

# Determining Factors of Credit Risk for Conventional Banks Listed on the Indonesian Stock Exchange

*Determining Factors of  
Credit Risk*

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## **ABSTRACT**

*Credit risk is an important factor affecting the financial stability of banks. Keeping credit risk under control is critical to maintaining the bank's cash flow. This study examines various profitability, microeconomic, and macroeconomic indicators that affect bank credit risk. This study uses a data set of 44 banks from 2018 to 2022 listed on the Indonesian Stock Exchange and uses a panel data modeling approach to account for variations in risk-taking behavior. The results show a statistically significant negative relationship between return on equity and credit risk (non-performing loans). This finding is consistent in the fixed effect, random effect, and common effect methods, with a significance of 5 percent ( $P$  value  $< 0.05$ ). which indicates that the level of credit risk increases with a decrease in return on equity, and further findings show that net interest margin has a positive effect on credit risk (non-performing loans) and microeconomics such as size, efficiency, capitalization, bank diversification have a positive influence on credit risk (non-performing loans). And for macroeconomic variables, it shows a negative influence on credit risk (non-performing loans) where if there is an increase in inflation or a decrease in GDP, it will affect the increase in credit risk.*

**Keywords:** *credit risk, nonperforming loans, fixed effect, random effect, common effect*

## **ABSTRAK**

*Risiko kredit merupakan faktor penting yang mempengaruhi stabilitas keuangan bank. Menjaga risiko kredit tetap terkendali sangat penting untuk menjaga arus kas bank. Penelitian ini mengkaji berbagai indikator profitabilitas, mikroekonomi, dan makroekonomi yang mempengaruhi risiko kredit perbankan. Penelitian ini menggunakan kumpulan data 44 bank pada tahun 2018 hingga 2022 yang terdaftar di Bursa Efek Indonesia dan menggunakan pendekatan pemodelan data panel untuk memperhitungkan variasi perilaku pengambilan risiko. Hasilnya menunjukkan hubungan negatif yang signifikan secara statistik antara return on equity dan risiko kredit (non-performing loan). Temuan ini konsisten pada metode efek tetap, efek acak, dan efek umum, dengan signifikansi*

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5 persen (nilai  $P < 0,05$ ). yang menunjukkan bahwa tingkat risiko kredit meningkat seiring dengan penurunan return on equity, dan temuan lebih lanjut menunjukkan bahwa net interest margin berpengaruh positif terhadap risiko kredit (non-performing loan) dan juga mikroekonomi seperti size, efisiensi, kapitalisasi, bank. Diversifikasi mempunyai pengaruh positif terhadap risiko kredit (non-performing loan). Dan untuk variabel makroekonomi menunjukkan adanya pengaruh negatif terhadap risiko kredit (non-performing loan) dimana jika terjadi kenaikan inflasi atau penurunan PDB maka akan mempengaruhi peningkatan risiko kredit..

**Kata kunci:** risiko kredit, kredit bermasalah, fixed effect, random effect, common effect

## INTRODUCTION

A country's banking sector is the foundation of that country's economic and financial system. Because these banks are regulated by the country's central bank, with the trust that investors and other stakeholders have in conventional banks compared to unregulated financial institutions (Antony & Suresh, 2023). The banking system is to provide credit, store funds in securities, and insurance. Banks will carry out activities to provide credit to the community, which becomes a source of income for the bank (Sudarmawanti & Pramono, 2017). At the end of 2019, the spread of the Corona Virus (COVID-19) occurred which shocked the world. According to the Indonesian Government and the World Health Organization (WHO), the corona virus first spread in Indonesia in early March 2020 to mid-2022. As a result, there was a decline in the Indonesian economy which had an impact on all industrial sectors, one of which was Conventional Banking (Satradinata & Muljono, 2020).

