Analysis of Factors Affecting Credit Distribution to Banks Listed on The Indonesia Stock Exchange (2017-2022)

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Research article

Abstract: The study aims to analyze the influence of factors that affect credit distribution by banks. The research period was conducted for 6 (six) years from 2017 to 2022. The data used are secondary data with quantitative methods. The variables used in this study are DPK, CAR, LDR, NPL, ROA as independent variables, and credit distribution as dependent variables. The population used in this study is conventional commercial banks. By using purposive sampling, the selected banks are banks listed on the IDX, and have individual financial statements at the end of the year during the study period so that 39 conventional commercial banks were selected. The analysis method used is data panel regression using the eviews 9.0 analysis tool. Based on the results of the analysis in the study, it was found that deposits and LDRs have a positive influence on credit distribution by banks. The CAR variable has a negative influence on credit distribution. NPL and ROA variables do not affect lending policy. Meanwhile, simultaneously the five variables affect credit distribution policy.

Keywords: DPK; CAR; LDR; NPL; ROA; credit distribution.

1. Introduction

Bank as a financial institution that functions as an intermediary for the circulation of funds in the community by collecting funds from the community and distributing them to the community in the form of credit. The activity of collecting funds from the public is called third party funds (DPK). DPK is the main source of funds for credit distribution, so increasing third-party funds will increase the fund of credit distribution that provide benefits for banks like interest on loan. The amount of funds disbursed by banks is of course influenced by various factors, both internal and external factors. This study focusses on internal factors seen from the company's financial condition. These factors are important to consider for maintaining credit performance. Non-performing loans (NPL) is one of ratio which set by the government to be a signal for the top enhancement risk occurring credit consequence. The increasing of NPL value shows an increasing risk credit consequence congestion payback of credit so the bank should reduce the lending fund to prevent risks. Apart from NPLs and DPK, Capital adequacy ratio (CAR) is a ratio that shows conditions health bank capital. A high CAR value indicates that the company has sufficient capital to handle exposure current and future risks comes, so the bank is able to increase the credit funds disbursed. Other factor is loan to deposit ratio (LDR), this ratio shows the level of bank liquidity which is increasing of LDR shows that the bank is not liquid enough to handle short obligations period (DPK) as a result no balance between lending funds (loan) and (DPK). The last factor is Return on asset (ROA), this ratio

shows the ability of bank to produce profit through asset management, (Dendawijaya, 2003). The increasing of ROA means the bank can optimize their assets to get return. loan or credit distribution is one of asset part, increasing credit will increase ROA, in other hand, bank will be increasing credit in this year when the value of ROA is high in the last year.
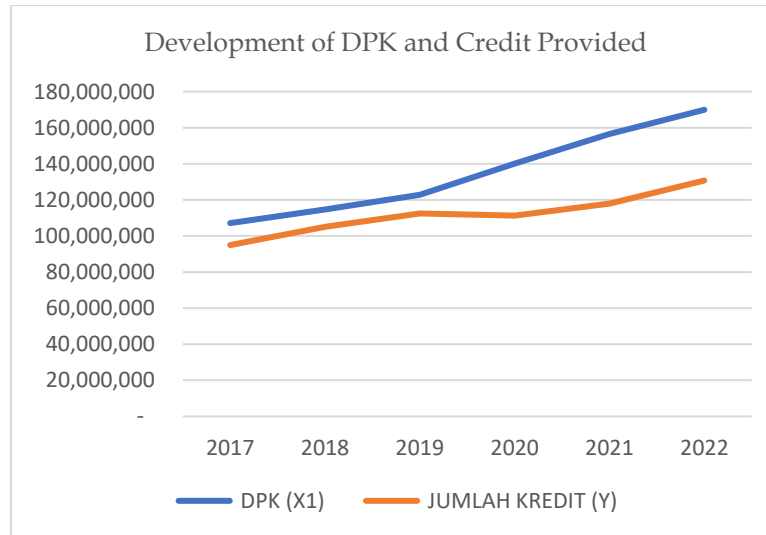

Figure 1. Average Third Party Funds and Total Loans Provided by BUK 2017-2022 (Data Processed)

