



# An Analysis of Financing Scheme Effect on Non-Performing Financing Asset at Islamic Banks In Indonesia

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## ABSTRACT

### Kata Kunci:

*Non-Performing  
asset; Islamic  
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mudaraba;  
musharaka;  
murabaha;  
ijarah.*

This research aims to identify the impact of financing contract towards the risks confronted by Islamic banks measured by Non-Performing Financing (NPF). The method of research using panel data analysis. The data of this study utilize secondary data in the form of monthly time series data in the period of January 2014 to December 2017 and cross section data from the two types of Islamic Banking (Bank Usaha Syariah and Unit Usaha Syariah). The result indicates that the financing scheme based on the empirical scheme of profit sharing schemes, especially *musyarakah*, is proven to increase financing risk.

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## INTRODUCTION

Islamic bank has a different characteristics of financing risk than that of conventional bank. The difference lies on the financing product characteristic. The financial products of Islamic Bank are distinguished by the contracts (*aqd*) used, which each product have different risk level and financing policies have an effect on financing risk (Sundararajan & Errico, 2002; Effendi et al, 2017). Profit and loss sharing (PLS) based contracts, such as *mudharaba* and *musharaka*, is known to have considerably high risk since banks are dealing with agency problems namely adverse selection and moral hazard (Khan & Ahmed, 2001; Samad, Gardner & Cook, 2005; Ascarya & Yumanita, 2005; Iqbal & Llewellyn, 2002). Furthermore, *murabahah* contracts generally faces different risk that is the inability of customer to pay their loan (Antonio, 2011).

Previous research have attempted to analyse the asymmetric information when Islamic banking developed *mudharabah* and *musyarakah* contracts. (Sadr & Iqbal, 2000) in line with this, Khalil et al, (2002) indicating within the context of agency theory, PLS system appear to be inherently characterized by agency problems. Khan & Ahmed (2001) stated other problems relate to institutional arrangements such as taxes, accounting systems, and audits that do not support the application of wider *musyarakah* contracts in Islamic banking. While Kettell, (2011), emphasize that since the revenue sharing system emphasizes the distribution of risks and benefits between lenders and borrowers when the loan is made. Further, According to Shamsuddin & Ismail (2013), the *ijarah* scheme basically has similarities to *murabahah* financing. Financing with *ijarah* can also provide relatively certain benefits, because the expected return can be calculated and agreed at the beginning of the contract, allowing *ijarah* financing to only bear a low risk (similar to *murabahah*) (Karim, 2004).

One of the risks in Islamic banking is the level of Non-Performing Financing (NPF), which becomes a problematic financing ratio for a bank. If the problematic financing increases, the risk of a decrease in profitability will also increase (Muhammad, 2005). In line with this also stated by Ascarya (2008); Khan & Ahmed (2001), they argued that the lack of use of profit-sharing systems in Indonesia Islamic banking was caused by internal and external problems. While Nasution & Wiliasih (2007) explained that the increase in *murabahah* allocations actually affected the increase in NPF.

According to Muhammad (2005), higher FDR ratio indicates lower bank's liquidity capability, due to higher amount of funds for financing. Greater financing will increase the income and profit obtained by the bank. Setiawan & Putri (2013) stated that the high distribution of third-party capital will have an impact on the increasing risk of failure. If FDR increases, the possibility of increasing NPF will be also triggered. While Antonio (2001) stated that the main cause of NPF lies was on the financing cancelation based on Indonesian Bank (BI) regulations elaborated in Circular Letter No. 12/11/DPNP/2010, it

is stated that the amount of FDR reflects the liquidity of a healthy bank (which is 85% - 110%), and the maximum limit of FDR is 110%, which if above the limit of Bank liquidity (bad category). On the other hand, [Sukmana \(2015\)](#) indicated that in the long run, the relationship between CAR and NPF depicted a significant and negative result. While [Setiawan & Putri \(2013\)](#) indicated that ROA, FDR, inflation, interest rates and GDP were significantly influential. ROA was the highest coefficient affecting NPF while inflation was the smallest coefficient affecting NPF. Then, [Kinasih \(2013\)](#) stated that the financing policy relying on *murabahah* did not always reduce the level of financing risk, despite perception that *murabahah* was a financing scheme with a low risk risk profile.

