

The Effects of Third Party Funds, Interest Rates, Bank Capital, and Non-Performing Loan towards Credit Distribution on Commercial Banks in Indonesia period 2012 - 2018

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Abstract

This research aims to examine the effect of Third Party Funds (TPF), Interest Rates (IR), Bank Capital, and Non-Performing Loan (NPL) towards Credit Distribution on commercial banks in Indonesia with period 2012 - 2018. This research using 84 monthly data of commercial banks in Indonesia period 2012 - 2018. This research uses the Error Correction Model (ECM) analysis and E-views 10 analysis tools. The result of the research shows that in the long term, Third Party Funds, Interest Rates, Bank Capital, and Non-Performing Loan affects Credit Distribution. In the short term, Third Party Funds and Non-Performing Loan affect Credit Distribution. Meanwhile, Bank Capital and Interest Rates have no effect on Credit Distribution on commercial banks in Indonesia. Simultaneously on the long term and short term all variables (Third Party Funds, Interest Rates, Bank Capital, and Non-Performing Loan) have an effect on Credit Distribution on conventional commercial banks in Indonesia period 2012 - 2018.

Keywords: *Credit Distribution, Third Party Funds, Interest Rates, Bank Capital, Non-Performing Loan, ECM.*

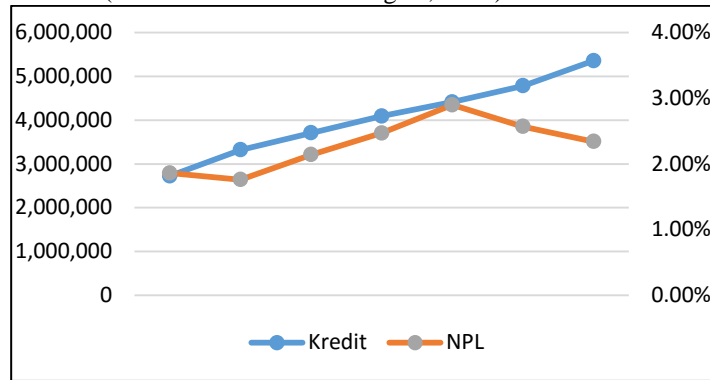
Introduction

The bank is a business entity that collects funds from the community in the form of deposits and distributes them to the public in the form of credit or on other forms to improve the lives of many people (Act of the Republic of Indonesia Number 10 of 1998). In other words, the bank is an intermediary institution between parties who have excess funds and those who lack funds. According to the act of the Republic of Indonesia Number 10 of 1998, there are two kinds of banks which are commercial banks and rural banks. Commercial banks are banks that carry out business activities conventionally and or based on sharia principles which in their activities provide services in payment. The main activity of commercial banks is collecting funds from the community and channeling them back to the community in the form of credit and gives the other services. The commercial banks are available because they can reduce the expensive transaction costs compared to the direct transaction (Silvana, 2009).

Credit is the main activity of banking that generate profits, banks must be able to determine the size of the loan interest rate component to obtain the maximum profit (Kasmir, 2012). Lending is the main function of commercial banks evidenced by the volume of loans that constitute bank's assets and the annual considerable raise of loans which is granted to borrowers both to private and public sectors of the economy (Malede (2014). In banking there is a risk of failure. The risk is in the form of non-payment by the debtor that causes bad credit so that it can affect lending. Banks need to see in advance whether the debtor can return the loan or not (Putri and Alien, 2016). Problem loans will cause conflict not only with the bank giving credit but also not with the customer who receives the credit. This credit distribution activity contains risks that can affect the health and continuity of the bank's business. Financial Liquidity, Solvability, and Profitability are generally influenced by their success in managing credit channeled. Realizing that credit is the backbone of the bank's business survival, the credit must be done systematically to prevent problematic credit (Mukhlis, 2011).

