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THE EFFECT *OF LOAN TO DEPOSIT RATIO* AND *NON - PERFORMING LOAN* ON *RETURN ON ASSETS IN STATE* - OWNED BANKS LISTED ON THE INDONESIA STOCK *EXCHANGE*

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Abstrak

Bank memiliki peran penting sebagai lembaga intermediasi keuangan dengan menjalankan fungsi intermediasi melalui penghimpunan dan penyaluran dana dalam bentuk kredit dan investasi. Kinerja keuangan mencerminkan keberhasilan suatu organisasi serta menunjukkan hasil yang dicapai melalui kegiatan operasionalnya. Salah satu indikator penting dalam menilai kinerja keuangan dan tingkat kesehatan keuangan bank secara keseluruhan adalah Return on Assets (ROA). ROA merupakan rasio profitabilitas yang digunakan untuk mengukur efektivitas bank dalam memanfaatkan seluruh aset yang dimiliki untuk menghasilkan laba. Semakin tinggi ROA menunjukkan semakin efisien pengelolaan aset dan semakin baik kinerja keuangan bank.

Terdapat berbagai faktor internal dan eksternal yang dapat memengaruhi ROA. Di antara faktor internal tersebut, Loan to Deposit Ratio (LDR) dan Non-Performing Loans (NPL) merupakan indikator penting yang dapat memengaruhi profitabilitas bank. Oleh karena itu, penelitian ini bertujuan untuk mengetahui dan menganalisis pengaruh Loan to Deposit Ratio dan Non-Performing Loans terhadap Return on Assets.

Penelitian ini menggunakan pendekatan kuantitatif dengan desain deskriptif-verifikatif. Sampel dipilih menggunakan metode purposive sampling berdasarkan kriteria yang telah ditentukan, yaitu

empat bank umum milik negara yang terdaftar di Bursa Efek Indonesia (BEI) selama periode 2015–2024. Penelitian ini menggunakan data sekunder yang diperoleh dari laporan keuangan yang dipublikasikan oleh bank-bank yang menjadi sampel penelitian.

Hasil penelitian menunjukkan bahwa Loan to Deposit Ratio tidak berpengaruh signifikan terhadap Return on Assets. Sebaliknya, Non-Performing Loans berpengaruh negatif dan signifikan terhadap Return on Assets. Selain itu, hasil pengujian secara simultan menunjukkan bahwa Loan to Deposit Ratio dan Non-Performing Loans secara bersama-sama berpengaruh signifikan terhadap Return on Assets.

Kata kunci: Loan to Deposit Ratio, Non-Performing Loans, Return on Assets

Abstract

Banks play a crucial role as financial intermediaries by performing financial intermediation functions through the mobilization and allocation of funds in the form of loans and investments. Financial performance reflects an organization's success and represents the outcomes achieved through its operational activities. One of the most important indicators for assessing a bank's financial performance and overall financial soundness is Return on Assets (ROA)**.** ROA is a profitability ratio that measures the effectiveness of a bank in utilizing its total assets to generate earnings. A higher ROA indicates greater efficiency in asset management and stronger financial performance. Numerous internal and external factors may influence ROA. Among the internal determinants, the Loan to Deposit Ratio (LDR) and Non Performing Loans (NPL) are considered key indicators affecting bank profitability. Therefore, this study aims to examine and analyze the effects of the Loan-to-Deposit Ratio and Non-Performing Loans on Return on Assets. This study employed a quantitative research approach using a descriptive-verificative design. The sample was selected through purposive sampling based on predetermined criteria, consisting of four state-owned commercial banks listed on the Indonesia Stock Exchange (IDX) during the 2015–2024 period. The study utilized secondary data obtained from the published financial statements of the selected banks. The findings reveal that the Loan-to-Deposit Ratio has no significant effect on Return on Assets. In contrast, Non-Performing Loans have a significant negative effect on Return on Assets. Furthermore, the simultaneous analysis demonstrates that the Loan-to-Deposit Ratio and Non-Performing Loans jointly have a significant effect on Return on Assets.

