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# Non Performing Loans Exchange Rates And Inflation In Indonesia

## Abstract

This study uses the Vector Error Correction Model to analyze secondary data from Bank Indonesia and the Indonesian Central Statistics Agency from 2000 to 2020. This sort of study falls under the category of quantitative research since its goal is to provide data in the form of numbers that can be utilized as a tool for information analysis about the subject at hand. This study looks at how non-performing loans (NPL), lending, bank size, currency rates, and inflation all interact. The result of this research is Non-performing loans are getting higher following the size of the bank, the level of credit, the increase in the rupiah interest rate in Indonesia, and the increase in inflation. The higher inflation in Indonesia will increase non-performing loans. Likewise, the larger the size of the bank also increases the number of non-performing loans. The higher the credit disbursed, the higher the risk of increasing non-performing loans. So based on the results of the investigation in this study, a prudential policy must be applied in granting credit.

**Keywords:** Non Performing Loans, Exchange Rates, Inflation, Indonesia

## Background

Banks are very important in the economies of various countries, because they are one of the most important sensitive sectors, especially because the success of the current economic system is related to the level of effectiveness and efficiency of banks in the country, and as a result, they are crucial to the economy through savings mobilization and financial intermediation (Prabowo, Sasongko, & Damayanti, 2022; Sulisnaningrum, 2021). Adequate and efficient distribution to various investments, and its ability to finance comprehensive economic development (Rusminingsih & Damayanti, 2022; Priyanto, Widarni, & Bawono, 2022). While the bank carries out its basic activity by providing loans to its customers, which depends on the level of trust shown by the customer through its financial position and personal and in-kind guarantees of various types, and in connection with this process several risks result from it, which differ from type to type (Purwantini, 2019). Perhaps the most important risk a bank faces is the risk of loan default (Garcia & Puspaningtyas, 2021). The phenomenon of loan default is a phenomenon that is almost not owned by banks. Consequently, professionals and experts who are accountable in the financial industry have taken notice of this issue, and the spread of this phenomenon in the banking system is caused by several reasons specifically related to banks, a number of economic, social conditions, and politics, and clients (Irawan, Sasongko, Mukhlis, Yanto, & Wulandari, 2022).

Troubled loans are called by several names such as critical debt, troubled debt, frozen debt, extraordinary debt, bad debt, stagnant debt, special debt, troubled debt, difficult debt, and doubtful debt, and we found the most commonly used name is Troubled loans (Rachman & Sok, 2022). Bank loans are divided into three types, namely regular loans, where the bank has no problem recovering them. These loans are usually called good or regular loans. Bad loans are loans that the bank has made every effort to claim, in addition to all possible legal procedures, and cannot recover, but continues to follow up with debtors to recover them if funds appear (Mutmainah & Sulisnaningrum, 2019). Troubled loans are loans that stand in the middle between ordinary bank

loans and bad loans, and the many names that indicate problem loans are reflected from one author to another, because it was found that there are differences between these definitions, according to the point of view seen by each author (Harnani, 2021; Martasundjaya & Harnani, 2021). From an institutional point of view, financial failure can be defined as encountering an unforeseen emergency that results in its inability to generate sufficient economic returns or surplus activity to pay its obligations in the short term (Widarni, Drean, & Bawono, 2022).

Non-performing credit is defined as credit where the borrower is unable to repay it at maturity, either because of the unwillingness to do so or because the borrower is unable to fulfill its obligations due to an event that is not taken into account due to circumstances or problems or imbalances around it (Bhattarai, 2020). A non-performing loan is defined as a loan that no longer generates interest income for the bank, or a loan that the bank is forced to schedule according to the borrower's current condition (Hasan, 2019).

This issue has been brought to the attention of experts, authorities, and professionals in the banking industry since banks nearly always have cases of default on loans provided to people and institutions, as this problem arises at the end of the establishment of both banks and customers, as well as several other economic variables through (Green, 2019). Bank lending is carried out in accordance with foundations and credit policies that aim to achieve stability by achieving an orderly and stable composition of the loan portfolio. This is because of how lending and risk traits, economic activity, and reducing the intensity of credit risk in the future, but it is realistic that no bank can do this because experience shows that lending and risk are synonymous in banking activity and cannot be separated from the nature of the collateral. which is obtained (Baer, Campiglio, & Deyris, 2021).

