BANKS SECTOR STABILITY RESPONSE TO MACROECONOMIC SHOCK AND BANK FUNDAMENTAL FACTORS: EVIDENCE FROM INDONESIA

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Abstract
Banks is an important financial institution, where banks is a pillar in the Indonesian economy. Banks has the main task of being a financial intermediary institution. The magnitude of the role of banks in the financial sector can be seen from the composition of the assets of financial institutions. Banks dominate the total assets of financial institutions. For this reason, it is important for the government and related institutions to maintain banks security. If the condition of a bank is healthy, it will create banks resilience in the face of monetary shocks that can shake Indonesia. But there are factors that can affect banks, namely internal and external factors. Internal factors can be seen from banks fundamentals, while external factors can be seen from Indonesia's macroeconomics. The purpose of this research is to find out and analyze the influence of fundamental factors or macroeconomic factors on the goals of banks in Indonesia. The analytical method used in this study is the Partial Adjustment Model (PAM). The data used are data on inflation, bi rate, rupiah exchange rate, and financial statements for each bank. From the analysis results show that the Rupiah Exchange Rate, CAR, and NPL have a significant effect on banks, while Inflation, Bi Rate, and NIM have no significant effect on banks.

Keywords: Banks Stability, Macroeconomic Factors, and Factors Fundamental

A. INTRODUCTION

Indonesia has several problems related to the economic system, one of which is banks stability. Where banks stability is an important problem in the economy today after the Asian economic crisis in 1998 and also the global crisis in 2008. The crisis can be evidence that the stability of a country's economy is influenced by financial system stability (Munandar,2016). Banks has an important role and is considered a pillar of the national economy, so that if a country occurs in a crisis, the banks sector must be saved (Munandar,2016). If a bank goes bankrupt, it will pose a systematic risk to other banks and can jeopardize the stability of the economy as a whole.

Banks is an important financial institution in the economy of a country. Where banks has a role as an intermediary institution that distributes funds from parties who have excess funds to be channeled to parties who lack funds. Banks is a place in various transactions that are closely related to finance, a place to save money, invest, make payments, send money, etc. The progress of banks in a country can be used as a benchmark for the progress of the country itself. The more developed a country, the greater the role of banks in controlling the country. Banks system stability and monetary stability are two things that are interrelated with each other. The stability of the banks system is a reflection of a healthy banks condition and also that banks are carrying

out their functions well, namely as an intermediary institution. If the bank is in a healthy condition, it will create banks resilience in the face of monetary stability that may shake the Indonesian economy. The stability of the banks system is one part of the stability of the financial system, where if the banks system is not stable it causes financial instability which will give rise to various credit, liquidity, market and capital risks. Financial system stability is part of the economic system that has an important role (Izazi, 2014).

Disturbances in banks stability can occur due to two factors, namely internal factors and external factors. Where internal factors are related to all policies and decisions in managing the bank's operational strategy. Meanwhile, external factors are risks beyond the control of banks which usually occur due to macroeconomic shocks. From external factors, there are several components that must be considered by the government and also Bank Indonesia as a form of maintaining the banks system stability.

Thus, it is necessary to conduct a health analysis for banks as an early warning as a sign of a healthy or unhealthy bank, so that it is good for banks to make repairs or early warnings. Many statistical methods are constantly evolving to predict health. Financial stability in the banks industry can be measured using overall bank risk through the z-score. Z-score is used to measure the stability of a company that describes the level of bankruptcy in assessing stability (Izazi, 2014).

B. LITERATURE REVIEW

Definition of Bank Stability
Bank stability is the bank's ability to carry out its inter mediation function properly and free from problems of financial difficulties. A stable bank is able to assess and manage risk effectively and allocate its resources efficiently. Banks with good stability also have strong resilience so that banks can maintain their business continuity in different economic environments, including when there are sudden economic disruptions.

