



Macroeconomics Factors on Non-performing Financing of The Islamic Commercial Banks

Mela Dipa Sekar Putri✉

Development Economic Study Program, Economics Faculty, Universitas Negeri Semarang

Permalink/DOI: <https://doi.org/10.15294/efficient.v4i3.47430>

Received: June 2021 ; Accepted: September 2021 ; Published: December 2021

Abstract

This study aims to determine the effect of macroeconomic variables on non-performing financing at Indonesian ICB for the 2009-2020 period. The method used in this study is the ECM (Error Correction Model) method with independent variables inflation, exchange rate, GDP, IPI, IHSG, and FDI, while the dependent variable is non-performing financing at ICB. The data in this study are secondary data, and the time used is quarterly from the first quarter of 2009 to the second quarter of 2020. The results of the analysis from the results of the ECM test conducted show that in the short term, the variables that have an effect are inflation, exchange rates, JCI, and FDI, while the GDP and IPI variables have no effect. Meanwhile, in the long term, the variables that affect non-performing financing are inflation, exchange rate, GDP, IPI, and JCI, while FDI does not affect non-performing financing.

Keywords: *macroeconomics factors, non-performing financing, The Islamic Commercial Banks, Indonesia*

Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh variabel makro ekonomi terhadap pembiayaan bermasalah pada BUS periode 2009-2020. Metode yang digunakan pada penelitian ini adalah metode ECM (Error Correction Model) dengan variabel bebas yaitu Inflasi, kurs, PDB, IPI, IHSG, dan FDI sedangkan variabel terikatnya adalah pembiayaan bermasalah pada BUS. Data dalam penelitian ini adalah data sekunder dan waktu yang digunakan triwulanan dari triwulan I 2009 hingga triwulan II 2020. Hasil analisis menunjukkan bahwa dari hasil uji ECM yang dilakukan didapatkan bahwa pada jangka pendek variabel yang berpengaruh yaitu variabel inflasi, kurs, IHSG, dan FDI, sedangkan untuk variabel PDB dan IPI tidak berpengaruh. Sedangkan untuk jangka panjang variabel yang berpengaruh terhadap pembiayaan bermasalah yaitu variabel inflasi, kurs, PDB, IPI, dan IHSG sedangkan untuk FDI tidak berpengaruh terhadap pembiayaan bermasalah.

Kata Kunci: *faktor makroekonomi, pembiayaan bermasalah, Bank Swasta Islam, Indonesia*

How to Cite: Putri, M. (2021). Macroeconomics Factors on Non-performing Financing of The Islamic Commercial Banks. *Efficient: Indonesian Journal of Development Economics*, 4(3), 1376-1389. <https://doi.org/10.15294/efficient.v4i3.47430>

© 2021 Semarang State University. All rights reserved

✉ Correspondence Address :
Address: Gedung L2 Lantai 2 FE Unnes
Kampus Sekaran, Gunungpati, Semarang, 50229
E-mail : meladipao6@gmail.com

INTRODUCTION

Banks act as a place to collect public funds; besides that, banks also act as a place for people to get financial assistance, where people speculate on money and so on. Specifically, a bank functions as an agent of trust, agent of development, and agent of services (Az, 2011). The services provided by banks are closely related to the existence of general economic activities in the community. Al Parisi (2017) and Agustin (2020) id that although the assets at the BUS were still relatively low, the asset growth was quite high and good.

In the growth and development of the banking industry, there must be a problem in the banking sector, one of which is non-performing loans. Both BUK and BUS always have problems inside and outside. Akbar (2019) stated that his frequent problem is usually caused by bank partners or bank customers or referred to as third parties. Problems with third parties often experienced by BUK or BUS are non-performing loans or non-performing financing, which can be measured by the amount of Non Performing Loans (NPL) for BUK and Non-Performing Financing (NPF) for BUS or the total non-performing loans or financing.

Hamzah (2018) said that the financing included in this NPF category included substandard financing, doubtful financing, and non-performing financing in measuring bank health, the NPL criteria set by banks in Indonesia was below 5% in accordance with SE No. 6/23/DPNP issued on May 31, 2004 so that if the NPL ratio of a bank is small then the ratio of credit borne by the parties from the bank will also be smaller, and vice versa if the higher the NPL value (above 5%) then a bank can said to be unhealthy.

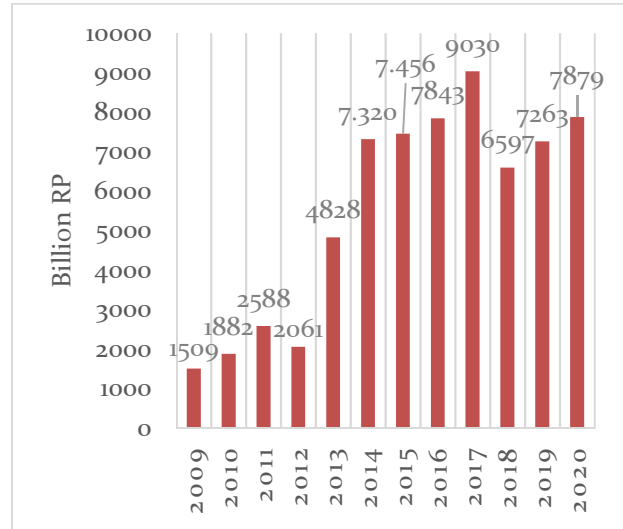


Figure 1. number of non-performing financing

Source : Statistik Perbankan Syariah, 2020

Figure 1 shows that the number of non-performing BUS financing shows fluctuating numbers. The highest total non-performing BUS financing in 2017 was 9030 billion. Judging from the total level of non-performing financing, which in 2020 also increased from the previous year, 2019, this incident could indicate an error in which there was an inappropriate financing distribution. Therefore, it is necessary to research this condition. Fahmi (2015) said that banking here as an institution is often exposed to risks, especially money-related, where this bank acts as a bridge between two parties who experience a surplus or a deficit.

