International Journal of Latest Technology in Engineering, Management & Applied Science (IJLTEMAS)

Volume XI, Issue XI, November 2022|ISSN 2278-2540

The Effect of NPLS and LDR on the Profitability of Conventional Commercial Banks Listed on the IDX

Sinta Yulyanti[1*], Rika Ayu Lestari[2], Syahrial Shaddiq[3], R. Rudi Alhempi[4]

[1,2]*Department of Economic Development, Universitas Islam Riau (UIR)*
[3]*Department of Management, Universitas Cahaya Bangsa (UCB)*
[4]*Department of Management, Sekolah Tinggi Ilmu Ekonomi (STIE) Persada Bunda*
**Corresponding author*

Abstract: **This study aims to determine the effect of Non-Performing Loans and loan to deposit ratios on return on assets in the banking sector on the Indonesia Stock Exchange in 10 years at conventional commercial banks from 2011-2020. This study uses panel data consisting of 14 conventional commercial banks listed on the IDX and uses time series data from 2011 to 2021. The regression used is static panel data regression. The results show that the NPL variable has a negative and significant effect on ROA with a probability level of 0.0002 which is less than the α level of 5% with a coefficient of -0.253098 if the NPL increases by 1% it will reduce ROA by 0.253098%. if there is an increase in bad loans this will reduce bank profits and slow down bank activity cycles, in very bad conditions it can even result in a decrease in the bank's ability to guarantee funds raised from the public, and allow systemic risk to occur.**

Keywords: **NPL, LDR, ROA, Profitability.**

I. INTRODUCTION

In an economic system in the world, banking has an important role in order to encourage economic progress in a country. Almost all sectors related to financial activities use the services of banks, so banking is one of the industries that involves risk, this is because banks manage people's money and are rotated in the form of various investments (Wijaya et al., 2021; Norrahmi et al., 2021). ROA is one of the indicatoes to measure a company's financial performance and is a profitability ratio used to measure the effectiveness of a company in making a profit by utilizing total assets that his possession (Siamat, 2004). The increased ROAshows that the company has good prospects in the future because the company has the potential to increase profits (Mahfuzah et al., 2021). Therefore, to maintain or increase ROA, it is necessary to pay attention to several factors that affect ROA including; Capital Adequacy Ratio (CAR), Loan To Deposit Ratio (LDR) and Non-Performing Loan (NPL) (Norrahmiati et al., 2022).

According to Riyadi (2006), the higher the LDR, the company's profit will increase, assuming the bank is able to disburse credit effectively. This ratio is used to measure the level of liquidity (Wanidison & Shaddiq, 2021; Joko et al., 2022). A high ratio indicates that a bank lends all its funds (loan-up) or is actually illiquid. Conversely a low ratio indicates a liquid bank with an overcapacity of funds ready for lending (Latumaerissa, 1999; Kurniawan et al., 2021). According to Sapariyah's research (2010) LDR partially has a positive and significant effect on ROA. Other studies conducted by Mahardian (2008), Susant hi (2010), Jantarini (2010) and Rahtini (2011) found that LDR had a significant effect on ROA. And another study conducted by Yuliani (2009) found LDR had no significant effect on ROA (Wagiono et al., 2020; Iyansyah et al., 2021).

Complex banking activities have a high potential for risk. Related to this risk, in the banking world there is the term Non-Performing Loan (NPL) is a ratio used to measure the bank's ability to overcome the risk of credit repayment failure by debtors (Darmawan, 2004; Irpan et al., 2021). Banks that have a high NPL rate are more at risk of experiencing losses in lending (Tracey, 2010; Surti et al., 2022). The provision of credit made by the bank contains risks, namely in the form of non-smooth repayment of loans thatwill affect the bank's performance. According to Mahmoedin (2001: 14) NPL has a positive effect on profitability (ROA) which can be seen from credit quality, if the NPL is higher, the profitability (ROA) will be lower. Research conducted by Alhaq, et al (2012) and Suhardi (2013) showed different results, that NPL had no effect on ROA.

Based on several previous studies described earlier, it shows inconsistent results. There are differences in research results between several researchers with the same variable, this has caused the author's interest in further researching the Loan to Deposit Ratio and non Performing Loan and their effect on Return On Assets.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

ROA or *Return on Assets* is a type of profitability ratio that is able to assess the company's ability to make a profit from the assets used. ROA will assess the company's ability based on past profit income so that it can be utilized in the next period or period. ROA is used to be able to evaluate whether the management has received appropriate rewards based on the assets they already own (Shaddiq et al., 2021; Hidayat et al., 2021). The ratio is a very useful value if someone wants to evaluate how well the company has used its funds Non

performing loan (NPL) is one of a number of factors which indicates the health of a bank. From the NPL information, it can be seen the evaluation of rentability conditions, credit risk, capital conditions, liquidity, and market risk. The higher the NPL ratio, it can be concluded that there is something wrong with the bank's performance (Saputra et al., 2020; Handayani et al., 2022).

