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The effect of External and Internal Factors on Financing Deposit to Ratio in Islamic Banks

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Abstract

The main activity of Islamic banks is to channel funds in the form of loans or financing from public funds they have collected. The provision of financing from Islamic banking to the public can be measured by the financing-to-deposit ratio (FDR). A high FDR can be concluded that the bank's ability is excellent, meaning it can fully manage its function as an intermediary. However, challenges in lending through measurement can be influenced by internal and external factors. This study aims to analyze internal factors such as NPF and ROA and external factors such as inflation and economic growth using the proxy of IPI. The study uses time-series data and the OLS method. The results showed that internal and external factors affect FDR in Islamic banking. The study's implication is the need for price stability, high economic growth, and efficient management of NPF and assets.

Keywords: *FDR, IPI, Inflation, NPF, ROA*

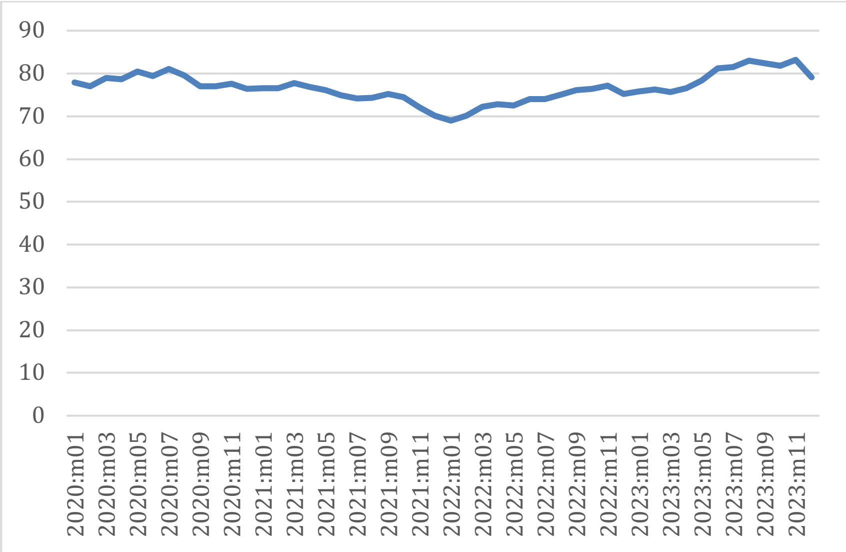
Introduction

Sharia banks are banks that carry out their business activities in accordance with sharia principles, which prohibit the use of prohibited items, maysir (speculation), gharar (uncertainty), zalim (injustice), sharia principles, usury (interest), and implementing prudential principles with an emphasis on economic democracy.In Islamic banking, the "financing to deposit ratio" (FDR) is used to measure the liquidity of a bank's ability to repay depositor withdrawals when financing is used as a source of liquidity. According to **(**Agus Yasin Fadli, 2018**)** The ratio of financing disbursed by sharia banks to third party funds collected by banks is known as the Financing to Deposit Ratio (FDR). Financing to Deposit Ratio (FDR) influences the financial performance of Islamic banks through several interrelated aspects.

There are external and internal factors that influence the Financing to Deposit Ratio (FDR) in Islamic banking in Indonesia, including several variables such as CAR, NPF, INFLATION, EXCHANGE RATE. One of the external factors in this research is inflation. In this research, inflation is an independent variable where inflation can influence the growth of mudharabah deposits. One of the consequences if high inflation can cause bank customers to not want to save and withdraw their funds from the bank is because the value of the rupiah currency is falling. If people no longer want to save, it will be difficult for the banking world to develop. The development of the banking world requires funds from people who invest their funds in banks. **(**Septitin, 2022**)**According to (Sukmana & Fitriani Somantri,

2019) internal banking conditions and external banking conditions are expected to have an impact on increasing and decreasing the financing to deposit ratio (FDR). A bank's financial ratios can reveal internal problems. On the other hand, a country's macroeconomic conditions can reflect external conditions.

Figure 1



Based on Figure 1, it shows that from 2020 to 2023 there will be increases and decreases which are not far off. In 2023, more precisely in November, FDR reached its highest point with a total of 83.19%. This is because when many sharia banks provide fees, this will resulting in an increase in FDR, this increase occurred due to demand for financing. Meanwhile, the lowest period will be in 2022, more precisely in January with a total of 69.98%. Factors that influence FDR are not only inflation, such as NPF, CAR, exchange rate.