Several macroeconomic indicators that have a relationship with the level of non-performing financing include inflation, exchange rates (exchange rates), Gross Domestic Product (GDP), Industrial Production Index (IPI), Composite Stock Price Index (CSPI), Foreign Direct Investment (FDI). The variables are taken also follow agency theory and commercial loan theory. Akbar (2019) said that this agency theory is shown by banks as owners of funds that

provide financing to customers as agents who manage funds.

In this case the customer as a fund manager must be able to manage his funds in order to repay the financing to the bank. In the book, Siegel (1982) describes the Commercial Loan Theory, and this theory focuses on the asset side of the statement of financial position in meeting bank liquidity. So if Islamic banks want to provide financing, the source of funds should be obtained from capital and long-term sources of funds. However, in unstable economic conditions, repayment of financing using customer cash flows is not smooth and will lead to problematic financing.

Taking the variables that have an influence on non-performing financing, based on previous studies. Research conducted (Hamzah, 2018) which proves the relationship between inflation and exchange rates on NPF by using agency theory and the commercial loan theory as the theoretical basis. Research (Soekapdjo et al., 2019) which in research uses agency theory that GDP, exchange rates, and inflation have a relationship with non-performing financing.

F. Ahmad et al., (2013) with agency theory and Commercial Loan Theory as the theoretical basis states that there is a relationship between inflation, CPI, IPI, FDI, GDP, interest rates, unemployment, state debt, and the exchange rate against NPL. Amanah (2019) said that the inflation variable had a significant effect on the level of non-performing financing. Inflation and non-performing loans have a relationship with changing people's purchasing power, when the inflation rate for goods or services increases, people's incomes remain. This condition will result in the ability of the community to ask for these goods and services will decrease This will

affect the income level of producers because the supply level of producers will be constant.

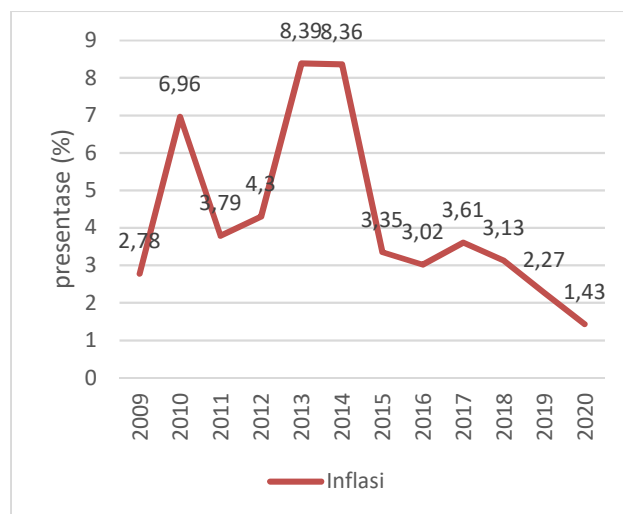


Figure 2. Inflation data in Indonesia 2009-2020

Source: BPS Indonesia, 2020

Figure 2 shows that inflation growth in Indonesia has fluctuated from year to year. This means that the price level of goods in Indonesia in 2009-2020 has increased and decreased. The lowest inflation rate in Indonesia in 2020 has reached 1.43%, this indicates that the price level in the stable market did not experience a high increase, while for the highest inflation in 2013 it was 8.36% where in 2013 this means an increase in the number of inflation from the previous year, namely 2012, and inflation in 2013 has exceeded the inflation threshold set at $3 + - 1$.

Jakubík (2007) says that one of the causes of the growth in risk from this financing is one of them determined by the exchange rate (exchange rate). The exchange rate affects the debtor's ability to repay the loan because when the IDR exchange rate depreciates for companies that always need their raw materials in the production process, they will import raw materials from other countries automatically the

price of the raw materials will also be more expensive.

As a result, it will have an impact on production in the company which will be reduced, due to increased costs. This will reduce the company's revenue. If the company's income is reduced, it will indirectly affect the debtor's ability to repay the loan. If the quality of returns decreases, this will result in higher non-performing financing in banks and an increase in the value of banking NPFs. (Hamzah, 2018) said that the variable exchange rate (exchange rate) had a significant effect on non-performing financing. (Ardana, 2017) say that there is a long-term relationship between the exchange rate and non-performing financing.

Figure 3 the growth of the Indonesian exchange rate from 2009-2020 has increased, this indicates that the IDR exchange rate is depreciating (a depreciation of the IDR will occur in other currencies in this case the United States dollar) the dollar exchange rate will be higher if it is converted into IDR. On the other hand, the dollar currency will be more expensive than before if it is exchanged for IDR.

In 2016-2017 the increase in the exchange rate was only IDR 112 This increase is quite small compared to the increase in 2017-2018 which is quite large, even an increase of IDR 933 the increase is almost 1000 IDR. In 2019 the IDR exchange rate reached IDR 13,901, so that it has increased from the previous year, namely in 2018 of IDR 14,481, this indicates that the IDR exchange rate is starting to appreciate (there is an increase in the value of the IDR against the United States dollar or in this case the value of the dollar is cheaper if it is exchanged into IDR).