The NPL ratio has a major effect on the health of the tires, therefore, banks must provide solutions to reduce the NPL ratio, the problem that will be caused if the NPL has a high ratio, namely Liquidity, related to whether the bank can afford to pay third parties or not. A third party in this contextis a party working in a bank (Shaddiq & Wanidison, 2021; Habibah et al., 2021). In the event of a liquidity problem, the bank will be in danger of reducing working employees (Shaddiq & Handayani, 2021; Fadilurrahman et al., 2021). Second, rentability, a type of rentability ratio commonly used in practice to measure a company's ability to make a profit (Rizal et al., 2020). Focus on measuring the comparison of gross profit with the overall assets owned by the company. Thirdly Solvency, solvency problems arise in the internal banks (Arizal et al., 2021). This problem arises when the bank's capital decreases and the bank fails to doits fusi (Ramadhani et al., 2021).

The loan to deposit ratio is used to assess liquidity risk, namely loan to deposits rati (LDR) which is the ratio between the size of the entire volume of credit disbursed by banks and the amount of funds received from various sources. The LDR showsn how far the liquidity level of a bank is. The higher the LDR rate, the more illiquid a bank is, meaning that it will find it difficult to meet its short-term obligations, such as sudden withdrawals by customers of their deposits (Rahmadani et al., 2022).

According to Cashmere (2014) "LDR (Loan To Deposit Ratio) is a ratio used to measure the composition of the amount of credit provided compared to the amount of public funds and own capital used. Loan to Deposit Ratio (LDR) indicator According to Sudirman (2013:158) this ratio shows one of the bank's liquidity assessments (Putera et al., 2022).

According to Frianto (2012:128) "Loan to Deposit Ratio is a ratio that expresses how far a bank has used the money of depositors to provide loans to its customers. In other words, the amount of money used to make loans is money that comes from the deposits of the depositors.

Hypothesis

Based on the background description and formulation of the problem, after being linked to the literature review, the author hypothesized as follows: "It is suspected that NPL and LDR have an effect on the profitability of B ank Umum Konvensional listed on the IDX

III. RESEARCH METHODS

The object of this study is a conventional commercial bank listed on the Indonesia Stock Exchange which provides annual reports for the 2011-2020 period. This study uses quantitative data in the form of secondary data which is data obtained in the form of already numbers.

Data collection is carried outin accordance with the way of documentation. The data analysis method used is *the Static Data Panel*. In this research, empirical findings were tested on the effect of the financial ratio of Non-Performing Loan (NPL), Loan to Deposit Ratio (LDR), as an Independent variable on Return On Asset (ROA).

IV. RESULTS OF RESEARCH AND DISCUSSION

Panel data regression model selection is a selection analysis stage to determine the best estimation model between common effect, fixed effect and random effect.

1. Chow Test

The chow test aims to find out the choice of a better model to use between common effect and fixed effect.

Table 1. Chow Test

Redundant Fixed Effects			
Tests Equation: FIXED			
Test cross-section fixed effects			
Effects Test	Statistics	d.f.	Prob.
Cross-section F	8.366493	-13,122	0.0000
Chi-square cross-section	87.95793	13	0.0000

The table above shows that the *p-value* in the *chi-square cross-section* is 0.0184 < a=0.05 then H0 is rejected which means it is better to use the *fixedeffect* model than model *commonefect*

2. Intepretation of panel data results

Table 2. Panel Data Results

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	-0.040451	1.126063	-0.035923	0.9714
NPL	-0.253098	0.064810	-3.905214	0.0002
LDR	0.024069	0.014224	1.692083	0.0932

Based on the table above, the estimation results using the *fixed effect* model will obtain the regression equation as follows:

$$ROA = -0.040451 - 0.253098NPL\ t + 0.024069LDR_t + e$$

1) Due Diligence

Based on the table above, it is known that Adjusted R-squared is 0.608198 or 60.81% meaning that the NPL and LDR variables, simultaneously Together affect the ROA variable by 60.81% while the remaining 59.81% is influenced by other variables outside the regression equation that we have

2) Test F

Judging from the Prob level of Test F in the results of

estimated eviews of 0.000000 smaller than the level of α = 5%, then the variable NPL and LDR, rejecting H0, means, overall the variables Together affect the variable ROA

3) Probability Test

- NPL variable: the NPL variable affects the ROA with a probability of 0.0002 less than the level of α = 5% conclusion rejecting H0 then has a significant impact on ROA
- LDR variable: the LDR variable has no effect on ROAwith a probability level of 0.0932 greater than the level of α = 5% of the conclusion of failing to reject H0 then it is unaffected.