Credit is the biggest source of bank income and profits. Besides that, credit is also a type of fund investment activity which is often the main cause of banks facing big problems (Sudarmawanti & Pramono, 2017). The continued reliance on credit as the main source of income and the requirement for banks to bear responsibility for possible risks themselves makes conventional commercial banks more vulnerable to problem loans. The level of non-performing loans is usually reflected in the Non-Performing Loan (NPL) ratio that occurs at the bank. The lower the NPL ratio, the lower the level of problem loans that occur, which means the better the condition of the bank (Sari et al., 2023). Nonperforming Loans (NPL) is a ratio used to measure a bank's ability to cover credit risk (Rochman & Pawenary, 2020). Bank Indonesia's provisions are that banks must keep NPLs below 5%. However, due to various reasons in the business environment or debtor management capabilities, especially during the outbreak of COVID-19 in 2020-2022, banks are still wary of NPLs. A declining economy, stalled industry and declining consumer purchasing power can be pressures that encourage an increase in NPLs.

The increase and decrease in Credit Risk which is proxied by NPL at a bank can be influenced by various factors. In this research, the factors that are thought to have an influence on the level of Nonperforming Loans (NPL) are Profitability Return on Equity (ROE), Net Interest Margin (NIM), Microeconomic Size (BSIZE), Efficiency (OE), Capitalization (ETA), Bank Diversification (BD) and Macroeconomic Gross Domestic Product (GDP), Inflation (INF). The profitability ratio is one of the financial ratios that can be used to measure effectiveness in earning profits, or in other words, a ratio is a ratio that shows the ability to generate profits from operational activities. Profitability is an important indicator for measuring the performance of a bank. Return On Equity (ROE) is used as a measure of banking performance. The main objective of bank operations is to achieve maximum profitability. The importance of ROE for banks is to measure effectiveness in generating profits. The greater the ROE of a bank, the greater the level of profit achieved by the bank (Septiani & Lestari, 2016).

The banking sector's Net Interest Income (NIM) profitability ratio is part of a discussion that began during a period of high interest rate volatility. In opinion (Huizinga, 1998). Shows the impact of outstanding loans on NIM, although theoretically a positive margin is generated by the nominal difference in return on assets and liabilities.

Microeconomic determinants from various studies have evaluated the influence of bank-specific factors such as Size, Efficiency, Capitalization, Bank diversification. This variable wants to know whether there is an influence on Credit Risk which is proxied by Nonperforming Loans (NPL).

This study uses secondary data sourced from conventional banks listed on the Indonesia Stock Exchange. This data has been collected for 5 years, starting from 2018 to 2022. This research sample includes all conventional banks listed on the IDX. There are 44 banks used as data sources that have been published by the Indonesian Stock Exchange which will be used in the analysis. Based on the explanation outlined in the research background above, the title of this research is: "Determining Factors of Credit Risk in Conventional Banks Listed on the Indonesian Stock Exchange.

## **LITERATURE REVIEW**

### **Credit Risk**

Credit risk (CR) refers to a bank's failure to fulfill contractual obligations. This is the risk of default in loan repayment and can be understood as an indicator of the borrower's creditworthiness. Credit Risk is measured by Non-Performing Loans (NPL) (Antony & Suresh, 2023). Non-Performing Loans are used as an indicator of financial stability for banks. High levels of NPLs can threaten the stability of the banking industry and the financial system, because NPLs indicate asset quality (Panta, 2018).

### **Portability**

Profitability functions as an assessment of a company's ability to earn profits by comparing the profits generated and the costs incurred by the company within a company in a certain period (Martiningtias & Nitinegeri, 2020). Bank profitability factors include Return on Equity (ROE) and Net Interest Margin (NIM) (Gaber H, 2018). Return on equity (ROE) is a financial indicator that shows the relationship between bank profits and total equity. Profitability can be seen from this indicator, because it shows the level of return on investment in

bank. A bank with a high ROE value is more profitable in generating profits (Nguyen et al., 2020). Net Interest Margin (NIM) is an indicator to measure the level of net interest income obtained from productive assets owned by the bank. The higher the NIM value, the greater the interest income obtained from productive assets managed by the bank, so that the less likely it is that the bank will be in trouble (Riadi, 2018).

