

The Effect of Macroeconomic Variables on Non Performing Financing in Sharia Commercial Banks

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Keywords: Gross Gross Domestic Product (GDP), Inflation, Exchange Rate (Exchange Rate), Money supply (M2), Non-Performance Financing (NPF), time-series.

Abstract: The main object of this research aims to analyze the effect of macroeconomic variables on non-performing financing. The population of this study is all Islamic banks in Indonesia. The data used are the overall level of GDP, inflation, exchange rate / exchange rate, money supply (M2) and the level of non-performing financing in Islamic commercial banks in Indonesia. Data starts from January 2005 to December 2014. This study uses a quantitative approach, with secondary data usage based on time series data. Data is obtained from reports on Islamic banking statistics published by Bank Indonesia (BI). The analysis technique used is multiple linear regression to obtain a comprehensive picture of the relationship between one variable and another. The results showed that GDP had a positive effect on NPF, inflation and the exchange rate had no effect on NPF and M2 had a negative effect on NPF. The variable that most affects the NPF is GDP.

1 INTRODUCTION

The Bank is a financial institution that functions as a financial intermediary that distributes funds from parties with excess funds to those who lack funds. Funds owned by banks are derived from bank funds themselves, funds from the public and loan funds. One of the bank's goals is to provide a safe place for depositors (Mankiw, 2013).

The Bank also has a mission in the Indonesian economy, which is to improve the lives of many people by channeling funds to the public in the form of credit so that the purchasing power or effort of the community can increase, thereby increasing Indonesia's economic development. That in a country's economy it is impossible to grow quickly without the role of banks in channeling credit. Financing portfolio (Financing) is the largest part of bank assets, because financing is the main activity of the Islamic banking business. Thus the revenue-sharing or profit-buying income which is a financing instrument for Islamic banking is the dominant source of income (Arifin, 2009). There is no risk-free term in Islamic economics, so Islamic banks in carrying out their main activities will also face risks, namely financing risk or credit risk.

Credit risk is the risk due to the failure of the customer or another party to fulfill the obligation to the bank in accordance with the agreed agreement. Credit or financing risk is reflected by the ratio of Non-Performing Financing (NPF) to Islamic banks and Non-Performing Loans (NPLs) in conventional banks. Several previous studies cited by (Makri, 2013) tested the determinants of Non Performing Loans (NPL) and non-performing loans, proving and confirming that macroeconomic variables have a strong influence on non-performing loans. The ability and fluency in repaying loans is influenced by the level of community income. The higher the level of total community income reflected by GDP (Mankiw, 2013), then the possibility of problematic financing will be small because the community is able to pay it off (Faiz, 2010). So that GDP is included in this study. Inflation in general is defined as the increase in the price of goods and services as a result of the amount of money (demand) which is more than the amount of goods or services available (supply), as a result of inflation is the fall in the value of money. The effect of changes in inflation on the NPF is that high inflation will cause a decline in real income so that people's living standards also fall. Before inflation, a debtor is still able to pay the installment, but after inflation occurs, prices have increased quite high, while the debtor's income has not increased, the

debtor's ability to weaken because most or even all of his income has been used to fulfill household needs as a result of rising prices.

Foreign exchange rates are the domestic price of foreign currency or foreign currency. (Hendry, 2011). Foreign exchange rates against the Indonesian currency represent economic stability in the country of Indonesia. Strengthening the rupiah exchange rate, the stronger the rupiah, the better the national economy in this country. Changes in currency exchange rates will also greatly affect the smooth running of the customer's business. If the value of the rupiah falls compared to foreign exchange and if the business is carried out using imported materials, it will hit the customer's business and can increase the problematic financing ratio.

