DFFits| > 2\sqrt{p/n}$, where 'p' represents the number of parameters in the multiple linear regression model, and 'n' represents the number of observations or data points. To obtain data free from outliers, outlier examination was performed six times, resulting in the removal of 22 out of 122 observations containing outliers. In the final stage, 100 outlier-free observations were obtained. Subsequently, to assess the success of the outlier test in improving the linearity of the model, a linearity test was conducted on the data without outliers. The results are presented in Table 5 below.

Table 5
Ramsey Linear Test Reset After Discarding Outlier Data

Reset Statistics	DF1	DF2	P-Value	Model
3.2958	4	91	0.01433	NPF ~ Inflation + ROA + FDR + Total Financing

In accordance with the Ramsey Reset test conducted in Table 5, a statistical value of 3.296 was obtained, with 4 degrees of freedom in the numerator and 91 degrees of freedom in the denominator, yielding a p-value of 0.014. Since the p-value is less than 0.05, the null hypothesis (H0) is rejected, indicating that the model does not satisfy the normality assumption. This suggests that the outlier test did not successfully rectify the linearity deviation, although it did reduce the

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Reset Test statistic from its previous value of 4.111 to 3.296 and raised the p-value from 0.002 to 0.014. With no remaining observations containing extreme outliers, the authors proceeded to address the linearity deviation in the model using a transformation method.

Box Cox Transformation

In addition to examining and removing data in observations containing extreme outliers, transformations can be employed to address violations of the assumptions of normality and linearity. Either of these methods may be chosen independently or used in conjunction. If the outlier inspection method is capable of linearizing the data, there is no need for transformation, and vice versa. In this particular case, the use of a single method is insufficient to rectify the linearity deviation, and, as a result, both methods are employed simultaneously. In this instance, we utilized the Box Cox transformation approach. The Box Cox transformation is part of the power transformation family of methods and can be applied to dependent variables in regression analysis (Chen et al., 2002). The fundamental principle of the Box Cox transformation involves finding the optimal lambda (λ) value, which is then incorporated into the transformation equation $Y_{tr} = (Y^{\lambda} - 1)/\lambda$. The optimal lambda obtained using R Studio software in this study is presented in Figure 2 below.

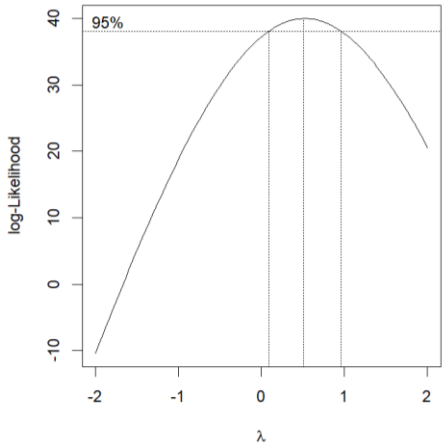

Figure 2 Box Cox Transformation

The exact optimal value of lambda (λ) was obtained, which was found to be 0.505. Referring to the optimal λ value, the suitable transformation is the use of the natural logarithm (ln) transformation on the dependent variable, thus converting Y into a new variable denoted as lnY. Subsequently, after the transformation of the dependent variable using the natural logarithm, a linearity test was conducted again to ensure the successful linearization of the data.

Table 6
Ramsey Reset Linearity Test after Data Transformation

Reset Statistics	DF1	DF2	P-Value	Model
1.958	4	91	= 0.1076	LnNPF ~ Inflation + ROA + FDR + Total Financing

Based on the Ramsey Reset test in Table 6, a Reset Statistic value of 1.958 was obtained with 4 numerator degrees of freedom and 91 denominator degrees of freedom, yielding a P-value of 0.108. Since the P-value is greater than 0.05, the null hypothesis (H0) is accepted, indicating that inflation, ROA (Return on Assets), FDR (Financial Deposit Ratio), and Total Financing are linearly related to NPF (Non-Performing Financing).