Based on figure 1, showing an increase in DPK and total credit, then accordance with the theory, an increase in DPK will increase bank lending.
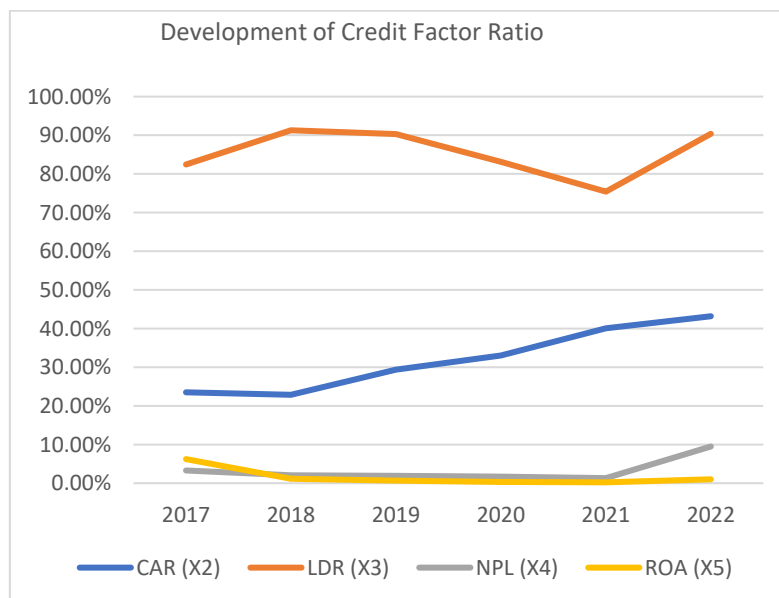

Figure 2. NPL, CAR, LDR, ROA at 39 Conventional Commercial Banks during 2017-2022 (Data Processed)

Other information, figure 2 show the increase in lending tends to be accompanied by an increase in LDR, and NPL where these two ratios describe credit risk, namely LDR shows the ability of a bank to settle short-term obligations, namely on credit disbursed. An increase in LDR should give a signal for banks to increase credit funds to reduce the liquidity risk. as well

as NPL where the NPL value has increased in the last 1 year, while ROA has decreased over the past 5 years which should have increased due to an increase in credit which of course will lead to an increase in profit derived from credit income (loan interest).

However, a few banks have different conditions were increasing in DPK but decline in lending, then other bank have increase credit distribution but have negative ROA conditions as well as NPL. Based on this phenomenon the author intends to analyze the effect of DPK, CAR, LDR, NPL, and ROA on Credit Distribution at Conventional Commercial Banks listed on the Indonesia Stock Exchange for the 2017-2022 period.

2. Literature Review

2.1. Credit Distribution

According to Article 1 paragraph 11 of Law No. 10 of 1998 concerning banking, credit is the provision of money or bills that can be equated with it, based on a loan agreement or agreement between the bank and another party that requires the borrower to repay the debt. Dendawijaya (2003) argues that funds collected from the public can reach 80% -90% of all funds managed by banks and credit activities reach 70% -80% of bank business activities.

2.2. Third-Party Funds

Third party funds are a source of bank funds originating from the public in the form of savings, demand deposits and time deposits. This source of funds is the main source of funds in carrying out its operational activities, namely lending. Therefore, the size of the amount of credit disbursement really depends on the amount of funds that the bank managed to collect. According to the results of research conducted by Sholicha (2021) and Suryawati (2018) stated that DPK has a positive and significant influence on lending.

H1: DPK has a positive influence on credit distribution.

2.3. Capital Adequacy Ratio (CAR)

Capital adequacy ratio (CAR) is a ratio used to see the ability of capital owned by a bank to finance all bank assets that contain risks, such as lending (Dendawijaya, 2003). Capital is the main determining factor that must be considered by banks because this capital aims to create balance, absorb losses, and maintain customer confidence (Yuwono, 2012).

H2: CAR has a positive effect on lending.

2.4. Loan to Deposit Ratio (LDR)

Loan to deposit ratio or LDR is used to measure the level of bank liquidity or how far the bank's ability to meet its short-term obligations. LDR is a ratio that compares the amount of credit extended by a bank to the amount of funds raised by a bank. According to Bank Indonesia, the LDR ratio of banking in Indonesia is expected to be in the range of 85% -100%. The higher the LDR, the greater the bank's need to increase the collection of funds from customers or other third parties. This can encourage banks to be more aggressive in offering banking products such as deposits and savings, which in turn can increase bank funding sources. Therefore, a high LDR can affect bank credit policy by providing adequate financial support for banks in extending credit to customers.