The relationship between money supply and credit risk arises through the behavior of borrowers due to changes in money supply in the economy. However, if the central bank decides to follow an expansionary monetary policy, reduce the required reserve level and reduce the discount rate. Increased money supply, which means increased productivity and profitability which in turn stimulates investment and consumption. As a result, income increases. In addition, increasing the money supply will reduce interest rates and increase the opportunity for people to have cheaper funds. These conditions increase the ability of borrowers to repay their obligations and contribute to reducing banks "credit risk exposure (Ahmad and Ariff 2007). Accelerating money supply growth can act as an indicator of potential future growth (Berk and Bikker, 1995). Impact of money supply on credit risk examined by Ahmad (2003), he found a significant and negative relationship between M2 as a proxy for money supply and credit risk. Several studies of external factors that include macroeconomic conditions are: Gross Domestic Product (GDP), Inflation, and Exchange Rate that affect the level of the ratio of non-performing loans (NPL) or non-performing financing (NPF) in Islamic commercial banks, between Other: Rahmawulan (2008), Setiawan (2013), Febrianti (2015), and Shingjergji (2013) examine external factors that affect non-performing loans (NPL / NPF). Their results show that GDP has a significant positive effect on non-performing loans (NPL / NPF). While Khemraj (2005), Azeez (2015), Haniifa (2015), Nursechafia and Abduh (2014), and Firmansyah (2014) show that GDP results have a significant negative effect on non-performing loans (NPL / NPF). Meanwhile, the results are different from Soebagia (2005), and Ihsan (2011) which shows that

GDP has no significant effect on non-performing loans (NPF).

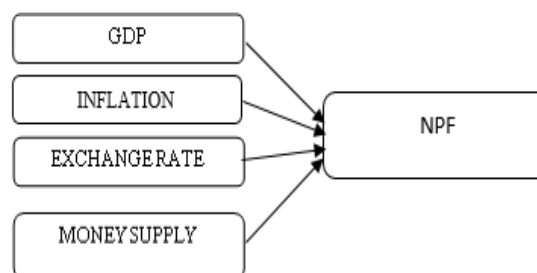
Nahar and Sarkev (2016), show that inflation has a significant positive effect on non-performing loans (NPL). Haniifah (2015) shows that inflation has a non-significant positive impact on non-performing loans (NPL). While Rajha (2016), Badar and Yamin (2013), ahmad and Bashir (2013) show that inflation has a significant negative impact on non-performing loans (NPL). Febrianti (2015), stated that the exchange rate had a significant positive effect on the Indonesian Islamic banking NPF. Shingjergji (2013) and Farhan, Sattar, Khalil and Chaudhry (2012) stated that the exchange rate has a positive effect on non-performing loans (NPLs) in contrast to Nahar and Sarkev which stated that the exchange rate had no effect on NPLs, and this research was supported by Firmansari (2014) , Haniifa (2015), Badar and Yasmin (2013) as well as Nursechafia and Abduh (2014). Badar and Yasmin showed that M2 did not affect non-performing loans (NPLs), whereas Nursechafia and Abduh (2014) showed the opposite result, namely that M2 had a significant positive effect on NPF. Based on the phenomenon of gaps and the diversity of research gaps, the results of existing research regarding the external influence of banking on NPL / NPF.

The Objectives of the Research

1. What is the influence of GDP, inflation rate, exchange rate fluctuations, and money supply on NPF (Non Performing Financing) at Islamic Commercial Banks in 2005-2014?
2. Which variable plays the most dominant role on the problematic financing level (NPF / Non-Performing Financing) in Sharia Commercial Banks in 2005-2014?

2 CONCEPTUAL FRAMEWORK

Based on background and problems of this research, the researchers describe the research framework as seen in Figure 1 below



2.1 HYPOTHESIS

The hypothesis is a temporary answer to the formulation of the research problem, (Sugiono, 2012: 93). Based on the formulation of the problem above, the hypothesis proposed in this study are:

1. Gross Domestic Product has a negative effect on NPF.
2. Inflation has a positive effect on NPF.
3. Exchange rates or exchange rates have a positive effect on the level of the NPF.
4. Money supply has a negative effect on NPF