According to Izazi (2014), banks system stability is one part of financial system stability. An unstable banks system has the potential to cause financial instability which creates various risks such as credit risk, liquidity risk, and market risk. Financial system stability is an important part of the economy.

Factors Affecting Bank Stability
According to Kocabay (2009) quoted from Izazi (2014), banks stability is influenced by several factors, including macroeconomic and institutional factors, namely factors originating from banks operational activities. If a bank experiences instability such as going bankrupt, it will affect the stability of the banks system as a whole and then affect the financial system.

According to Pakpahan (2016), monitoring is carried out to see systemic risks to financial stability. There are two main indicators in the monitoring target, namely micro indicators and macro indicators. The two indicators are interrelated in the financial and economic systems. The monitoring of micro indicators is carried out on the micro condition of financial institutions, this

monitoring is seen from liquidity risk, credit risk, and profitability of financial institutions, which is intended to measure the resilience of the financial system. Meanwhile, macro indicators are carried out on domestic and international macroeconomic conditions which will have an impact on financial stability.

The Relation of Monetary Policy to Banks Stability
The link between monetary policy and banks occurs through two stages of monetary transmission in the money circulation process. The first is the interaction between the central bank and banks in various transactions in the money market related to the monetary operations of the central bank and liquidity management by banks. Through this interaction, monetary policy affects interest rates, the volume of third party funds, lending to business owner economic activity, both in the form of savings and credit to be channeled to the business world. So that this development will affect aggregate demand in the real sector, both consumption and investment so that it will determine the level of economic growth and also the value of inflation which is the final target of monetary policy (Baboucek, Ivan dan Martin Jancar. 2008).

There is an imbalance between the money market and the credit market, both because of banks conditions as well as the structure and operation of the financial market, the operation of the money supply channel cannot guarantee that the interest rate channel will also run normally. The money channel and credit channel are more concerned with the quantity aspect of the money circulation process in the economy, while the interest rate channel is more concerned with the price aspect in the financial market for various economic activities in the real sector. The monetary policy adopted by the central bank will affect the development of interest rates in the financial sector, which in turn will affect consumption and investment, and ultimately the level of inflation and real output. The interest rate transmission process does not take place immediately but there is a time lag due to the internal conditions of the banks system in managing its assets and liabilities.

The Relation of Banks Fundamentals to Banks Stability
According to Ramlawati (2011) quoted from Jiwandono (2014), fundamental analysis is an attempt to estimate or predict the health and prospects of a company's profits, namely the ability of a company to generate profits in the future. One aspect of fundamental analysis is financial statement analysis. Strong fundamentals will increase the level of customer trust where with good fundamentals will generate public interest in trusting the soundness and stability of the bank itself. So that if the fundamentals of a bank decline or have problems, the stability of the banks system will decrease.

According to Dendawijaya (2001) that basically there are three principles that must be considered by banks, namely:

1. Liquidity means that the bank must be able to fulfill all its obligations.
2. Solvency is the ability of a bank to meet its financial obligations if the bank is liquidated, where solvable banks are banks that are able to guarantee all of their debts.
3. Profitability is the ability of a company to generate profits during a certain period.

Banks Stability Measurement

If a bank becomes unstable, such as bankruptcy, it will affect the stability of the banks system and will then affect the financial system. The Z-score itself is a risk measurement that is commonly used to determine the possibility of a bank's failure in running its business in many empirical banks studies. The Z-score is used as a proxy profitability, leverage, and return volatility into a single measure. The formula to find the Z-score uses the formula made by Boyd et al, that is: (Year?)

$$Z_{ROA} = \frac{ROA + \frac{Eq}{TA}}{SD_{ROA}}$$

Where:
Z: Z-score that describes bank stability
ROA: Return on Assets
Eq: Total equity or bank capital
TA: Total assets of the bank
SD: Standard deviation of ROA

The higher the Z-score, the more stable the bank. Banks that have a negative Z-score are bankrupt banks. Banks that have a Z-score close to zero tend to be unstable. Meanwhile, banks that have a Z-score much higher than zero have good stability (Nurhasanudin, 2017).