However, among the previous research only focusing on the contract in Islamic banks, and also the Non-Performing Financing (NPF) in Islamic Bank and also the risk of Islamic Bank in implementing profit-sharing. But lack to attempt the impact of financing contract toward Islamic bank risk, measured by NPF. Therefore, this research aims to identify the impact of financing contract towards Islamic bank risk measured by Non-Performing Financing (NPF) through *mudaraba*, *musharaka*, *murabaha*, and *ijarah* contracts.

## RESEARCH METHOD

This research using panel data analysis which in the initial stage is conducted by estimating model parameters with three approaches (models) consisting of: pooled least square, fixed effect approach (fixed effect), and random effect approach. In this study, the regression model utilized is a fixed effect, with the following explanation ([Widarjono, 2013](#)).

Fixed effect is a model with different intercepts for the subject (cross section), but the slope of each subject does not change over time ([Gujarati, 2012](#)). The fixed effect method assumes the regression coefficient (slope) remains equal between individuals and times ([Widarjono, 2013](#)). The limitations of the Pooled Least Square model can be overcome by inserting a dummy variable to allow for intercept differences ( $\alpha$ ). Other coefficients remain similar to each type of the observed banks. The fixed effect method can be described as follows:

$$Y_{it} = \alpha + \beta X_{it} + \gamma W2_t + \gamma W3_t + \dots + \varepsilon_{it} \dots \dots \dots (1)$$

After estimating the regression model to determine the best model, the next step is performed to test using Chow Test. The significance test results are comparisons between the common effect and fixed effects models. If P Value (Prob> F) is <Alpha of 0.05 then H1 is accepted, meaning the best choice is fixed effect at the lowest prob F value in the output of fixed effect. The analysis results indicate the value of the Prob. F

of 0.000, due to the value of the Prob. F < 0.05. Thus, the estimation model that is more appropriate is the fixed effect model.

The next performed method is the Hausman test. If the Chow test falls on the fixed effect model, then the next stage is determining the best model (between fixed and random effect). If P Value (Prob > Chi2) is < Alpha 0.05 then H0 is rejected which means the best choice is fixed effect. The Hausman test results indicate that the Prob value > chi2 cross section random is 0.0000 or less than Alpha 0.05. Thus, it can be concluded that the null hypothesis is rejected which means that more appropriate model is the fixed effect model. Based on the results of the chow test and hausman test, the fixed effect model is accepted. Thus, it is concluded that the model is more accurately applied to analyze the effect of financing schemes (the fixed effect model).

To analyze the effect of *mudharabah*, *musyarakah*, *murabahah*, *ijarah* and FDR on the NPF level of Islamic banking in Indonesia, this study utilizes time series data from 2014-01 to 2017-12 and cross section data of 2 types of Islamic banking. The following formula is applied in this study:

$$U_{it} = \alpha + \beta_1 MUD_{it} + \beta_2 MUS_{it} + \beta_3 MUR_{it} + \beta_4 IJH_{it} + \beta_5 FDR_{it} \varepsilon_{it} \dots \dots \dots (2)$$

While:

$\alpha$	: Intercept
$\beta_1 - 3$	: Regression Coefficient
$U_{it}$	: Total NPF
$MUD_{it}$	: Mudaraba Financing
$MUS_{it}$	: Musharaka Financing
$MUR_{it}$	: Murabaha Financing
$IJH_{it}$	: Pembiayaan <i>Ijarah</i>
$FDR_{it}$	: <i>Financing to deposit ratio</i>
$\varepsilon$	: Error
$i$	: Cross section data of two types of Islamic Banking
$t$	: Time Series Data 2014-01 – 2017-12

## RESULT AND DISCUSSION

The results indicated that the partial variables of *musyarakah* statistical test are significant for NPF Islamic banking. *Musyarakah* variable coefficient of 0.0395 indicates that every increase of IDR 1 trillion in *musyarakah* financing on average will increase NPF by 3.95%. This is in accordance with the hypothesis and study conducted by [Abusharbeh \(2014\)](#) pointing out that there is a positively significant relationship between the financing of profit loss sharing (*mudharabah* and *musyarakah* contracts) and NPF

rates. The risks faced in financing *musyarakah* contract deal with the possibility of losses as a result of the financed business or projects and the dishonesty of the customer.

