Ilomata International Journal of Tax & Accounting
P-ISSN: 2714-9838; E-ISSN: 2714-9846
Volume 4, Issue 4, October 2023
Page No. 771-781

The Influence of Operational Costs on Operating Income and Interest Rates on Non-Performing Loans in Banking Companies listed on the Indonesian Stock Exchange

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Received : September 4, 2023
Accepted : October 18, 2023
Published : October 31, 2023

Citation: Safitri, R., Sulastri., Andriana, I. (2023). The Influence of Operational Costs on Operating Income and Interest Rates on Non-Performing Loans in Banking Companies listed on the Indonesian Stock Exchange. Ilomata International Journal of Tax and Accounting, 4(4),771-781.
https://doi.org/10.52728/ijtc.v4i4.909

ABSTRACT: This study aims to analyze the effect of operational costs on operational income and interest rates on non-performing loans in banking companies on the Indonesian Stock Exchange. The population in this study are banking companies on the Indonesia Stock Exchange for 2018 - 2022 with a total of 150 companies and a total sample of 30 companies. The sampling technique was purposive sampling. The data collection technique documentation is used from financial reports published on the IDX's official website, namely www.idx.co.id. The analysis used is multiple linear regression analysis with panel data. The results of this research show that operational costs on operational income have a significant positive effect on non-performing loans, This means that operational costs on operational income have not been able to minimize the level of non-performing loans, thus causing an increase in non-performing loans. while interest rates do not affect non-performing loans, which means that the interest rate position does not influence non-performing loans.

Keywords: Operational Costs on Operating Income (BOPO), Interest Rates, Non-Performing Loans

INTRODUCTION

Banking financial institutions have a big influence with the main role of collecting public funds in the form of savings, current accounts, and deposits. Then it is distributed back to the community in the form of credit (Putri et al., 2022).

Banks provide profits that come from the difference between deposit interest collected from savings and loan interest distributed in the form of credit. Therefore, banks must strive to place the funds they have in the most profitable form, namely credit (Betz & Kerner, 2016; Mattingly, 2019; Ranaldo et al., 2021). Credit distribution can create quite large risks that will be faced by banks because large credit distribution can lead to problematic credit. Thus, banks need to be careful in managing the funds they have in the form of credit (Mattunruang & A., 2023). The

following is data on bank credit performance in credit distribution and growth for the period 2018 - 2022:

Table 1
Banking Credit Performance 2018-2022

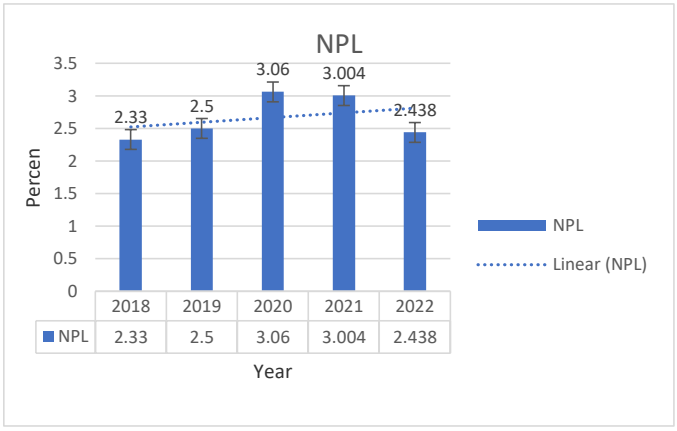
Year	Banking Credit Performance	
	Credit (Rp Trillion)	Growth
2017	4.737,94	8,24%
2018	5.294,88	11,75%
2019	5.616,99	6,08%
2020	5.481,62	2,41%
2021	5.768,58	5,3%
2022	6.387	11,35%

Source: Processed Data (2023).

Based on the table above, the data shows that in 2018 banking credit performance grew by 11.75%. Then in 2019, credit decreased by 6.08%, due to the first appearance of the pandemic in some countries. Bank credit growth slowed during the COVID-19 pandemic, in line with the national economic contraction in 2020 with growth of 2.41%. Meanwhile, in 2022 banking credit will experience recovery from the impact of the pandemic, because growth has reached pre-pandemic levels as can be seen in the table. However, the value of bank credit still shows a growing trend in the last two years. This is reflected in the banking credit growth ratio which has increased in 2021 by 5.3% and in 2022 by 11.35%.