Factors Affecting Banks Stability:

a) External Factors (Macroeconomics)
External factors according to Dwijayanthy (2009) are variables that do not have a direct relationship with bank management, but these factors indirectly have an effect on the economy and law which will have an impact on the performance of financial institutions. One of the external factors used in this study is as follows:

a.i Inflation
Inflation is defined as a condition where there is an increase in the general price level, both for goods, services, and production. From this definition, it can be indicated that there is a weakening of purchasing power followed by a decline in the real value of a country (Samuelson, 2001).

a.ii BI Rate (benchmark interest rate)
According to Bank Indonesia (2014), the definition of the BI Rate is the reference interest rate (reference) of monetary policy and is determined at the Board of Governors' Meeting every month. Interest rate is a fee that is stated in a certain percentage in order to borrow money for a certain period of time which is the cost of bank credit to customers (interest rate).

a.iii Exchange rate

Exchange rate is the price of a currency of a country measured or expressed in another currency. Exchange rates play an important role in spending decisions. The exchange rate is also determined by the amount of demand and supply for a currency. If there is no exchange rate balance, the value of a currency can depreciate or appreciate.

b) Internal Factors (Bank Fundamentals)

Internal factors or factors originating from bank fundamentals are policy making and bank operational strategies such as decisions related to capital, financing and bank risk management. One of the internal factors used in this study are as follows:

b.i Non-Performing Loans (NPL)

NPL is the rate of return of credit made by borrowers or depositors to the bank. NPL can also be interpreted by the level of bad credit at the bank. The current amount of NPL allowed by Bank Indonesia is a maximum of 5%, if it exceeds 5% it will affect the assessment of the Bank's Soundness Level, and will also have an impact on the reputation of the bank itself. The greater the level of NPL, it will indicate that the bank is not able to manage its credit, and also gives an indication that the level of risk is high on lending to the bank (Mawardi, 2015).

b.ii Net Interest Margin (NIM)

NIM (Net Interest Margin) is one of the capabilities of a bank in managing maturities on interest rate related products in terms of assets and liabilities. NIM is the ratio between net interest income and total earning assets owned by the bank. Net interest is the difference between interest income and interest expense. Earning assets are assets owned by a bank which can generate income. The higher the NIM value, the better the performance of the bank concerned (January, 2002).

b.iii Capital Adequacy Ratio (CAR)

CAR (Capital Adequacy Ratio) is one measure to determine whether the capital owned by the bank is considered sufficient or not. CAR is a bank's capital adequacy ratio or the bank's ability to use capital for precautionary funds used to cover losses obtained by the bank (Dendawijaya, 2001).

C. FRAMEWORK AND HYPOTHESES

Framework

The framework of this research can be seen in Figure 1 below which briefly explains that banks stability is determined by macro and micro factors. Macro factors are none other than macroeconomic variables (inflation, BI Rate, exchange rate) and micro factors namely banks fundamentals (NPL, NIM, CAR). Furthermore, the relationship between the factors can be made a plot as shown in the following figure.