Keywords ：Loan to Deposit Ratio , Non-Performing Loans , Return on Assets

INTRODUCTION

Banking is part of an intermediary institution that plays a role in carrying out financial performance functions by collecting and managing the distribution of funds, both in the form of credit and investment. (Viera Valencia & Garcia Giraldo, 2019). Financial performance reflects success and can be interpreted as the results achieved from various activities. Profitability is one of the main indicators used to assess the health and performance of a bank. An adequate level of profitability not only reflects the efficiency of bank management but also serves as a prerequisite for business continuity and the bank's ability to fulfill obligations to stakeholders. One of the most commonly used profitability ratios in evaluating bank performance is *Return on Assets* (ROA). ROA measures a bank's ability to generate operating profit from its total assets, thus reflecting the effectiveness of the use of all asset resources in generating profits (Kasmir, 2022). Christine & Winarti (2022) broadly stated that *Return on Assets* (ROA) *Return on Assets (* ROA) is a ratio that illustrates the extent to which assets generate profit for a company. A high ROA indicates that the company is efficiently utilizing its assets.

According to the Financial Services Authority (OJK, Sektor et al., 2022), a bank is categorized as performing well if its ROA is above 1.5%, and very well if its ROA exceeds 2%. A high ROA indicates that bank management has efficiently managed its assets to generate profits. Conversely, a low or negative ROA indicates problems with operational efficiency, credit quality, or the bank's funding structure. Therefore, maintaining and improving ROA is a top priority for both bank management and regulators in realizing a healthy and highly competitive banking industry.

Investors use *Return on Assets* to measure and evaluate financial performance; this ratio helps shareholders make informed investment decisions. A positive *Return on Assets (ROA) will impact a bank's financial strategy.*

Many factors can influence *Return on Assets,* both external and internal. The emergence of Covid-19 and rising interest rates are examples of external factors affecting profitability, while internal factors that can affect Return on Assets include: *Loan to Deposit Ratio* (LDR) and *Non-Performing Loans (NPL)* .

The Loan-to-Deposit Ratio (LDR) is calculated by dividing total disbursed credit by total third-party funds (DPK) received by the bank. According to Financial Services Authority (OJK) regulations, a healthy LDR ranges from 78% to 92% (OJK, 2022). If the LDR is too low, the bank

is not optimally disbursing credit, thus underutilizing potential interest income, the primary source of bank profitability. Conversely, an LDR that is too high reflects significant liquidity risk, as the bank may experience difficulty meeting its short-term obligations to customers.

Theoretically, there is a positive relationship between *the Loan to Deposit Ratio* (LDR) and *Return on Assets* (ROA). A higher LDR indicates a greater portion of funds disbursed as credit. Because credit is the primary instrument for generating interest income for banks, an increase in the LDR within safe limits tends to increase interest income and ultimately drive ROA. This aligns with the theory of financial intermediation, which states that a bank's primary function is to channel funds to productive sectors to generate optimal returns (Diamond, Pratama & Suripto, 2022). However, this relationship is not always linear, as an excessive LDR can actually increase the risk of non-performing loans, ultimately depressing bank profitability.

Non-Performing Loan (NPL) is One of the parameters that reflects the level of non-performing loans in a bank, the higher *the Non-Performing Loan value* , the greater the risk of default which will later affect the company's profitability (Sabir & Husain, 2021:79) .

NPL is one of the most important credit risk indicators for regulators and investors when assessing bank health (Bank Indonesia, 2022). The Financial Services Authority (OJK) has set a healthy NPL maximum of 5%. If the NPL exceeds this limit, the bank is required to take immediate corrective measures.

Theoretically, NPLs have a negative relationship with ROA. The higher the NPL, the greater the number of non-performing loans a bank must cover. This has two direct impacts on profitability: first, banks must establish larger allowances for impairment losses (CKPN), resulting in increased operating expenses and lower net income. Second, non-performing loans reduce the bank's expected interest income because non-performing debtors fail to pay their interest obligations in full. Therefore, an increase in NPLs directly depresses a bank's ROA (Almunawwaroh & Marliana, 2021).