According to Retnadi (2006), the ability to disburse credit by banking is influenced by various things that can be reviewed from the internal and external sides of the bank. From the internal side, the bank is mainly influenced by the ability of the bank to raise community funds and the determination of interest rates. Meanwhile, the bank's external side is influenced by economic conditions, government regulations, etc (Pratama, 2010). The other factors that can affect the distribution of credit such as third party funds, interest rates, bank capital, non-performing loan, and bank profits. When the Third Party Funds will increase the credit and the higher profit gained from the Return On Assets (ROA) will increase the amount of credit to the community and

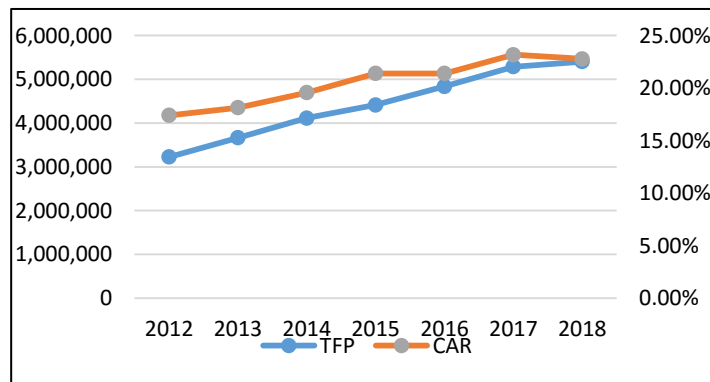
large owned capital (Capital Adequacy Ratio) will also impact the credit distribution, so the greater Non-Performing Loan will also impact the level of credit distribution (Hasanudin and Prihatiningsih, 2010).



Graph 1.1: Exchange of Credit Distribution and NPL Commercial Banking in Indonesia 2012 - 2018

Source: Indonesian Banking Statistics

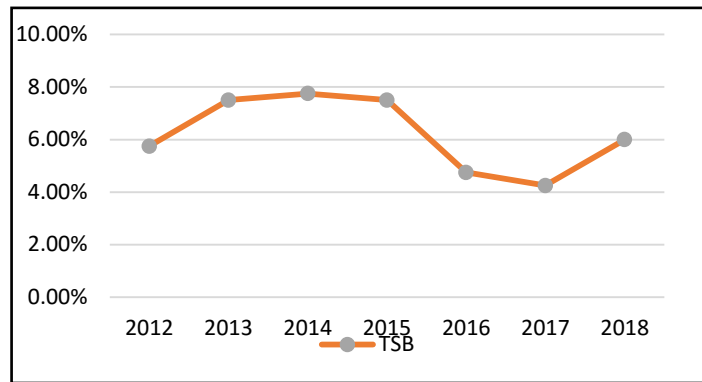
Credit distributed by conventional banks in Indonesia according to Indonesian banking statistics from 2012 to 2018 increased. This is backed by forecasts for better economic conditions, decreased credit rates, decreased risk of credit distribution, and decreased risk of banking liquidity. The increase in the credit distribution is followed by the ups and downs of the channeled credit, although the value of the NPL has not exceeded the maximum of 5% which is determined by the Indonesian bank (BI). The higher NPL's value is above 5%, the bank is categorized as unhealthy. The higher NPL has caused declining profit to be received by the bank (Mukhlis, 2011). The higher the rate of NPL, the higher the allowance for impairment losses, resulting in the increasingly reduced earnings after tax. (Sari et al, 2018). It shows that banking should still increase the principle of caution in channeling its credit to avoid the risk of problematic credit. One of the evaluations on creditworthiness will be given about the 5C aspects (Character, Capacity, Capital, Collateral, and Condition of Econom) (Ikwan et al, 2016).



Graph 1.2: Funding Source of Commercial Banking in Indonesia 2012 - 2018

Source: Indonesian Banking Statistics

The bank's source of funds is the third party fund which is the largest source of funds collected from the community through Savings, Giro, and Deposits. Also there is a source of internal funds owned by the bank that is the bank capital indicated by the Capital Adequacy Ratio (CAR) where if the ratio of the CAR is increased then the credit is channeled up. This means that when the bank's source of funds increases (Third Party Funds and Capital Bank) the credit that can be channeled to the public is also increased. According to Indonesian Banking Statistics, the source of the commercial bank in Indonesia from 2012 to 2018 is a source of funds derived from Third Party Funds, and from the Bank, Capital is increased. The Capital Adequacy Ratio (CAR) from 2012 to 2018 according to Indonesian Banking Statistics has value above 8% exceeding the minimum limit determined by Indonesia Bank (BI). The increase shows people's confidence in the commercial banks in Indonesia is also high.