The word "loan" comes from the verb "to borrow" and its meaning linguistically is what is given to other money on condition that it is returned after a known period of time. Loans can also be defined as the exchange of deferred value for immediate value. Loans are an act of trust between people, as manifested in actions where a person who becomes a creditor gives money to another person who becomes a debtor or promises to give it to them, or agrees to guarantee it in advance (Johnson & Krijtenburg, 2018).

Loans can also be defined as a contract between two parties, the first party is considered a lender and gives money, and the second party is considered as a borrower and receives money and returns it with interest at the specified time, and therefore the loan prepares money. An agreed financial refund, offering a guarantee that enables the bank to recover the funds in the event that the consumer stops making payments (Nugraheni & Aziza, 2020). A bank loan can be defined as a trust given by a bank to its customers, because it provides a certain amount of money to be used for a certain purpose during a certain period, in return for the bank. get the agreed material return, with a guarantee that the bank will be able to work if the work goes ahead (Baicu, Gârdan, Gârdan, & Epuran, 2020).

Bank lending is the process of providing individuals and institutions in society with the necessary funds, provided that the debtor promises to repay these funds with interest, commissions, and their fees in one payment or with his own money if the customer stops paying without any loss (Atikah, 2021). The process of granting credit from a bank is actually the same as the trust given to its customers. Although trust is considered an important pillar of the lending process, it does not guarantee the protection of the bank from the risks that may be encountered when providing these loans (Sharma & Sharma, 2019). The bank's right to borrowers is in jeopardy, and loans that reach this situation are called by a series of names, the most important of which are critical debt, problem

debt, frozen debt, uncollectible debt, bad debt, bad debt, the names commonly used are Non Performing Loan (Barney & Souksakoun, 2021).

The abundance of nomenclature indicating the concept of troubled bank loans is reflected in the definition of this term between one author and another, because there are differences in these definitions, according to the point of view of each author (Seiferling, 2020). Financial failure is considered from an institution's point of view as facing an unforeseen emergency that results in its inability to generate sufficient economic returns or surplus activity to pay its obligations in the short term (Obrenovic, Du, Godinic, Tsoy, Khan, & Jakhongirov, 2020). The definition of bad credit comes as debt that a bank considers, after examining the customer's financial position and debt guarantees, that is so dangerous that it is impossible to collect it within a reasonable timeframe (Al Zaidanin & Al Zaidanin, 2021).

Non-performing loans are defined as loans that no longer generate interest income for the bank, or loans that are forced to be scheduled by the bank according to the current conditions of the borrower (Owonye & Obonofiemro, 2022). The subject of default has been associated with the percentage of bank inability to collect loans because it is defined as a bank loan for which the probability of non-recovery exceeds 51% (Bawa, Goyal, Mitra, & Basu, 2019).

## Research methods

This study uses the Vector Error Correction Model to analyze secondary data from Bank Indonesia and the Indonesian Central Statistics Agency from 2000 to 2020. This sort of study falls under the category of quantitative research since its goal is to provide data in the form of numbers that can be utilized as a tool for information analysis about the subject at hand. This study looks at how non-performing loans (NPL), lending, bank size, currency rates, and inflation all interact. We employ the subsequent model :

$$\Delta R_t = \beta_0 + \Delta(N) + \Delta(B) + e_t$$

Where R is the vector of the mass variable as the dependent variable and N is the variable in vector n, B is a constant based on time t. N is $NPL_t$, $Cr_t$, $Bz_t$, $Ex_t$, $If_t$. B is $\beta_1$, $\beta_2$ $\beta_3$ $\beta_4$ $\beta_5t$ is the time series over time and e is the error term. $\Delta$ is the change over the variable in the vector.

## Results and Discussion

In autoregression, stationary data is needed so that the stationarity test is carried out with the unit root test with the results presented in table 1. Whereas all variables to be estimated in the unit root test at the first difference level has a probability below 5%, so it is said to be stationary.

**Table 1.** Stationarity Test

|  | Level | | First Diff. | |
|---|---|---|---|---|
|  | Prob. | Description | Prob. | Description |
| NPL | 0.3127 | No | 0.0000 | Yes |
| Cr | 0.2411 | No | 0.0000 | Yes |
| Bz | 0.0000 | Yes | 0.0000 | Yes |
| Ex | 0.1127 | No | 0.0000 | Yes |
| If | 0.0010 | Yes | 0.0000 | Yes |

The next test involves comparing the least value of the AIC, which is shown in table 2, to the optimal lag. According to the test findings, the best lag is at lag 4, with the lowest AIC value.

