ANALYSIS OF EFFECT OF EXCHANGE RATE, INFLATION, AND POWER PURCHASE ON DISTRIBUTION OF CREDIT IN COMMON CONVENTIONAL BANKS

Debora Diazka Riani
Rony Joyo Negoro Octavianus
Tommy Mora Hamonangan Hutapea
Faculty of Economics and Business, Universitas Ma Chung, Indonesia

Abstract: This study aims to determine the macroeconomic effects seen from the exchange rate, inflation, and purchasing power to lending channeled by conventional banks. By this research is quantitative research with research type which used is causal research. The sampling in this study using purposive sampling method and found that the sample of this study is Bank BUKU 4. This study uses multiple linear regression analysis techniques. The results from the results of this study are when viewed partially, there are two variables that are not significant to the dependent variable, the exchange rate and inflation variables have a negative relationship toward the amount of loan disbursement and not significant. This applies to policies that the government and BI set to maintain the stability of the country’s economic system. As for the variable purchasing power has a significant influence and has a negative relationship with the amount of loan disbursement. From the results of this study is expected to continue to maintain the macroeconomic situation in Indonesia in order to increase the growth of lending and the importance of supervision from the government to maintain the stability of macroeconomic conditions in Indonesia

Keywords: Exchange Rate, Inflation, Power Purchase, Distribution of Credit

The condition of banking in Indonesia in September 2017 according to the assessment of Deposit Insurance Agency (DIA) condition of banking in Indonesia in a healthy condition. Seen from several indicators of improvement banking, the ratio of return on assets (ROA), which increased to 2.4% on an annual basis at the end of September 2017. The bank’s capital adequacy ratio (CAR) has also risen to 22.65% in the first nine months of 2017. On the other hand, bank liquidity is still adequate, reflected from the position of the loan to deposit ratio (LDR) in September 2017 which is at position 89% (Sitanggang, 2017).

Improved global economic growth in 2017 could be a momentum for banking credit expansion. Bank as a financial intermediary institution has the main task of channeling credit to the community in need. Although global economic growth is improving, the bank’s intermediary function is slow, as seen from the low level of Distribution of Credit. This is because the rate of credit growth in some regions in Indonesia has not met the government’s target. NTB Banking is one of them, still not too bold in increas-
ing the Distribution of Micro Credit Program (in Indonesian: Kredit Usaha Rakyat, or KUR) for Indonesian Migrant Worker. This is due to the lack of skills of migrant workers, the skills of the workers in terms of compliance administrative requirements, and the absence of collateral from the debtor to be able to pay off the loan (Septarini, 2017).

Another problem concerning Distribution of Credit is also experienced by Bank BNI, can be seen until November 2017, KUR distribution is still far below the target, which is only in the range of 55% for small segments. This is due to the government’s directive not to channel KUR dominantly to the trade sector, but to the agricultural and manufacturing sectors. Though the trade sector accounted for 50-60% of realization of KUR distribution in previous years (Ardhian, 2017). Banks are beginning to reduce the Distribution of Credit to the commercial sector. This is because the loan segment contributed the largest non-performing loan (NPL) increase, as reflected by several large banks experiencing an increase in the ratio of non-performing loans to commercial financing. There are two banks with nonperforming loan ratio in high commercial credit, that are Bank Mandiri 10.16% per September 2017 and CIMB Niaga 8% per September 2017 (Yudistira, 2017).

The intermediary function of this banking is inseparable from the effect of macroeconomic conditions in Indonesia such as the Exchange Rate, Inflation, and Power Purchase. Financial market turmoil in 2008 made the Rupiah Exchange Rate to US Dollar weakened and boosted commodity prices (Haryati, 2009). This indicates that if there is an increase in the level of Rupiah Exchange Rate to US Dollar to make the price of goods and services in the country become more competitive. therefore it will help bank customers to be able to make payments on loans made. Similarly, when there is high inflation, people tend to be reluctant to invest because the government will raise the benchmark interest rate. This makes the interest of the loan to be paid increases and in the end, the Distribution of Credit is also hampered (Akbar & Munawaroh, 2014). Power Purchase’s weakening condition can also hamper credit growth. As expressed by Bank Permata Economist, Josua Pardede in Sandy, that the slowing trend in credit growth in the second quarter of 2017 is influenced by the level of public Purchase Power which tends to be flat. This can also be seen from the decline in Indonesia’s manufacturing activity by lowering its production volume (Sandy, 2017).