***Loan to Deposit Ratio* (LDR)**

In the banking sector, liquidity refers to a bank's capacity to meet immediate responsibilities such as debt payments and customer deposit withdrawals. A bank with adequate assets can quickly convert into cash to meet its liquidity needs. A bank with adequate assets is said to have good liquidity.

The Loan to Deposit Ratio is one of the important indicators in measuring bank liquidity. *The Loan to Deposit Ratio* is the amount of loans a bank provides compared to the amount of deposits held by customers. A higher *Loan to Deposit Ratio* can indicate increased liquidity risk, where the bank will be unable to meet urgent withdrawals from customers. However, if maintained under control, this ratio will demonstrate the bank's efficiency in allocating funds to debtors. Liniarti & Andhayani Nasution (2022:25) states that, " *The Loan to Deposit Ratio* is a ratio that measures the extent to which a bank is able to repay withdrawals made by relying on the credit provided as a source of liquidity."

The purpose of calculating *the Loan to Deposit Ratio* is to determine and assess how well the bank is able to carry out its business activities and how balanced customer credit requests are with the bank's obligation to immediately grant customer withdrawal requests for funds that the bank has used to distribute credit.

Formula for finding *the Loan to Deposit Ratio* :

$$\textbf{Loan to Deposit Ratio} = \frac{\textbf{Total Pinjaman}}{\textbf{Total Simpanan}} \textbf{ x 100\%}$$

Non-Performing Loan (NPL)

Non-Performing Loan (NPL) is a financial ratio that shows the percentage of problem loans to total loans issued, which is used to measure bank credit risk according to (Wiwid Mufitasari et al., 2025).

The rise in non-performing loans is one of the dangers caused by the increasingly complex banking operations. A lower level of *non-performing loans* will minimize credit risk.

Formula for finding *Non-Performing Loan:*

$$\textbf{Non - Performing Loan} = \frac{\textbf{Kredit Bermasalah}}{\textbf{Total kredit yang diberikan}} \textbf{ x 100\%}$$

Return on Assets (ROA)

One of the factors used as a benchmark for assessing a bank's business management skills is profitability. Bank profitability analysis is necessary because it allows banks to assess how well their resources are being utilized.

The level of profitability is important for banks because it shows how effectively assets are used in generating net profit, in addition, increasing investor interest in saving their capital and growing public trust in raising additional funds and maintaining stable and necessary profitability by fulfilling obligations to shareholders (Rustan & Gunawan, 2024).

One of the most commonly used profitability ratios to evaluate bank performance is *Return on Assets* (ROA). ROA measures a bank's ability to generate operating profit from its total assets, thus reflecting the effectiveness of using all asset resources to generate profits (Kasmir, 2022).

Return on Assets (ROA) is a financial ratio that demonstrates a bank's capability in generating profits from its assets. This ratio is used to assess the bank's investment effectiveness. A high *ROA* indicates optimal asset management, while a low *ROA* indicates inefficient management. Therefore, *ROA* is one of the main parameters used to evaluate and assess a bank's financial performance, according to Wiwid Mufitasari et al., 2025.

Formula for finding *Non-Performing Loan:*

$$\textbf{Return on Asset} = \frac{\textbf{Laba Operasi}}{\textbf{Total Aset}} \textbf{x } 100\%$$

METHOD

The method used in this study is a quantitative research method with a descriptive and verification approach. The descriptive method is used to describe the conditions of *the Loan to Deposit Ratio* (LDR), *Non-Performing Loans* (NPL), and *Return on Assets* (ROA) in state-owned banks listed on the Indonesia Stock Exchange. Meanwhile, the verification research is used to measure the effect of *the Loan to Deposit Ratio* (LDR) and *Non-Performing Loans* (NPL) on *Return on Assets* (ROA) in state-owned banks listed on the Indonesia Stock Exchange.

The variables in this study are *Loan to Deposit Ratio* (LDR) and *Non-Performing Loan* (NPL) as independent variables and *Return on Assets* (ROA) as dependent variable.