H3: LDR has a positive effect on credit distribution.

2.5. Non-Performing Loans (NPL)

Non-performing loan or NPL is a ratio that reflects credit risk. NPL is the percentage of non-performing loans in the substandard, doubtful and loss categories compared to the amount of loans disbursed by banks. The credit quality of a bank is said to be poor if this ratio is higher because with this high ratio the bank's capital will be eroded because it has to provide larger reserves. Bank Indonesia regulations for banks to maintain the NPL ratio below 5%.

H4: NPL has a negative effect on lending.

2.6. Return on Assets (ROA)

Return on assets or ROA is the ratio used to measure the ability of bank management to manage assets to generate profit (profit) (Dendawijaya, 2003). The greater the ROA value reflects the greater the level of profit obtained by the bank, and the better the position of the fund in terms of asset use.

H5: ROA has a positive effect on credit distribution.

3. Research Methods

This research use quantitative method that using secondary data. The source of data that will be obtained by researchers in conducting this research is internal data derived from individual financial reports that are presented at the end of the year through the website on the official website of each bank. The population used in this study are conventional commercial banks listed on the Indonesian Stock Exchange (BEI). Sampling technique uses Purposive Sampling Technique with the criteria for determining the sample for this study are conventional commercial banks listed on the Indonesia Stock Exchange that attach individual financial information regarding variables related to the research, so we got 39 banks fo 41 bank from the characteristic sample. Moreover, this research use 6 years from 2017 to 2022, so we get 234 data consisting of 6 (six) variables, 5 (five) independent variables and 1 (one) dependent variable. The independent variables used for this study are Third Party Funds (DPK), Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), Loan to Deposit Ratio (LDR) and Return on Assets (ROA), while the dependent variable will be used to conduct this research is lending to conventional commercial banks listed on the Indonesia Stock Exchange for the 2017-2022 period.

4. Results and Discussion

This study analyzes the factors that influence lending to conventional commercial banks with a total of 39 banks from 2017 to 2022, so that the data obtained for research is 234 data. This study uses 5 variables that are believed to have an influence on bank lending. The five independent variables used are DPK (X1), CAR (X2), LDR (X3), NPL (X4), and ROA (X5) while the dependent variable is lending (Y). The following is the result of a statistical description of the data used.

Table 1. Statistics Description

	X1	X2	X3	X4	X5	Y
Mean	1,71	0,32	0,85	0,03	0,02	1,69
Median	1,68	0,23	0,84	0,01	0,01	1,65
Maximum	2,10	2,83	3,55	3,23	2,01	2,08
Minimum	1,24	0,00	0,01	-0,03	-,16	1,26

	X1	X2	X3	X4	X5	Y
Std. Dev.	1,97	0,30	0,34	0,21	0,13	1,94
Observations	234	234	234	234	234	234

Based on the Descriptive Statistics table above, it shows that N is the data used to conduct research, namely 234 data. In the DPK variable (X1), it has a minimum value of 1.24 with an average value of 1.71 and a standard deviation value of 1.97. The second variable, CAR (X2), has a minimum value of 0.00, with a standard deviation of 0.30 and an average value of 0.32. The third variable, namely LDR (X3), has a minimum value of 0.01 with an average value of 0.85 and a standard deviation of 0.34. The fourth variable, namely NPL (X4), has a minimum value of -0.03 with an average value of 0.03 and a standard deviation of 0.21. The last variable is ROA (X5) which has a minimum value of -0.16, an average value of 0.02 and a standard deviation value of 0.13. Furthermore, the dependent variable, namely lending (Y), has a minimum value of 1.26, an average value of 1.69 and a standard deviation value of 1.94.

4.1. Regression Data Panel

Table 2. Panel Data Regression Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.283525	0.746892	3.057370	0.0026
X1	0.821681	0.042960	19.12645	0.0000
X2	-0.262395	0.074919	-3.502382	0.0006
X3	0.776886	0.072331	10.74073	0.0000
X4	-0.132388	0.071781	-1.844348	0.0667
X5	-0.150582	0.115925	-1.298957	0.1955

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.990190	Mean dependent var	16.93474
Adjusted R-squared	0.987970	S.D. dependent var	1.940289
S.E. of regression	0.212814	Akaike info criterion	-0.089022
Sum squared resid	8.605091	Schwarz criterion	0.560697
Log likelihood	54.41554	Hannan-Quinn criter.	0.172944
F-statistic	446.0024	Durbin-Watson stat	1.469710
Prob(F-statistic)	0.000000		

Based on the results of testing the selection of the panel data regression model, the Fixed Effect Model was selected as the panel data regression model to be used to do data processing in this research. Figure 3 above shows the regression results *fixed effect mode* l (FEM) with formula regression as follows.