Figure 1 Framework
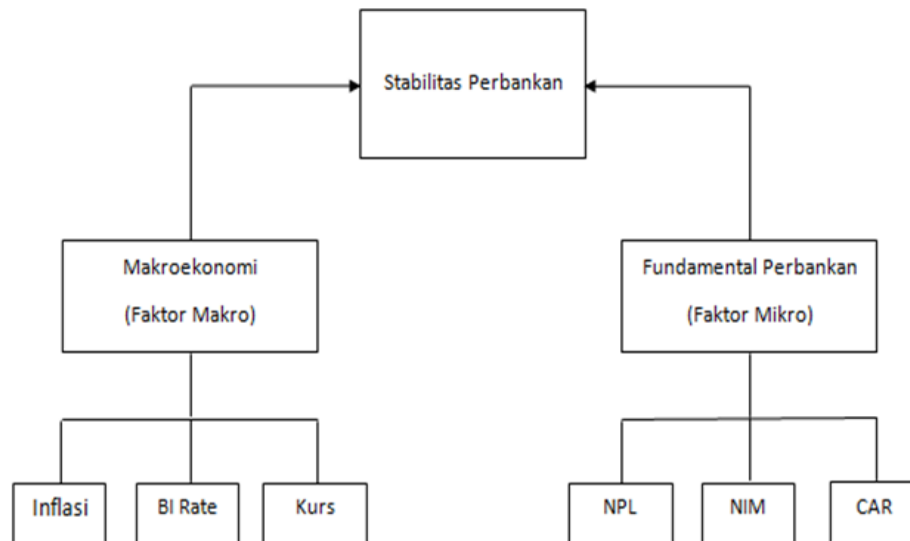
Hypothesis

Based on the flow chart above, a hypothesis can be drawn up as below.

H1 = Inflation has a negative effect on banks stability

H2 = BI Rate has a negative effect on banks stability

H3 = Rupiah Exchange Rate (Exchange Rate) has a negative effect on banks stability

H4 = NPL has a negative effect on banks stability

H5 = NIM has a positive effect on banks stability

H6 = CAR has a positive effect on banks stability

D. RESEARCH METHOD

On this occasion, it is explained about the types of variables and models as well as the analytical methods used in this study. For that, you can follow the following description:

Dependent Variable

The dependent variable in this study is the z-score which measures banks stability. The Z-score is a proxy for the probability of bank failure. The samples included in the z-score are conventional banks samples which will later become the average banks industry, namely BCA, BNI, Mandiri, and BRI. Where these banks are banks that are included in book 4.

Independent Variable

The independent variables used in this study for macroeconomic factors are Inflation, BI rate, and the Exchange rate. As for the fundamental factors, namely CAR, NIM, NPL.

Models and Methods of Analysis

The analytical model in this study is the Partial Adjustment Model (PAM) which is processed using the Ordinary Least Squares (OLS) method. The equation used in multiple linear regression is as follows:

$$Y = α1 + β1\ X1 + β2\ X2 + β3\ X3 + β4\ X4 + β5\ X5 + β6\ X6 + β7\ Y\ (-1) + ϵ$$

Where,
Y = Z-Score
X1 = Inflation
X2 = Exchange rate
X3 = BI Rate
X4 = CAR
X5 = NIM
X6 = NPL
Y (-1) = Autoregressive dependent

E. RESULTS AND DISCUSSION

RESULTS

Partial adjustment model is an analysis of the relationship between one dependent variable and two or more independent variables which can also be used to analyze the response of a variable due to pretentiousness or shocks from other variables. To determine the response of the dependent variable due to changes in the independent variable, the regression coefficient of the lag of the dependent variable is commonly used, namely Z-score (-1). The independent variables are Inflation, Rupiah Exchange Rate (Exchange), BI Rate, CAR, NIM, and NPL. Then from the results of calculations using Eviews, the following regression equation is obtained:

Z-SCORE = 11.95 + 0.099(INFLASI) - 0.091(KURS) - 0.891(BIRATE)

Sig   (0.000)   (0.645)   (0.022)   (0.062)

          - 1.184(CAR) + 0.589(NIM) - 1.825(NPL) + 0.245 Z-SCORE (-1)

          (0.007)   (0.122)   (0.000)   (0.036)

The regression results show that there are two possibilities for the linear function in explaining the independent variable to the dependent variable when using two directions. The positive sign indicates that there is a positive relationship between the independent and dependent variables, while the negative sign indicates that there is a negative relationship between the independent and dependent variables.

Satatistical Verification:
Overall Test (F Test)
Based on the results of the analysis, it can be seen that the Prob (F-statistic) value is 0.0000 or less than 0.05. Thus it can be said that all independent variables in macroeconomic variables (Inflation, Bi Rate, and Exchange) and fundamental variables (CAR, NIM, and NPL) simultaneously have an influence on the occurrence of banks stability or in other words all variables can simultaneously be used as predictor in the equation model.