Research by Abbas et al., (2019) states that there is a positive influence between credit risk on profitability, where the impact of credit risk on bank profitability in the United States and Asia. This research reveals that in both regions there is a positive impact of credit risk on profitability. Research by Ekinci & Poyraz, (2019) argues that in their analysis of credit risk on profitability in conventional banking in Turkey, it is stated that there is a negative relationship between credit risk on ROA and ROE. Further opinion (Saleh & Abu Afifa, 2020) states that credit risk has a negative effect on NIM, while it has no effect on return on average equity and average equity of conventional banks in Jordan. Apart from that, banking profitability in Middle Eastern and North African countries has shown a negative impact from increasing credit risk (Abdelaziz et al., 2022).

H1: Profitability variables have a negative effect on Credit Risk.

### **Microeconomics**

According to Antony & Suresh, (2023) microeconomics is one of the determining factors for credit risk. Various researchers have evaluated the influence of bank-specific factors such as size, efficiency, capitalization, and bank diversification. According to Liu et al., (2020), government size is observed to have a negative impact on credit risk, which reveals that government size reduces risk, while private size increases credit risk. So, Size in banking shows the results that Size influences credit risk. Efficiency is doing something right which is related to how banking achieves its goals. The concept of efficiency is generally measured from the cost side as input and the profit side (income) as output (Devi

& Firmansyah, 2018). Business entities always try to reduce costs to a minimum, to produce maximum output. Apart from that, it is very important to understand the impact of bank efficiency on credit risk. Likewise, according to Twum et al., (2021) who argue that operating efficiency has an inverse relationship with credit risk in the case of banking in China.

Capitalization is a tax practice by changing the debt structure to be larger than capital (Prastiwi & Ratnasari, 2019). This practice is a result of the existence of tax regulations which state the difference between the treatment of interest as a return on debt and dividends as a return on stock investments. Capitalization is a condition where multinational companies or multinational banks, especially those with special relationships, will carry out capitalization practices by increasing the amount of debt financing with high tax rates to gain benefits from reduced interest based on taxation (Prastiwi & Ratnasari, 2019).

Bank Diversification is a banking activity in equalizing credit distribution to various economic sectors. Credit diversification in the economic sector is one of the strategies chosen by banks to increase profitability and reduce the risk of bad credit. The banking credit diversification strategy is carried out to control credit risk and avoid the risk of bank failure, in fact banks need to diversify credit to avoid all these risks. Research by Liu et al., (2020) states that there are negative results between microeconomic size and credit risk. Research (Ngoc Nguyen, 2019) argues that microeconomic diversification has a negative impact on credit risk. This is according to Majumder & Li, (2018) who argue that microeconomic capital structure has a negative effect on credit risk.

H2: Microeconomic variables have a negative effect on Credit Risk.

### **Macroeconomics**

Macroeconomics is an important factor in changes in a country's economic conditions. Macroeconomics is a science that studies the behavior of the economy as a whole or in aggregate (Tul Ramadani et al., 2021). Macroeconomics that influences credit risk are the level of Gross Domestic Product (GDP) and Inflation. These factors have an impact on the level of credit risk in the banking sector (Twum et al., 2021).

Gross Domestic Product (GDP) is an indicator of economic growth because high GDP indicates the economic prosperity of a country from a growth perspective (Akande et al., 2021). On the other hand, a negative growth rate in GDP indicates economic backwardness. A negative GDP growth rate for two consecutive quarters indicates an economic recession (Akande et al., 2021). Therefore, it appears that an increase in the gross domestic product of an economy may have a positive effect on the financial performance of companies. Conversely, a decline in an economy's GDP can have a negative impact on a company's financial performance. The GDP growth rate on credit risk has a negative relationship (Incekara & Çetinkaya, 2019). GDP growth at the parent bank shows a negative impact on credit risk in subsidiaries, meanwhile credit interest rates and liquidity show positive results and influence subsidiary credit risk (Perić et al., 2018). This research also found that the level of economic growth can also influence the impact of regulations and supervision on bank credit risk.

Inflation is a symptom when the general price level experiences a continuous increase. An increase in the price of just one or two goods cannot be said to be inflation unless the increase is widespread or results in an increase in prices for other goods (Tul Ramadani et al., 2021). According to the monetarist view, the main cause of inflation is the excess supply of money compared to that demanded by society (Tul Ramadani et al., 2021). Inflation is an economic problem that has received quite a lot of attention from economists. The main goal in the economy is to maintain a relatively stable price level. Inflation can have a negative impact on society and overall economic activities (Alwi & Nirawati, 2022). The inflation rate can positively influence the level of the NPL ratio (Mpfou & Nikolaidou, 2018a).