Y = 2.283525+ 0.821681X1 - 0.262395 X2 + 0.776886 X3 -0.132388 X4 -0.150582 X5

it can be concluded that DPK (X1) and LDR (X3) have a significant positive effect on lending (Y), which means that each a 1 percent increase in DPK (X1) where other variables will remain resulted an increase of 1% in lending by 0.82168. Likewise, if a 1% increase in LDR (X3), where other variables are constant so will resulted increase in lending of 0.776886. Conversely, CAR (X2) has a negative influence on lending (Y), which means every 1 percent increase in CAR will decrease in lending by banks by -0.262395. While the other two variables, namely NPL (X4) and ROA (X5), also have a negative value which means each increase in this ratio

will reduce the amount of funds disbursed in the form of credit. However, these two variables have no significant relationship to credit distribution. This can also be interpreted that changes in these two variables do not affect significantly bank decisions in channeling credit funds.

4.2. Hypothesis Test

4.2.1. F test

Based on table 6 the FEM test shows that the value probability F statistic of 0.0000 things it shows smaller of alpha (α) 0.05 or 5% with thus it can be concluded that the independent variables, namely DPK, CAR, LDR, NPL, and ROA have linear relationship to the dependent variable, namely the distribution of credit funds granted. In other words, the selected model is feasible to interpret the effect of independent variables on the dependent variable. In other words, the independent variables simultaneously significantly influence the dependent variable.

4.2.2. T test

Based on table 6 the FEM test results show that three of the 4 independent variables significantly influence the distribution of credit given. The variables in question are DPK, CAR, and LDR. DPK (X1) and LDR (X3) have a significant positive effect on credit distribution, while CAR (X2) has a significant negative effect on bank credit distribution. Meanwhile, the other two variables, namely NPL (X4) and ROA (X5), have a negative and insignificant effect on credit distribution. It can also be said that changes in the two variables may not have a significant effect on credit distribution.

4.3. Discussion

4.3.1. The Effect of DPK (X1) on Total Credit Disbursement (Y)

Banks as an institution that has the main function of collecting funds from the community and channeling them to the community, of course, must continue to increase their DPK so that they are able to fulfill their operational activities, namely channeling funds. So that the largest source of funds owned by banks is obtained from third party funds originating from public deposits in the form of current accounts, savings, time deposits, certificates of deposit, and guarantee deposits. This source of funds is often used by banks for lending. So that the greater the third-party funds (DPK) collected by the bank will lead to a greater source of funds (loanable funds) collected by the bank, as well as causing an increase in the target amount of credit disbursement by the bank. This is done because from this credit distribution, the bank is also able to generate profits from loan interest. Therefore, it is important for banks to maintain stability and increase their DPK.

In accordance with this theory, this study states that third party funds (DPK) have a positive and significant effect on bank lending. These results support previous research conducted by Sholicha and Fuadati, (2021), Herawati and Suastika (2023) and Suryawati, Cipta, and Susila (2018), which stated that DPK has a positive and significant influence on lending.

4.3.2. Effect of CAR (X2) on Credit Distribution (Y)

The results of this study found that CAR (X2) has a significantly negative effect on bank lending, which means that an increase in CAR will result in a decrease in credit funds. This is contrary to the theory which states that the higher the value of Capital Adequacy Ratio (CAR) indicates that commercial banks have sufficient capital to support their operational activities

