DETERMINANTS OF NON-PERFORMING LOANS (NPL) IN BANKING COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE

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Abstract: This study aims to analyze the factors that influence non-performing loans in banking companies listed on the Indonesian stock exchange. The population in this study are banking companies on the Indonesia Stock Exchange for the period 2018 - 2022 with a total of 150 companies with a total sample of 30 companies. The sampling technique was purposive sampling. The data collection technique uses documentation from financial reports published on the IDX's official website, namely idx.co.id. The analysis used is multiple linear regression analysis with panel data. The results of this study indicate that the loan-to-deposit ratio have a significant positive effect on non-performing loans, and capital adequacy ratio have a significant negative effect on non-performing loans, and inflation have no effect on non-performing loans.

Keywords: *Non-Performing Loans, Loan Deposit Ratio, Capital Adequacy Ratio, and Inflation*

1. Introduction

Banking financial institutions have a major influence with the main role of collecting public funds in the form of savings, demand deposits, and time deposits. Then it is distributed back to the community in the form of credit (Putri & Pohan, 2022). Lending can pose a sizable risk that will be faced by banks because large credit distribution can lead to non-performing loans. Thus banks need to be careful in managing their funds in the form of credit. Distributed loans have a percentage of 70% to 80% of the total business volume owned by customers.

The fact is that some of the credit distribution still has a risk. Thus, to overcome payment failures and be able to measure the ability of banks and the soundness of banks in lending decisions, the Non-Performing Loan (NPL) ratio can be used (Akbar, 2022). Loans are declared problematic or Non-Performing Loans when they are categorized in (collectibility 3) substandard loans, (collectibility 4) doubtful loans, and (collectibility 5) bad loans (Suryani & Africa, 2021). NPL is determined by the bank to the debtor if the debtor has not been able to pay the obligations that have been scheduled for up to 90 days (Bholat et al., 2016). The following is a graph of Non-Performing Loans in banking in the period 2018 – 2022:
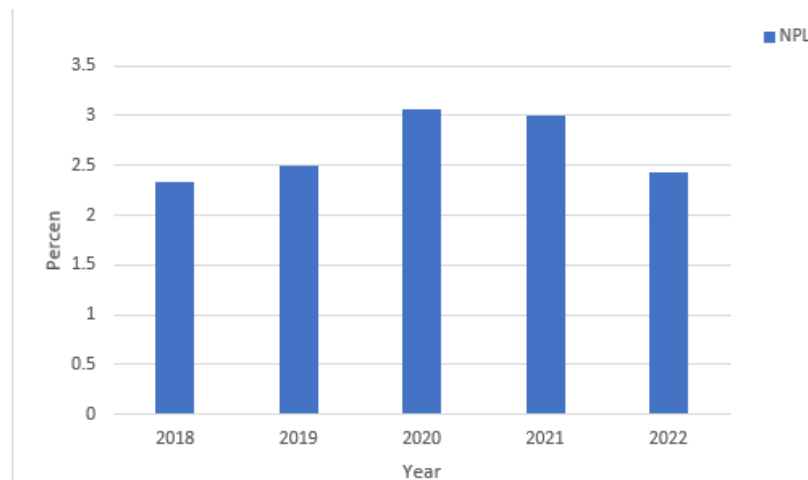
Figure 1 : graph of Non-Performing Loans

Based on the graph above, it can be stated that the ratio of Non-Performing Loans in banks in Indonesia is still in the standard value category. From graphic image 1.1 the growth of non-performing loans from 2018 to 2022, it can be seen that loans disbursed by commercial banks in Indonesia in general have increased from 2018 – 2020 to the highest peak in the NPL value in 2020 of 3.06. This is because in that year there were restrictions on community social activities to reduce the transmission of the coronavirus which had an impact on almost all business sectors. So that this situation makes it difficult for the public or debtors to pay their obligations to the bank due to a decrease in their income due to the Covid-19 pandemic. this ratio is the lowest since pre-pandemic.