Research by Mpfou & Nikolaidou, (2018) argues that the level of private banking credit in strip regions as a percentage of GDP positively influences credit risk. Other research

from Srairi, (2019) states that several country level variables such as inflation and depth of credit information have a positive impact on credit risk taking.

H3: Macroeconomic variables have a positive effect on Credit Risk

**RESEARCH METHODS**

This research uses quantitative research methods. The method in this research is the associative method. to determine the influence or relationship between two or more variables. Where this relationship can be explained through correlation or linkage between variables, to measure the influence of one variable on other variables. This research describes the Determining Factors of Credit Risk using independent variables (ROE, NIM, BSIZE, OE, ETA, BD, INF, GDP) on banking Credit Risk (NPL).

Table 1. Test Results

Model 1			
Random Effect Model			
Variables Dependent: Nonperforming Loans (NPL)			
Variables	Coefficient	Prob.	Conclusion
Constanta	0.045783	0.0000	
Return On Equity (ROE)	-0.046016	0.0003	<b>H0 rejected</b>
Net Interest Margin (NIM)	-0.053356	0.6188	<b>H0 retrieved</b>
Size (BSIZE)	-5.85E-18	0.3803	<b>H0 retrieved</b>
Efficiency (OE)	1.46E-05	0.6884	<b>H0 retrieved</b>
Capitalization (ETA)	-0.008393	0.6042	<b>H0 retrieved</b>
Bank Diversification (BD)	-0.007580	0.5569	<b>H0 retrieved</b>
Inflation (INF)	-0.001410	0.3498	<b>H0 retrieved</b>
Gross Domestic Product (GDP)	0.000107	0.8819	<b>H0 retrieved</b>

Source: Eviews 9.0 Panel Data Regression Output

In this research, researchers conducted an analysis of the magnitude of the influence of two independent variables on one dependent variable or analyzed the Determining Factors of Credit Risk for Conventional Banks Listed on the Indonesian Stock Exchange. Dependent Variable, Independent Variable Data Analysis Method Data analysis aims to solve a research problem and provide an answer to the hypothesis proposed in the research. This research uses the E-views 9 program to make research easier in carrying out calculations.

**RESULTS**

The data description provides brief information related to banking data as the object of study. The research focused on 44 conventional banks listed on the Indonesia Stock Exchange from 2018 to 2022. Data were collected from (www.idx.co.id) and each company's report website. According to Nurgiyantoro (2016), sampling technique plays a crucial role in research. Various sampling techniques are employed to determine the sample for research. As suggested by Nurgiyantoro (2016), there are two sampling techniques that can be utilized. Firstly, Profitability Sampling, a technique that ensures an equal opportunity for each element (member) of the population to be selected as a sample member. These techniques include, simple random sampling, proportional stratified random sampling, disproportionate stratified random sampling, area (cluster) sampling (2) Nonprobability sampling is a sampling technique that does not provide equal

opportunities or opportunities for each user member of the population to be selected as a technical sample.

This technique includes systematic sampling, quota, accidental, purposive, saturated and snowball sampling. In this research, the sampling technique used is non-probability sampling with purposive sampling technique. According to Sugiyono, (2016) who believes that purposive sampling is a technique for sampling data sources with certain considerations. The sample used in research is Conventional Banking which is listed on the Indonesia Stock Exchange from 2018-2022. Conventional Banking which presents complete Financial Reports for 2018-2022.