Based on BI Regulation Number 15 / 2 / PBI / 2013 of 2013, it is stated that banks have the potential to experience risk difficulties if the NPL is more than 5% net of the total credit disbursed. If the NPL value ratio is more than the set limit of 5%, banking health can be disrupted and must receive special attention from the government (Putri et al., 2022). This also shows that banks cannot manage their loans well. High non-performing loans will cause banks to strengthen their capital structure (Hamzah, 2018). If customers do not pay their obligations according to the specified time, it will increase problem loans, so that the impact of the bank will suffer losses because it makes profits from credit interest on loan funds (Rabbanin et al., 2022).

Graph 1 Development of Banking NPLs 2018 – 2022



Source: Processed Data, (2023).

There are 3 (three) general factors that cause Non-Performing Loans, namely internal factors of the debtor, internal factors of the bank, and external factors of non-banks and debtors. The debtor's internal factors include age, the debtor's character, and the decline of the debtor's business. Internal bank factors can include operational costs to operating income (BOPO), while external factors for non-banks and debtors are interest rates (Barus & Erick, 2016). For this research, we analyze operational costs against operating income (BOPO) and interest rates.

Banking in carrying out its activities has expenses for operational costs. The level of efficiency and ability of banks to carry out their operational activities is necessary to maintain bank health. The indicator used by banks is operational costs to operating income (BOPO). The level of BOPO will affect the risk of problematic credit (Soekapdjo et al., 2020). The BOPO ratio is used to measure the level of efficiency and ability of a bank to carry out its operational activities. The greater these costs can encourage banks to increase interest rates so that debtors will have difficulty returning funds (Rahmani, 2022; Silbermayr & Minner, 2016).

Meanwhile, interest rates have an impact on NPL movements. Increasing loan interest rates is very attractive to banks, because the income received is obtained from loans that have high yields, but on the other hand, high credit interest rates will pose a risk to banks because customers will experience difficulty in paying their obligations, so the risk of bad credit is high. The interest rate in this context is the loan interest rate based on conventional banks. (Clichici & Colesnicova, 2014)

Apart from that, research conducted by (Wardani et al., 2021a) and (Bengawan & Ruslim, 2020) obtained results that BOPO had a significant positive influence on NPL. In contrast, research from (Khan et al., 2020) states that it has a significant negative effect on NPL. (Cahyono et al., 2022) research shows that BOPO affects NPL. Meanwhile, research by (Wulandari et al., 2021) and (Akbar & A., 2022) shows that BOPO does not affect NPL.

Research conducted by (Dewanto, 2022), shows that international interest rates have a positive effect on NPL. Research conducted by (Naibaho, 2018) shows that interest rates influence NPLs, while (Laskarsari, 2021) in his research has the results that interest rates do not influence Non-Performing Loans (NPLs).

Signaling Theory

According to (Brigham & Houston, 2018), signals are actions taken by company management to provide clues or signals to investors about how management views the company's prospects. Signal theory in this case explains how banks should provide signals to financial institution users. A good signal is a signal that can be taken and perceived by the market well and is also not easily imitated by other companies that have poor quality. Thus, a bank must also provide a positive signal to its customers and the public so that the public has confidence in the bank regarding the funds stored in the bank (Mattunruang & A., 2023).

Non-Performing Loans (NPL).

Performing Loans is the ratio between the amount of credit given and the level of collectability (problem loans) compared to the total credit given by the bank. Credit risk is caused by debtors not being able to repay loans on time (Akbar & A., 2022).The NPL ratio is used to measure how

much credit risk occurs in banking. The higher the NPL ratio, the higher the risk experienced by the bank, and conversely, the lower the NPL level, the better the condition of the bank (Ozili, 2019).