4) Interpretation of Results

- NPL Variable Coefficient (-0.253098): the NPL variable affects ROA, reflected in the probability level of 0.0002 smaller than the level of α = 5%, if the NPL increases by 1% it will decrease ROA by as much as 0.253098%. This means that if bad debts increase, it will reduce the performance of the bank, the turnover of funds will not be optimal where it is known that the main activity of banking is asset management, namely collecting funds and distributing them. Then the bank gets a profit based on the asset management activity. So that if there is an increase in bad debts, this will reduce bank profits and slow down the rotation of bank activity, in very bad conditions it can even result in a decrease in the bank's ability to guarantee funds from the public, and enabling systemic risks.
- LDR Variable Coefficient (0.024069): LDR variable has no effect on ROA reflected in Probalitity level of 0.0932

V. CONCLUSION

Based on the description and analysis put forward, it can be broadly concluded as follows:

1. NPL variable: the NPL variable affects ROA with a probability of 0.0002 less than the level of α = 5% conclusion rejecting H0 then has a significant impact on ROA
2. LDR variable: the LDR variable has no effect on ROA with a probability level of 0.0932 greater than the level of α = 5% of the conclusion of failing to reject H0 then it is unaffected.
3. Based on the results of Test F, it was concluded that independent variables namely Non-Perfoaming Loan (NPL) and Loan to Deposit Ratio (LDR) and simultaneously affect the dependent variable, namely Return On Asset (ROA).

VI. SUGGESTION

The suggestions that the author can give to future researchers through the results of this study are as follows:

1. Bank management should pay attention to the management of the credit provided and then be able to find out if there are indications of non-performing loans so that bank activities do not affect the bank's profit.
2. Can develop further research on other financial variables that have a greater influence on bank profitability (ROA) in addition to the variables used in this study and expand the sample of companies that includes all types of banks using newer methods and data.

REFERENCES

[1] Ali, M., 2006. Manajemen Risiko: Strategi Perbankan dan Dunia Usaha MenghadapiTantanganGlobalisasi Bisnis. Jakarta: PT. Raja Grafindo Persada.

[2] Ariwindata, K. T. (2006). Pengaruh Risiko Kredit Terhadap Profitabilitas dengan KecukupanModalsebagai Variabel Mediasi. E-Jurnal Manajemen Unud Vol. 5. No. 4.

[3] Arizal, A., Sukmana, R. A., Ulfah, Y., Shaddiq, S., & Zainul, M. (2021). Strategi Pemanfaatan Facebook Marketplace dalam Manajemen Periklanan. Syntax Idea, 3(6), 1278-1289. Fadilurrahman, M., Ramadhani, R., Kurniawan, T., Misnasanti, M., & Shaddiq, S. (2021). Systematic Literature Review of Disruption Era in Indonesia: The Resistance of Industrial Revolution 4.0. Journal of Robotics and Control (JRC), 2(1), 51-59.

[4] Bank Indonesia. 2011. Peraturan Bank Indonesia No. 13/1/PBI/2011 Tanggal 5 Januari 2012tentangPenilaian Tingkat Kesehatan Bank Umum. Jakarta: Bank Indonesia.

[5] Dendawijayanto, Lukman. 2009. Manajemen Perbankan (Edisi Kedua). Jakarta: Ghalia Indonesia.

[6] Dewi, Aminar Sutra. 2017. Pengaruh CAR, BOPO, NPL,NIM, dan LDR Terhadap ROA Pada Perusahaan Di Sektor Perbankan Yang Terdaftar Di BEI Periode 2012-2016. Jurnal Pundi. Vol, 01 No, 03.

[7] Habibah, M., Setiawan, A., Shaddiq, S., & Zainul, H. M. (2021). Creative Advertising Management Application Strategy on Television in Indonesia. Jurnal Mantik, 5(2), 800-806.

[8] Handayani, W., Semara, O. Y., Rahayu, F., & Shaddiq, S. (2022). Proceedings on Engineering Sciences. Proceedings on Engineering, 4(2), 137-142.