**Table 2.** Optimal Lag Test

| Lag | LR | FRE | AIC |
|---|---|---|---|
| 0 | NA | 12219721 | 36.11211 |
| 1 | 49.44421 | 11311311 | 31.3211 |
| 2 | 27.11351 | 17112314 | 29.1121 |
| 3 | 39.23122 | 12222231 | 28.3311 |
| 4 | 33.11271 | 79113311 | 27.5432* |

Note: The lowest AIC value is shown by an asterisk and bold type.

The next test is the co-integration test which is presented in table 3. Based on the test results there is co-integration between variables so that it can be concluded that the VECM model can be used in vector testing and estimation in investigating variables.

**Table 3.** Cointegration Test

| | Eigenvalue | T- Stat. | Crit. Value | Prob. |
|---|---|---|---|---|
| None* | 0.778812 | 111.2232 | 71.2377 | 0.0000 |
| At most 1* | 0.491131 | 79.1132 | 51.1122 | 0.0000 |
| At most 2* | 0.471127 | 49.7726 | 37.2232 | 0.0000 |
| At most 3* | 0.401125 | 17.3211 | 13.2211 | 0.0000 |

Information: 5% probability

The VECM test is presented in table 4. From the test results, of Non Performing Loans (NPL), credit, bank size, exchange rates, and inflation have a significant positive influence relationship. So that each variable influences each other.

**Table 4.** VECM Estimation Results

| Variable | Coefficient | T-statistics |
|---|---|---|
| NPL | 0,19307 | -2,05044 |
| Cr | 0,00017 | 0,99419 |
| Bz | 0,32772 | -4,99535 |
| Ex | 0,00013 | -0,76731 |
| If | 0,07707 | -4,31502 |
| C | 0,03106 | -1,38357 |

Non-performing loans are getting higher following the size of the bank, the level of credit, the increase in the rupiah interest rate in Indonesia, and the increase in inflation. The higher inflation in Indonesia will increase non-performing loans. Likewise, the larger the size of the bank also increases the number of non-performing loans. The higher the credit disbursed, the higher the risk of increasing non-performing loans. So based on the results of the investigation in this study, a prudential policy must be applied in granting credit.

**Conclusion**

Non-performing loans are getting higher following the size of the bank, the level of credit, the increase in the rupiah interest rate in Indonesia, and the increase in inflation. The higher inflation in Indonesia will increase non-performing loans. Likewise, the larger the size of the bank also increases the number of non-performing loans. The higher the credit disbursed, the higher the risk of increasing non-performing loans. So based on the results of the investigation in this study, a prudential policy must be applied in granting credit.

## References

Al Zaidanin, J. S., & Al Zaidanin, O. J. (2021). The impact of credit risk management on the financial performance of United Arab Emirates commercial banks. International Journal of Research in Business and Social Science, 10(3), 303-319.

Atikah, I. (2021). The Urgency Of Mortgage Agreement As An Effort To Realize The Trust By Bank As Creditor. Jurnal Hukum dan Peradilan, 10(1), 31-63.

Baer, M., Campiglio, E., & Deyris, J. (2021). It takes two to dance: Institutional dynamics and climate-related financial policies. Ecological Economics, 190, 1-10.

Baicu, C. G., Gârdan, I. P., Gârdan, D. A., & Epuran, G. (2020). The impact of COVID-19 on consumer behavior in retail banking. Evidence from Romania. Management & Marketing, 15(1), 534-556.

Barney, K., & Souksakoun, K. (2021). Credit crunch: Chinese infrastructure lending and Lao sovereign debt. Asia & the Pacific Policy Studies, 8(1), 94-113.

Bawa, J. K., Goyal, V., Mitra, S. K., & Basu, S. (2019). An analysis of NPAs of Indian banks: Using a comprehensive framework of 31 financial ratios. IIMB Management Review, 31(1), 51-62.

Bhattarai, S. (2020). An Analysis of the Perceptions of Regulatory Authorities about the Causes of Non-Performing Loans. Journal of Business and Social Sciences Research, 5(2), 35-51.

Garcia, M., & Puspaningtyas, M. (2021). The Effect Of The Ratio Of The Money Supply, The Ratio Of Bank Credit, And The Ratio Of Domestic Savings To Economic Growth In Malaysia. Splash Magz,1(2),12-16.