Graph 1.3: Interest Rate of Commercial Banking in Indonesia 2012 - 2018

Source: Indonesian Banking Statistics

Another factor that can affect the credit channeled is the BI 7-Day Repo Rate, where this interest rate is the benchmark interest rate in the determination of the ups and downs of deposit interest rates and credit interest rates. The higher the interest rate of the loan, the volume of the credit is channeled is greater and the profit gained increases (Hasanah and Yona, 2017). Likewise, when the BI 7-Day Repo Rate drops, the deposit interest rates and credit interest rates are falling, so the decline in credit interest rates is expected to increase credit demand (Wijaya, 2010), Increased credit distribution will increase the profit gained by commercial banks in Indonesia. According to the Indonesian Banking Statistics BI 7-Day, Repo Rate shows that in 2014 until 2017 decreased and climbed back in 2018.

Based on the descriptions that have been described in the background, there are many factors both internal and external that can affect the credit distribution of commercial banks in Indonesia. This research aims to determine the influence of independent variables (Third Party Fund, Interest Rates, Capital Bank, and Non-Performing Loan) on its dependent variables which is the Credit Distribution on the Commercial Banks Performance in Indonesia. Besides, similar studies previously still showed inconsistent results between each other. It is hoped that doing this research will get more consistent results than previous research.

Literature Review

Credit Bank

The main activity of commercial banks is collecting funds from the community and channeling them back to the community in the form of credit and gives the other services. According to the act of the Republic of Indonesia Number 10 of 1998, Credit is the provision of a bill that can be likened to it, based on the agreement or lending agreement between the bank and the other party that requires the borrower to settle the debt after a certain period of interest. The distributed credits utilize the source of funding collected from the community which is Third Party Funds.

Third-Party Funds

Third-party funds are sources of funds collected from the community and become the largest source of funds most relied upon by the bank because it can reach 80 - 90% of all funds managed by the bank (Dendawijaya, 2009). The needs of funds are sourced and collected from this community in the form of saving, giro, and deposits. The source of this fund is the most important source of funding for bank operations and is a measure of success for the bank if it can finance its operations from this source of funds (Kasmir, 2013). By utilizing good third party fund management, commercial banks will be able to run their operational daily smoothly. The higher third party fund, the higher the credit distribution (Selvie et al, 2017).

Bank Capital

Bank capital as a manifestation of the wishes of the shareholders to play a role in the banking business, or several funds invested in various types of business-relevant capital banks (Abdullah and Francis, 2013). bank capital is a source of funds owned by the bank as a reserve of funds for the risk of credit channeled. The capital bank which is projected with the Capital Adequacy Ratio (CAR) of minimum liquid capital, owned by the bank to provide funds as business capital and to accommodate the risk of loss of funds caused by operations of the bank (Sari, 2013). CAR is an internal factor that determines the distribution

of banking credit (Yuwono, 2012). CAR has a minimum limit value of 8%. The high CAR value indicates a steady-state of capital so that it will increase the bank's ability to anticipate losses arising from credit distribution activities (Putri and Akmalia, 2016). With the big CAR, the level will also increase the confidence of banking in channeling its credit (Komaria and Diansyah, 2019).