2.2 DATA AND METHODOLOGY

The population in this study are all Sharia commercial banks registered at Bank Indonesia in the observation period January 2005 to December 2014.. The data used as samples in this study are NPF data for Islamic Commercial Banks, Real GDP, Inflation and exchange rates (middle exchange rates). This data is in the form of monthly data for each variable starting from the period January 2005 to December 2014, except for the GDP variable which is only available in quarterly form which is then interpolated into monthly data through the quadratic match sum method. The reason for choosing the year period used is to get accurate results

The data analysis method used in this study is the Ordinary Least Square Method (OLS) using multiple linear regression techniques. In conducting multiple linear regression analysis, this method requires to test classic assumptions in order to get good regression results. In analyzing multiple linear regression models in order to produce a good estimator, that is linear bias with the minimum variant (best linear unbiased estimator = BLUE) is the fulfillment of the assumptions of the basic assumption of regression, namely by performing a series of classic assumption tests as follows:

A. Classic assumption test

1. Normality Test
This normality test aims to test whether in the dependent variable regression model, both independent variables and both are normally distributed or not.
2. Multicollinearity Test
Multicollinearity test aims to test whether the regression model found correlation between independent variables (Tanjung, 2013: 52)
3. Autocorrelation Test
Autocorrelation is a phenomenon that arises from incorrect specifications regarding the

relationship between endogenous variables and explanatory variables.

$$E(u_i u_j) \neq 0; i \neq j$$

The autocorrelation test aims to test whether in a linear regression model there is a correlation between the interfering errors in period t with errors in the period t-1 (before). Correlation test aims to find out whether there is a correlation between members of a series of observational data described according to time (time series) or space (cross section).

4. Heterocytacity test

Heteroscedasticity test is used to determine whether or not there is a deviation from the classical heteroscedasticity assumption, namely the existence of variance inequality of residuals for all observations in the regression model. The prerequisites that must be fulfilled in the regression model so that there is no symptom of heteroscedasticity is if the Prob value. F count is greater than alpha level 0.10 (10%) does not occur heteroscedasticity

B. Statistic test

Statistical analysis test used in the form of regression analysis, namely analysis that can measure the influence between a group of variables that are interconnected. In this study, analysis uses multiple linear regression method. Multiple linear regression is defined as a model that has a minimum independent variable of two or more. The regression equation in this study is as follows:

$$NPF = \beta_0 + \beta X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \dots + \beta_n X_n$$

X_1 = variable GDP

X_2 = Inflation variable

X_3 = exchange rate variable

X_4 = variabel Money Supply

C. Hypothesis test

Hypothesis test s used to test the effect of the independent variable either partially or simultaneously to the dependent variable.

1. Simultaneous Significance Test (Test F Statistics)

Simultaneous significance test (F test statistic) aimed to show whether all the independent variables used simultaneously influence on the dependent variable or not.

2. Parsial Significance Test (Test t Statistics)

The purpose of partial significance test (t test statistic) is to determine whether each independent variable (GDP, Inflation, exchange rate and M2) affect the dependent variable (NPF) is significant or not.

3 RESULTS AND DISCUSSIONS

The influence of GDP on NPF

The first hypothesis proposed states that GDP has a significant negative effect on NPF. This is in accordance with the general theory when the GDP growth rate increases, it will increase economic activity (Samuelson, 2001), so that when economic activity increases, people's income will rise which in turn also increase the capacity for borrowers or debtors to repay their loans. When the loan or credit repayment capacity of the debtor increases, in other words, the loan repayment will be timely and the interest, so the probability of the possibility of non-performing loans will decrease. In addition, the decline in real GDP is also a common characteristic of recession (Samuelson, 2001), the recession will cause economic sluggishness that affects the debtor's business cycle and ultimately affect business profitability.