[9] Haryati, Rina dan Endang Tri Widiyarti. 2016. Pengaruh Leverage, Size, NPL, BOPO dan LDR.TerhadapKinerja Keuangan Bank (Studi Pada Bank Umum Konvensional yang Terdaftar Di Bursa Efek Indonesia Periode 2010-2014). Jurnal Of Management. Vol, 3 No, 3.

[10] Hidayat, M., Mahalayati, B. R., Sadikin, H., Shaddiq, S., & Zainul, H. M. (2021). Advertising Media Strategy as Product Ordering. Jurnal Mantik, 5(2), 812-819.

[11] Indonesia.Kashmir.2014. Bank dan Lembaga Keuangan Lainnya. Jakarta: PT. RajaGrafindo Indonesia.

[12] Irhan, F. 2012. Manajemen Pengambilan Keputusan Teori dan Aplikasi. Alfabeta: Bandung.

[13] Irpan, M., Wibisono, G., Kurnianti, I., Sukmana, R. A., & Shaddiq, S. (2021). Utilization of Digital Communication in Promotion of Riverbank Tour Destination at Marabahan Barito Kuala in Era 4.0. Proceedings on Engineering, 3(4), 453-462.

[14] Iyansyah, M. I., Sari, S., Shaddiq, S., & Zainul, H. M. (2021). Literasi Manajemen Komunikasi Pemasaran dalam Melaksanakan Etika dan Standar Periklanan. Jurnal Revolusi Indonesia, 1(10), 1073-1091.

[15] Joko, C. P. E. S. P., Widokarti, R., & Shaddiq, S. (2022). Core Values Akhalak BUMN on Millenial Generation Job Satisfactions.

[16] Junianto, Rahmadika Dwi dan Budhi Satrio. 2018. Pengaruh CAR, NPL, LDR dan BOPO Terhadap Profitabilitas Bank BUMN Di BEI 2013-2017. Jurnal Ilmu dan Riset Manajemen. Vol,

7 No,11.

[17] Kashmir.2012. Bank dan Lembaga Keuangan Lainnya. Jakarta: PT. Raja Grafindo

[18] Kurniawan, M. I., Subroto, P., Ulfah, Y., Shaddiq, S., & Zainul, M. (2021). The Impact of Merger Company on the Value of Case Study Stocks on Merger Gojek and Tokopedia. Proceedings on Engineering, 3(4), 425-432.

[19] Mahfuzah, A., Shaddiq, S., Aisyah, L., & Putera, A. R. (2021). Analisis Peran Orang Tua dan Guru terhadap Siswa di Sekolah Dasar pada Pembelajaran Online; Dampak COVID-19.

[20] Muttaqin, Husein Fajri. 2017. Pengaruh CAR, BOPO, NPL dan LDR Terhadap ROA Pada BankKonvensional Di Indonesia (Studi Kasus Pada Bank Konvensional Yang Terdaftar Di BEI).eJournalAdministrasi Bisnis. Vol, 5 No, 4.

[21] Norrahmi, D., Lestari, D., Gafar, A., Shaddiq, S., & Abbas, A. E. (2021). Pengaruh Promosi Penjualan Matahari Department Store Terhadap Sikap Konsumen di Kota Banjarmasin.

[22] Norrahmiati, S. S., & Suharto, I. (2022). Marketing Strategy of Kulit Lumpia Beuntung Banjarmasin Business in Increasing Sales Volume.

[23] Peraturan Bank Indonesia No.11/25/PBI/2009 tentang perubahan atas peraturan Bank Indonesia No.5/8/PBI/2003 Tentang Penerapan Manajemen Risiko Bagi Bank Umum.

[24] Peraturan Bank Indonesia No11/1/PBI/2009 tentang Bank Umum.

[25] Peraturan Otoritas Jasa Keuangan No.42/POJK.03/2015 Tentang Kewajiban Pemenuhan Rasio KecukupanLikuiditas (Liquidity Converage Ratio) Bagi Bank Umum.

[26] Putera, A. R., Aisyah, L., Misnasanti, M., Mahfudzah, A., & Shaddiq, S. (2022). Manajemen Pembiayaan Pendidikan Lembaga Kursus Bahasa Inggris: Antara Profit dan Pemenuhan Kebutuhan Siswa. Jurnal Bahana Manajemen Pendidikan, 11(1), 48-54.

[27] Raharjo, Dwi Priyanto Agung, dkk. Pengaruh Rasio, CAR, NPL, LDR, BOPO, dan NIM. Terhadap KinerjaBank Umum Di Indonesia. Jurnal Ekonomi Manajemen Sumber Daya. Vol, 15 No. 12.