Operational Costs to Operating Income (BOPO)

Operating Costs to Operating Income is a ratio that measures operational costs to operational income. Operational costs themselves are costs used by banks in carrying out their main business activities, namely labor costs, marketing costs, interest, and other costs that cannot be separated from capital costs which are obligations that must be paid by the bank. The higher the deposit interest rate, the higher the cost of capital, and vice versa. This has an impact on bank income because the main bank profit comes from deposit interest minus loan interest (Rosita & Musdholifah, 2018).

Interest rate

Interest is defined as a fee that must be paid to people who deposit their funds in the bank and that must be paid by customers to the bank (customers who receive loans). Apart from that, interest can also be interpreted as remuneration provided by banks to customers who pay or sell their products (Kasmir, 2015). The interest rate is a component that determines whether someone will invest or save which will provide benefits for investors who invest their funds.

Operational Costs to Operating Income (BOPO) to Non-Performing Loans

The BOPO ratio illustrates whether the bank has utilized its production factors well or not. If it is appropriate, it means that the bank can provide credit or loans well because its financial performance is also good. The BOPO ratio is used to estimate the level of bank efficiency in terms of its operational activities. The lower the value, the more efficient the bank is in paying operational costs. Bank efficiency will influence on bank performance.

BOPO or efficiency ratio functions to determine the size of banking management's ability to control operational costs relative to operational income (Kingu et al., 2017). If the BOPO ratio is low, the bank's operational costs will be more efficient. However, on the contrary, there is potential for credit problems if the bank's operational performance or credit does not run efficiently (Wardani et al., 2021a).

In reality, there is uncertainty related to banking business activities or banking operational activities where losses are likely to occur, causing a reduction in profits that can be obtained by the bank. The results of research conducted by (Cahyono et al., 2022), (Khan et al., 2020) show that BOPO has a positive effect on Non-Performing Loans. Based on the description above, the following hypothesis can be formulated:

Hypothesis 1: Operating Costs Operating Income (BOPO) has a positive effect on Non-Performing Loans

Interest Rates on Non-Performing Loans

Interest is defined as fees that must be paid to people who deposit their funds in banks and fees that must be paid by customers to banks (customers who have credit). Apart from that, interest

can also be interpreted as remuneration provided by banks to customers who pay or sell their products (Kasmir, 2015)

The higher the bank interest rate, the higher the NPL value will be. This is because when bank interest rates rise, deposit interest rates also indirectly rise. Rising deposit interest rates will cause the costs of collecting third-party funds to also increase. If that happens, bank credit interest rates will also increase so that the risk of problematic credit will increase (Akbar & A., 2022). The results of research conducted by (Dao et al., 2020; Dewanto, 2022; Zariyawati1 et al., 2021) show that credit interest rates have a positive effect on non-performing loans. Based on the results of the description above, the following hypothesis can be concluded:

Hypothesis 2: Credit Interest Rates have a positive effect on Non-Performing Loans.

METHOD

The type of data used in this research is quantitative data, sourced from secondary data, namely data originating from financial reports that have been processed by each banking company starting from 2018 - 2022. Data was obtained from sources: the Financial Services Authority and Data Bank Indonesia. This research uses multiple linear regression analysis techniques with panel data and uses Eviews 10 software. Research data was obtained from purposive sampling results by research criteria.

Independent (independent) variables are variables that influence or cause the emergence or change in the dependent variable. Meanwhile, the Dependent Variable is a variable that is influenced or is the result of the existence of an independent variable (Sartono, 2015). In more detail, the operationalization of the independent and dependent variables in this research is as follows:

Table 2 Operational Definition of Variables

Variable	Definition	Scala	Indicator
Operating Costs on Operating Income (BOPO)(X1)	A ratio that compares the total operational costs and operational income of the bank.	Ratio	$BOPO = \frac{\text{Operating Costs}}{\text{Operating Income}}$
interest rate (X2)	The interest rate reference rate has been set by Bank Indonesia and has been published to the public.	Ratio	BI Rate
Non-Performing Loan (NPL) (Y)	The ratio between the amount of credit given and the level of collectibility (problem loans) compared to the total credit given by the bank.	Ratio	$NPL = \frac{\text{Problem loans}}{\text{Total credit}}$

Source: Data processed, Author (2023)

RESULTS AND DISCUSSIONS

The data used is 30 banking companies with a period of 5 years 2018 – 2022, so the observation data is 150 data.