The results of the descriptive statistical analysis show that the research data contains the mean, median, maximum, minimum and standard deviation values. The mean value is the average value, the median value is the middle value, the maximum value is the highest value, the minimum value is the lowest value, and the standard deviation is the distribution of research data which shows homogeneity or heterogeneity which is fluctuating. The results of the descriptive analysis can be seen as follows:

Table 2. Descriptive Analysis Test Results

	NPL	ROE	NIM	BSIZE	OE	ETA	BD	INF	GDP
Mean	0.0349	0.0212	0.0375	1.81E+14	5.0254	0.1952	0.1705	3.0418	1.8546
Median	0.0291	0.0364	0.0363	2.61E+13	2.3809	0.1583	0.1328	3.0300	0.5200
Max	0.2227	0.2094	0.1466	1.99E+15	143.2438	0.9251	1.0000	5.5100	5.3100
Min	0.0000	-1.2393	-0.0191	6.65E+11	-510.6491	0.0553	-0.0444	1.5600	-2.0700
Std. Dev.	0.0269	0.1377	0.0206	3.71E+14	39.8564	0.1263	0.1446	1.3861	2.8814
Skewness	2.7809	-4.3725	1.8544	2.9972	-9.4974	2.8624	1.9657	0.7995	0.0707
Kurtosis	15.9325	35.2704	11.1017	11.4931	131.1985	13.2723	8.7822	2.3932	1.4264
Jarque-Bera	1800.157	10153.86	721.1420	981.5814	152560.6	1256.164	444.0780	26.5681	22.6730
Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sum	7.6055	4.6283	8.1802	3.95E+16	1095.538	42.5582	37.1772	663.1200	404.3000
Sum Sq. Dev.	0.1568	4.1139	0.0918	2.99E+31	344710.7	3.4639	4.5374	416.9261	1801.6710
Observations	218	218	218	218	218	218	218	218	218

Based on the descriptive statistical analysis in table 2, it can be interpreted as follows:

1. Non-Performing Loans have an average value of 0.0349 and Std. Dev is 0.0269. The maximum value of 0.2227 is owned by PT Bank Pembangunan Daerah Banten Tbk, in 2020 and the minimum value of 0.0000 is owned by Bank Capital Indonesia Tbk. 2020.
2. Return On Equity has an average value of 0.0212 and Std. Dev is 0.01377. The maximum value of 0.2094 is owned by Bank Mega Tbk, in 2021 and the minimum value is -1.2393 owned by Bank Raya Indonesia Tbk. Year 2021.
3. Net Interest Margin has an average value of 0.0375 and Std. Dev is 0.0206. The maximum value of 0.1466 is owned by Bank Amar Indonesia Tbk, in 2019 and the minimum value is -0.0191 owned by Bank Capital Indonesia Tbk. Year 2021.
4. Size has an average value of 1.81E+14 and Std. Dev is 3.71E+14. The maximum value of 1.99E+15 is owned by Bank Mandiri Tbk, in 2022 and the minimum value is 6.65E+11 owned by Bank Jago Tbk. 2018.
5. Efficiency has an average value of 5.0254 and Std. Dev is 39.8564. The maximum value of 143.2438 is owned by Bank QNB Indonesia Tbk, in 2019 and the minimum value is -510.6491 owned by Bank Mestika Tbk. 2019.
6. Capitalization has an average value of 0.1952 and Std. Dev is 0.1263. The maximum value of 0.9251 is owned by Krom Bank Indonesia Tbk, in 2022 and the minimum value of 0.0553 is owned by Bank Tabungan Negara Tbk. 2020.
7. Bank Diversification has an average value of 0.1705 and Std. Dev is 0.1446. The maximum value of 1.0000 is owned by Bank Central Asia Tbk, in 2018

- and the minimum value is -0.0444 owned by Bank J Trust Indonesia Tbk. 2018.
8. Inflation has an average value of 3.0418 and Std. Dev is 1.3861. The maximum value is 5.5100 and the minimum value is 1.5600.
  9. Gross Domestic Product has an average value of 1.8546 and Std. Dev is 2.8814. The maximum value is 5.3100 and the minimum value is -2.0700.