[28] Rahmadani, J., Yuliansyah, M., & Shaddiq, S. (2022). Implementasi Pemanfaatan Minat dan Bakat Siswa dalam Peningkatan Hasil Belajar Siswa di SMK Negeri 1 Martapura dan SMK Negeri 1 Sungai Pinang.

[29] Ramadhani, R., Suswanta, S., & Shaddiq, S. (2021). E-marketing of Village Tourism Development Strategy (Case Study in the Tourist Village Puncak Sosok). Journal of Robotics and Control (JRC), 2(2), 72-77.

[30] Rizal, R., Misnasanti, M., Shaddiq, S., Ramdhani, R., & Wagiono, F. (2020). Learning Media in Indonesian Higher Education in Industry 4.0: Case Study. International Journal on Advanced Science, Education, and Religion, 3(3), 127-134.

[31] Sadi'yah, Yeni Siti Halimatus, dkk. Pengaruh LDR, BOPO, dan NPL, terhadap ROA pada BUSN Devisa Terdaftar Di BEI Periode 2014-2018. Indonesian Journal Of Economics And Manajement. Vol, 1 No, 2.

[32] Saputra, M. R. Y., Winarno, W. W., Henderi, H., & Shaddiq, S. (2020). Evaluation of Maturity Level of the Electronic based Government System in the Department of Industry and Commerce of Banjar Regency. Journal of Robotics and Control (JRC), 1(5), 156-161.

[33] Shaddiq, S., & Handayani, W. (2021). Communication and Interactive Marketing Management through Internet Advertising. SMBJ: Strategic Management Business Journal, 1(02), 25-29.

[34] Shaddiq, S., & Wanidison, E. (2021). Training Programs Needed to Develop Young Entrepreneurs from Training Institutions in Bandung: A Qualitative Perspective. SMBJ: Strategic Management Business Journal, 1(01), 26-38.

[35] Shaddiq, S., Iyansyah, M. I., Sari, S., & Zainul, H. M. (2021). The Effect of Marketing Promotion Management on Public Service Advertising in Strengthening Digital Communication. SMBJ: Strategic Management Business Journal, 1(02), 1-16.

[36] Surat edaran Bank Indonesia No. 13/ 24./DPNP 2011 Perihal penilaian tingkat kesehatan bankumum.

[37] Surat Edaran Bank Indonesia No. 3/30/DPNP tanggal 14 Desember 2001. Perihal laporan keuangan publikasi triwulan dan bulanan bank umum serta laporan tertentu yang disampaikan kepada bank Indonesia.

[38] Surat Edaran Bank Indonesia No. 3/8/DPNP Tentang Bank Umum

[39] Surti, S., Shaddiq, S., Suhaimi, A., & Abdillah, M. H. (2022). The Potency of the Tumih Village Farmer Community's Participation in the Agricultural Development Planning Strategy. Gorontalo Development Review, 5(2), 141-155.

[40] Suwandi, Jordi dan Hening Widi Oetomo. 2012. Pengaruh CAR, NPL, BOPO, Dan LDR Terhadap ROA pada BUSN Devisa. Jurnal Ilmu dan Riset Manajemen. Vol,6 No,7.

[41] Undang-undang Republik Indonesia Nomor 10 Tahun 1998 tentang Perubahan Atas Undang- undangNomor 7 tahun 1992 Tentang Perbankan.

[42] Wagiono, F., Shaddiq, S., Junaidy, J., Wibowo, D. E., & Yahya, M. Y. D. (2022). Community Habits in Floating Houses (Lanting) in Utilizing the River as an Shower, Wash, and Toilet (MCK) Facility in the S. Parman Down Area Neighborhood 01 Hamlet XVII Palangka Raya. JED (Jurnal Etika Demokrasi), 7(1), 109-121.

[43] Wanidison, E., & Shaddiq, S. (2021). Training Programs Needed to Develop Young Entrepreneurs from Training Institutions in Bandung: A Qualitative Perspective. Strategic Management Business Journal, 1(1), 28-39.

[44] Wijaya, B. A., Noveriady, M., Puspaningratri, N., & Shaddiq, S. (2021). The Role of Corporate Marketing Communications Management in Implementing Advertising Ethics and Standards. Jurnal Mantik, 5(2), 807-811.

[45] Yuliani. 2007. Hubungan Efisiensi Operasional dengan Kinerja Profitabilitas pada SektorPerbankan yangGo Publik di Bursa Efek Jakarta.Jurnal Manajemen & BisnisSriwijaya Vol. 5 No 10.