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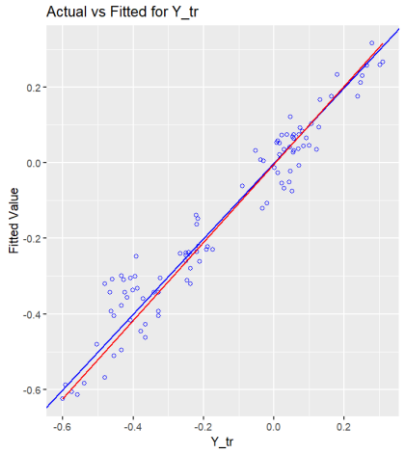

Figure 3 Actual Y Plot with Y Prediction Using LnY

In accordance with the actual Y values plotted against the predicted Y values using the results of the transformation (LnY or LnNPF), the blue line (actual Y) and the red line (predicted Y) appear closely aligned in this figure, indicating a significantly improved and more accurate representation compared to Figure 1. This observation suggests that data free from outliers and dependent variables that have been transformed using the natural logarithm (Ln) successfully ameliorated linearity deviations and enhanced the precision of the regression model.

Stasionecity Assumption

In addition to meeting the assumptions of normality, heteroskedasticity, autocorrelation, and multicollinearity, regression analysis with time series data must also satisfy the test of residual stationarity to avoid spurious regression (Wooldridge, 2015). The stationarity test is employed to ensure that the time series data used in the analysis conforms to white noise requirements. In linear time series regression analysis, the examination of data stationarity is conducted on the residuals. The Augmented Dickey Fuller (ADF) test was utilized in this study to verify the stationarity of the time series regression residuals. If the P-Value is less than 0.05, H0 is rejected, indicating that the regression residuals are stationary. The results of the ADF test conducted using our R program are summarized in Table 7 as follows:

8Table 7

Dickey-Fuller Augmented Stationary Test on Residuals

Dickey-Fuller	Lag order	P-Value
-3.4881	4	0.04669

The summary of the ADF test in Table 7 indicates a P-Value of 0.047 at lag 4. Since the P-Value is less than 0.05, H0 is rejected, meaning that the residuals of the time series regression are white noise or stationery.

Multicollinearity Assumption

Testing for multicollinearity can be carried out using various approaches, including Variance Inflation Factors (VIF), determinant of the variance-covariance matrix, correlation among independent variables, and others. This study utilizes the determinant of the variance-covariance matrix. Independent variables are considered free from multicollinearity when VIF <10. The multicollinearity test for multiple linear regression analysis in this case was conducted using R Studio software, and the results are presented in Table 8 as follows:

Table 8
Multicollinearity Test

Variables	Tolerance	VIF
Inflation	0.202	4.941
ROA	0.873	1.145
FDR	0.278	3.597
Total Financing	0.493	2.027

Based on Table 8, it can be observed that the VIF values for each independent variable are less than 10. Therefore, H0 is accepted, indicating that in this case, the variables Inflation, ROA, FDR, and Total Financing are free from multicollinearity.

Autocorrelation Assumption

Autocorrelation is a requirement in regression analysis with Ordinary Least Squares (OLS) estimation when using time series data. In order to obtain a reliable estimator, the residuals or error terms should not be correlated with other observations. The idea is that the residuals in one period should not depend on the residuals in another period (Tinungki, 2016). According to (Ghozali, 2016), Breusch-Godfrey was developed to test high-order autocorrelation by including lagged dependent variables or not including lagged dependent variables in regression models with both large and small sample sizes (n < 30). The Breusch-Godfrey test has been shown to be highly powerful in testing autocorrelation by including lagged dependent variables when compared to other methods. Time series data exhibit significant serial correlation between observations if the P-Value is <0.05, and conversely, they do not have significant autocorrelation if the P-Value is >0.05. The results of the Breusch Godfrey serial correlation test, as calculated in R Studio, are presented in Table 9 below.

Table 9
Breusch-Godfrey Serial Correlation Test

LM test	Ordo	p-value
28.662	3	0.000

Based on Table 9, a LM Test statistic of 28.66 with a P-Value of 0.00 was obtained at order 3. Since the P-Value is less than 0.05, the null hypothesis (H0) is rejected. This implies a significant serial correlation in the residuals between different observations. In other words, the residuals in the previous time periods are significantly correlated with the residuals in the subsequent time periods (autocorrelation is present). Time series data necessitate the absence of autocorrelation. Therefore, to proceed with time series regression analysis in this case, a Cochrane Orcutt test is required.

Overcoming Violations of Autocorrelation Assumptions Using the Cochrane-Orcutt Test

According to Tinungki (2016), to address autocorrelation in time series data, the Cochrane-Orcutt procedure can be employed. This procedure is a suitable choice for resolving issues in estimating regression coefficients in the general least squares (GLS) equation that cannot be estimated using the ordinary least squares (OLS) method. The Cochrane-Orcutt test was conducted using the R or R Studio software. Through the Cochrane-Orcutt test, a new regression equation (transformation) free from autocorrelation components was obtained. Subsequently, a retest for autocorrelation was performed to assess the effectiveness of Cochrane-Orcutt in mitigating autocorrelation assumption violations.