Partial Test (t-test)
If t-count > t-table or prob-sig < = 5%, it means that each independent variable has a significant positive effect on the dependent variable. The results of the partial test (t test) between INFLATION and Z-SCORE showed a t-count value of 0.2550 with a significance value of prob. of 0.7987. This means that the effect of INFLATION on Banks Stability is not significant.

Partial test results (t test) between KURS and Z-SCORE shows the t-count value of -2.0870 with a significance value of prob. of 0.0369. This means that the effect of the Exchange Rate on Banks Stability is negative but significant.

The results of the partial test (t test) between BI RATE and Z-SCORE showed a t-count value of -1.1602 with a significance value of prob. of 0.2459. This means that the effect of BI RATE on Banks Stability is not significant.

The results of the partial test (t test) between CAR and Z-SCORE show a t-count value of 2.0420 with a significance value of prob. of 0.0485. This means that the effect of CAR on Banks Stability is positive and significant. NIM variable.

The results of the partial test (t test) between NIM and Z-SCORE showed a t-count value of 1.7579 with a significance value of prob. of 0.0788. This means that the effect of NIM on Banks Stability is not significant.

The results of the partial test (t test) between NPL and Z-SCORE showed a t-count value of -9.9356 with a significance value of prob. of 0.0000. This means that the effect of NPL on Banks Stability is negative but significant.

Goodness of Fit Test (R2)
The results of the calculation of the R-Square test obtained a value of 0.7948. This means that 79.48% of the Z-Score level can be explained by the variables of Inflation, Exchange Rate, BI Rate, CAR, NIM, and NPL. While the remaining 20.52% Z-Score can be explained by other variables that are not included in the regression model.

Econometrical Verification:
Normality test
The results of the normality test show that the probability value > 0.05 is 0.0363 < 0.05. So it can be said that the data is not normally distributed.

However, based on the assumption of the Central Limited Theory proposed by Dielman in 1961 in Indrawati (2013), it states that the observational data of the research sample will be considered normal if the observational data in the research sample is more than 30 (n > 30) observations, even though the Probability results show inconsistent results. significant below 0.05 but researchers used 40 observations in the study so that the data is considered normal.

Autocorrelation Test
Based on the test results show that the value of Prob. Chi-Square(2) is 0.0760, which indicates that Prob. Chi Square (2) 0.0760 > 0.05. Thus, it can be said that there is no autocorrelation in this regression model.

Multicollinearity Test
Based on the table above, the VIF value for all independent variables consisting of Inflation, Rupiah Exchange Rate (Exchange), BI Rate, CAR, NPL, NIM has a VIF value below 10, so the regression model in this study is said to be free from multicollinearity.

Heteroscedasticity Test
From the test results obtained the results of Prob. Chi-Square (2) is 0.9732. Where if Prob. Chi-Square (2) > then there is no heteroscedasticity. And the Prob value. Chi-Square (2) 0.9732 > 0.05 which indicates that the tested variable does not contain heteroscedasticity. This means that there is no correlation between the size of the data and the residuals so that if the data is differentiated it does not cause the residual (error) to get bigger (Ghozali, 2006).

DISCUSSION

The Effect of Inflation on Banks Stability
Based on the results of testing the effect of inflation on banks stability as measured by the z-score, inflation has no effect on banks stability. This means that the macroeconomic variable, namely inflation or instability in the price of goods and services with the amount of goods or services available, does not affect the stability of the banks system itself. The results of this study are supported by research by Baboucek and Jancar (2005) conducted in Czech, research by Simon (2010) and research by Rahmawulan (2008) which states that inflation has no effect on banks stability because when inflation occurs where prices rise continuously, then people's purchasing power will decrease because the value of money continues to be eroded by inflation which causes rising production costs to ultimately harm producers. Producers are reluctant to continue their production, and producers can pause their production for a while so that this will only have an impact on producers and consumers.