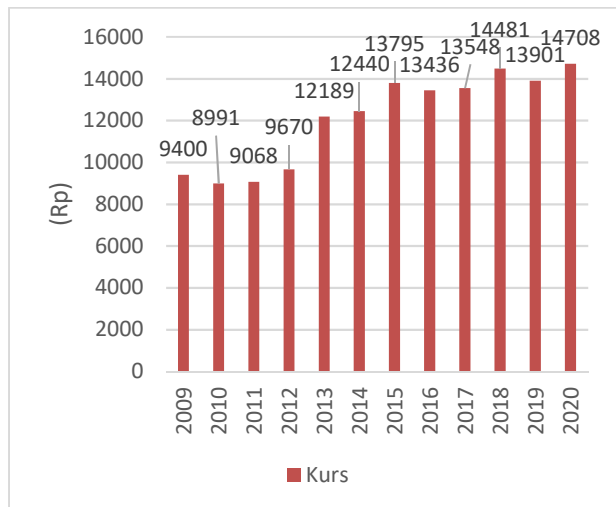


Figure 3. exchange rate growth data in Indonesia 2009-2020

Source: statistik.kemendag.co.id, 2020

But in 2020, the IDR exchange rate began to depreciate again, because the price of the dollar rose again in 2020, which was IDR 14,780. Gross Domestic Product (GDP) is a macroeconomic variable that greatly influences economic conditions in Indonesia. GDP is the market value of the total number of goods and services produced by a country in a certain period of time.

Ahmad et al., (2013) said that growth from an increase in GDP shows an increase in the income of an individual or a company, this will result in the ability of credit payments to increase so that the amount of NPL will decrease and vice versa if the amount of GDP decreases it can indicate income from individuals or the company has decreased and can result in its ability to pay credit will decrease and can cause an increase in NPL.

Figure 4 shows a fluctuating number where sometimes GDP increases but also decreases. This decrease or increase in GDP can affect economic conditions in Indonesia. The highest GDP in 2019 was 2,769,908 billion, while

the lowest GDP was in 2009, which was 1,451,314 billion. From this data, from 2013 to 2019, GDP in Indonesia has always increased.



Figure 4. Indonesia GDP data year 2009-2020

Source: BPS Indonesia, 2020

Another macroeconomic variable that is considered to influence the level of non-performing financing in BUS is IPI. The Industrial Production Index (IPI) is an economic indicator that calculates the total real production of all industrial sectors. Aviliani et al (2015) aid that IPI, a proxy for a country's national income, has a strong relationship with all performance indicators in banking.

One of the indicators of banking performance itself is the level of banking non-performing financing, this means that IPI also affects the level of non-performing financing in banks. Ahmad et al (2013) saying that there is a significant relationship between IPI and the level of NPL. Figure 5 can explain the fluctuating conditions of IPI growth in Indonesia.

The figure shows that the growth of IPI in Indonesia has decreased when viewed from 2009 to 2020. The highest IPI decline was in 2010, wherein it reached 137%, down to 15% in 2010. From 2009 to 2015, IPI in Indonesia always

experienced a decline in succession until 2016, 2017, 2018, and 2019. IPI Indonesia has increased, but in 2020 Indonesia's IPI decreased again.

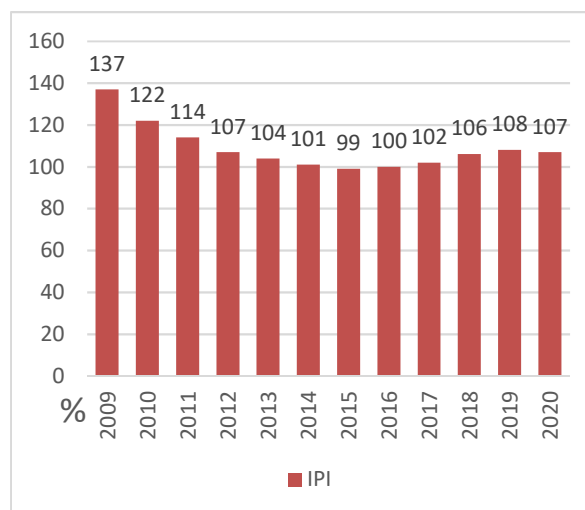


Figure 5. Indonesia's industrial production index growth 2009-2020.

Source: Statistics.gr, 2020

One of the causes of the decline in IPI in Indonesia is the result of economic shocks. For example, the economic shocks in Indonesia during the 1998 crisis impacted the decline in industrial productivity in Indonesia. (Bappenas.go.id, 2010). Another macroeconomic variable that is considered to be able to influence the level of non-performing financing in BUS is the JCI. The Composite Stock Price Index (CSPI) is a value that can be used as a performance measurement tool for combining stocks on a stock exchange.

Raharjo (2009) when the stock price increases, it will increase the company's ability to generate corporate profits. If the company's profit increases, it will also cause the company's ability to repay its loans to banks, then the ratio of banking non-performing financing will increase because when there is an increase in

stock prices, many people will sell their shares to achieve profits, this also applies vice versa.