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Table 10
Breusch-Godfrey Serial Correlation Test

LM test	Ordo	p-value
5.3613	3	0.1472

Based on Table 10, a LM Test statistic of 5.361 was obtained with a P-Value of 0.147 at lag order 3. Since the P-Value is greater than 0.05, H0 is accepted. This means that there is no significant serial correlation between residuals in different observations. In other words, the residuals in the previous period's observations do not exhibit a significant correlation with the residuals in the subsequent period's observations (i.e., no autocorrelation is present).

Hypothesis Test

Effects of Inflation, ROA, FDR and Financing simultaneously on NPFs

The simultaneous (collective) influence of all independent variables on the dependent variable can be tested for significance using an F-test. If the F statistic yields a P-Value <0.05, then H0 is rejected, indicating that the independent variables can collectively have a significant impact on the dependent variable. The results of the F-test in the multiple linear regression analysis for this case were conducted using our R program, and are presented in Table 11 as follows:

Table 11
Coefficient of Determination and Regression F Test

F	P-Value	df1	df2	R^2	Adjusted R^2
98.4	0.000	4	94	0.8072	0.799

In accordance with Table 11, an F-statistic of 98.4 and a P-Value of 0.000 were obtained, with 4 degrees of freedom for the numerator and 94 degrees of freedom for the denominator. Since P < 0.05, H0 is rejected, indicating a significant influence of the variables Inflation, ROA, FDR, and Total Financing on NPF simultaneously. The independent variables have a strong explanatory power when the coefficient of determination (R-Square) approaches 1. The R-Square value from the multiple linear regression analysis using R Studio 4.1.3 is 0.799, meaning that 79.90% of the variance in the changes (ups and downs) of Y can be explained by Inflation, ROA, FDR, and Total Financing, while the remaining 20.10% is explained by other variables not considered in this study.

Effects of Inflation, ROA, FDR and Individual Financing on NPFs

Hypothesis testing for the individual impact of independent variables on the dependent variable in multiple linear regression analysis is employed to elucidate the significance of the partial influence of independent variables on the dependent variable. The significance test can be observed through the t-test and the resulting probability. If the t-statistic exhibits a significance probability of <0.05, then H0 is rejected, signifying that the independent variable has a significant individual impact on the dependent variable. The sign on the regression parameter coefficient or t-value indicates a negative or positive relationship direction. The regression parameter coefficients and t-tests generated by the R program in this study are summarized in Table 12 below.

Table 12
Regression Coefficients and Regression t-Test

Model	Estimate	Std. Error	t value	Pr(>|t|)	
(Intercept)	2.695	1.349	1.997	0.049	*
Inflation	0.136	0.040	3.428	0.001	***
ROA	-0.241	0.054	-4.445	0.000	***
FDR	0.391	0.270	1.448	0.151	

Financing	-0.380	0.036	-10.427	0.000	***
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1					

Model: LnNPF ~ INFLATION+ ROA + FDR + Financing

Based on the results of the t-regression test in Table 12, the influence of the Inflation variable on NPF individually is indicated by a t-statistic value of 0.136 with P=0.001. Because P<0.05, H0 is rejected, meaning that Inflation has a significant positive effect individually on NPF. The influence of the ROA variable on the NPF variable is marked by a t-statistic of -4.445 and P=0.000. Because P<0.05, H0 is rejected, indicating that the ROA variable has a significant negative effect individually on the NPF variable. The influence of the FDR variable on the NPF variable is indicated by a t-statistic of 1.448 and P=0.151, as P>0.05, H0 is accepted, meaning that the FDR variable has a non-significant positive effect individually on the variable Y. The influence of the financing variable on the NPF variable is marked by a t-statistic of -10.427 and P=0.000. Because P<0.05, H0 is rejected, signifying that the financing variable has a significant negative effect individually on the NPF variable.