The Effect of Exchange Rate on Banks Stability
Based on the results of testing the effect of the rupiah exchange rate variable (exchange rate) on banks stability as measured by the z-score, the effect of the exchange rate on banks stability is negative but significant so it can be stated that the rupiah exchange rate (exchange rate) has a significant negative effect on banks stability. The higher the rupiah exchange rate (exchange rate), the lower or lower the level of banks stability, this is because the depreciating exchange

rate will weaken the company's balance sheet so that it can reduce the ability to invest in the future. The results of this study support the research of Soebagio (2005) which examines the effect of the exchange rate aspect on Non Performing Loans (NPL). According to Wibowo (2016) NPL itself can be one that can measure the level of banks stability.

The factor of currency value (exchange rate) has a greater influence on debtors who borrow credit in foreign currency and market their products domestically at prices in the national currency. This causes interest expense and credit repayments to increase to beyond the debtor's liability limit. And also when the value of the currency rises, it will cause many investors to sell their foreign currency to banks as a result, banks must require large enough funds to meet their obligations (Sutojo, 2000).

Effect of BI Rate on Banks Stability
Based on the results of testing the influence of the BI Rate variable on banks stability, the effect of the Bi Rate or the interest rate set by Bank Indonesia has no effect on banks stability. The results of this study support the research of Simon (2010) and Agung et al (2001), where the BI Rate variable responded not significantly this is because the movement of the BI Rate reflects the level of risk in the economy concerned. When the central bank increases the Bi Rate, the inflation rate in the economy is increasing.

In the short term, the banks sector responded by increasing loan interest rates so that demand for credit fell for a while. This also led to a decrease in credit risk as reflected in the NPL ratio. If the bank has a high amount of non-performing financing, the bank will try to first evaluate their performance by temporarily stopping the distribution of financing. So that the BI Rate does not affect the level of banks stability.

Effect of Capital Adequacy Ratio (CAR) on Banks Stability
Based on the results of testing the effect of the variable Capital Adequacy Ratio (CAR) on banks stability, the effect of CAR on Banks Stability is positive and significant so it can be stated that CAR or capital ratio has a significant effect on banks stability.

This is in accordance with the theory expressed by Siamat (2005) that capital adequacy is a very important factor for banks in order to accommodate the risk of loss, especially the risk of loss due to non-payment of loans extended by conventional banks to their customers. Thus, when the CAR rises, it will reduce the risk in conventional banks.

The results of this study are in accordance with research by Ahmad and Ariff (2007) on banks in Malaysia, and Subagio (2005) in Indonesia, which state that CAR will determine the position of NPL. Meanwhile, according to Adiningsih (2000), when a bank has large capital reserves, it means the bank can minimize a risk that will later occur to the bank. Because CAR is a reserve of capital used to fund banks that are feared to suffer losses. The higher the CAR value, the greater the ability of banks to deal with various risks and also the bank will be able to finance various operational activities and contribute optimally to matters related to profitability.

Effect of Net Interest Margin on Banks Stability

Based on the results of testing the effect of the Nim variable on banks stability, NIM has no effect on banks stability. This is because NIM is used to determine the ability of bank management in managing productive assets that will generate net income. NIM is a measure to distinguish between the interest income earned by the bank and the amount of interest paid to the lender which can be called gross margin. For this reason, if the NIM decreases, the only effect is the interest income earned by banks without affecting the level of banks stability. So that the NIM level does not affect banks stability.

In the research of Martines Peria and Mody (2004) quoted from Izazi (2014), explains that high bank spreads can hinder the growth of savings and investment so that there are costs from the financial system that become a barrier for certain borrowers. This proves that a high NIM has a negative relationship with bank financial stability.

The Effect of Non-Performing Loans (NPL) on Banks Stability

Based on the results of testing the influence of the Non Performing Loan (NPL) variable on banks stability, the effect of NPL on Banks Stability is negative but significant so it can be stated that Non Performing Loan (NPL) has a significant effect on banks stability.