Table 3 Research Descriptive Statistics

Explanation	NPL	BOPO	Interest Rate
Mean	0.489702	1.942555	0.433683
Median	0.467607	1.941585	0.434569
Maximum	1.959566	2.459181	0.741152
Minimum	0.021189	1.667826	0.225309
Std. Dev.	0.281843	0.115611	0.183904
Observations	150	150	150

Source: Data Processing Results, Eviews (2023)

Based on table 3 shows the descriptive statistical output of research variables using reviews. The NPL variable has an average of 0.49, with a standard deviation of 0.28 which shows that the average NPL deviation in banking is low, thus indicating good results because there are no data deviations, a maximum value of 1.96 which means the greatest collectibility level (problem loans). and a minimum value of 0.02 which means the lowest collectability level (problem loans).

The BOPO variable has an average of 1.94, with a standard deviation of 0.11 which shows that the average BOPO deviation in banking is low, thus indicating good results because there are no data deviations, a maximum value of 2.46 which means that the amount of operational costs is greater than the bank's operating income, and a minimum value of 1.66 which means that the amount of operational costs is less than the bank's operating income.

The interest rate variable has an average of 0.43, with a standard deviation of 0.18 which shows that the average deviation in banking interest rates is low, thus indicating good results because there are no data deviations a maximum value of interest rate is 0.74, and a minimum value of interest rate is 0.22.

Table 4 T-test results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.315519	0.460084	0.685787	0.4939
BOPO	0.700552	0.166622	4.204448	0.0000
SB	-0.005645	0.070527	-0.080033	0.9363

Source: Data Processing Results, Eviews (2023)

The variable Operational Costs to Operating Income (BOPO) in table 4 has a coefficient value of 0.700552 and the (t) p-value is 0.0000 < 0.05, so it can be interpreted that Operational Costs to Operational Income (BOPO) has a significant positive effect on Non-Performing Loans (NPLs).

The Interest Rate variable in table 4 has a coefficient value of 0.005645 and a (t) p-value of 0.9363 > 0.05, so it can be interpreted that the Interest Rate has no significant effect on Non-Performing Loans (NPL).

The Effect of Operational Costs to Operating Income (BOPO) on Non-Performing Loans (NPL)

The research results support the first hypothesis which states that operational costs on operational income have a positive effect on non-performing loans. This shows that the panel data output with a random effect model on the operational cost variable on operational income has a coefficient value of0.700552and (t) p-value is 0.0000 < 0.05, meaning that operational costs on operational income have a significant positive effect on Non-Performing Loans. As for value *R*2ie 0.455699 which means this variable can influence performing loans only 45.57%, the remaining 54.43% is influenced by other variables not examined in this research such as reputation.

Banks that can be effective and efficient in carrying out their operations are those that can minimize operational costs by getting the maximum operational income possible. One source of operational income for banking businesses is by distributing credit. If a bank wants to get a large income, of course, one way is to distribute large amounts of credit. Disbursing large amounts of credit can result in the possibility that banks will experience the risk of bad credit (Suryani et al., 2021).

In reality, there is uncertainty related to banking business activities or banking operational activities where losses are likely to occur, causing a reduction in profits that can be obtained by the bank (Mattunruang & A., 2023). A higher BOPO ratio indicates that the operational costs incurred are not used efficiently. Bank inefficiency occurs due to the low quality of management so that supervision and control are not carried out properly which will result in a poor credit management process which can increase NPL (Wardani et al., 2021b). The results of this research are in line with research conducted by (Cahyono et al., 2022; Mattunruang & A., 2023; Suryani et al., 2021; Wardani et al., 2021b) which shows the results that BOPO has a positive effect on Non-Performing Loans.