The three things above can affect the banking policy in distributing credit to the community. As can be seen in research conducted by (Ditria, Vivian, & Widjaja, 2008) shows that the effect of macroeconomic indicators on the amount of credit. Where if there is an appreciation of the rupiah exchange rate against the USD then it will reduce the amount of credit disbursed, such as working capital loans. In the study (Sari & Abundanti, 2016) it was found that Inflation variable had a positive effect not significant to Distribution of Credit. This is because the inflation fluctuation rate in the period 2011-2015 is quite low, so Inflation only gives little influence on the interest rate that will affect the Distribution of Credit in commercial banks. The opposite is shown in the study (Sharma & Gounder, 2012). The results showed that Inflation has a significant negative effect on Distribution of Credit.

METHOD

This research is causal research with a quantitative approach to show a causal relationship, so in this research, there is independent and dependent variable (Sugiyono, 2016). The researcher wants to see the causal relationship between several variables that is the Exchange Rate (X1), Inflation (X3), Power Purchase (X3) and Number of Distribution of Credit by Conventional Commercial Bank (Y).

The sampling technique used in this research is purposive sampling with several provisions that must be met, including (a) is a Conventional Commercial Bank which publishes and publishes quarterly reports for the period 2011-2016, (b) Conventional Commercial Bank with the amount of Distribution of Credit largest by category Commercial Bank of Business Group (in Indonesia: Bank Umum Kelompok Usaha, or BUKU). Based on the criteria of purposive sampling, the appropriate sample is Bank BUKU 4. Bank BOOK 4 has the target of
Distribution of Credit or productive financing to MSMEs at least 70% of the total credit or financing. Bank BUKU 4 may conduct all business activities in both Rupiah and in foreign currency and capital participation in financial institutions in Indonesia and/or all regions abroad with a larger amount than BUKU 3 which is only limited to the Asian region. Included in Bank BUKU 4 through 2016 are BCA (Bank Central Asia), BNI (Bank Negara Indonesia), BRI (Bank Rakyat Indonesia), and Bank Mandiri (Kurniawan, 2017). The calculation data to be used in this research is obtained from a secondary data source. The data for the Exchange Rate variable is obtained from the calculation of the rupiah exchange rate against US Dollars obtained from BI transaction information on the official website of Bank Indonesia (BI). Inflation variable data can be directly found on publication published by BI in BI's official website. As for the Power Purchase variables obtained from the value of decent living standards published by Indonesia, Central Bureau of Statistics (Badan Pusat Statistik, 2017). Data analysis method used in this research is multiple linear regression analysis with the following formula:

\[ Y_i = a + b_1X_1 + b_2X_2 + b_3X_3 + e \]

Information:
- \( Y_i \) = Amount of Credit by Bank BUKU 4
- \( a \) = constants
- \( b_1, \ldots, b_3 \) = regression coefficient
- \( X_1 \) = Exchange Rate
- \( X_2 \) = Inflation
- \( X_3 \) = Power Purchase
- \( e \) = error

**RESULTS**

Table 1 Test Results FANOVA*

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>166.903</td>
<td>3</td>
<td>55.634</td>
<td>19.531</td>
<td>.000*</td>
</tr>
<tr>
<td>Residual</td>
<td>56.971</td>
<td>20</td>
<td>2.849</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>233.874</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Amount of Credit
b. Predictors: (Constant), Power Purchase, Inflation, Exchange Rate

Source: Primary data processed (2017)