The sampling technique in this study is the *purposive sampling* technique , namely a method of determining samples selected based on specific criteria that are considered to represent the characteristics of a previously determined population (Firdaus, 2021) . The samples in this study are:

1. PT Bank Rakyat Indonesia Terbuka (BBRI).
2. PT Bank Negara Indonesia Terbuka (BBNI)
3. PT Bank Mandiri Terbuka (BMRI)
4. PT Bank Tabungan Negara Terbuka (BBTN)

This study uses secondary data , which is data that has been processed and presented or conveyed through various media such as books, journals, the internet, and other sources related to the research object. The data used in this study is quantitative, that is, data in numerical form. The

data required for this study are the financial reports of state-owned banks listed on the Indonesia Stock Exchange for the period 2015–2024.

The analytical technique used in this study is panel data regression. Panel data regression can be defined as an analysis used to determine whether one or more independent variables have a significant influence, either partially or simultaneously, on the dependent variable. Panel data is often associated with time series data and cross-sectional data (Priyanto, 2022) .

The time series examined in this study, which takes into account the time and amount from 2015-2024 and includes the variables *of Loan to Deposit Ratio* and *Non-Performing Loan* to *Return on Assets* at BRI, BNI, Mandiri and BTN banks.

RESULTS AND DISCUSSION

Loan to Deposit Ratio (LDR) Condition

The Loan to Deposit Ratio (LDR) conditions of state-owned banks listed on the Indonesia Stock Exchange for 2015-2024 are shown in the table below:

Table 1. Loan to Deposit Ratio Conditions of State-Owned Banks for the 2015-2024 Period

Year	BBRI	BBNI	BMRI	BBTN
2015	86.88	87.80	87.05	108.78
2016	87.77	90.40	85.86	102.66
2017	87.44	85.60	88.11	103.13
2018	88.96	88.80	96.74	103.49
2019	88.64	91.50	96.37	113.50
2020	83.66	87.30	82.95	93.19
2021	83.67	79.70	80.04	92.86
2022	79.17	84.20	77.61	92.65
2023	84.73	85.80	86.75	95.36
2024	89.39	96.10	98.04	93.79
Mean	**86.03**	**87.72**	**87.95**	**99.94**
Median	**87.16**	**87.55**	**86.90**	**99.01**
Minimum	**79.17**	**79.70**	**77.61**	**92.65**
Maximum	**89.39**	**96.10**	**98.04**	**113.50**
Standard Deviation	**3.20**	**4.45**	**7.08**	**7.45**

Source: data processed by researchers (2025)

Table 1 shows that between 2015 and 2024, BBTN had the highest mean *Loan to Deposit Ratio* at 99.94%, while BBRI had the lowest mean at 86.03%. The median values also show a similar pattern, with BBTN having the highest median at 99.01% and BBRI having the lowest at 87.16%.

BMRI had the lowest *Loan to Deposit Ratio value* throughout the period, namely 77.61% in 2022, while the highest *Loan to Deposit Ratio value* was achieved by BBTN at 113.50% in 2019. This shows that BBTN is very aggressive in distributing credit compared to other state-owned banks.

BBTN had the highest standard deviation at 7.45, followed by BMRI at 7.08, indicating that *the Loan-to-Deposit Ratio* of both banks experienced significant year-to-year fluctuations. Meanwhile, BBRI had the lowest standard deviation at 3.20, indicating stability in its credit distribution policy.

Overall development *of the Loan to Deposit Ratio ,* shows that each bank has different credit distribution characteristics, with BBTN tending to be aggressive and fluctuating, while BBRI is more conservative and stable.