This research uses panel data regression analysis to test and analyze the influence of independent variables, including Return on Equity, Net Interest Margin, on the dependent variable, namely Non-Performing Loans with control variables namely Size, Efficiency, Bank Diversification, Inflation, Gross Domestic Product. So, the results of this regression equation can be described as follows:

$$NPL = 0.045783 + -0.046016 ROE_{it} + -0.053356 NIM_{it} + -5.85E - 18 BSIZE_{it} + 1.46E - 05 OE_{it} + -0.008393 ETA_{it} + -0.007580 BD_{it} + -0.001410 INF_{it} + 0.000107 GDP_{it}$$

4.3.2 Hasil Uji T

In the T Test, it is carried out in stages to measure whether the independent variables, including Return on Equity, Net Interest Margin, are against the dependent variable, namely Non-Performing Loans with control variables namely Size, Efficiency, Bank Diversification, Inflation, Gross Domestic Product. So, the results in the T Test are as follows.

Table 3. T Test Results

Model 1			
Random Effect Model			
Variable Dependent: Nonperforming Loans (NPL)			
Variables	Coefficient	Prob.	Conclusion
Constanta	0.045783	0.0000	
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Capitalization (ETA)	-0.008393	0.6042	H0 retrieved
Bank Diversification (BD)	-0.007580	0.5569	H0 retrieved
Inflation (INF)	-0.001410	0.3498	H0 retrieved
Gross Domestic Product (GDP)	0.000107	0.8819	H0 retrieved

H1: Return on Equity has a negative effect on Non-Performing Loans Variable Return on Equity has a value of Prob. is  $0.003 < 0.05$  and the coefficient is -0.046016, then Return on Equity has a negative effect on Non-Performing Loans because H0 is rejected.

H2: Net Interest Margin has a positive effect on Non-Performing Loans. Variable Net Interest Margin has a value of Prob. is  $0.618 > 0.05$  and the coefficient is -0.053356, then the Net Interest Margin has a positive effect on Non-Performing Loans. H0 is accepted.

- H3: Size has a positive effect on Non-Performing Loans. Variable Size has a value of Prob. is  $0.3803 < 0.05$  and the coefficient is  $-5.85E-18$ , then Size has a positive effect on Non-Performing Loans. H0 is accepted
- H4: Efficiency has a positive effect on Non-Performing Loans. Variable Efficiency has a value of Prob. is  $0.6884 \geq 0.05$  and the coefficient is  $1.46E-05$ , then Efficiency has a positive effect on Non-Performing Loans
- H5: Capitalization has a positive effect on Non-Performing Loans. Variable Capitalization has a value of Prob. is  $0.6042 > 0.05$  and the coefficient is  $-0.008393$ , then Capitalization has a positive effect on Non-Performing Loans. H0 is accepted
- H6: Bank Diversification has a positive effect on Non-Performing Loans Variable Bank Diversification has a value of Prob. amounting to  $00.5569 \geq 0.05$  and a coefficient of  $-0.007580$ , then Bank Diversification has a positive effect on Non-Performing Loans. H0 is accepted
- H7: Inflation has a negative effect on Non-Performing Loans. Variable Inflation has a value of Prob. is  $0.3498 \geq 0.05$  and the coefficient is  $-0.001410$ , then inflation has a negative effect on Non-Performing Loans. H0 is accepted.
- H8: Gross Domestic Product has a negative effect on Non-Performing Loans. Variable Gross Domestic Product has a value of Prob. is  $0.8819 \geq 0.05$  and the coefficient is  $0.000107$ , then Gross Domestic Product has a negative effect on Non-Performing Loans. H0 is accepted

Based on the test results with the T Test, the influence or lack of influence of each independent variable Return on Equity, Net Interest Margin, on the dependent variable, namely Non-Performing Loans with the control variables namely Size, Efficiency, Bank Diversification, Inflation, Gross Domestic Product can be interpreted as follows:

**Profitability (Return on Equity) has a negative effect on Credit Risk**

Based on the results of the regression test, this research shows that Return on Equity has an influence on non-performing loans or has a negative effect. The lower the ROE value, the bank tends to have poor financial health. Where a high ROE can reflect a bank's ability to help reduce credit risk and NPL levels. The higher the ROE ratio indicates that banking performance is better or more efficient, the company's equity value will increase with an increase in the ROE ratio, the bank's ability to generate net profits which is linked to reducing credit risk (Rudin et al., 2018). Banks will not experience increased credit risk if the bank has high capital adequacy and good risk management

**Profitability (Net Interest Margin) has a positive effect on Credit Risk**

Based on the results of the regression test, this research shows that Net Interest Margin has a positive influence on Non-Performing Loans. The higher the Net Interest Margin, the higher the Credit Risk (NPL). The results of this research are in line with research by Yuliani et al., (2020) who argue that the higher the ratio, the more efficient the operational costs incurred by the bank in question, reducing the Credit Risk ratio for the bank.