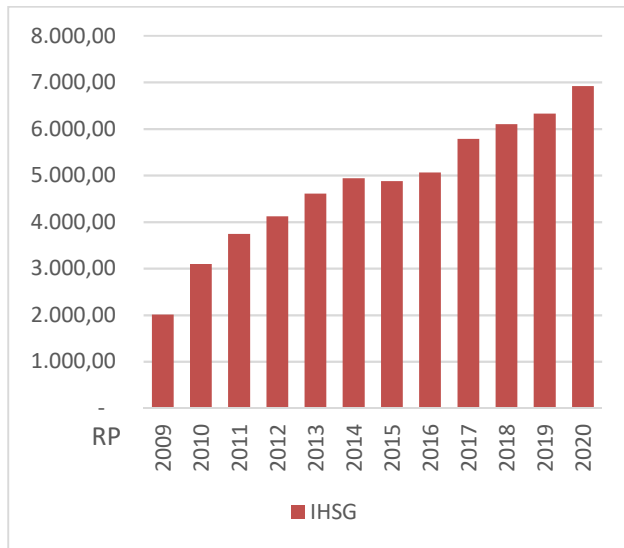


Figure 6. ICI growth Indonesia in 2009-2020.
Source : Investing.com, 2020

Figure 6 shows the growth of JCI data in Indonesia from 2009 to 2020. The average JCI in Indonesia has increased over 11 years if you look at the picture. From 2009 to 2014, the Indonesian Composite Index (JCI) for five years always increased. The increase in points reached 2,923 IDR. However, in 2015 the Indonesian Composite Index decreased by 62 points. The increase or decrease in the JCI is influenced by the state of the economy in Indonesia and the condition of the company.

Another macroeconomic variable that is considered to influence the level of non-performing financing in BUS is FDI (Foreign Direct Investment). FDI usually involves two countries at once. Calvo & Mendoza (2000) suggests that there is a positive FDI effect on bad loans. With an increase in FDI, domestic loans will automatically increase and will result in the growth of NPL or NPF.

Figure 7 shows that Indonesia's FDI data fluctuates during 2009-2020; FDI fluctuates every year. Indonesia's highest FDI in 2009 reached 6,128 million USD, which means that in 2019 stock prices throughout Indonesia were at their highest for 11 years. The lowest point in Indonesia's FDI itself was in 2016, reaching 1,135 million USD; this year is also the highest decrease in FDI wherein 2015-2016, the decline in FDI reached 3,809 million USD.

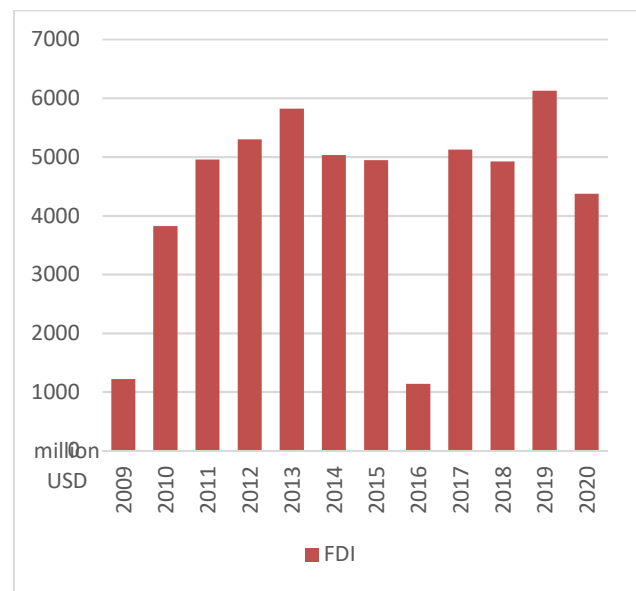


Figure 7. FDI growth Indonesia In 2009-2020
Sumber: Investing.com, 2020

This fluctuating value of FDI is caused by the confidence of investors to invest in Indonesia. The variables used in this study have values that fluctuate every year. Therefore it is necessary to research the long and short term. Based on the above background, it is necessary to conduct further research to determine the consistency of the new research. This study aims to determine The Effect of Macroeconomic Variables on the Non-performing Financing of Islamic Commercial Banks in Indonesia.

RESEARCH METHODS

This type of research is a type of quantitative research. In this study, numerical data processing (numbers) was carried out. This study uses secondary data, data sourced from government agencies, sources of banking statistics, and reliable sources that have been published. The data type used is time-series data for the 2009-2020 every quarter.

The variables in this study consist of the dependent variable and the independent variable. The dependent variable in this study is the total non-performing financing of BUS in billions of IDR. The independent variables are inflation (X₁) expressed in percent, the exchange rate (X₂) expressed in IDR to USD, GDP (X₃) expressed in billion IDR, IPI (X₄) expressed in percent, JCI (X₅) expressed in IDR, and FDI (X₆) expressed in million USD.

The method in this study uses the Error Correction Model. In the Error Correction Model (ECM), several steps and conditions must be met to be accepted as an ECM model. All variables must be stationary at the degree of integration and have cointegration. The model of short-term and long-term equations in this study can be seen in equations (1) and (2).

Where D is a form of difference in the short-term model, e represents the residual in the model, and ECT stands for the error correction term. A stationary test is performed on all variables, where the dependent variable and the variable must be stationary at the first different level. This study uses the Augmented Dickey-Fuller (ADF) unit root test as one of the methods in the stationary test. The statistical value of each variable is compared with the critical value.

$$D(\text{Pembiayaan Bermasalah}) = \alpha_0 + \alpha_1 D(\text{INFLASI}) + \alpha_2 D(\text{KURS}) + \alpha_3 D(\text{PDB}) + \alpha_4 D(\text{IPI}) + \alpha_5 D(\text{IHSG}) + \alpha_6 D(\text{FDI}) + \text{ECT}_t \dots \dots \dots (1)$$

$$\text{Pembiayaan Bermasalah} = \beta_0 + \beta_1 \text{INFLASI} + \beta_2 \text{KURS} + \beta_3 \text{PDB} + \beta_4 \text{IPI} + \beta_5 \text{IHSG} + \beta_6 \text{FDI} + E_t \dots \dots \dots (2)$$

If the statistical value is greater than the critical value, it can be stationary and vice versa. Furthermore, suppose in the unit root, all variables are not stationary. In that case, it can be continued on the degree of integration test, where all variables must be stationary at the same degree. Furthermore, it is known that all data variables are stationary to a certain degree. Furthermore, a cointegration test is conducted to know whether there is long-term cointegration in the model. The integration test is carried out through the remaining long-term regression results in equation (2).