The results of this study are in accordance with research conducted by Wibowo (2010), which states that the higher the NPL ratio, the higher the risk borne by the bank, which is reflected in the greater capital that must be reserved by the bank to absorb risk. While the smaller the NPL ratio, the bank's performance and bank functions work well. Because Non-Performing Loans (NPLs) are also a proxy in measuring the level of banks stability, there is a significant relationship between NPLs and banks stability. According to Meslier et al. (2014) quoted from Izazi (2014) diversification of types of credit disbursed by a bank is also proven to increase banks stability, because the source of banks income can stabilize the level of bank profitability.

F. CONCLUSION

In this study, it was found that fundamental variables have more influence on banking stability, so it is expected that banks will be more careful from the internal side of banking itself. When the internal state of a bank is strong, the bank experiences only a few shocks when there are risks or problems beyond the control of the bank. And also banks should strengthen the capital aspect, namely the Capital Adequacy Ratio (CAR) and also focus more on the problem of bad loans, namely the level of Non Performing Loans (NPL) where to overcome the increase in non-performing loans in conventional banking, conventional banks must also be more sensitive to conditions. macroeconomics, especially the rupiah exchange rate (exchange rate) so that it can determine credit policies appropriately in order to control the level of NPLs. These aspects can affect banking stability. A high CAR value will increase Banking Stability, and a low NPL value will increase Banking Stability.

G. IMPLICATION

The implications of this research consist of three parts. First for the public, that by understanding the results of this research, the public can evaluate banks stability by taking into account

macroeconomic variables and bank fundamentals. Second for businesses, the results of this research can be used as a reference for making business plans and decisions. Three, for academics, this research can be used as a reference to develop further research with a broader analytical method than Parsial Adjustmen Model (PAM).

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Dependent Variable: ZSCORE
Method: Least Squares
Date: 03/28/21   Time: 12:47
Sample (adjusted): 2008Q2 2020Q4
Included observations: 51 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.95677	1.814440	6.589788	0.0000
INFLASI	0.099573	0.214330	0.464579	0.6446
BIRATE	-0.891283	0.464683	-1.918046	0.0618
KURS	-0.091080	0.038407	-2.371453	0.0223
CAR	-1.184495	0.419615	-2.822817	0.0072
NIM	0.589465	0.373122	1.579818	0.1215
NPL	-1.824880	0.295274	-6.180291	0.0000
ZSCORE(-1)	0.247689	0.114319	2.166635	0.0358

R-squared	0.789027	Mean dependent var	7.407843
Adjusted R-squared	0.754683	S.D. dependent var	0.678974
S.E. of regression	0.336292	Akaike info criterion	0.801428
Sum squared resid	4.862978	Schwarz criterion	1.104459
Log likelihood	-12.43641	Hannan-Quinn criter.	0.917225
F-statistic	22.97397	Durbin-Watson stat	1.674603
Prob(F-statistic)	0.000000		

Variance Inflation Factors
Date: 03/28/21   Time: 12:52
Sample: 2008Q1 2020Q4
Included observations: 51

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	3.292191	1484.641	NA
INFLASI	0.045937	64.62555	3.130064
BIRATE	0.215930	357.4578	3.096767
KURS	0.001475	79.22047	1.798345
CAR	0.176076	647.4757	1.547369
NIM	0.139220	222.3810	1.315187
NPL	0.087187	33.33409	3.399947
ZSCORE(-1)	0.013069	323.4774	2.847094

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.400425	Prob. F(7,43)	0.8968
Obs*R-squared	3.121012	Prob. Chi-Square(7)	0.8736
Scaled explained SS	4.762771	Prob. Chi-Square(7)	0.6889

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 03/28/21   Time: 12:53
Sample: 2008Q2 2020Q4
Included observations: 51