The results of testing the Gross Domestic Product (GDP) variable on the level of the Sharia bank NPF ratio, it is known that GDP has a significant positive effect on the level of the ratio of Islamic banks' NPF. So the higher the real GDP growth, the higher the level of problematic financing in Islamic commercial banks, but the effect is not large because a 1% GDP increase only raises the NPF level by 0.0095%. This is because when GDP conditions increase, the macroeconomic income of the community also increases, but this does not reduce the level of problematic financing, because this indicates the tendency of the Indonesian people who are considered highly consumptive, so that most of their income is prioritized for their consumption needs rather than repayment of loans to banks. It is proven that Indonesia is currently ranked second as the most consumptive country in the world after Singapore. (Tranggono, 2012)

These findings support the results of research conducted by Soebagio (2005), Imaduddin (2006), Edwin (2007), Rahmawulan (2008) and (Mutmainah and Chasanah, 2012). in their research GDP has a significant positive effect on Problem Financing.

Influence of Inflation on NPF

The second hypothesis states that Inflation has a positive and significant effect on NPF is not acceptable. The results of this study inflation rate has no effect on NPF.

According to Chapra (2001), inflation implies that money cannot function as a fair and correct

accounting unit. Inflation causes people to behave unfairly to others, by undermining the purchasing power of monetary assets unknown. This damages the efficiency of the monetary system and raises the costs of welfare for the community. Inflation tends to damage values, reward speculative efforts by inflicting losses on productive activities and exacerbating income inequality. Thus inflation is a symptom of disequilibrium that is not in accordance with the emphasis of Islam on equilibrium. In pure Islamic theory, actually inflation will not occur because of the characteristic Islamic financial characteristics. When the money used is full bodied money or fully backed money, there will be no inflation. This is because the type of money does not cause the creation of circulating money with Seignorage. Based on the above theory, inflation has no effect on the level of NPF.

Sharia Commercial Banks also have stronger durability compared to Conventional Banks. Islamic banks use several types of contracts in financing that aim to diversify credit risk. The most dominant financing used is financing with a murabahah agreement that is equal to 61% based on Sharia Banking Statistics 2015. In murabahah applications installments are fixed from the beginning to the end, so that when there is an increase in inflation in the long term, this does not affect the amount of installments paid by the customer. Because customers can plan cash flow arrangements needed to pay off murabahah financing (Mutamimah and Chasanah, 2012).

Thus, the impact of inflation can be reduced and has no effect on NPF. The results of this study support the results of the study by Popita (2013) and Firdaus (2015) which concluded that the inflation variable had no significant effect on NPF Syariah Bank. Febrianti (2015) states that the cause of inflation is not significant affects the NPF because the value of financing and non-performing loans in Islamic banks is relatively small in nominal terms when compared to conventional banks so that the impact of inflation is not significant on NPF. In addition, inflation that occurred during the observation period was not as severe as the inflation that occurred during the 1997/1998 crisis which reached hyper inflation so that it could make it difficult for debtors. These findings support the results of research conducted by Nursechafiah and Abduh (2014), and Bhattarai (2014), in their research the inflation variable did not have a significant effect on Problem Financing.

Influence of Exchange Rate on NPF

The third hypothesis proposed states that the Exchange has a positive and significant effect on NPF. variables From the results of the study obtained the value of the Statistics for the variable exchange rate of 0.6115 with a significance value of 0.54 where this value is greater at a significance level of 0.10. Thus the third hypothesis states that the Exchange variable which has a positive and significant effect on NPF is rejected. Based on the results of data analysis it can be concluded that the exchange rate does not negatively affect NPF. The absence of influence between the two variables because the NPF is not directly affected by the economic conditions seen from the exchange rate. Changes in exchange rates require a long period of time to influence the condition of the bank's NPF level. Fluctuating exchange rates have no effect on margin fluctuations, such as in Conventional Banks. Because financing products at Islamic Banks make borrowers who use the services of Islamic Commercial Banks obtain fixed and unchanged margins, as is the case with loans in Conventional Banks. So that it will make the borrower community will be better able to regulate their financial flow or cash flow.