Reported by news from (Republika.co.id, 2020)Explain PT. State Savings Bank (Persero) Tbk, bank (BTN) seeks to reduce the ratio of non-performing loans (NPL) and asset recovery. By selling around 1,282 assets worth IDR 249.28 billion. The assets consist of residential houses, apartments, and commercial properties that are sold as non-productive assets from commercial, consumer, and Sharia loan collateral. The sale of troubled assets was carried out to reduce the NPL value below two percent.

There are 3 (three) general factors that cause non-performing loans, namely debtor internal factors, bank internal factors, and non-bank and debtor external factors. The debtor's internal factors include the debtor's age, character, and setbacks in the debtor's business. Bank internal factors may include Capital Adequacy Ratio (CAR), Loan Deposit Ratio (LDR), while non-bank external factor and debtor is Inflation, (Barus & Erick, 2016) in research using internal factors of banks and external factor of non-banks and debtors.

Based on previous research, the research related to LDR conducted by Wardani & Haryanto (2021), Ozili, et al, (2019), and Umar & Sun (2016) states that the LDR coefficient has a significant negative effect on NPL. In contrast to research conducted by Ruslim and Bengawan (2020), Suryani & Africa (2021) showed results that LDR has a significant positive effect on NPL. Research from Wulandari et al, (2021) and Cahyono & Suzuda (2022) shows that LDR does not affect NPL.

Meanwhile, Research conducted by Khan, et al (2020), and Suryani & Africa (2021) obtained the result that CAR had a significant negative effect on NPL. In contrast, the results of research from Ozili, et al, (2021), CAR has a positive effect on NPL. Research from Rabbani & Dadan (2022), and Cahyono & Suzuda, states that CAR affects NPL. Mattunruang, (2023) CAR does not affect NPL.

Research from Harimurti, et al, (2022), shows that inflation has a significant positive effect on NPLs, this research is supported by Mattunruang, (2023). Meanwhile, research by Mustada & Pramono, (2022) found that inflation does not affect NPLs. Meanwhile, according to research by Dewanto & Sudjono, (2022) and Kiosevski & Petkoveski, (2021) shows that inflation has a significant negative effect on NPL.

2. Literature Review
Agency Theory

Agency theory emerged as a separation between company owners and management. The bigger and more complete a company is, the owner cannot routinely continue to supervise and manage the company, so they ask for help from management to be able to manage the company to make a profit. When the owner chooses a manager to act as manager and make company decisions, then that's when the agency relationship occurs (Sutedja 2016). Managers have more internal information about the condition of the company than the principal, so the manager must be forthright in providing information related to the condition of the company to the owner (Wulandari, 2021).

3. Research Methodology

This study uses secondary data obtained from the financial services authorities and Indonesian banks. the research is limited to the influence of the dependent variable namely Loan to Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), and Inflation. As for the independent variable, namely Non-Performing Loans (NPL). The object of research is the sector of banking companies listed on the Indonesian stock exchange. The analysis technique uses multiple linear regression analysis with panel data and Eviews 10 software. The sample for this study comes from the 2018-2022 banking sector which is listed on the Indonesian stock exchange. The research used purposive sampling for sampling:

Table 3.1 Research Sample

No.	Criteria	Jumlah
1.	Banking companies listed on the Indonesia Stock Exchange 2018 – 2022	46
2.	Companies that are not commercial banks conventional during 2018-2022	4
3.	Companies that conducted mergers and acquisitions during 2018-2022	12
	number of samples	30
	observer year	5

Source : The data is processed by the author, (2023)

The sample in this study totaled 150 financial reports from 30 sample companies listed on the Indonesia Stock Exchange (IDX) for 5 years, namely from 2018 to 2022. The sample consists of 5 state-owned banks, 23 national private banks, and 2 regional government banks.