The most dominant variable influencing NPF in this study is financing, as it has the largest absolute t-statistic value |-10.427|=10.427. On the other hand, the variable with the least influence on NPF is FDR, with the lowest absolute t-statistic value |1.448|=1.448, and it is not statistically significant. The regression parameter coefficients (constant and slope) in Table 11 can be formulated into a prediction equation or mathematical equation as follows:

$$Ln(Y) = 2.695 + 0.136X_1 - 0.241X_2 + 0.391X_3 - 0.380X_4$$

The equation above can be interpreted as follows: the constant (intercept) is 2.695 with a probability of 0.049 (significant at a 95% confidence interval level). This means that Y is 2.695 percent when other influencing variables are held constant or at zero. The coefficient of the Inflation parameter $(\hat{b}_1)$ is 0.136, meaning that for every 1% increase in Inflation, there is an associated 13.6% increase in NPF, assuming that other variables influencing it remain constant. The coefficient of the ROA parameter $(\hat{b}_2)$ is -0.241, meaning that for every 1% increase in ROA, there is a corresponding 24.10% decrease in NPF, assuming other influencing variables remain constant. The coefficient of the FDR parameter $(\hat{b}_3)$ is 0.391, indicating that for every 1% increase in FDR, there is a 39.10% increase in NPF, assuming other influencing variables remain constant. The coefficient of the financing parameter $(\hat{b}_4)$ is -0.380, signifying that for every 1 rupiah increase in financing, there is a 38.00% decrease in NPF, assuming other influencing variables remain constant.

Discussion

The Effect of Inflation on NPF

The results of the analysis of the impact of the inflation variable on NPF individually are characterized by a t-statistic value of 0.136 with a P-value of 0.001. Because P<0.05, it implies that inflation has a statistically significant positive effect on NPF individually. The coefficient of the INF parameter $(\hat{b}_1)$ is 0.136, which means that for every 1% increase in INF, there is an associated increase in NPF of 13.6%, assuming that other influencing variables remain constant.

Inflation is generally defined as the rise in the prices of goods and services due to an increase in the amount of money (demand) exceeding the amount of goods and services available (supply). Inflation affects economic activities both at the macro and micro levels, including investment activities (Rosyada, 2015). An increase in inflation leads to a decrease in borrowers' ability to repay their loan installments. The impact of inflation on Non-Performing Financing (NPF) is that high inflation results in a decrease in real income for the public, leading to a decline in their living standards. Before inflation, a borrower could still afford to pay their loan installments, but after inflation, prices increase significantly, while the borrower's income remains the same. As a result,

the borrower's ability to make loan payments weakens because most or even all of their income is used to meet daily needs due to the rising prices. This research aligns with previous studies, inflation has a positive and significant impact on Non-Performing Financing (NPF) (Sukiyat & Anwar, 2021; Windasari & Diatmika, 2021). Similar research found that Non-Performing Financing (NPF) in several Islamic banks in Indonesia increased in 2017 due to inflation that occurred in 2016-2017. The high inflation had an impact on debtors' ability to repay their loans, which in turn directly affected the Islamic banks by necessitating control over the level of NPF.

The Effect of ROA on NPF

The influence of the ROA variable on the NPF variable is indicated by a t-statistic of -4.445 and P=0.000, since P<0.05, which means that the ROA variable has a significant negative impact individually on the NPF variable. The parameter coefficient for ROA $(\hat{b}_2)$ is -0.241, signifying that each 1% increase in ROA results in a 24.10% decrease in NPF, assuming that other influencing variables remain constant. The profits obtained will also have an impact on the decline in financial performance of Islamic Commercial Banks. These research findings align with (Dendawijaya, 2009) theories, which suggests that the consequences for the bank, due to the emergence of problematic financing, may include a loss of opportunities to generate income from the provided financing, thereby reducing profit and negatively affecting profitability. Non-Performing Financing (NPF) serves as a signal to financial statement users that the larger the NPF, the greater the losses experienced by the bank, subsequently leading to a reduction in the bank's profits, and vice versa.

The risk in the form of difficulties in recovering financing by debtors in substantial amounts can impact a bank's performance. The existence of problematic financing can lead to many disbursed financings not yielding results. A high level of Non-Performing Financing (NPF) also results in the need for larger reserves, ultimately diminishing the bank's capital. The findings of this research align with previous studies conducted by (Hakimul 'Izza & Utomo, 2022; Karisma, 2019; Mandasari, 2021), which state that Non-Performing Financing (NPF) has a negative and significant impact on Return on Asset (ROA). This indicates that a high NPF, due to issues of third-party or customer inability to repay, along with uncollectible financing, results in the bank's failure to manage its banking business effectively, thereby affecting the bank's performance. The existence of these issues affects the profit margins, leading to adverse impacts on profitability.