The Effect of Interest Rates on Non-Performing Loans (NPL)

The research results do not support the second hypothesis which states that interest rates have a positive effect on non-performing loans. This shows that the panel data output with the random effect model on the interest rate variable in Table 4 has a coefficient value of 0.005645, and (t) p-value is 0.9363 > 0.05, so it can be interpreted that interest rates do not affect non-performing loans. As for value *R*2 ie 0.455699 which means this variable can influence performing loans only 45.57%, the remaining 54.43% is influenced by other variables not examined in this research, such as the rupiah exchange rate.

Interest rates have no effect because the influence caused by interest rates does not increase or decrease NPL directly. Because the decline in NPLs is not influenced only by reducing interest rates, but rather by handling credit risk management (Syahid, 2016). This happens because interest rates can put pressure on customers who borrow funds from banks. After all, with high-interest rates, only customers can borrow and repay at that interest rate. However, demand for bank credit will decrease because customers prefer to borrow from other than banks such as cooperatives, and in the end, non-performing loans will decrease. This shows that increasing interest rates will limit the rate of Non-Performing Loans at commercial banks in Indonesia (Zariyawat, 2021) The results

of this research are in line with research conducted by (Dao et al., 2020; Zariyawati1 et al., 2021) showing the results that interest rates do not affect non-performing loans.

CONCLUSION

Operational Costs on Operational Income have a significant positive effect on Non-Performing Loans in banking companies listed on the Indonesia Stock Exchange. Interest rates have no effect on non-performing loans in banking companies listed on the Indonesia Stock Exchange. The practical implications in this research can cover three aspects, namely practical implications for customers, debtors and banks. For customers, always be careful when saving funds, investing and making credit loans. Based on this research, customers can conduct an analysis of operational cost variables on operational income and interest rates. In looking at which banks have the highest non-performing credit scores, NPLs affect the bank's health and operational activities in the future. So that customers have a greater sense of security when making transactions at the bank. For debtors, debtors need to have the ability to analyze the extent of the bank's ability to provide loans. Therefore, debtors must be able to analyze the health of the bank. Healthy banks tend to be more active in providing credit because they have a good credit portfolio (low NPL). For banks, banks must be able to maintain the value of non-performing loans which in this research can be reduced by analyzing loan quality, increasing capital and reducing the number of high-risk assets and reducing operational expenses as efficiently as possible.

Suggestion

a. The research variables are limited, then other determinant variables can be studied such as the rupiah exchange rate, return on assets, and gross domestic product.
b. The period for this research was only 5 years so future researchers can extend the research period to a period of 8 to 10 years.
c. The research data used is the annual report of each sample company for the 2018-2022 period. For a more in-depth search, it is best to use the most recent year to get more accurate and representative results.
d. The use of samples is not only limited to national government and private banks, it would be better to use all banks in Indonesia.

REFERENCES

Akbar, M., & A., S. (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.

Betz, T., & Kerner, A. (2016). The influence of interest: Real US interest rates and bilateral investment treaties. *Review of International Organizations*, *11*(4), 419–448. https://doi.org/10.1007/s11558-015-9236-6

Brigham, E. F., & Houston, J. F. (2018). *Dasar-Dasar Manajemen Keuangan Buku 1, Edisi 14*. Salemba Empat.

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

Clichici, D., & Colesnicova, T. (2014). The impact of macroeconomic factors on nonperforming loans in the Republic of Moldova. *Journal of Financial and Monetary Economics, Centre of Financial and Monetary Research "Victor Slavescu," 1*(1), 73– 78.

Dao, L. K. O., Nguyen, T. Y., Hussain, S., & Nguyen, V. C. (2020). Factors affecting nonperforming loans of commercial banks: The role of bank performance and credit growth. *Banks and Bank Systems*, *15*(3), 44–54. https://doi.org/10.21511/bbs.15(3).2020.05

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

Hamzah, A. (2018). Pengaruh Faktor Makro Ekonomi Terhadap Pembiayaan Bermasalah (Penelitian Pada Bank Umum Syariah di Indonesia Tahun 2010- 2017. *JIFA (Journal of Islamic Finance and Accounting*, *1*(2), 73–90.

Kasmir. (2015). *2015).Bank dan Lembaga Keuangan Lainnya*. PT. Raja Grafindo Persada.