Tabel 3.2 Definition Operational Variable

| Variable	Definition	Scala	Indicator
Loan to Deposit Ratio (LDR) (X1)	Comparison ratio between the amount of financing disbursed and total third party funds	Ratio	$LDR = \dfrac{\text{Total credits granted}}{\text{Total third party funds}}$

Capital Adequacy Ratio (CAR) (X2)	Comparison ratio between bank capital to risk-weighted assets	Ratio	$CAR = \dfrac{Capital}{Arisk-weighted\ assets}$
Inflasi (X3)	An increase in the price of goods and services that occurs due to high demand compared to the available supply of goods and services	Ratio	$Inflation = \dfrac{IHK_t - IHK_{n-1}}{IHK_{n-1}}$
Non Performing Loan (NPL) (Y)	The ratio between the amount of loans disbursed and the level of collectability (non-performing loans) compared to the total loans disbursed by the bank.	Ratio	$NPL = \dfrac{Problem\ Credit}{Total\ Credit}$

Source : The data is processed by the author, (2023)

4. Results and Discussion
4.1 Results

Table 4.1: Normality Test with Jarque-Bera Test
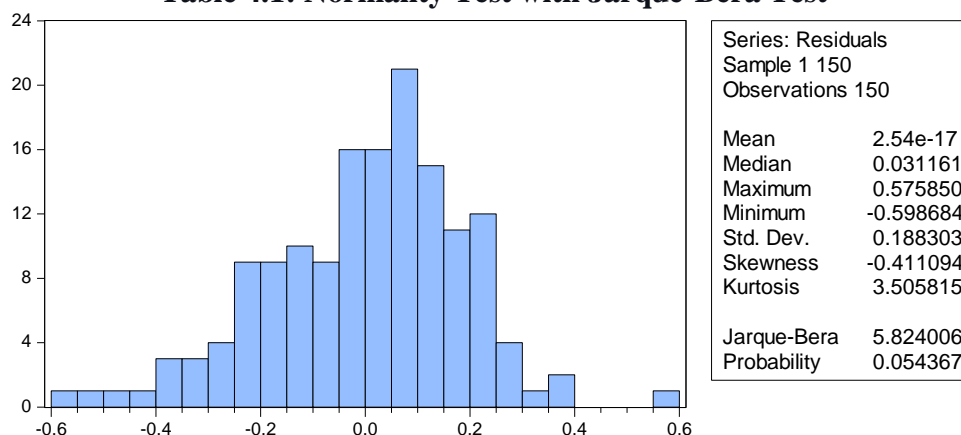
Based on the output results from the table above, the bark-bera probability value is 5.824006, and the probability value obtained is greater than 0.05, meaning that the data is normally distributed.

Table 4.2: Multicollinearity Test with VIF Test

Variables	VIF
LDR	1.216370
CAR	1.155336
Inflation	1.115835

The results show the value of the Multicollinearity Test with Variance Inflation Factor (VIF), VIF is less than 10. This shows that the model is free from multicollinearity.

Table 4.3 : Autocorrelation Test with Durbin-Watson Test

Information	Results
Probability Chi Square	0.2375

The results of the autocorrelation test with the Durbin-Watson test were 1.247445. based on the decision-making criteria that the DW value is between -2 to +2 there is no autocorrelation

Tabel 4.4 : Heteroscedasticity Test with Arch Test

Information	Results
Probability Chi Square	0.2375

The results show that the probability chi-square value of Obs*R-square is 0.2375, so the probability chi-square value is > 0.05 so it can be concluded that there is no heteroscedasticity.