and bear the risks that arise, including credit risk. In extending credit to customers, bad credit cannot be separated. So, if the CAR increases, this shows that there is sufficient bank capital to carry out risky operational activities, especially credit risk. The results of this study are in line with Wijaya, Harahap, Elidawati, and Goh (2023), Carlson, Shan, and Warusawitharana (2013) who state that banks will reduce their distribution of credit funds when the CAR value is high enough. Whereas in Komaria and Diansyah's research (2019) CAR has a negative and insignificant effect on lending. This happened because Conventional Commercial Banks had not been able to manage their existing capital properly for lending, especially the research period was right when Covid 19 occurred so that banks tended to be more careful in distributing funds. The thing that needs to be considered is that the process or system for granting credit must be made better to see how much the prospective credit recipient is able to pay in installments or refund. In addition, according to Pratama (2010), an increase in CAR will reduce the level of lending due to the capital owned by the bank not only focusing on loans but also on other assets. Therefore, when a bank extends credit, it is necessary to pay attention to that the credit has risks so that the greater the credit extended, the greater the possibility of credit risk being faced. This causes the RWA (Risk Weighted Assets) value to also increase, so the bank's CAR value will decrease (small). The high CAR also indicates that there are idle financial resources (capital). Apart from that, this also shows that the capital allocated to loans is still small because this capital is used to maintain the minimum capital adequacy requirement and anticipate the risk of loss to the bank.

4.3.3. Effect of LDR (X3) on lending (Y)

The results of this study indicate that LDR has a significantly positive influence on lending by banks to the public. This is in line with the research results of Amelia and Murtiasih (2017), and Wijayanti (2017) LDR has a positive effect on the amount of bank lending. The higher the LDR, the ability of the credit that has been channeled will be higher in paying its obligations. A high LDR value will increase the credit extended by banks because LDR measures the level of liquidity of a bank by the amount of credit extended as a source of liquidity. This shows that the condition of LDR is still the main indicator in determining lending policies for banks, so that the higher the LDR of a bank, it indicates that the banking intermediation function is running very well.

4.3.4. Effect of NPL (X4) on lending (Y)

This study found that NPL has a negative influence on distribution but not significant or it can be said that NPL does not have a significant influence on lending policy. This result is in line with Efriany and Rahmayanti (2016), Amelia dan Murtiasih (2017). So, the results showing that the higher the NPL level, the lower the lending, this does not necessarily happen or affect it. According to Selamet (2006) the greater the NPL level indicates that the bank is not professional in managing its credit. The insignificant effect indicates that the high Non-Performing Loan (NPL) is still within reasonable limits not exceeding the specified limit and is able to be controlled by the bank, so that the increase in NPL does not affect the distribution of loans. According to Febrianto (2013), the bad credit factor cannot be separated from the bank's main activity in the form of lending. However, if there is an increase in the NPL value or non-performing loans that are still within reasonable limits according to the bank and are still under control by the bank, the bank will continue to increase its lending. Conversely, a small or declining NPL value for a bank will not maximize credit distribution, because the bank will still pay attention to other factors such as the availability of funds and capital.

4.3.5.   Effect of ROA (X5) on Credit Distribution (Y)

The results of this study indicate that ROA has a negative and insignificant effect, or in other words that ROA has no significant effect on lending. According to Taswan (2017), ROA is not a source of funding or the main indicator that is considered by banks in lending. The percentage level of ROA shows the company's ability to manage assets to obtain profits, where the ups and downs of profits are related to capital management of company assets which will generate company revenue thereby increasing profits. Meanwhile, Saumur, Anggraeni, and Diana (2021) found that lending was positively and significantly affected by ROA. This shows that the higher the result, the higher the allocated credit and the lower the ROA, the lower the allocated credit will be. If a bank has a low ROA, then the profit level will be smaller.

4.3.6.   Effect of DPK, CAR, LDR, NPL, ROA on Credit Distribution.

Based on the results of this study, it can be concluded that the five independent variables have a significant influence on credit distribution simultaneously. This shows that the condition of the five variables is taken into consideration and influences the bank in joint lending policies. This is also shown from the coefficient of determination R2 and adjusted R of more than 90% so this also shows that the dependent variable can be explained by the five independent variables.

5.   Conclusion

a) Third Party Funds (DPK), and Loan on Deposit Ratio (LDR) have a positive influence on bank lending so that an increase in these two variables will be accompanied by an increase in lending to the public.
b) CAR has a negative effect on lending, thus indicating that when the CAR value increases, banks will tend to reduce the level of lending. This is done to reduce credit risk that might harm the bank.
c) Non-performing loans (NPL) and return on assets (ROA) do not affect lending policies. So that changes in NPL and ROA will not be a major consideration for banks in lending.
d) DPK, CAR, LDR, NPL, ROA influence the lending policy. So, it can be said that when a bank decides on a lending policy it will consider the five variables together.

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