After the model meets the requirements of an ECM model, the classical assumption test is performed on the model. (Gujarati & Porter, 2010) suggested that the classical assumption test should be applied in the regression model. The classical assumption test consists of normality test, autocorrelation test, heteroscedasticity test and multicollinearity test. The model can be accepted as a good model if it passes all these tests.

In the long-term and short-term regression models, the regression model was carried out using the t-statistic test, the F-statistical test, the determinant coefficient test, or the R-square (R₂) statistical test. T-test was conducted to test the significance of each variable. The F test was carried out to see the effect of the X variable

together on the Y variable. The coefficient of determination (R^2) test was carried out to determine how much the set of variations in the independent variable could explain the dependent variable (Gujarati, 2004).

RESULTS AND DISCUSSION

Regression in the model can be done if the researcher's requirements are not stationary at the level and the test is stationary at the 1st different level. Based on the results of the unit root test, we can see in table 1. Furthermore, based on the cointegration test. In this study, there is a cointegration relationship between long-term variables, which can be shown in table 2.

The results of the ecm regression in the long and short term can be shown in Tables 3 and 4. In the table 3, it can be concluded that the independent variable (X) has a short-term effect on the dependent variable (Y) because the value (ECT (-1)) term has a negative and significant effect.

Table 1. Unit Root Test

Variable	level	1st different
Pembiayaan Bermasalah	0,8608	0.0000
Inflation	0.4303	0.0010
Exchange rate	0.9295	0.0000
PDB	0.9048	0.0000
IPI	0.0695	0.0000
IHSG	0.8822	0.0000
FDI	0.1563	0.0000

Source : Output E-views, 2020

Inflation in the short term Inflation partially has a significant effect on non-performing financing. It is known by the value of t-count is greater than the value of t-table where

the value is $3.667575 > 1.684$, then H_0 is rejected and H_1 is accepted. From the results of the ECM test, inflation has a coefficient of (-451.0898) meaning that when inflation increases by 1%, it will result in a decrease in non-performing financing by 451.0898 billion IDR with the assumption of *ceteris paribus*.

Table 2. Cointegration Test

Variable	t-Statistic	Probability	Decision
Residual (ECT)	-5.622360	0,0000	Stasioner

Source: Output E-views, 2020

Exchange rate in the short term Exchange rate partially has a significant influence on non-performing financing. The value knows this of t-count is greater than the value of t-table where the value is $2.990419 > 1.684$, then H_0 is rejected, and H_1 is accepted. The results of the ECM exchange rate test have a coefficient of (1.420489) , meaning that when the exchange rate increases by 1 IDR, it will result in an increase in non-performing financing of 1.420489 billion IDR with the assumption of *ceteris paribus*.

GDP in the short term, GDP partially does not have a significant effect on non-performing financing. The t-count value is smaller than the t-table value where the value is $0.961138 < 1.684$, then H_0 is accepted, and H_1 is rejected. In the short term, IPI partially does not have a significant effect on non-performing financing. The t-count value is smaller than the t-table value, which is $1.154143 < 1.684$, then H_0 is accepted, and H_1 is rejected.

JCI in the short term, JCI partially has a significant influence on non-performing financing. The t-count value is greater than the t-table value where the value is $2.255141 > 1.684$,

then H_0 is rejected, and H_1 is accepted. The results of the ECM JCI test have a coefficient value of (1.122077), meaning that when the JCI increases by 1 IDR, it will result in an increase in non-performing financing of 1.122077 billion IDR with the assumption of *ceteris paribus*.

Table 3. Regression Results of Short-Run ECM Equations

Variable	Coefficient	t-statistic
C	-175.9463	-1.168722
DINFLASI	-451.0898	-3.667575
DKURS	1.420489	2.990419
DPDB	0.013603	0.961138
DIPI	-52.99455	-1.154143
DIHSG	1.122077	2.255141
DFDI	0.067186	2.067700
ECT(-1)	-0.688461	-5.055238
R-squared		0.599340
Adjusted R-squared		0.523539
F-statistic		7.906805
Prob(F-statistic)		0.000021

Source: output E-views 10, 2020

In the short term, FDI partially has a significant effect on non-performing financing. The value knows it of t-count is greater than the value of t-table where the value is $2.067700 > 1.684$, then H_0 is rejected, and H_1 is accepted. The results of the ECM JCI test have a coefficient value of (0.067186), meaning that when FDI increases by 1 million USD, it will result in an increase in non-performing financing of 0.067186 billion IDR with the assumption of *ceteris paribus*.

Inflation in the long term Inflation partially has a significant effect on non-performing financing. The t-count value is greater than the t-table value where the value is

$1.8890434 > 1.684$, then H_0 is rejected, and H_1 is accepted. The ECM inflation test results have a coefficient of (-202.7647), meaning that when inflation increases by 1%, it will decrease non-performing financing by 202.7647 billion IDR with the assumption *ceteris paribus*.