Tabel 4.5 : Parameter coefficient with random effect model

Variables	coefficient	std. Error	t-Statistics	Prob.
C	0.315519	0.460084	0.685787	0.4939
LDR	0.429611	0.049613	8.659323	0.0000
CAR	-0.322341	0.125589	-2.566635	0.0113
INF	0.097715	0.144897	0.674375	0.5012

4.2 Discussion
Effect of Loan-to-Deposit Ratio on Non-Performing Loans (H1)
The loan Deposit ratio has a coefficient value of0.429611and (t) the p-value is 0.0000 <0.05, so it can be interpreted that the Loan to Deposit Ratio has a significant positive effect on Non-Performing Loans. This was due to an increase in third-party funds collected by banks causing banks to distribute more credit, driven by the source of income for commercial banks, most of which came from credit loans. So that the greater the amount of credit disbursed, the greater the risk is borne by the bank and the opportunity for non-performing loans to occur (El-Maude et al., 2017).

Effect of Capital Adequacy Ratio on Non-Performing Loans (H2)
Capital Adequacy Ratio has a coefficient value of-0.322341and (t) the p-value is 0.0113 <0.05, so it can be interpreted that Capital Adequacy has a significant negative effect on Non-Performing Loans. the higher the capital adequacy ratio, the more likely it will be to accommodate the risk of losses faced by banks due to an increase in non-performing financing. So, capital adequacy is a very important factor for banks to accommodate the risk of loss, especially the risk of loss from non-payment (Akbar, 2022).

Effect of Inflation on Non-Performing Loans (H3)
Inflation has a coefficient value of0.097715and (t) the p-value is 0.5012 > 0.05, so it can be interpreted that inflation does not affect non-performing loans (NPL). Thus the higher the inflation rate, the level of non-performing financing in a bank will remain stable. This indicates that debtors feel they have a responsibility or commitment to fulfill their obligations in terms of repaying their loans to banks so that even though inflation has increased, non-performing financing at banks has not also increased (Akbar, 2022).

5. Conclusion
Loan to Deposit Ratio significant positive effect on Non-Performing Loans in banking companies listed on the Indonesia Stock Exchange. The Capital Adequacy Ratio has a significant negative effect on Non-Performing Loans in banking companies listed on the Indonesia Stock Exchange. Inflation has no effect on non-performing loans in banking companies listed on the Indonesia Stock Exchange.

Suggestion

For further research, it is recommended to add or use independent variables of internal factors and other external factors that have not been studied in this study, such as Return on Assets (ROA), Third Party Funds (DPK) for internal factors. Then, the Composite Stock Price Index (IHSG), Gross Domestic Product (GDP), Exchange Rates, Credit Volume for external factors. So that you can see the conditions that are different and the latest.

References

Akbar, M, A., Setiawati,. (2022). Analisis Pengaruh Faktor Internal dan Eksternal pada Non Performing Loan (NPL). *Jurnal Ekonomi dan Bisnis*. 11 (1), 1309-1319.

Barus, A. C., & Erick. (2016). Analisis Faktor-Faktor Yang Mempengaruhi Non Performing Loan pada Bank Umum Di Indonesia. *Jurnal Wira Ekonomi Mikroskil,* 6(2), 113–122.

Bengawan, C. H., & Ruslim, H. (2020). The Effect Of Capital Aset And Liability Ratio On Non- Performing Loan. *Jurnal Akuntansi,* 23(3), 433-448. https://Doi.Org/10.24912/Ja.V23i3.612.

Bholat, D., Lastra, R., Markose, S., Miglionico, A., and Sen, K. (2016). Non-Performing Loans: regulatory and accounting treatments of assets. Bank of England Staff Working Paper, No. 594.

Cahyono, L, T & Suzuda, f,. (2022),.Determinant Factors of Non Performing Loan in Indonesia Commercial Banks. *Jurnal Bisnis, Manajemen dan Teknososiopreneur,* 1 (1), doi: 10.31326/BIMTEK.V1I1.1253

Dewanto, Bayu dan Sudjono (2022), Ananlysis of Macroeconomic Factors Affecting Non-Performing Loans in Multinational Banking In Indonesia. *International Journal of Innovative Science and Research Technology*, 7 (11).