**Table 1.** Result Analysis of Financing Scheme Effect on Non-Performing Financing Asset

Variable	Coefficient	P-Value	Interpretation
<i>Mudaraba</i> ( $X_1$ )	0.01313	0.770	Not Significant
<i>Musharaka</i> ( $X_2$ )	0.03948	0.000	Positive Significant
<i>Murabaha</i> ( $X_3$ )	-0.05983	0.000	Negative Significant
<i>Ijarah</i> ( $X_4$ )	0.22657	0.000	Positive Significant
FDR ( $X_5$ )	-0.02294	0.001	Negative Significant

The partial test results of murabahah variables are significant for NPF Islamic banking. Murabahah variable coefficient value of -0.0598334 means that every increase of IDR. 1 trillion on average will reduce NPF by -5.98%. These results are in line with study pointing out that there is a negative correlation between the financing of non-profit loss sharing, which is the murabahah agreement on the NPF level. Murabahah has the certainty of profit and income, both in terms of the amount and time of payment. Both parties involved between the bank and the customer are able to draw predictions about payments times. The research of [Ahmed & Khan \(2001\)](#) also assume murabahah contract scheme as a financing with the lowest risk rating. Murabahah scheme is considered simple in its management because the level of return from the murabahah scheme can be determined in value, allowing banks to draw cashflow expectations.

The partial test results of the *ijarah* variables are significant for NPF Islamic banking. The *ijarah* variable coefficient is 0.2270, which means that every increase of IDR. 1 trillion in *ijarah* financing on average will increase NPF by 22%. The existence of a high NPF value in *ijarah* financing occurred due to problem in financing of mining, heavy equipment and leasings. Most *ijarah* financing portfolios from sharia banking for sectors related to mining and commodities have a substantial portion.

The partial statistical test results of the FDR variable are significant for NPF Islamic banking. The FDR variable coefficient value is -0.0229 which means that every 1% increase in FDR on average will reduce the NPF by -2.29%. Therefore, the FDR variable has a significantly negative effect on NPF Islamic banking. Expansive bank policy in channeling financing does not always lead to an increase in NPF, due to the effectively and optimally channeled financing contracts to improve the performance of Islamic banks. These results are in line with the [Poetry & Sanrego \(2011\)](#) which indicate that the financing channeled by Islamic banks has good quality; therefore, the expansion of financing by Islamic banking can increase returns and reduce NPF rates.

## CONCLUSION

Based on the findings, it can be concluded that the financing scheme based on the empirical scheme of profit sharing schemes, especially *musyarakah*, is proven to increase financing risk. The perception that *musyarakah* is a financing scheme possessing a high-risk profile which can be proven in regression tests by using the fixed effect model. Then, the financing scheme that relies on empirical *murabahah* contracts is proven to reduce the level of financing risk, the perception that *murabahah* is a financing scheme that has a low risk profile which can be proven in regression tests by using the fixed effect model. On the other hand, the financing scheme that is based on the *ijarah* contract is empirically proven to increase the risk of financing. Although characteristically the *ijarah* contract has similarities with *murabahah* contracts considered to have low risks, these do not guarantee the low risk of the *ijarah* scheme.

However, this research has limited scope, where the analysis in this study is only performed on financing contract variables. This study does not directly test each risk in financing contract. Future studies are expected to be able to engage the risk variables of each contract, to obtain a more comprehensive answer regarding the risk of financing. In optimizing the revenue sharing scheme and *ijarah*, future study is expected to focus on microfinance as an effort to mitigate risks.

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