Table 4. Regression Results of Long-Run ECM Equations

Variable	Coefficient	t-statistic
C	10132.74	2.247685
Inflasi	-202.7647	-1.8890434
Kurs	0.671959	6.054555
PDB	-0.023600	-2.124610
IPI	-104.5792	-3.529963
IHSG	1.066035	2.721413
FDI	0.031734	0.563999
R-squared		0.886712
Adjusted R-squared		0.869283
F-statistic		50.87600
Prob(F-statistic)		0.000000

Source : Output E-views 10, 2020

Exchange rate in the long term Exchange rate partially has a significant influence on non-performing financing. The t-count value is greater than the t-table value where $6.054555 > 1.684$, then H_0 is rejected, and H_1 is accepted. The ECM exchange rate test results have a coefficient of (0.671959), meaning that when the exchange rate increases by 1 IDR, it will increase non-performing financing of 0.671959 billion IDR with the assumption of *ceteris paribus*.

In the long term, GDP partially has a significant influence on non-performing financing. The value of t-count is greater than the value of the t-table where the value is $2.124610 > 1.684$, then H_0 is rejected, and H_1 is accepted. The ECM GDP test results

have a coefficient value of (-0.023600), meaning that when GDP increases by 1 billion IDR, it will decrease non-performing financing by 0.023600 billion IDR with the assumption *ceteris paribus*.

In the long term, IPI partially has a significant influence on non-performing financing. The t-count value is greater than the t-table value where the value is $3.529963 > 1.684$, then H_0 is rejected, and H_1 is accepted. The ECM IPI test results have a coefficient value of (-104,5792), meaning that when the IPI increases by 1%, it will result in a decrease in non-performing financing by 104,5792 billion IDR with the assumption of *ceteris paribus*.

JCI in the long term, JCI partially has a significant influence on non-performing financing. The value of t-count is greater than the value of the t-table where the value is $2.721413 > 1.684$, then H_0 is rejected, and H_1 is accepted. The results of the ECM JCI test have a coefficient value of (1.066035), meaning that when the JCI increases by 1 IDR, it will result in an increase in non-performing financing of 1.066035 billion IDR with the assumption of *ceteris paribus*.

In the long term, FDI partially does not significantly affect non-performing financing. The t-count value is smaller than the t-table value where the value is $0.563999 < 1.684$, then H_0 is accepted, and H_1 is rejected. The results of the classical assumption test show that the pomfret model passes the autocorrelation test based on the Breusch-Godfrey Series Correlation LM test with a probability value of more than the critical value ($0.1683 > 0.05$).

The model passed the multicollinearity test after healing through the Variant Inflation Factors (VIF) value, where the VIF value of all dependent variables was less than 10. Normality

test Prob value. JB is calculated at $0.06 > 0.05$, and the model is normally distributed. The results of the white heteroscedasticity test using the method obtained are $0.0906 > 0.05$, and there is no heteroscedasticity problem in the model.

Inflation affects non-performing financing in the short term and the long term on non-performing financing. This result follows the agency theory and stakeholder theory by Akbar (2019) where the activities of individuals and companies that result in problematic financing problems arise. This is also in line with research Çiftçi (2014) which states a short-term relationship between inflation and non-performing financing.

In the short and long term, inflation has a significant negative effect on non-performing BUS financing. Inflation has increased, funding non-performing will experience the opposite. This result is due to expectations of inflation in the short term, where people believe that there will be an increase in inflation in the future. When inflation increases, the prices of goods and services become more expensive.

As a result, residents will suppress their consumption, and the demand for financing will decrease because people don't want to increase their cost of living. Therefore, when inflation rises, the risk of funding non-performing will decrease along with the shrinking demand for financing at the BUS. This statement is by agency theory and stakeholder theory by Akbar (2019), where the activities of individuals and companies that result in complex financing problems arise.

Because here inflation results in the behaviour of individuals and companies in returning their loans to banks and can affect the ratio of non-performing financing on banking.

This result is in line with research by Ardana (2017), Çiftçi (2014), Mutamimah & Chasanah (2012), and Sudarsono (2018) which say that inflation in the long term and short term affects NPF or non-performing financing. The exchange rate affects the long term and in the short term non-performing financing. Changes in the exchange rate will affect banking. If there is an increase in the exchange rate, the banks will bear a reasonably high risk.

When the value of the IDR weakens, the business of banking customers will be at risk of a decline, mainly if the production raw materials from their company are imported. When the IDR exchange rate weakens, the dollar exchange rate increases, resulting in the price of raw materials from abroad also increasing. An increase in the price of raw materials will result in a decrease in the productivity of bank customers and a reduction in company income, thereby causing the company's quality in repaying loans to the bank to deteriorate. This condition will increase non-performing banking financing.

The economic conditions of customers will affect the activities of banking. This result follows the commercial loan theory by Siegel, (1982) and agency theory, where the activities of individuals and companies that lead to problematic financing problems (Akbar, 2019). This statement is also in line with research Hamzah (2018), Widarjono & Rudatin (2021), Efendi (2018), and Pertiwi et al (2020) which state that there is a relationship between the exchange rate and non-performing financing.

GDP has a long-term effect on non-performing financing, this result is in line with research (F. Ahmad et al., 2013). This is in line with the real business cycle theory where

economic shocks will also affect the activities of a company (S. Ahmad, 1996). The emergence of non-performing financing is caused by a third party, namely a customer who is unable to repay the loan. This is in accordance with agency theory and stakeholder theory, where the activities of individuals and companies that lead to the emergence of problem financing problems (George AF Roberts, 1992). With this, it can be said that the microeconomic variable, namely the GDP variable, does not directly affect the level of non-performing financing, this is in accordance with macroeconomic theory which states that macroeconomic variables can indirectly affect non-performing financing.

