



The Effect of Internal Factors and Exchange Rate on Sharia Banking Liquidity in Indonesia

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ARTICLE INFO

ABSTRACT

ISSN: 2723-1097

Keywords:

Capital; credit risk level; third party funds; exchange rate; liquidity.

Islamic banking is quite unique because it prioritizes its operational activities on financing distribution, this raises a phenomenon related to liquidity problems. This study aims to examine the influence of internal factors, namely capital, credit risk level, third party funds, and external factors, namely the exchange rate on the liquidity level of Islamic banks in Indonesia. This study uses a quantitative approach. The population in this study is Islamic commercial banks (BUS) in Indonesia, and then using purposive sampling technique for sampling. The test was carried out with multiple linear regression. The results showed that capital and credit risk level can affect liquidity. Meanwhile, third party funds and exchange rates are not proven in determining the level of liquidity of Islamic banks in Indonesia. The R-square value shows the number 0.668, meaning that the model's ability to explain the dependent variable is 66.8%, while the remaining 33.2% is influenced by other variables outside the research model. Based on research results, Sharia banks should improve financing management, thereby reducing the risk of an increase in non-performing financing which is calculated by the NPF ratio. This takes into account the statistical data of Sharia bank that the NPF level is still quite high.

Introduction

According to [Alamsyah \(2012\)](#), sharia banking is facing the 2015 Asean Economic Community, some parties are worried that the presence of the 2015 AEC is a threat because the potential domestic market will be taken by competitors from other countries. This concern is unwarranted if we are indeed able to demonstrate high competitiveness. The largest Islamic bank in Indonesia is currently only able to record assets of around US \$ 5.4 billion so that no one has yet entered the ranks of the

25 Islamic banks with the largest assets in the world, while three Malaysian banks were able to enter the list. This shows that the economic scale of Indonesian Islamic banks is still inferior to Malaysian Islamic banks which will be the main competitors. This economic scale has not yet been achieved, making the operations of Islamic banks in Indonesia less efficient, especially since most of the Islamic banks in Indonesia are still in the expansion stage which requires significant infrastructure investment costs ([Anggraeni & Berniz, 2022](#)).

Another weakness in facing the 2015 AEC is the differentiation of Islamic financial products in Indonesia which is considered to be still lacking. This is due to the business model of the Islamic finance industry in Indonesia, particularly Islamic banking, which focuses more on meeting needs in the real sector and strictly maintains "maqasid sharia" ([Alamsyah, 2012](#)). This is different from other countries where the role of products in the financial sector (financial market and capital market) is more dominant. In essence, the structure of Islamic finance development in Indonesia will be stronger than in other countries ([Sunaryo, 2020](#)). The shortage of instruments in the Islamic financial market has an impact on the liquidity management of Islamic banking ([Fuadi et al., 2022](#)).

According to [Kusumastuti & Alam \(2019\)](#), Islamic banking is quite unique because it prioritizes its operational activities on financing distribution, this raises a phenomenon related to liquidity problems. Islamic banking is an intermediary institution that has the potential to experience excess and lack of liquidity ([Ahmad et al., 2019](#)). Liquidity in this study was measured using the financing to deposit ratio (FDR). According to [Nikmah & Hidayati \(2021\)](#) in his research, in the world of Islamic banking financing is done by not using the interest system. FDR states the ability of banks to repay withdrawals made by depositors by relying on loans provided as a source of liquidity ([Bintoro & Rahmadhani, 2021](#)). The greater the financing, the income obtained is expected to increase, because the income increases automatically profits will also increase. This is also closely related to third party funds (TPF), because DPK is used by banks as a source of funds to fund long-term and short-term financing ([Risalah et al., 2018](#)).