The results of this study strengthen the research of Febriyanti (2015), which concludes that in the long run the exchange rate has no significant effect on financing risk (NPF) of Islamic Commercial Banks (BUS). This is due to the average amount of financing in foreign currency in Sharia Banking in the range of 5% of the total financing disbursed, based on the 2015 Indonesian Banking Statistics. So that changes in exchange rates do not have enough impact and even have almost no impact on NPF Syariah Banks. In addition, financing exposure at Islamic Commercial Banks is more directed at the real sector activities of the domestic economy so that it does not have a high level of integration with the global financial system. The results of the study support the research of Mutamimah and Chasanah (2012) and Firdaus (2015) which show that the exchange rate does not affect the occurrence of changes in the level of problematic financing The results of this study also support the results of Popita's (2013) and Firdaus (2015) study which concluded that the inflation variable had no significant effect on NPF Syariah Bank.

Influence of M2 on NPF

Effect of the amount of money in circulation (M2) on NPF The fourth hypothesis proposed states that M2 has a negative and significant effect on NPF.

Variables from the results of the study obtained t-statistics value for the exchange rate variable of -1.892 with a significance value of 0.061 where this value is significant at a significance level of 0.10. Thus the fourth hypothesis states that the M2 variable has a negative and significant effect on NPF received. The amount of money in circulation is one of the macro policies used by the government to stabilize economic conditions. Therefore changes in the amount of money in circulation will affect banking conditions. When the amount of money circulates increases, one of the instruments used by the government is to raise interest rates. It is expected that with the increase in interest rates, it will stimulate the public to invest their funds in the bank. When people invest their funds in banks, Islamic banks as part of the banking industry will collect these funds. The amount of funds that has been collected will increase the ability of Islamic banks to channel funds through financing. In the end the amount of financing will increase. This condition also increases the ability of borrowers to repay their obligations and contribute to reducing banks "credit risk exposures (Ahmad and Ariff 2007). These findings support the results of research conducted by Nursechafia and Abduh (2014), Iriani and Yuliadi (2015) who in their research Money Supply variables negatively affect the Term Financing

4 CONCLUSION

GDP has a significant positive effect on the ratio of Islamic banks' general bank NPF. So the higher the real GDP growth, the higher the level of non-performing financing in Islamic banks. This is because when GDP conditions increase, the macroeconomic income of the community also increases, but this does not reduce the level of problematic financing, because this indicates the tendency of the Indonesian people who are considered highly consumptive, so that most of their income is prioritized for their consumption needs rather than repayment of loans to banks. The debtor's failure to repay the loan can be caused by internal factors from the debtor such as the cessation of income received by the debtor to repay his loan or other factors affecting the debtor in repaying his debt. And the performance factor of the bank also influences the increase in high financing.

The inflation rate has no effect on the NPF, because the value of financing and non-performing loans in Islamic banks in nominal terms is still relatively small when compared to conventional

banks so that the impact of inflation is not significant on the NPF.

The exchange rate or exchange rate does not affect non-current financing. This is due to the fact that the financing in foreign currency in Islamic banks is at an average of around 5% of the total financing disbursed (Bank Indonesia, 2013), so that changes in exchange rates do not have enough impact and almost no impact on the Islamic bank NPF. The money supply has a positive and significant effect. Islamic banks as part of the banking industry will collect funds from the community. The amount of funds that has been collected will increase the ability of Islamic banks to channel funds through financing. In the end the amount of financing will increase. With the increase in financing, there will be an increase in NPF if the increase in the amount of money in circulation is not accompanied by an increase in output of production goods.

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5 SUGGESTION

The results of this study can be useful for evaluating the development of the Islamic Commercial Bank system and steps for taking related policies such as:

- a. Policies related to Gross Domestic Product Sharia Commercial Banks should be cautious in channeling credit to the public, the link between GDP and non-performing loans, in recession conditions where there is a decline in sales and corporate income, it will affect the company's ability to repay its loans. This will cause an increase in non-current credit outstanding.
- b. The government suppresses the amount of money in circulation by providing financing options that are clear, easy and safe for the community so that the funds can develop and manage the community itself
- c. For further research researchers can use customer characteristics as additional variabel so that banks can reduce the level of their NPF.

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