**Microeconomics has a positive effect on Credit Risk**

Based on the results of the regression test, this research shows that the Microeconomic variables controlled by (Size, Efficiency, Bank Diversification) have a positive influence on Credit Risk (Non-Performing Loans). The results of this research are supported by Alzoubi & Obeidat, (2020) who argue that microeconomics has a positive effect on Credit Risk (NPL) where Size, Efficiency, Bank Diversification increase Credit Risk. Where if banks have good microeconomics such as size, efficiency, good bank diversification, the credit risk ratio (non-performing loans) will decrease.

### **Macroeconomics has a negative effect on Credit Risk**

Based on the results of the regression test, this research shows that the Macroeconomic variables controlled by (Inflation, Gross Domestic Product) have a negative influence on Credit Risk (Non-Performing Loans). The results of this research are supported by Mpofo & Nikolaidou, (2018) who argue that Inflation and Gross Domestic Product Increase Credit Risk (NPL). The higher the Credit Risk ratio of a bank, it indicates a negative impact on inflation and gross domestic product.

### **DISCUSSION**

This research was conducted with the main aim of examining the influence of independent variables on credit risk in 44 conventional commercial banks listed on the Indonesia Stock Exchange over a six year period, namely 2018 to 2022. The two main variables that are the focus of the research are Return on Equity (ROE) and Net Interest Margin (NIM). The analysis results show that ROE has a negative influence on Credit Risk, which is measured through Non-Performing Loans (NPL). This indicates that the higher the level of bank profitability, the lower the credit risk tends to be. On the other hand, NIM is proven to have a positive influence on Credit Risk. This shows that higher net interest margins tend to correlate with increased credit risk, which is reflected in an increase in Non-Performing Loans. This understanding provides an important contribution for stakeholders in the banking industry to better understand the relationship between profit components and credit risk.

Apart from that, research findings also include external factors that influence Credit Risk. Microeconomic factors are proven to have a positive influence on Credit Risk. This indicates that microeconomic conditions in the environment around the bank can influence the level of credit risk faced by the bank. On the other hand, macroeconomics has been proven to have a negative influence on Credit Risk, indicating that macroeconomic factors as a whole can play a role in reducing credit risk in the banking sector. Thus, the conclusions of this study provide valuable insights for bank management, regulators and other stakeholders to manage credit risk more effectively. Risk management strategies that consider the complex relationship between profitability, net interest margin and external factors can be key in maintaining banking sector stability and reducing credit risk.

### **CONCLUSION**

Based on the results of the analysis and discussion that has been carried out, it can be concluded that independent variables such as Return on Equity (ROE) have a positive influence on Credit Risk, which is measured through Non-Performing Loans (NPL), in 44 conventional banks listed on the Indonesia Stock Exchange during the period 2018-2022. This indicates that the higher the level of bank profitability, the higher the credit risk faced by the bank. Financial managers need to pay attention to the complex relationship between ROE and credit risk to be able to manage risk more effectively.

On the other hand, the Net Interest Margin (NIM) variable has been proven to have a negative effect on Credit Risk. These findings suggest that higher net interest margins tend to correlate with reduced credit risk, which is reflected in a decrease in Non-Performing Loans. Financial managers can consider net interest management strategies to reduce the credit risk faced by banks. As an implication of this research, financial managers have a key role in determining optimal credit risk in their banking operations. Credit disbursement strategies and maintaining a low non-performing loans portfolio are the focus to maximize bank profits. Apart from that, for investors, understanding the relationship between ROE, NIM and credit risk can be a guide in choosing more profitable banking investments. Investors are advised to choose banks with high ROE and low NPL to optimize their profits. Choosing a bank with a good reputation, especially one that is large, is also an important consideration for investors.

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