Performing Loan (NPL) Condition

Non-Performing Loan (NPL) conditions of state-owned banks listed on the Indonesia Stock Exchange in 2015-2024 are shown in the table below:

Table 2. *Non-Performing Loan Conditions* State-Owned Banks for the 2015-2024 period

Year	BBRI	BBNI	BMRI	BBTN
2015	2.02	2.70	2.29	3.42
2016	2.03	3.00	3.96	2.84
2017	2.12	2.30	3.45	2.66
2018	2.16	1.90	2.79	2.81
2019	2.62	2.30	2.39	4.78
2020	2.94	4.30	3.29	4.37
2021	3.08	3.70	2.81	3.70
2022	2.82	2.80	1.88	3.38
2023	3.12	2.10	1.02	3.01
2024	2.94	2.00	0.97	3.16
Mean	**2.59**	**2.71**	**2.49**	**3.41**
Median	**2.72**	**2.50**	**2.59**	**3.27**

Minimum	**2.02**	**1.90**	**0.97**	**2.66**
Maximum	**3.12**	**4.30**	**3.96**	**4.78**
Standard Deviation	**0.46**	**0.78**	**0.99**	**0.70**

Source: data processed by researchers (2025)

Table 2 shows that in the period 2015-2024 the mean for *Non-Performing Loans* The highest average ratio was held by BBTN at 3.41%, indicating that this bank faces higher credit risk than other state-owned banks. Meanwhile, the lowest average was held by BMRI at 2.49%.

BBTN's median score is also high at 3.27%, while BBNI's is the lowest at 2.50%. This indicates that BBTN's credit performance is generally consistent with a high level *of non-performing loans, while BBNI's is more variable.* BMRI's minimum score of 0.97% in 2024 indicates significant improvement in credit risk management. Conversely, BBTN's maximum score was 4.78% in 2019, marking its worst period in terms of non-performing financing.

In terms of standard deviation, BMRI showed the highest fluctuation in *non-performing loans* at 0.99, indicating instability in credit performance from year to year. Meanwhile, BBRI had the lowest standard deviation at 0.46, indicating a relatively small and stable annual change *in non-performing loans* .

In general, data on the development of *non-performing loans (NPLs)* indicates that BBRI and BMRI tend to have stable and better credit management performance compared to BBNI and BBTN, which exhibit higher variations and levels of credit risk. Overall, *NPLs* indicate that BBTN is most vulnerable to credit risk, while BBRI and BMRI are more stable and have better credit performance during the 2015-2024 period.

Return on Assets (ROA) Condition

The Return on Asset (ROA) conditions of state-owned banks listed on the Indonesia Stock Exchange for 2015-2024 are shown in the table below: .

Table 3. *Return on Assets Conditions* State-Owned Banks for the 2015-2024 period

Year	BBRI	BBNI	BMRI	BBTN
2015	4.19	2.60	3.15	1.61
2016	3.84	2.70	1.95	1.76
2017	3.69	2.70	2.72	1.71
2018	3.68	2.80	3.17	1.34

2019	3.50	2.40	3.03	0.13
2020	1.98	0.50	1.64	0.69
2021	2.72	1.40	2.53	0.81
2022	3.76	2.50	3.30	1.02
2023	3.93	2.60	4.03	1.07
2024	3.76	2.50	3.59	0.83
Mean	**3.51**	**2.27**	**2.91**	**1.10**
Median	**3.73**	**2.55**	**3.09**	**1.05**
Minimum	**1.98**	**0.50**	**1.64**	**0.13**
Maximum	**4.19**	**2.80**	**4.03**	**1.76**
Standard Deviation	**0.66**	**0.74**	**0.72**	**0.52**

Source: data processed by researchers (2025)

Table 3 shows that in the 2015-2024 period the mean for *Return on Assets* The highest average ratio was held by BBRI at 3.51%, indicating the best profitability performance in asset management compared to other banks. Meanwhile, the lowest average was held by BBTN at 1.10%.

BBTN achieved the minimum value of 0.13% in 2019, indicating poor performance in asset management. Conversely, BBRI achieved the maximum value of 4.19% in 2015, marking its best period in asset management.

BMRI's standard deviation shows the highest fluctuation in *Return on Assets* at 0.74, indicating instability in asset management to generate profits from year to year. Meanwhile, BTN has the lowest standard deviation at 0.52, indicating a relatively small and stable annual change *in Return on Assets* .

Overall, BBRI and BMRI have efficient financial performance, while BBTN faces the greatest challenge in optimizing its assets to generate profits. Meanwhile, BBNI is in the middle but exhibits significant fluctuations.