This means that increased economic growth results in increasing the ability to repay loans of individuals and companies. This study is also in line with research (Sakee, 2014) which states that in the long term GDP has an effect on credit risk in banks. This study is also in line with research (Havidz & Setiawan, 2015) which states that GDP has an effect on NPF. An increase in GDP in a country indicates an increase in economic activity and income, if the income of individuals and companies is greater than their expenditure, it will facilitate the repayment of bank loans, this will reduce the risk of non-performing financing.

The reason why GDP has no effect in the short term on non-performing financing is because it can be seen from the data that an increase in GDP over time is not always accompanied by a decrease in the level of non-performing financing. But if you look at it continuously from time to time a stable increase in GDP can reduce the number of non-performing financing, the data can be seen from the appendix. IPI has an effect in the long term

but has no effect in the short term on non-performing financing.

IPI growth indicates an increase or decrease in industrial productivity in a country. This is in line with the commercial loan theory, economic growth is marked by an increase in international trade and an increase in industrial output as well as a surplus in a country's trade balance (S. Ahmad, 1996). This is also in line with the commercial loan theory, a change in economic conditions in a country, in which IPI as one of the measuring variables will result in the quality of the credit (Siegel, 1982). Where when the economic conditions change will result in the quality of customers in returning their loans.

When IPI increases, it means that industrial productivity also increases, when industrial productivity increases this will result in an increase in the company's income, and vice versa if there is a decrease in IPI where productivity decreases will also result in a decrease in company income. If the company's income increases, the ability of a company to repay its loans will improve and this will reduce the risk of non-performing financing. If the company's income decreases, this will affect the company's ability to repay its loans and will cause an increase in non-performing financing.

This means that the economic conditions of customers will affect the activities of banking, this is in accordance with the theory with agency theory and stakeholder theory, Akbar (2019) state that the activities of individuals and companies that lead to the emergence of problematic financing problems. This is also in line with research Ahmad & Bashir (2013) which states that there is a negative and significant effect between IPI and bad loans.

IPI has no effect in the short term on non-performing financing because it can be seen from the data that a decrease does not always follow an increase in IPI over time in the level of funding non-performing. However, if viewed continuously from time to time, a stable rise in IPI can reduce the number of non-performing funding, the data can be seen in the appendix.

JCI in the long term and short term affect non-performing financing. When there is an increase in the JCI, it will increase the number of funding non-performing. When the JCI has increased, many stock players sell their shares because when the stock price increases, that's where the profits are owned by the stock players (Raharjo, 2009). Therefore, when there is an increase in share prices, shareholders will compete to sell the shares before the stock price drops again.

When the shareholders sell their shares, the company will need a lot of funds for the stock sellers. Therefore, the company will make more loans to the bank to cover the withdrawal due to the shares being sold. This will result in a high risk of non-performing financing. This result means that the economic conditions of customers will affect the activities of banking, this is following agency theory and stakeholder theory, where the actions of individuals and companies that lead to the emergence of problematic financing problems (Akbar, 2019).

This is also in line with research by Raharjo (2009) states there is a significant influence between the JCI and banking performance. It can be strengthened by data that the JCI data and problematic financing are both increasing every year. FDI in the long term does not affect non-performing funding, while in the

short term, FDI has a positive and significant effect on non-performing financing.

In the long term, FDI does not affect non-performing financing because, in the long term, the economic condition of the customers is not determined by the size of the investment but is determined by how the company remains productive. In the short term, FDI affects non-performing financing because an increase in FDI will result in higher domestic borrowing than income from companies or individuals. This condition will lead to growth in NPLs or an increase in non-performing loans or non-performing financing of foreign investment banks.

Calvo & Mendoza (2000) revealed that there is a positive and significant effect of FDI on the level of bad credit in banks Festić et al (2011) revealed that there is a positive and significant effect of FDI on the level of banking non-performing loans. This result means that the economic condition of the customer will affect the activities of the banking sector. This is in accordance with the agency theory and stakeholder theory, where the activities of individuals and companies lead to the emergence of financing problems for BUS.

CONCLUSION

Non-performing BUS financing is measured by the total value of BUS non-performing financing in the 2009-2020 period. In the short term the variables that influence the non-performing financing of BUS are inflation, exchange rate, JCI, and FDI variables. In contrast, the GDP and IPI variables have no effect. In the long term, the variables that influence the non-performing financing of BUS

are inflation, exchange rate, GDP, IPI, and JCI, while FDI has no effect.

In determining the policy of loose credit or tight credit or the size of the amount of financing provided by the bank to customers, it is better for the bank before that to also look at the country's economic condition first. By looking at the growth rate of macroeconomic variables, namely the value of inflation, exchange rate, GDP, IPI, JCI, and FDI first, this is expected to control the level of non-performing financing in banks.