Interest Rates

External factors that can affect the channeling of banking credit are interest rates of BI 7-Day Repo Rate. According to the Bank Indonesia BI 7-Day, Repo Rate is a benchmark interest rate that is used as a new policy for strengthening the framework of monetary operations that can quickly affect the money market, banking, and the real sector. The BI 7-Day Repo Rate that will determine the difference margin between the interest rate of the loan and the saving interest rate, the greater the interest rate of the loan then the volume of credit is channeled the greater and the profit gained increased (Hasanah and Yona, 2017). Likewise when the BI 7-day Repo Rate drops, the deposit interest rates and credit interest rates are falling, so the decline in credit interest rates is expected to increase the demand for credit (Wijaya, 2010). Bank benefits one of them is obtained from credit distribution activities to the community, the ability of banks to disburse credit will be increased if the value of ROA banking has demonstrated high value (Komaria and Diansyah, 2019).

Non-Performing Loan

The problematic credit measured using the Non-Performing Loan ratio, NPL is the ratio used for the bank's health assessment of the assets owned whereby the affected loan is not able to fulfill its credit obligation to the bank so that the credit is not collectible or stalled. The higher the NPL level, the greater the credit risk incurred by the banking party. Consequently the high NPL resulting in banking will be very selective and careful in channeling its credit, it is feared the potential of uncollectible credit (Pratiwi and Lela, 2014). Commercial banks should pay more attention to the NPL ratio by following credit policy and credit risk assessments to avoid creditors who do not have sufficient guarantees or customers who have a high credit risk (Rababah, 2015). The high NPL shows the declining health of the bank and will also impact the reduction in the level of credit distribution. The bank should be able to keep its credit to be far from credit risk, but if the bank cannot keep its credit, then the bank should reduce the credits given (Putri et al, 2016).

Data and Methods

This research is included in the associative research clause, where research is conducted to determine the causal relationship or the influence of independent variables towards the dependent variable. In this research the object used is consisting of independent variables (Third Party Fund, Interest Rate, Bank Capital, and Non-Performing Loan), and dependent variable (Credit Distribution). The subject of research is a commercial bank in Indonesia. The data research using secondary data in the form of publication of the Indonesian Banking Statistic (SPI).

The data research using commercial bank data in Indonesia period 2012 to 2018 monthly obtained as much as 84 data, monthly data in seven years is used to obtain a more maximal and profound result. Research data is quantitative and time-series data. The analytical techniques used in this study are analysis of time series data by using the error correction models. It is a stationarity test, cointegration test, and Error Correction Model (ECM). The analysis tool used in this research is with software program E-views 10.

Result and Discussion

Stationarity Test

In conducting a test with the error correction model method, the time series data must first be in the test of its stationarity. Stationarity test in this study using the unit root test with the Augmented Dickey-Fuller Method. The stationary test result indicates that at a level $I(0)$ of variable data Credit, Third Party Funds, Interest Rates, Bank Capital, and Non-Performing Loan are non-stationers. After known that the data at data level $I(0)$ is not the stationer then the next test is degrees of integration test. The degree of integration test is used to know up to the degree of the data can be said Stationer. In this study, it is known that at a level $I(0)$ data is non-stationer, then at the first differentiation stage $I(1)$ shows that the data is still non-stationer. Then at the stage of second differentiation $I(2)$ shows that the data has a stationer. Once it is known all the data variables used have been a stationer, the next is the cointegration test.

Cointegration Test

A cointegration test is used to determine the presence or absence of a long-term relationship between dependent variables to independent variables. In this study the cointegration test used was the Johansen Cointegration Test. The test result shows that all variables have long-term relationships. This is evident from the value of Trace Statistic and Max-Eigen Statistic has a value greater than the critical value at a rate of the alpha significance of 5%. In addition to the use of the Engle-Granger test shows

the results that the value of the residual coefficient is significant ($0.0086 < 0.05$), this means that the residue value of the cointegration regression is the stationer. In the results of the regression cointegration according to Ghozali (2018), this means that cointegration regression is not a spurious regression even though the individual variables are non-stationers, but blazing-intertwining means that variables have a long-term relationship. After the cointegration test is met, the subsequent testing of regression analysis is performed using the Error Correction Model. ECM is a model used to identify both short-term and long-term equations in a study.