Multiple Linear Regression

This analysis is used to determine the direction of the relationship between the independent variables (*Loan to Deposit Ratio* and *Non-Performing Loan*) and the dependent variable (*Return on Assets*), whether each independent variable is positively or negatively related, and to predict the value of the dependent variable if the value of the independent variable increases or decreases.

The data used is usually on an interval or ratio scale. Based on the results of data processing, the results of multiple linear regression analysis are obtained as follows:

$$ROA = 3.6485 + 0.0082\ LDR - 0.6959\ NPL + \varepsilon$$

From the panel data regression equation above, we obtain:

1. The constant value of 3.6485 means that if *Return on Assets is not affected by the Loan to Deposit Ratio* and *Non-Performing Loan* variables , the average *Return on Assets* is 3.6485.
2. The regression coefficient of the LDR variable is 0.0082, meaning that every one percent increase in *the Loan to Deposit Ratio will result in a* 0.0082 percent increase *in Return on Assets* .
3. The regression coefficient of the NPL variable is -0.6959 percent, meaning that every one percent increase *in Non-Performing Loans can cause a decrease in the Return on Assets value* of 0.6959 percent.

Analysis of the Coefficient of Determination

The correlation coefficient of determination test is carried out to calculate how much the model is able to explain the dependent variable.

Table 4. Test of Determination Coefficient (r^2)

R-squared	0.608975	Mean dependent var	0.467246
Adjusted R-squared	0.587838	S.D. dependent var	0.661499
S.E. of regression	0.424682	Sum squared resid	6.673115
F-statistic	28.81150	Durbin-Watson stat	1.088083
Prob(F-statistic)	0.000000		

Source: Panel data application output (2025)

Based on the test results for the coefficient of determination, the *Adjusted* R- *Square table shows* that the effect is 0.5878 or 58.78%. This indicates that *the Loan to Deposit Ratio* and *Non-Performing Loans* have a 58.78% effect on *Return on Assets* , with the remaining 41.22% being the influence of external variables not included in this analysis.

Partial Hypothesis Test (t-Test)

The partial test (t-test) basically shows how far one independent variable influences the dependent variable by assuming the other independent variables are constant.

Table 5. Partial Hypothesis Test Results

Dependent Variable: ROA
Method: Panel EGLS (Cross-section random effects)
Date: 06/24/25 Time: 17:34
Sample: 2015 2024
Periods included: 10
Cross-sections included: 4
Total panel (balanced) observations: 40
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.648534	1.192558	3.059418	0.0041
LDR	0.008235	0.011858	0.694480	0.4917
NPL	-0.695915	0.092773	-7.501299	0.0000

Source: Panel data application output (2025)

The Effect of *Loan to Deposit Ratio* on *Return on Assets*

Shows insignificant results because the probability value is 0.4917 > 0.05 or $t_{hitung} \leq t_{tabel}$, namely 0.694 ≤ 2.026 with the conclusion that *the Loan to Deposit Ratio* partially has no significant effect on *the Return on Assets variable* in state-owned banks listed on the Indonesia Stock Exchange for the period 2015 - 2024.

The Effect of *Non-Performing Loans* on *Return on Assets*

Shows significant results because the probability value is 0.0000 < 0.05 or $t_{hitung} > t_{tabel}$namely -7.501 > 2.026 with the conclusion that *Non-Performing Loans* partially have a negative and significant effect on *the Return on Assets variable* in state-owned banks listed on the Indonesia Stock Exchange for the period 2015 - 2024.

Simultaneous Hypothesis Test (F Test)

The F statistical test essentially aims to test whether all independent variables formulated in the model have a joint or simultaneous influence on the dependent variable.

Table 6. Recapitulation of Simultaneous Hypotheses

R-squared	0.608975	Mean dependent var	0.467246
Adjusted R-squared	0.587838	S.D. dependent var	0.661499
S.E. of regression	0.424682	Sum squared resid	6.673115
F-statistic	28.81150	Durbin-Watson stat	1.088083
Prob(F-statistic)	0.000000		

Source: Panel data processing application output (2025)

The F-test results show significant results with a probability value of 0.0000 < 0.05 or $F_{hitung} > t_{tabel}$, namely 28.81150 > 3.25. This means that *the Loan to Deposit Ratio* and *Non-Performing Loan variables* simultaneously have a significant influence on the dependent variable *Return on Assets* in state-owned banks listed on the Indonesia Stock Exchange for the period 2015 – 2024.