In addition, the activities of Islamic banks in carrying out their intermediation function cannot be separated from the risk of financing which is commonly known as non-performing financing (NPF) ([Medyawati & Yunanto, 2018](#)). Non-performing financing can be measured for its collectibility with the criteria of substandard, doubtful, and loss. High non-performing financing can lead to a reluctance for banks to channel their financing because they have to form large write-off reserves, thereby reducing the financing provided by a bank, which will affect the liquidity of a bank as measured by FDR ([Sitompul & Nasution, 2019](#)).



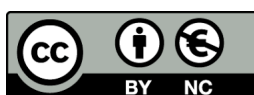
The NPF ratio is used to measure the ability of bank management to manage non-performing loans or financing disbursed by Islamic banks. According to the Circular Letter of the Financial Services Authority Number 10/SEOJK.03/2014, to see the quality of the provision of funds for financing disbursed by Islamic banking is seen from the NPF indicator, namely the comparison between total non-performing financing and total financing. In addition, the capital aspect is also a matter of concern for banking fund disbursement activities. The main purpose of regulating capital adequacy is to maintain the level of bank liquidity, which means trying to minimize the level of risk borne by the bank. Islamic bank capital is reflected in the capital adequacy ratio (CAR). If the CAR value is high, then the bank is able to finance operational activities and make a good contribution to the distribution of financing that requires a larger capital disbursement than Islamic banks ([Priskila & Nurhasanah, 2021](#)). According to [Hosen et al., \(2019\)](#), talking about bank liquidity, the financial performance of Islamic banks is influenced by internal factors and external factors. Internal factors are related to the management of the Islamic bank, and external factors are often referred to as macroeconomic factors with the tools including government policies and macroeconomic conditions such as the exchange rate of the Rupiah against the US Dollar (exchange rate).

There is a belief that Islamic banking will bring "benefit" for economic improvement and equitable distribution of community welfare ([Aryati & Purwanto, 2019](#)). First, Islamic banks are closer to real countries because the products offered, especially in financing, always use underlying transactions in real countries so that their impact is more real in encouraging economic growth. Second, there are no speculative products (gharar) so that they have strong durability and have been tested for their toughness from the direct hit of the global financial crisis. At a macro level, Islamic banking can provide support for the creation of state financial stability and the national economy. Third, the state of profit-loss sharing which is the spirit of Islamic banking will bring fairer benefits to all parties, both for the owner of the funds as depositors, entrepreneurs as debtors and the bank as fund managers ([Thoi'n & Prastiwi, 2019](#)).

Literature Review

Effect of Capital on Liquidity

The main thing in this ratio is used to measure the ability of existing capital to cover possible losses in credit activities and securities trading. It can be concluded that CAR is the level of capital adequacy owned by the bank in providing funds for business development purposes and accommodating the risk of loss of funds caused by the bank's operational activities. The level of adequacy of a bank on capital is very important in channeling credit given to the public ([Martono, 2010](#)).



According to [Siamat \(2003\)](#) one of the functions of bank capital is to meet minimum capital requirements, the level of capital adequacy is very important for banks to channel credit. If the bank's capital adequacy level is good, the public will be interested in taking credit, and the bank will have sufficient reserve funds in case of bad credit at any time. Banks that have a high CAR have a lot of credit, so if the CAR increases it will increase the LDR/FDR. [Ramadhanti et al., \(2019\)](#) research on the effect of CAR on Islamic banking financial performance shows that CAR has an effect on FDR, as well as [Toh \(2019\)](#); [Roulet \(2018\)](#); [Cai & Zhang \(2017\)](#) and [Bitar et al., \(2018\)](#) study which shows that CAR has an effect on LDR in conventional banking. Thus, the following hypothesis can be drawn:

H1: Capital affects the liquidity of Islamic banking in Indonesia.