Green, W. N. (2019). From rice fields to financial assets: Valuing land for microfinance in Cambodia. Transactions of the Institute of British Geographers, 44(4), 749-762.

Irawan, C. B., Sasongko, B., Mukhlis, M., Yanto, D. D. G. F., & Wulandari, M. W. (2022). Trade and Foreign Direct Investment on Economic Growth in Indonesia: ARDL Approach. Tamansiswa Accounting Journal International, 5(1), 70-75.

Harnani, S. (2021). Public Finance on Economic Growth in Terms of Financial Literacy and Human Capital. Tamansiswa Management Journal International, 3(1), 19-22.

Hasan, M. Z. (2019). Causality Between GPD Growth and Non-Performing Loans in Bangladesh: A Toda-Yamamoto Approach. International Journal of Finance and Banking Research, 5(5), 126-131.

Johnson, S., & Krijtenburg, F. (2018). 'Upliftment', friends and finance: everyday exchange repertoires and mobile money transfer in Kenya. The Journal of Modern African Studies, 56(4), 569-594.

Martasundjaya, R.H., & Harnani,S. (2021). The role of technology investment, business sector investment, public goods investment in driving net exports and economic growth in Indonesia. ASIAN Economic and Business Developmen ,1(1),19-22.

Mutmainah, S., & Sulisnaningrum, E. (2019). MEMAKSIMALKAN PROFITABILITAS MELALUI NON PERFORMING LOAN DENGAN BEBAN OPERASIONAL PENDAPATAN OPERASIONAL DAN NET INTEREST MARGIN. In Seminar Nasional Sistem Informasi (SENASIF) (Vol. 3, pp. 1642-1651).

Nugraheni, N., & Aziza, Q. A. (2020). The Existence Of Collateral In Credit Through Peer-To-Peer Lending Services. Yustisia Jurnal Hukum, 9(1), 98-115.

Obrenovic, B., Du, J., Godinic, D., Tsoy, D., Khan, M. A. S., & Jakhongirov, I. (2020). Sustaining enterprise operations and productivity during the COVID-19 pandemic:"Enterprise Effectiveness and Sustainability Model". Sustainability, 12(15), 1-10.

Owonye, B., & Obonofiemro, G. (2022). Determinants Of Non-Performing Loans In The Nigeria Banking Industry. International Journal Of Management & Entrepreneurship Research, 4(11), 428-440.

Prabowo, B. H., Sasongko, B., & Damayanti, L. (2022). Economic Challenges And The Potential Threat Of A Debt Trap In Asia. Tamansiswa Accounting Jurnal International, 5(1), 53-63.

Priyanto, E., Widarni, E. L., & Bawono, S. (2022). The Effect of Internet Inclusion on Financial Inclusion in P2P Lending in Indonesia Based on Human Capital Point of View. In Modeling Economic Growth in Contemporary Indonesia (pp. 107-121). Emerald Publishing Limited.

Purwantini,H. (2019).PENGARUH KEBIJAKAN KREDIT TERHADAP RETURN ON ASSETS DI PT. AGUNG MALANG. Jurnal Akuntansi Jayanegara, 11(1),37-46

Rachman, R., & Sok, A. (2022). Domestic Savings, Money Supply and Economic Growth In Sri. Tamansiswa Management Journal International, 5(1), 18-22.

Rusminingsih, D., & Damayanti, L. (2022). The The Role Of Financial Literacy On Economic Growth And Human Capital In Thailand. Tamansiswa Accounting Jurnal International, 4(1), 52-52.

Seiferling, M. (2020). Apples, oranges and lemons: public sector debt statistics in the 21st century. Financial Innovation, 6(1), 1-17.

Sharma, S. K., & Sharma, M. (2019). Examining the role of trust and quality dimensions in the actual usage of mobile banking services: An empirical investigation. International Journal of Information Management, 44(1), 65-75.

Sulisnaningrum, E. (2021). Investment Bank Competition in Indonesia. Tamansiswa Accounting Jurnal International, 3(1), 17-20.

Widarni,E.L., Drean,B., & Bawono,S. (2022).The Foundation Of Macroeconomics For Business. Banyuwangi : PT. Frost Yunior. https://tripleninecommunication.com/product/thefoundation-of-macroeconomics-for-business/

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