Error Correction Model

Table 1.1: Long-term regression results of commercial banks in Indonesia

Variable	Coefficient	T-statistic	Prob.
C	26.54207	7.402899	0.0000
TPF	0.356963	4.908209	0.0000
CAR	-14.49757	-2.083977	0.0404
IR	24.00993	2.001192	0.0488
NPL	-221.6507	-7.677076	0.0000
Adjusted R-Squared	0.748798		
Prob (F-statistic)	0.000000		
Durbin-Watson stat	1.787971		

The form of long-term regression equations, as follows:

$$\text{Credit} = 26.54207 + 0.356963\text{TPF} - 14.49757\text{CAR} + 24.00993\text{IR} - 221.6507\text{NPL}$$

Based on table 1.1 above, it shows that the probability for a TPF variable of 0.0000, CAR of 0.0404, IR of 0.0488, and NPL for 0.0000. All variables have a significant probability value at the alpha significance level of 0.05 due to the P-value of $< \alpha = 5\%$. This shows that in the long term all the variables (TPF, CAR, IR, and NPL) have partially affected the credit distribution of commercial banks in Indonesia.

Table 1.2: Short-term regression results of commercial banks in Indonesia

Variable	Koefisien	T-Statistik	Prob
C	0.326022	0.106325	0.9156
DTPF	0.389433	5.856873	0.0000
DCAR	-7.222766	-1.135111	0.2599
DIR	-2.256587	-0.177965	0.8592
DNPL	-247.6422	-9.356531	0.0000
ECT	-0.152391	-2.695834	0.0086

Adjusted R-Squared	0.834043
Prob (F-statistic)	0.000000

The form of short-term regression equations, as follows:

$$\Delta \text{Credit} = 0.326022 + 0.389433\Delta \text{TPF} - 7.222766\Delta \text{CAR} - 2.256587\Delta \text{IR} - 247.6422\Delta \text{NPL} - 0.152391$$

Based on table 1.2 above, it shows that the probability for a variable TPF of 0.0000, CAR of 0.2599, TSB of 0.8592, and NPL for 0.0000. The TPF and NPL variables have a significant probability value at the alpha significance level of 0.05 due to the P-value of $\alpha = 5\%$. Meanwhile CAR and IR variables have an insignificant probability value in alpha 0.05 because P-value $> \alpha = 5\%$. This indicates that the TPF and NPL variables have partially affect credit distribution, meanwhile, the CAR and IR variables do not have affect credit distribution of commercial banks in Indonesia.

ECT has a P-value of 0.0086 ($0.0086 < \alpha = 5\%$) Indicates that the ECM specification model used in this study is valid. The negative sign on the coefficient of ECT value shows that the adjustment of balance to the instability occurring in the short term to the long term between the TPF, CAR, IR, and NPL variables against the credit distribution of commercial banks in Indonesia. The coefficient value of ECT 0.152391 shows the adjustment to equilibrium condition for 6.5 months between Third Party Fund, Interest Rates, Capital Bank, and Non-Performing Loan against Credit Distribution in commercial banks in Indonesia with period 2012-2018.

Based on the results of the analysis, the explanation of each independent variable effect on the dependent variables is as follows:

The Effect of Third Party Funds (TPF) on Credit Distribution

From the analysis of both long-term and short-term regression (ECM and OLS), it shows that the TPF variable coefficient value is positively marked with a P-value of $0.0000 < \alpha = 5\%$, which means that the TPF variable in both long-term and short-term has a positive effect on credit distribution of commercial banks in Indonesia period 2012-2018. TPF variables have a positive effect on credit distribution because the number of TPF from 2012 to 2018 increased. When the TPF increases the credit will be increased. The optimal use of TPF causes credit to be channeled up so that the bank gains will also increase.

The Effect of Capital Bank (CAR) on Credit Distribution

From the results of regression analysis by the OLS method, the capital bank (CAR) variable has a negative coefficient value with a P-value of $0.0404 < \alpha = 5\%$, which shows that the bank's capital variable in the long term affects credit distribution. This means that when the bank has increased, the credit that is channeled increases also, the increased bank capital shows that the bank has a reserve of funds when there is a problem of credit that the bank has sufficient capital to support its assets that contain risk.