Table 2 Results of Multiple Linear Regression Analysis Coefficients*

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>95.480</td>
<td>23.600</td>
<td>4.046</td>
<td>0.001</td>
</tr>
<tr>
<td>Exchange Rate</td>
<td>-0.000255545</td>
<td>0.00035816</td>
<td>-0.158</td>
<td>0.713</td>
</tr>
<tr>
<td>Inflation</td>
<td>-0.09250985</td>
<td>0.21820314</td>
<td>-0.052</td>
<td>0.424</td>
</tr>
<tr>
<td>Power Purchase</td>
<td>-0.00000881</td>
<td>0.00000267</td>
<td>-0.726</td>
<td>3.305</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Amount of Credit
Source: Primary data processed (2017)
DISCUSSION

Based on the results of the above research, it can be seen that from the three independent variables simultaneously have a significant influence on the number of Distribution of Credit. Based on Table 1 the value of F arithmetic amounted to 19.531. While Ftable \( \alpha = 0.05; df \text{ regression} = 3; df \text{ residual} = 20 \) is equal to 3.098. Because Fcount > Ftable is 19.531 > 3.098 or sig F value \( \alpha = 0.05 \) then model of regression analysis is significant. This means that H0 is rejected and Ha accepted so that it can be concluded that the dependent variable (Number of Distribution of Credit) can be influenced significantly by the independent variables (Exchange Rate (X1), Inflation (X2), and Power Purchase (X3)).

Based on Table 2. Multiple Regression Analysis results above can be seen how the direction and influence of each independent variable to the dependent variable. Seen from Table t, the t-table value \( \alpha = 0.05; df \text{ residual} = 20 \) in this study is 2.086. Test results between X1 (Exchange Rate) with Y (Number of Distribution of Credit) shows t-count = -0.713. Because t-table is -0.713 < 2.086 or sig t value (0.484) < \( \alpha = 0.05 \) then the effect of X1 (Exchange Rate) on the Number of Distribution of Credit is insignificant. This means that H0 is accepted and Ha is rejected so it can be concluded that the Number of Distribution of Credit is not significantly affected by the Exchange Rate.

While t-test results between X2 (Inflation) with Y (Number of Distribution of Credit) shows t-count = -0.424. Because t-table is -0.424 < 2.086 or sig t value (0.676) > \( \alpha = 0.05 \) then the effect of X2 (Inflation) on the Number of Distribution of Credit is not significant at alpha 5%. This means that H0 is accepted so it can be concluded that the Number of Distribution of Credit can be influenced insignificantly by Inflation.

Likewise, T-test is also conducted between X3 (Power Purchase) with Y (Number of Distribution of Credit) which shows the result t-count = -3.305. Because t-table is -3.05 < 2.086 or sig t value \( \alpha = 0.05 \) then the effect of X3 (Power Purchase) on the Number of Distribution of Credit is significant at alpha 5%. This means H0 is rejected and Ha accepted so it can be concluded that the Number of Distribution of Credit can be affected significantly by Power Purchase.

The coefficient of determination is used to calculate the magnitude of influence or contribution of independent variables to the dependent variable. From the analysis in Table 3, the result of adjusted R (coefficient of determination) was 0.707. This means that 70.7% of the Number of Distribution of Credit variables will be influenced by the independent variables, namely Exchange Rate (X1), Inflation (X2), and Power Purchase (X3). While the remaining 29.3% variable Number of Distribution of Credit will be influenced by other variables that are not discussed in this study.

In addition to the coefficient of determination also obtained correlation coefficient which shows the amount of relationship between independent variables ie Exchange Rate, Inflation, and Power Purchase with variable Number of Distribution of Credit, R-value (correlation coefficient) of 0.863, this correlation value indicates that the relationship between independent variables ie Exchange Rate (X1), Inflation (X2), and Power Purchase (X3) with the Number of Distribution of Credit are very strong because they are in the range of 0.8 to 1.0.

The conditions of the Exchange Rate and Inflation during the period 2011-2016 are actually quite varied, several economic phenomena occurred during that period. However, this does not have a great influence on the number of Distribution of Credit by banks. Basically, the economic development of a country depends not only on domestic economic conditions but also influenced by the economic situation of other countries in the world. When the world economy undergoes drastic changes, this will have an impact on the economy in Indonesia. Bank Indonesia always strives to respond to world economic conditions by maintaining macroeconomic stability and strengthening national economic fundamentals.
As inflation in 2011 was caused by the increasing prices in 2010. International commodity prices began to rise, such as food commodities and also oil prices began to increase again. Uncontrolled inflation will certainly degrade the Power Purchase community slowly but surely. For lower-middle-class people, an increase in inflation will affect people’s income. This is because the tendency of middle to lower society to hold their wealth in the form of cash with a much greater proportion than the upper middle society. Inflation also affects upper-middle-class people, but with the high income, they can access financial institutions to avoid the impact of Inflation (Munandar, 2011).