Khan, M., A., S., A., 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. https://doi.org/10.1108/AJAR-10-2019-008

Kingu, P. S., Macha, S., & Gwahula, R. (2017). *Determinan Spesifik Bank NonPerforming Loans: Bukti Empiris dari Bank Komersial di Tanzania.Jurnal Internasional Bisnis & Manajement* (Vol. 5, Issue 12, pp. 18–28).

Laskarsari, P. H. (2021). Pengaruh Inflasi, Capital Adequacy Ratio, Gross Domestic Product dan Suku Bunga Bank Terhadap Non Performing Loan Pada Bank BUMN Di Indonesia. *Hayam Wuruk Perbanas*, *21, (1*, 6.

Mattingly, T. J. (2019). Before we talk about student debt cancelation, can we talk about interest rates? *American Journal of Pharmaceutical Education*, *83*(9), 1832–1835. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076984215&partnerID=40&md5=2e549f4faeacc41b9718bb3b8b319049

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*, *6*(1), 52–60.

Naibaho, K. (2018). Pengaruh GDP, Inflasi, BI Rate, Nilai Tukar Terhadap Non Performing Loan Bank Umum Konvensional di Indonesia. *Jurnal Administrasi Bisnis*, *62*(2), 85–101.

Ozili, P. K. (2019). Non-Perfoming Loans In European Systemic And NonSyetematic Banks. *Journal of Financial Economics Policy*, 33. https://doi.org/10.1108/JFEP-02-2019-

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). https://doi.org/10.31326/BIMTEK.V1I1.125

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

Rahmani, n a b. (2022). Analisis Pengaruh Non Performing Loan, Loan to Deposit Ratio, Biaya Operasional terhadap Pendapatan Operasional terhadap Kinerja Keuangan pada Bank Umum Syariah. *Jurnal Dinamika Akuntansi Keuangan Dan Perbankan*, *11*(1), 22–30.

Ranaldo, A., Schaffner, P., & Vasios, M. (2021). Regulatory effects on short-term interest rates. *Journal of Financial Economics*, *141*(2), 750–770. https://doi.org/10.1016/j.jfineco.2021.04.016

Rosita, M., & Musdholifah, M. (2018). Pengaruh Makroekonomi, Capital Adequacy Ratio, Loan To Deposit Ratio dan Pertumbuhan Kredit terhadap Non Performing Loan pada Bank Asing di Indonesia Periode 2013-2014. *BISMA (Bisnis Dan Manajemen*, *8*(2), 124. https://doi.org/10.26740/bisma.v8n2.p124-

Sartono R. A. (2015). *Manajemen Keuangan Teori dan Aplikasi Edisi 4*. BPFE.

Silbermayr, L., & Minner, S. (2016). Dual sourcing under disruption risk and cost improvement through learning. *European Journal of Operational Research*, *250*(1), 226–238. https://doi.org/10.1016/j.ejor.2015.09.017

Soekapdjo, S., Tribudhi, D., & A. (2020). Pengaruh faktor eksternal dan internal terhadap kredit bermasalah perbankan konvensional di Indonesia. *Journal FEB UNMUL*, *17*(2), 278–286.

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

Syahid, D. C. N. (2016). Pengaruh Faktor Eksternal dan Internal Terhadap Kredit Bermasalah serta Dampaknya Terhadap Cadangan Kerugian Penurunan Nilai Menurut PSAK 55. *Jurnal Perbanas*, *2*(1), 1–23. https://doi.org/10.1016/s0957-

Wardani, A., P., H., & A, M. (2021a). 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.

Wardani, A., P., H., & A, M. (2021b). 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.

Wulandari, B., Khetrin, Seviyani, K., Operasional, B., Operasional, P., Suryani, I., Africa, L., & A. (2021). Pengaruh Loan to Deposit Ratio (LDR. *Jurnal Ecopreneur*, *14*, 202–209.

Zariyawati1, M., A., H., M, T., Mujb, K., & A, M. (2021). Determinant Factors of Non-Performing Loan among Non-Bank Financial Intermediaries in Malaysia. *International Journal of Business and Management*, *16*(8). https://doi.org/10.5539/ijbm.v16n8p48