Effect of Credit Risk Level on Liquidity

According to [Medyawati & Yunanto \(2018\)](#), if there is an NPF in Islamic banking, it will result in a shock to the performance of the banking system itself. However, there are allegations that the NPF of Islamic banks is relatively small compared to conventional ones, so that Islamic banking can carry out its functions properly. If the NPF cannot be handled properly, it will result in the loss of opportunities to earn income from the loans provided, thereby reducing profits and reducing the ability to provide credit ([Dendawijaya, 2009](#)). The large number of non-performing loans makes banks not dare to increase their lending, especially if third party funds cannot be achieved optimally, it can disrupt the liquidity of a bank, therefore non-performing loans affect FDR. In research ([Rif'ah, 2018](#)), regarding the effect of NPF on FDR, BPRS in Indonesia showed that NPF had a negative effect on FDR, as well as research results from [Gogo & Arundina \(2021\)](#); [Pracoyo & Imani \(2018\)](#); [Hassan et al., \(2019\)](#); and [Ahamed \(2021\)](#) which showed a negative effect of NPF on FDR. Thus, the following hypothesis can be drawn:

H2: The level of credit risk affects the liquidity of Islamic banking in Indonesia.

Effect of Third Party Funds on Liquidity

Public funds are funds originating from the community, both individuals and business entities, which are obtained by banks using various deposit product instruments owned by banks. Public funds are the largest funds owned by banks and this is in accordance with the bank's function as a collector of funds from parties who have excess funds in the community ([Suhardjono, 2002](#)). Furthermore, according to [Surya & Utami \(2019\)](#), third party funds are funds in the form of deposits from the public. With large funds, a bank can channel more credit. Banks can take advantage of these third party funds to be placed in posts that generate income for the bank, one of which is in the form of credit. An increase in TPF will result in credit growth,



therefore TPF growth has an effect on the LDR. The bank's ability to raise funds shows that the bank has high credibility from the public. In the research of [Surya & Utami \(2019\)](#); [Kristina & Dewi \(2021\)](#) and [Saputro & Wildaniyati \(2021\)](#), it also shows that TPF has an effect on FDR. Thus, the following hypothesis can be drawn:

H3: Third party funds affect the liquidity of Islamic banking in Indonesia

Effect of Exchange Rate on Liquidity

Banking activities cannot be separated from matters relating to the exchange rate of foreign currencies against the domestic currency. A bank serves customers who want to transact foreign exchange. This bank makes a profit by buying foreign currency at the ask price and reselling it at a slightly higher price than the offer price, but not only that, the impact of fluctuating foreign currency exchange rates, in this case the US Dollar, can cause people to be more willing have US dollars, by withdrawing funds from banks, thereby reducing banking supplies which in turn affects the ability of banks to provide credit, so that the exchange rate affects FDR ([Surya & Utami, 2019](#)). [Rif'ah \(2018\)](#) research on the effect of the exchange rate on the LDR at commercial banks shows that the exchange rate has no significant effect on the LDR. Meanwhile, in the research of [Osundina et al. \(2016\)](#); [Surya & Utami \(2019\)](#), it shows that the exchange rate has an effect on the liquidity of Islamic banking. Thus, the following hypothesis can be drawn:

H4: Exchange rate affects the liquidity of Islamic banking in Indonesia.

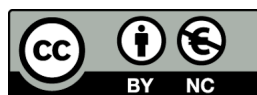
Method

Types of research

This study uses a type of research with a quantitative approach. The quantitative approach is defined as a research method based on the philosophy of positivism, used to examine a particular population or sample, data collection using research instruments, quantitative/statistical data analysis with the aim of testing the established hypothesis ([Sugiyono, 2016](#)). This research approach is in the form of quarterly BUS financial report data registered at Bank Indonesia with data measurement using a scale/numeric. The results of the analysis are presented in numerical/numeric form and then explained and interpreted further in an explanatory description.