Literature Review

Finance to Deposit Ratio (FDR), which is used by Islamic banking to describe the relationship between the results of bank loans and the money it receives, is one indicator of liquidity owned by Islamic banks. This explains why banks are in a position where they can pay customer and depositor withdrawals by relying on the availability of credit from their liquidity sources.

Inflation is an increase in goods and services as a whole and increases which is related to market mechanisms which is caused by increased market demand, increased consumption and instability in the distribution of goods. Rising inflation will result in high consumption due to the continuing increase in prices of goods which will generally result in a reduction in the value of savings. (Izzati Febriani, 2019). According to (Alfian Akbar, 2016) High inflation rates can hamper economic growth, which in turn increases the risk of doing business in the real sector. Of course, the banking sector and capital markets in the financial industry will also be affected. High growth rates, especially in developing countries, can have a negative impact on economic growth. It can cause difficulties in vacancies and result in increasingly widespread unemployment and result in massive inflation. High inflation causes an increase in food prices which leads to an increase in the value of credit (Lestari, 2013). Meanwhile, according to (Merlinda Putri & Alia, 2017) regional progress can be shown from the regional income itself. With the advancement of regional income, it can be seen that income will increase. And if income increases, the inflation rate in the village decreases, thereby reducing the rate of increase in inflation.

CAR can be called a banking performance ratio which functions to measure how much capital a bank has to support risky assets, such as the volume of loans they disburse. (Muni, 2018). Capital adequacy ratio is an interrelated thing about banks. The existence of a car can support the development of bank operations and survival despite the risks posed, including the risk of bad credit which can hamper the return of bank capital. With a bank policy that provides minimum credit obligations, it can have an effect on returning capital quickly, with high loans, the interest received by the bank also increases. (Almunawwaroh & Marliana, 2018) is a measure used to assess how much capital a bank has to support assets that contain or produce risk, for example the credit provided. According to (Dini & Lestari, 2021).

Non-Performing Financing or NPF is a form of measuring part of the ratio with the overall picture of total financing. Bank Indonesia sets a maximum gross NPF of 5% as a tolerant figure for the health of a bank. (Damayanti, Ali Nurdin, & Widayan, 2021). NPF is closely related to the funding provided by sharia banks to their customers. This shows how banks can use the loans they receive as a source of liquidity to pay depositor withdrawals.

The value of the rupiah expressed in a particular country's currency is known as the exchange rate, or exchange rate, of the rupiah against other currencies. The value of the rupiah expressed in a particular country's currency is known as the exchange rate, or exchange rate, of the rupiah against other currencies. The supply and demand for foreign currency influences the rupiah exchange rate which tends to fluctuate (Handayani & Riduwan, 2020). The aim of this research is to find out how much influence the exchange rate, inflation, car and NPF have on FDR which is influenced by internal and external factors.

Research Method

This research analyzes FDR which is influenced by macroeconomic variables such as Capital Adequacy Ratio (Car), Non Performing Financing (Npf), Inflation, and Exchange Rate (Exchange Rate). By using panel data this makes it easier to analyze accurate and detailed data. In analyzing this data, sources from the OJK and Bank Indonesia were used. Below is the data resulting from the research as follows:

Tabel

Variabel	Notasi	Keterangan	Sumber
Financing to Deposito Ratio(FDR)	Y	Persen	OJK
Capital Adequacy Ratio(CAR)	X1	Persen	OJK
Non Performing Financing(NPF)	X2	Persen	OJK
Inflasi	X3	Persen	Bank Indonesia
Nilai Tukar(Kurs)	X4	Ribu	Bank Indonesia

Source: OJK and Bank Indonesia

This research uses the Ordinary Least Square (OLS) method to determine the influence of independent variables on the dependent variable, in this research to determine the influence of macroeconomic variables on foreign direct investment in Indonesia. The OLS method equation is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon_t$$

Where AND is Financing to Deposit Ratio, X_1 is the Capital Adequacy Ratio, X_2 is Non-Performing Financing, X_3 is Inflation, X_4 is the Exchange Rate, β_0 is the constanta value, $\beta_1 - \beta_4$ is the coefficient value of the independent variable, ε_t is the error term and Ln is logarithmic form. To fulfill the BLUE concept (best linear unbiased estimator) the research applies a classic assumption test consisting of normality, autocorrelation, multicollinearity and heteroscedasticity.