REFERENCES

- Ahmad, F., Abbas, Z., & Bashir, T. (2013). Explanatory power of macroeconomic variables as determinants of non-performing loans: Evidence from Pakistan. *World Applied Sciences Journal*, 22(2), 243-255. <https://doi.org/10.5829/idosi.wasj.2013.22.02.1863>
- Ahmad, S. (1996). Real Business Cycles: A Survey of Theories and Evidence. *Economics and Finance in Indonesia*, 44, 341-353.
- Al Parisi, S. (2017). [Determinan Kinerja Keuangan Bank Umum Syariah di Indonesia]. *Ikonomika*, 2(1), 81-827. <https://doi.org/10.24042/febi.v2i1.900>
- Ardana, Y. (2017). [Analisis Kondisi Makroekonomi Terhadap Tingkat Pembiayaan Bermasalah Bank Umum Syariah di Indonesia (Periode Januari 2009-Desember 2015 dengan model ECM)]. *Media Trend*, 12(1), 1-11. <https://doi.org/10.21107/mediatrend.v12i1.1537>
- Agustin, P. (2020). [Analisis Kinerja Keuangan Bank Umum Syariah di Indonesia]. *Efficient: Indonesian Journal of Development Economics*, 3(2), 811-827.
- Akbar, T. (2019). [Kajian kinerja Profitabilitas Bank pada Perspektif Bank Umum Berdasarkan Kegiatan Usaha]. Uwais Inspirasi Indonesia.
- Amanah, T. (2019). [Pengaruh Produk Domestik Bruto, Inflasi, Bi Rate, Dan Nilai Tukar Rupiah Terhadap Pembiayaan Bermasalah Dalam Perspektif Ekonomi Islam (Studi Pada BPRS di Indonesia Periode 2008-2018)]. Doctoral Dissertation, UIN Raden Intan Lampung.
- Aviliani, A., Siregar, H., Maulana, T. N. A., & Hasanah, H. (2015). The Impact of Macroeconomic Condition on

- The Banks Performance in Indonesia. *Buletin Ekonomi Moneter Dan Perbankan*, 17(4), 379-402. <https://doi.org/10.21098/bemp.v17i4.503>
- Bappenas.go.id. (2010). (2010, desember 18). Bappenas.go.id. Retrieved from : Bappenas.Go.Id. https://www.bappenas.go.id/files/7813/5063/5672/02ekps2010industrimanufaktur__20110530112013__3.pdf
- Calvo, G. A., & Mendoza, E. G. (2000). Contagion, Globalization, and the Volatility of Capital Flows. *Journal of International Economics*, 51(1), 79-113.
- Çiftçi, S. (2014). *The Influence of Macroeconomic Variables on Stock Performance*. University of Twente, December, 1-53. <http://ageconsearch.umn.edu/bitstream/19232/1/spo5ba15.pdf>
- Efendi, A. Y. (2018). Credit Risk Determinants in Indonesia. *Efficient: Indonesian Journal of Development Economics*, 1(2), 106-115. <https://doi.org/10.15294/efficient.v1i2.30153>
- Fahmi, I. (2015). [pengantar manajemen keuangan teori]. Alfabeta.
- Festić, M., Kavkler, A., & Repina, S. (2011). The macroeconomic sources of systemic risk in the banking sectors of five new EU member states. *Journal of Banking and Finance*, 35(2), 310-322. <https://doi.org/10.1016/j.jbankfin.2010.08.007>
- Hamzah, A. (2018). [Pengaruh Faktor Makro Ekonomi Terhadap Pembiayaan Bermasalah (Penelitian Pada Bank Umum Syariah di Indonesia Tahun 2010-2017)]. *Journal of Islamic Finance and Accounting*, 1(2), 2615-1782.
- Havidz, S. A. H., & Setiawan, C. (2015). Bank Efficiency and Non-Performing Financing (NPF) in the Indonesian Islamic Banks. *Asian Journal of Economic Modelling*, 3(3), 61-79. <https://doi.org/10.18488/journal.8/2015.3.3/8.3.61.79>
- Jakubík, P. (2007). Macroeconomic environment and credit risk. *Finance a Uver - Czech Journal of Economics and Finance*, 57(1-2), 60-78.
- Mutamimah, S., & Chasanah, N. Z. (2012). [Analisis Eksternal Dan Internal Dalam Menentukan Non-Performing Financing Bank Umum Syariah di Indonesia]. *Jurnal Bisnis Dan Ekonomi (JBE)*, 19(1), 49-64.
- Pertiwi, R. E., Syaikat, Y., & Rachmina, D. (2020). [Faktor Yang Memengaruhi Kredit Bermasalah Bank Konvensional Dan Syariah di Indonesia]. *Jurnal Aplikasi Bisnis Dan Manajemen*, 6(1), 118-127. <https://doi.org/10.17358/jabm.6.1.118>
- Raharjo, B. (2009). [Dasar-dasar Analisis Fundamental Saham Laporan Keuangan perusahaan]. Gajah Mada University.
- Roberts. G., A. F. (1992). *Chitin Chemistry*. Macmillan International.
- Siegel, B. N. (1982). *Money, Banking, and the Economy*. Academic Press, Inc.
- Soekapdjo, S., Tribudhi, D. A., & Nugroho, L. (2019). [Pengaruh Fundamental Ekonomi dan Kinerja Keuangan Terhadap Kredit Bermasalah Pada Bank Syariah Di Indonesia.] *Ekonika: Jurnal Ekonomi Universitas Kadiri*, 4(2), 126. <https://doi.org/10.30737/ekonika.v4i2.327>
- Sudarsono, H. (2018). [Analisis Pengaruh Variabel Mikro Dan Makro Terhadap Npf Perbankan Syariah Di Indonesia]. *Equilibrium: Jurnal Ekonomi Syariah*, 6(1), 1. <https://doi.org/10.21043/equilibrium.v6i1.3040>
- Widarjono, A., & Rudatin, A. (2021). Financing diversification and Indonesian Islamic bank's non-performing financing. *Jurnal Ekonomi & Keuangan Islam performing financing*. 7(1), 45-58.
- Muhammad, M. (2019). Determinants of Non-Performing Financing (NPF) on Sharia Rural Banks (BPRS) in Indonesia. *Efficient: Indonesian Journal of Development Economics*, 2(1), 341-353.