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.220053	1.124851	0.195628	0.8458
INFLASI	0.113188	0.132873	0.851856	0.3990
BIRATE	-0.338338	0.288077	-1.174468	0.2467
KURS	-0.005479	0.023810	-0.230109	0.8191
CAR	-0.075891	0.260137	-0.291733	0.7719
NIM	-0.035908	0.231315	-0.155235	0.8774
NPL	0.070854	0.183053	0.387069	0.7006
ZSCORE(-1)	0.082272	0.070872	1.160861	0.2521

R-squared	0.061196	Mean dependent var	0.095353
Adjusted R-squared	-0.091632	S.D. dependent var	0.199541
S.E. of regression	0.208482	Akaike info criterion	-0.154825
Sum squared resid	1.868990	Schwarz criterion	0.148207
Log likelihood	11.94804	Hannan-Quinn criter.	-0.039028
F-statistic	0.400425	Durbin-Watson stat	2.282102
Prob(F-statistic)	0.896776		

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.296751	Prob. F(2,41)	0.2844
Obs*R-squared	3.034136	Prob. Chi-Square(2)	0.2194

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 03/28/21   Time: 12:53
Sample: 2008Q2 2020Q4
Included observations: 51
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.977117	2.207689	0.895560	0.3757
INFLASI	0.008711	0.213485	0.040802	0.9677
BIRATE	-0.019187	0.461673	-0.041560	0.9671
KURS	-0.010536	0.039276	-0.268263	0.7898
CAR	0.035343	0.417338	0.084686	0.9329
NIM	0.015785	0.374752	0.042121	0.9666
NPL	-0.446582	0.409241	-1.091243	0.2815
ZSCORE(-1)	-0.214240	0.179093	-1.196249	0.2385
RESID(-1)	0.392240	0.243941	1.607933	0.1155
RESID(-2)	0.020822	0.168981	0.123223	0.9025

R-squared	0.059493	Mean dependent var	-9.88E-16
Adjusted R-squared	-0.146960	S.D. dependent var	0.311865
S.E. of regression	0.333995	Akaike info criterion	0.818523
Sum squared resid	4.573665	Schwarz criterion	1.197313
Log likelihood	-10.87234	Hannan-Quinn criter.	0.963270
F-statistic	0.288167	Durbin-Watson stat	1.979719
Prob(F-statistic)	0.974243		
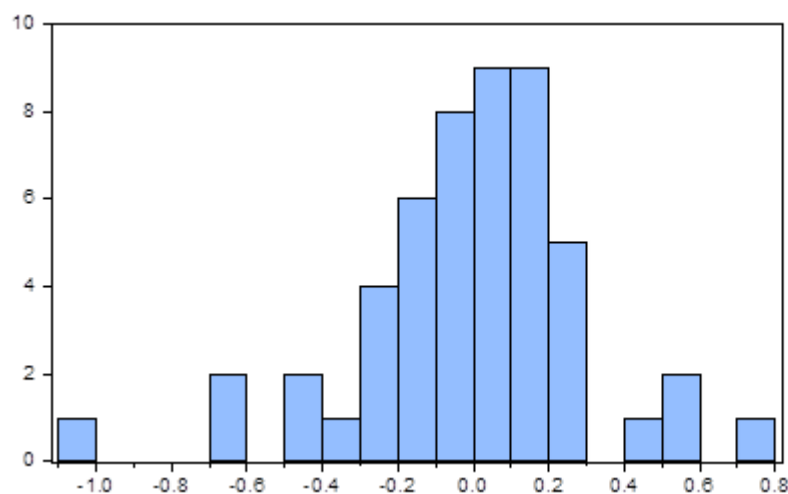
Series: Residuals
Sample 2008Q2 2020Q4
Observations 51

Mean	-9.88e-16
Median	0.032712
Maximum	0.747816
Minimum	-1.094705
Std. Dev.	0.311865
Skewness	-0.662663
Kurtosis	5.293365
Jarque-Bera	14.90902
Probability	0.000579