Meanwhile the regression analysis with the ECM model, the capital bank (CAR) variable has a negative coefficient value with the P-value of $0.2599 > \alpha = 5\%$, which means that in short-term capital variables the bank does not affect the credit distribution. This is because the capital adequacy ratio is a ratio that measures the bank's ability to provide a reserve of funds to suppress the risk of a channeled credit. These capital reserves will be used by banks to fund credit activities and risks that may occur in the long term.

The Effect of Interest Rates (IR) on Credit Distribution

From the results of regression analysis by the OLS method, the interest rate variable (BI 7-Day Repo Rate) has a positive coefficient value with a P-value of $0.0488 < \alpha = 5\%$. It shows that in the long term the Interest Rates variable has positively affected the credit distribution. The increase in credit interest rates resulted in the decline of credit demand because the community is weighed down by the high-interest rate feared by the customer is not able to fulfill its credit obligation to the bank to cause uncollectible credit.

Meanwhile regression analysis with the ECM model, the interest rate variable has a negative coefficient value with the P-value of $0.8592 > \alpha = 5\%$, which means that the interest rate variable does not affect the credit distribution. This is due to a new policy adjustment in 2016 which replaces the benchmark interest rate, where the effect of the new policy indirectly can be felt in the near term. So the banking chooses to use the benchmark interest rate that was previously set for credit and deposits interest rates.

The Effect of Non-Performing Loan (NPL) on Credit Distribution

From the results of regression analysis in both long and short term, the NPL variable has a negative coefficient value with the P-value of $0.0000 < \alpha = 5\%$, which means both in the long term and short-term NPL variables negatively affect the credit distribution of commercial banks in Indonesia period 2012-2018. This shows that the ratio of non-performing loans is a problematic credit ratio that is used as an indicator of the quality health valuation of banking assets. When the credit is channeled up the risk of having problematic credit (bad credit) will also increase. Thus the higher NPL, the greater risk that the bank has to bear and the profit gained will decrease. Therefore, the bank must be more selective and use its careful principles before channeling credit to the customer, to determine if the customer can fulfill their lend.

The Effect of Third Party Funds, Interest Rates, Bank Capital, and Non-Performing Loan simultaneously on Credit Distribution

From the results of regression analysis in the long term and short term, the variables of Third Party Funds, Interest Rates, Capital Banks, and Non-Performing Loans have simultaneously affected the Credit Distribution of commercial banks in Indonesia period 2012-2018. This can be seen from the probability of the F-statistic to have a significant value of 0.0000 at the significance of Alpha 0.05 ($0.0000 < \alpha = 5\%$).

The adjusted R-squared value in the long term is 75% and in the short term is 83% in this study the variables of Third Party Funds, Interest Rates, Bank Capital, and Non-Performing Loan were able to explain the credit variation on the commercial bank in Indonesia. Meanwhile the remainder in the long term by 25% and in the short-term of 17% is influenced by other variables that are not contained in this study.

Conclusion

The credit distribution of the commercial banks in the Indonesia period 2012-2018 is influenced by various factors both internal and external. Based on the results and discussion of the above analysis, the conclusion in this study is as follows:

1. Third-Party Funds, both long-term and short-term has positively affected the credit distribution of commercial banks in Indonesia.
2. Interest Rates, in the long term, have a positive effect on credit distribution. Meanwhile, in the short term Interest Rates do not affect the credit distribution of commercial banks in Indonesia.
3. Bank Capital, in the long-term bank capital, positively affects credit distribution. Meanwhile, in the short term capital banks do not affect the credit distribution of commercial banks in Indonesia.
4. Non-Performing Loan, in the long term and short term negatively affect the credit distribution of commercial banks in Indonesia.
5. Simultaneously the variables of the Third Party Funds, Interest Rates, Bank Capital, and Non-Performing Loan were influential on the credit distribution of commercial banks in the Indonesia period 2012-2018.

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