Population and Sample

BUS was chosen as the population because it is a bank that fully transacts according to sharia and is not a business unit. BUS has an independent status and is not under the conventional banking system which still applies the usury system. The



research sample was taken by purposive sampling, namely the technique of determining the sample with certain considerations ([Sugiyono, 2004](#)). The BUS criteria used as samples in this study are:

Table 1. Determination of Research Sample

No	Criteria	Bank Amount
1	Islamic banks are Islamic commercial banks (BUS)	12
2	BUS that did not publish the quarterly publication report March 2013–September 2015	(3)
3	BUS has complete data required	9
Number of Samples		9

Source: Secondary data, processed (2019)

The data in this study is panel data. Panel data is a combination of time series data (time-series data) and place or space data (cross-section data) ([Widarjono, 2009](#)). The panel data in this study has the number of cross-sectional units > 1, namely 9 BUS, and the number of time periods > 1, which is 11 quarters. Then the data is processed using SPSS and the predetermined multiple linear regression model

$$FDR = \alpha + \beta_1 CAR + \beta_2 NPF + \beta_3 DPK + \beta_4 ER + e$$

Description:

- α = Constant
- 1, 2, 3, 4 = Regression Coefficient
- CAR = Capital Adequacy Ratio
- NPF = Non Performing Financing
- TPF = Third Party Funds
- ER = Exchange Rate
- FDR = Financing to Deposit Ratio
- E = Error

After that, descriptive statistical tests were carried out, then continued classical assumption testing consisting of normality test, autocorrelation, multicollinearity test and heteroscedasticity test and the last one was hypothesis testing.



Result and Discussion

Table 2. Multiple Linear Regression Analysis Results

No	Variable	Sig.	Alpha	Decision
1	Capital (CAR)	0,000	0,05	H1 accepted
2	Credit Risk Level (NPF)	0,010	0,05	H2 accepted
3	Third Party Funds (DPK)	0,082	0,05	H3 rejected
4	Exchange rate (ER)	0,625	0,05	H4 rejected

Dependent Variable = FDR
F Statistics = 47.232
Significance = 0.000a
R² = 0.668

Source: Secondary data, processed (2019)

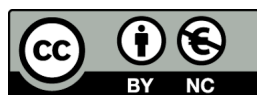
Based on table 2 which shows the results of the coefficient of determination test from the summary model, the R-square value is 0.668. This means that 66.8% of the variation in liquidity (FDR) can be explained by variations in the variable capital (CAR), credit risk level (NPF), third party funds (DPK), exchange rate. meanwhile, obtained a significance value (F-statistic) of 0.0000. Significance value (F-statistic) $0.0000 < 0.05$ (alpha). Therefore, the decision taken is that the independent variable has an influence on the liquidity of Islamic banking.

Effect of Capital on Liquidity

Based on the results of multiple regression, it appears that the capital (CAR) has a significance value of 0.00. This value, when compared with an alpha of 0.05, indicates a smaller value. This means that the first hypothesis is accepted. The results showed that capital (CAR) had an effect on liquidity (FDR). This is because if the bank's capital adequacy level is good, the public will be interested in taking credit, and the bank will have sufficient reserve funds. if at any time bad credit occurs. The results of this study are in line with ([Siamat, 2003](#)) theory, namely that banks that have a high CAR have a lot of credit, so that if the CAR increases it will increase the LDR/FDR. The results of this study are consistent with research conducted by [Gautama et al., \(2018\)](#); [Kartini & Nuranisa \(2018\)](#); [Abbas et al., \(2019\)](#) which shows that capital (CAR) has an effect on Islamic financial performance.

Effect of Credit Risk Level on Liquidity

The credit risk level variable (NPF) in table 4.7 has a significance value of 0.01. This value, when compared with an alpha of 0.05, indicates a smaller value. This



means that the second hypothesis is accepted. The results showed that the level of credit risk (NPF) had an effect on liquidity (FDR). The results of this study are in line with the finding of [Dendawijaya \(2009\)](#), if NPF cannot be handled properly, it will result in lost opportunities to earn income from loans, thereby reducing profits and reducing the ability to provide credit. The large number of non-performing loans makes banks not dare to increase their lending, especially if third party funds cannot be achieved optimally, it can disrupt the liquidity of a bank, therefore non-performing loans have a negative effect on FDR. This study is not in line with research conducted by [Saputro & Wildaniyati \(2021\)](#) which showed that non-performing financing had no effect on Islamic financial performance. Meanwhile, the results of research [Rufaidah et al., \(2021\)](#); [Suryaningsih & Sudirman \(2020\)](#) show that non-performing financing has a negative effect on Islamic financial liquidity.