Bank Indonesia is mandated by the Law to be able to control Inflation by managing people’s demand for goods and services so as not to exceed the economic capability. This is because Inflation can arise if the amount of demand exceeds the supply of supplies. To manage the demand, BI set the interest rate through the determination of the BI Rate so that consumption and investment needs remain balanced. This determination will affect lending rates and bank loans, where the increase will lead to increased savings and deposits and reduce the level of consumption and investment. With this reduction means balancing the number of requests so as to minimize price increases. Inflation control can also be done by maintaining the stability of the Exchange Rate. When the Exchange Rate strengthens, export goods will be cheaper along with the decline in the competitiveness of domestic products that impact on the decline in economic growth. Not only reducing public demand, the government is also working to increase the number of goods and services produced by optimizing fiscal policy and sectoral policies. Increasing the production of goods and services by the government by providing infrastructure and creating a conducive investment climate.

As mentioned in Law no. 21 of 2011 on OJK, the role of Bank Indonesia is to implement macroprudential policy, which is the task of BI to make all efforts to maintain the stability of the financial system. The instability of the financial system can come from the pressure of inflation as well as the volatility of the rupiah exchange rate. Therefore, this macroprudential policy is done to solve both problems (Redaksi Newsletter Bank Indonesia, 2014).

Of the several policies that have been taken by the government and BI that causes that any changes that occur in the Exchange Rate and Inflation do not give a big influence in the Distribution of Credit by the Bank. Once there is a change in macroeconomic conditions, BI will immediately take the policy to reduce the fluctuations that occur. Policies taken by BI were not done to overcome the existing problems, but only to minimize the impact that may occur when macroeconomic fluctuations.

![Figure 1 Tendency Index](source)

Source: (Badan Pusat Statistik, 2017)
Figure 1 shows the value of business and consumer tendency indexes throughout 2011 to 2016. These two values indicate the general condition of the business and consumer economy in Indonesia in the short term (quarterly). From the graph, it can be seen that the index of consumer tendency has a higher value than the index of business tendency.

Based on the value of Consumer Tendency Index it can be assumed that when Power Purchase society increases, the level of Distribution of Credit will decrease. People tend to use money held for consumption rather than as working capital. When people spend more money on consumptive needs, it can be said that the acceptance of money received by society is limited. Therefore the risk of default on the loan received is greater. The higher the NPL, of course, this will make Distribution of Credit inhibited (Selviana & Khairunnisa, 2015).

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Based on the results of the above research, it can be concluded that the three independent variables simultaneously affect significantly to the dependent variable. This shows that the three variables simultaneously can increase or decrease the amount of Distribution of Credit. Partially, Exchange Rate and Inflation variables are partially negative and insignificant to Number of Distribution of Credit, while Power Purchase variable has significant negative effect. This indicates that any weakening of Exchange Rate will increase the amount of Distribution of Credit by banking. And as Inflation increases, the number of Distribution of Credit by banks will decrease. Also when Power Purchase decreases, the number of Distribution of Credit will increase.

Recommendation

People are expected to understand macroeconomic conditions and how to act primarily related to credit demand to banks. So people are wiser in managing their consumptive power and helping to increase the growth of bank credit. The expectation to be conveyed in banking institutions is if the banking company can continue to maintain its performance in overseeing the macroeconomic situation in Indonesia. This is important to do so that banks can continue to increase the growth of Distribution of Credit to the public. The expectation to be directed to the government is if the government can also participate actively in carrying out supervision on indicators of Exchange Rate, Inflation, and Power Purchase as a reference point in maintaining the stabilization of Distribution of Credit in the economic sector.

REFERENCES