The Effect of FDR on NPF

The influence of the FDR variable on the NPF variable is indicated by a t-statistic of 1.448 and P=0.151 because P>0.05, meaning that the FDR variable has a non-significant positive impact individually on the Y variable. The FDR parameter coefficient $(\hat{b}_3)$ is 0.391, signifying that a 1% increase in FDR results in a 39.10% increase in NPF, assuming that other influencing variables remain constant.

This finding is derived from the research results and is, therefore, not aligned with the Liquidity Management Theory. The theory suggests that when a bank can design debt repayments using future-period earnings, bank liquidity can be sustained (Hasibuan, 2011). This theory does not support the notion that FDR is related to NPF. In cases where the bank can efficiently allocate third-party funds in a well-planned and tightly connected manner, debtor repayments will be smooth, and the bank can meet its debt obligations.

FDR has an impact on bank profitability as an opportunity generated from the use of funds distributed (Setiawan & Bagaskara, 2016). Based on this analysis, it is observed that FDR is not influenced by increases or decreases in NPF. Furthermore, this study aligns with previous research which also found a non-significant positive influence of FDR (Muhammad et al., 2020). According to previous research, bank income is not only derived from FDR but also from

investments in BI or financial markets. In conclusion, Islamic banks do not solely focus on FDR but will also strive to select total financing with a high potential for generating profit.

The Effect of Financing on NPF

The influence of funding variables on the variable Y is indicated by a t-statistic of -10.427 and P=0.000. Since P<0.05, it means that the funding variable significantly and negatively affects the NPF variable individually. The funding parameter coefficient $(\hat{b}_4)$ is -0.380. This implies that for every 1 billion rupiahs increase in TF, there will be a 38.00% decrease in NPF, assuming that other influencing variables remain constant.

Non-performing loans (NPLs) are a concerning issue for banks. This is primarily due to the failure of borrowers to meet their obligations to repay the principal and interest as agreed upon in the credit agreement (Dendawijaya, 2009). NPF serves as an indicator to demonstrate credit risk-related losses. The magnitude of NPF reflects the level of cost control and financing/credit policies executed by the bank (Pratin & Adnan, 2005).

NPF is a ratio associated with the allocation of financing. A lower NPF level corresponds to a higher amount of financing extended by the bank. High non-performing loans can lead to bank reluctance in disbursing credit, as they would need to establish significant impairment provisions. NPF significantly affects financing because a high likelihood of failure in non-performing financing will have adverse consequences for the bank. NPF has a significant impact on financing in Islamic banking, signifying that a higher NPF level results in reduced financing disbursements by Islamic banks, prompting banks to be more cautious by reducing financing (Sari et al., 2022). NPF represents the risk of unpaid financing disbursed by Islamic banks. An increase in NPF results in a decrease in financing disbursements, and conversely, a decrease in NPF leads to an increase in financing disbursements.

Conclusion

Based on the results of multiple linear regression analysis using the R program, it can be concluded that there is a significant influence of the Inflation, ROA, FDR, and Total Financing variables simultaneously on NPF. The Inflation variable has a significant positive impact individually on NPF. The ROA variable has a significant negative impact individually on the NPF variable. The FDR variable has a positive but not significant impact individually on the NPF variable. The Total Financing variable has a significant negative impact individually on the NPF variable. In this study, the variable with the most dominant influence on NPF is Financing, while the variable with the least influence on NPF is FDR. The presence of the Covid-19 pandemic in early 2020 in Indonesia did not have an impact on the increase in the NPF rate in Islamic banking in Indonesia. On the contrary, the NPF rate decreased from the previous year, which was 2019. This was due to Islamic banks reaching the real sector in providing financing. In addition, the government issued policies related to the restructuring of financing through the Financial Services Authority Regulation No. 11/POJK.03/2020 on National Economic Stimulus as a Countercyclical Policy.

The author provides some suggestions, including that in order to achieve low NPF and high profits, Islamic banks are expected to conduct a thorough analysis/assessment of loan applications, monitor credit utilization, be more selective, and provide financing to customers with high credibility, conduct collateral checks, and exercise prudence. Furthermore, Islamic banks should direct their financing to the intended use of the loan funds for customers, as inefficient financing distribution may lead to problematic financing, resulting in non-performing loans. This research is expected to be used as a study material and additional knowledge for all parties, especially Islamic banking and Islamic economics programs. As for future researchers, it is hoped that they can introduce other variables that affect monetary stability and expand the research period to obtain better and more accurate results.

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