Effect of Third Party Funds on Liquidity

The third party funds (DPK) variable has a significance value of 0.082. This value is greater than alpha of 0.05. This means that the third hypothesis is rejected. The results showed that the size of third party funds (DPK) had no effect on liquidity (FDR). The results of this study are not in line with the theory of [Suharjono \(2002\)](#), that public funds are the largest funds owned by banks and this is in accordance with the function of banks as collecting funds from parties who have excess funds in society. This is because the distribution of funds for financing in Islamic banks comes from two sources, namely TPF and core capital. Most of the financing funds disbursed are taken from the core capital of Islamic banks, so the high value of TPF that has been collected by banks does not affect the FDR level of the Islamic bank. This result is not in line with research conducted by [Saputro & Wildaniyati \(2021\)](#); [Surya & Utami \(2019\)](#) which shows that third party funds (TPF) have an effect on Islamic banking liquidity.

Effect of Exchange Rate on Liquidity

The exchange rate variable in table 2 has a significance value of 0.025. This value, when compared to an alpha of 0.05, indicates a larger value. The results of the analysis show that the fourth hypothesis (H4) is that the exchange rate variable has no effect on Islamic banking liquidity. Fluctuations in the exchange rate of foreign currencies, in this case the US Dollar, can cause people to increasingly want to own US Dollars, by withdrawing funds from banks, thereby reducing banking supplies. However, this is offset by the value of TPF which increases every quarter in every Islamic bank. Therefore, the exchange rate of foreign currencies in the end does not affect the ability of banks to provide credit, so the exchange rate has no effect on FDR ([Maralutua & Pulungan, 2022](#)). This is in line with research conducted by [Rufaidah et al., \(2021\)](#); [Alqtish & Abdulal \(2021\)](#); [Barbosa et al., \(2018\)](#) that the exchange rate has no effect on Islamic banking liquidity.



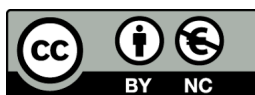
Conclusion

Based on the results of data analysis on the effect of capital (CAR), credit risk level (NPF), third party funds (DPK), and exchange rate (ER), on Islamic banking liquidity (FDR), the following conclusions are obtained: first, capital (CAR)) affect the liquidity of Islamic banking. Second, the level of credit risk (NPF), affects the liquidity of Islamic banking. Third, third party funds (DPK), have no effect on the liquidity of Islamic banking. Fourth, the exchange rate (ER), has no effect on the liquidity of Islamic banking. Fifth, capital (CAR), credit risk level (NPF), third party funds (DPK), and exchange rate (ER), have a joint effect on Islamic banking liquidity.

Based on the limitations that exist in this study, the researchers suggest several things, first, further research can use other types of companies such as the conventional banking sector, rural credit banks, sharia business units so that research results can be compared. Second, changing research indicators or adding other variables, such as Bank Indonesia Syariah Certificates (SBIS), operational costs to operating income (BOPO), and return on assets (ROA). Third, further research should consider expanding the research sample, both in terms of sample criteria and observation time. In addition, the object of research can be changed, namely UUS and BPRS. Meanwhile, BUS should improve financing management, thereby reducing the risk of an increase in non-performing financing which is calculated by the NPF ratio. This takes into account the Islamic banking statistics for BUS and UUS, that the NPF level is still quite high.

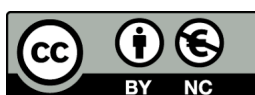
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