Result and Discussion
Descriptive Analysis

Descriptive analysis is used in research to find out whether the data corresponds to the truth. Through this analysis, the characteristics, patterns and relationships between variables in the research can be revealed. The data below was tested using the OLS method using mean, max, min and standard deviation of data used from 2020 to 2023.

Tabel Analisis Deskriptif

Variabel	Mean	Max	Min	Std Dev
Y	76.655542	83.19000	68.98000	3.328768
X1	2350.104	2628.000	2029.000	195.1228
X2	2.832083	3.460000	2.10000	0.430002
X3	2.871875	5.950000	1.320000	1.443985
X4	14770.60	16367.00	13662.00	555.5585

Source: Data processing results

Based on the table above, there is data that shows the relationship between one variable and another, including:

1. In the table above, variable Y shows that the average value is 76.6655542 percent. The highest value reached 83.19 percent which occurred at the end of 2023, more precisely in November, this is an increase of 2.36% when compared to 2022. Meanwhile for The lowest value of 68.98 percent occurred in 2022 in January.

2. The variable . compared to the previous year. Meanwhile, the lowest value occurred in 2020 with a figure of 20.29 percent.

3. The variable This condition occurred in the midst of the COVID-19 pandemic, which caused many debtors to experience difficulties in fulfilling their loan installment payment obligations. Meanwhile, the lowest value was 2.10 which was at the end of 2023.

4. The variable at 1.32 percent in 2020.

5. In variable

The analysis above uses research results from panel data analysis. According to him, there are several methods that are often used to find out panel data results. One of the methods used in this research is:

Method *Common Effect*

Model or method *Common Effect* is an approach method in panel data regression. This method is usually used when estimating combined data from *Cross-Section* and *Time-Series* and is able to estimate panel data models without considering both time and individuals easily so that it is similar to the approach *Ordinary Least Square* (OLS). Results of data processing with assistance *Eviews* The 10 in the table above are approaches that use methods *Common Sample.*

Normality Analysis

Diagnosa Model	
Normalitas	0.791429
Autokorelasi	0.1474
Heteroskedastisitas	0.0585
Multikolinearitas	*Free from multicollinearity problem*

Source: Data processing results

The normality test functions to see whether the data distribution is normally distributed or not. If the significance value is > 0.05 then the data is considered to be normally distributed. In the autocorrelation test, if the Prob Chi Square result is > 0.05, it means that H0 is accepted and no problems are found in autocorrelation.To ascertain whether there is inequality of variance in the regression model, a heteroscedasticity test is carried out. If the Pron (Chi) value is less than 0.05 then heteroscedasticity occurs or there is a problem because H0 is not accepted.

The normality test above shows that the normality value is 0.791429. The autocorrelation test shows a number of 1474. Meanwhile heteroscedasticity shows a number of 0.585.

Regression Analysis

Regression analysis is used in research in order to determine the influence of one variable on another. In regression analysis there are variables that influence (independent) and those that are influenced (dependent). By researching the variables CAR, NPF, Inflation and Exchange Rate, what are the 4 the variable has an effect or no effect.

Tabel

Variabel	Koefisien
C	20.70
	(1.06)
X1	-0.11
	(-0.37)
X2	0.42
	(0.24)
X3	-0.78
	(-1.96)
X4	-0.004
	(4.29)**

Based on the table above, there is data that shows the relationship between variables from X1 to X4 using the OLS method. We can analyze which variables influence the Financing to Deposit Ratio, including:

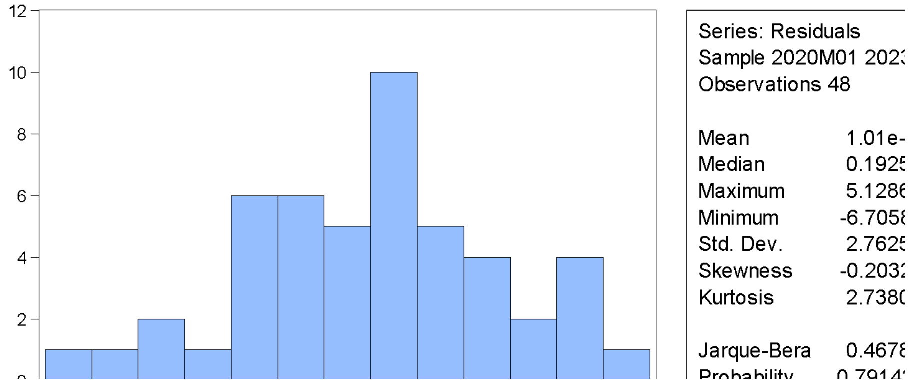
1. The results of the OLS regression table above with the variable a result of increased capital due to higher profits. This is due to the fact that increasing income can increase the bank's capacity to offer credit without increasing the amount of deposits.The bank's capacity to withstand the risk of loss increases along with the CAR value. The bank's capacity to withstand the risk of loss increases along with the CAR value (Puji Astuti, 2022)

2. If you look at the OLS regression results in the table, the coefficient increase. However, a good NPF Non-Performing Financing Level tends to determine an even Financing To Deposit Ratio FDR Level.

3. If you look at the OLS regression results in the X3 coefficient table -0.78and the T-statistic is -1.96, meaning that the relationship between the inflation rate does not have a significant effect on the Financing To Deposit Ratio FDR, because when the inflation rate rises it does not necessarily mean that the Financing To Deposit Ratio FDR increases.

4. If you look at the OLS regression results in the X4 coefficient table, it is -0.004and the T-statistic of 4.29 illustrates the relationship between the exchange rate level which has a positive influence on the Financing To Deposit Ratio. The reason the exchange rate level has a significant positive effect is that when the exchange rate level increases, the Financing To Deposit Ratio will also increase and vice versa.

Hypothesis Testing
Normality Test (Jarque Bera)



Analysis: From the results of the normality test, it can be seen that the Jarque Bera probability value is 0.790 (>0.05), so it can be concluded that the data is normally distributed (Passes Normality). In other words, there was no violation of the normality test in this study.

Autocorrelation Test (LM Test)

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	7.044962	Prob. F(38,5)	0.0187
Obs*R-squared	47.11994	Prob. Chi-Square(38)	0.1474

The autocorrelation test aims to check whether there is a correlation between confounding errors and period t with errors from the previous period, namely period t-1, in a linear regression model. If this correlation is found, it is said that there is an autocorrelation problem. The autocorrelation test uses the Lagrange Multiplier (LM) test to identify and test the significance of the autocorrelation. Analysis: If the Chi-Square probability value is 0.14 (>0.05), it can be concluded that the autocorrelation test assumption has been met or the data has passed the autocorrelation test.

Heteroscedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	2.517471	Prob. F(4,43)	0.0551
Obs*R-squared	9.107885	Prob. Chi-Square(4)	0.0585
Scaled explained SS	6.351773	Prob. Chi-Square(4)	0.1744

The Heteroskedasticity Test aims to check whether there is an inequality in the variance of the residuals between one observation and another in the regression model. In this test the researcher uses the Heteroskedasticity Test. Analysis: From the results of the heteroscedasticity test using the White Test method, it is known that the R-Square value has a Chi-Square probability (4) of 0.0585 (>0.05), so it can be concluded that the heteroscedasticity test assumptions have been met or the data has passed the heteroscedasticity test.

Conclusion

Sharia banks are banks that carry out their business activities in accordance with sharia principles, which prohibit the use of prohibited items, maysir (speculation), gharar (uncertainty), zalim (injustice), sharia principles, usury (interest), and implementing prudential principles with an emphasis on economic democracy. Islamic banks offer products and services that comply with sharia principles, such as profit-sharing and investment-based financing. The aim of this research is to find out how much influence the exchange rate, inflation, interest rate and NPF have on FDR which is influenced by internal and external factors. Based on the results of regression analysis carried out using the OLS approach, it shows that CAR(X1) has an insignificant and insignificant relationship, NPF(X2) has an insignificant and insignificant relationship, Inflation (X3) has an insignificant and insignificant relationship while the exchange rate (X4) has influential and significant relationship

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