El-Maude, J. G., Abdul-Rehman, A., and Ibrahim, M. (2017). Determinants of Non-Performing Loans in Nigeria's Deposit Money Banks. *Archives of Business Research.* 5(1), 74-88.

Harimurti, C, Pandoyo, Sofyan, M,. (2022). Factors Affecting Non-Performing Loans In State Owned Banking. *International Jounal of Economics and Business and Accouanting Research* (IJEBAR*). 6(2), 958-967.

https://www.republika.id/posts/24929/laba-bersih-btn-rp-237-triliun-pada-2021

Khan, M, A., Siddique, A., & and Sarwar, P, Z., (2020) Determinants of non-performing loans in the banking sector in developing state. *Asian Journal of Accounting Research* 5 (1), 135-145 *Emerald Publishing Limited* 2443-4175 DOI 10.1108/AJAR-10-2019-008

Kjosevski, J., & Petkovski, M. (2021). Macroeconomic and bank-specific determinants of non-performing loans: the case of baltic states. Empirica, 48(4), 1009–1028. https://doi.org/10.1007/s10663-020-09491-5

Mattunruang, A, A (2023). Pengaruh Non Performing Loans (NPL) Terhadap Profitabilitas (Studi Empiris dari Bank Komersial Yang Terdaftar Di Bursa Efek Indonesia Periode 2019-2022). *Jurnal Ekonomektriks (Ekonomi, Manajemen, Akuntansi),* 6 (1), 52-60.

Musta'da, N., & Pramono, N. H. (2022). Non Performing Loan: Analisis Kredit Bermasalah di Masa Pandemi Covid 19. Journal of Accounting and Digital Finance, 2(1), 1–15. https://doi.org/10.53088/jadfi.v2i1.335

Ozili, Peterson K. 2017. Non-performing loans and Financial Development: New Evidence. *Journal of Risk Finance,* 20 (1), 59-81.

Putri, L, T, C, & Pohan, F, S. (2022). Determinant Factors of Non-Performing Loan in Indonesian Commercial Banks. *Jurnal Bisnis, Manajemen dan Teknososiopreneur.* 1 (1), doi: 10.31326/BIMTEK.V1I1.125

Rabbanin, M, N & Rahadian, D. (2022). Faktor-Faktor Yang Berpengaruh Terhadap NPL Bank BUMN. *Journal of Management Bussiness*. 5 (1), 444-450, doi: https://doi.org/10.37531/sejaman.v5i2.2326

Suryani, I, & Africa, L, A. (2021) Pengaruh CAR, LDR, ROA, dan BOPO terhadap NPL pada Bank Umum Swasta Nasional. Jurnal Ecopreneur. 14, (2) Tahun 2021, 202-209.

Sutedja. (2016). Pengungkapan (Disclosure) Laporan Keuangan sebagai Upaya Mengatasi Asimetri Informasi. *Jurnal Infestasi*. 3 (2), 113 – 125.

Umar, Muhammad dan Gang Sun. (2016). Non-Perfoming Loans (NPLs), Liquidity Creation And Moral Hazard: Case Of Chinese Banks. *Umar and Sun China Finance and Economic Review.* Vol. 4, No.10

Wulandari, B., Khetrin, & Seviyani, K. (2021). Pengaruh Loan to Deposit Ratio (LDR), Biaya Operasional, Pendapatan Operasional (BOPO), Kurs, Capital Adequacy Ratio, Ukuran Bank dan Inflasi Terhadap Non Performing Loan (NPL) di Perusahaan Perbankan Terdaftar di BEI. COSTING:*Journal of Economic, Business and Accounting* , 5(1).

Wardani, A, P., Haryanto, A, M. (2021). Analisis Faktor – Faktor yang mempengaruhi Non Performing Loan (NPL) di Indonesia pada Bank Umum Konvesnsional yang terdaftar di BI tahun 2019-2020. *Diponegoro Journal Of Management,* 10(3), 2337-3792.