The Effect of *Loan to Deposit Ratio* on *Return on Assets*

Based on the analysis, *the Loan to Deposit Ratio variable* was shown to have no significant impact on *Return on Assets.* This means that any increase in *the Loan to Deposit Ratio* will not affect *Return on Assets.* These results align with research conducted by Hastari, Ratih, 2024. which states that *the Loan to Deposit Ratio* has no effect on *Return on Assets.*

The Loan-to-Deposit Ratio is a measurement tool used to assess a company's level of total loans compared to total deposits. Bank Indonesia has set a minimum *Loan-to-Deposit Ratio limit* of 78% and a maximum tolerable limit of 92%. To maintain *a Loan-to-Deposit Ratio,* banks are expected to consistently disburse or increase financing to borrowers.

The Loan to Deposit Ratio conditions in state-owned banks listed on the Indonesia Stock Exchange show that several banks have *Loan to Deposit Ratio values* at maximum and minimum values, this is due to some banks not distributing credit efficiently which will affect the bank's profit. In the 2015-2024 period, *the Loan to Deposit Ratio* that is within the range of Bank Indonesia regulations is BBRI bank with a minimum limit of 79.17% and a maximum of 89.39% is in accordance with the established provisions. Then for the three banks such as BBNI, BMRI for the lower limit is in accordance with Bank Indonesia not less than 78% but for the upper limit of *the Loan to Deposit Ratio* exceeds the provisions, namely 96.1% for BBNI and 98.04% for BMRI. Furthermore, BBTN is in the range of *Loan to Deposit Ratio* that is too high exceeds the provisions with a maximum value of 113.5%.

Furthermore, the empirical findings of this study are inconsistent with the theoretical view that an increase in *the Loan to Deposit Ratio* will also drive an increase *in Return on Assets.* Based on empirical data, *the Loan to Deposit Ratio* does not affect the increase in *Return on Assets;* when *the Loan to Deposit Ratio increases , Return on Assets* actually decreases. This condition indicates that banks are not utilizing all third-party funds optimally and are less efficient in increasing bank profitability. Therefore, it can be concluded that *the Loan to Deposit Ratio* has no effect on *Return on Assets* in state-owned banks listed on the Indonesia Stock Exchange 2015-2024 is due to the credit provided by banks not having a significant impact on profit generation due to the lack of optimization of third-party funds.

The Impact of *Non-Performing Loans* on *Return on Assets*

Return on Assets is partially significantly influenced by the level of *Non-Performing Loans.* This negative correlation indicates that an increase in *Non-Performing Loans* actually tends to decrease *Return on Assets* . Therefore, this research aligns with the results of research (Wulandari et al., 2024) which states that *Non-Performing Loans* have an impact on *Return on Assets.*

Non-Performing Loan is one of the parameters that reflects the level of non-performing loans in a bank, where the higher the value of *Non-Performing Loan* , the greater the risk of default which will later affect the company's profitability. The theory put forward by (Sabir & Husain, 2021:79) is in accordance with the findings of this study where when the value of *Non-Performing Loan* increases the level of credit risk also increases and vice versa so that it will later affect the increase and decrease of *Return On Assets.*

The Effect of *Loan to Deposit Ratio* and *Non-Performing Loans* on *Return on Assets*

Profitability or *Return On Assets* plays a crucial role for banks which can be used as a parameter in assessing the effectiveness of banking operational implementation. In this study, *Loan to Deposit Ratio* and *Non-Performing Loans* play a very important role in bank profitability, so that if all independent variables can meet the applicable PBI standards and are in accordance with their operational activities, bank profitability will remain stable and can even strengthen customer confidence in saving excess funds in the bank.

These results are in accordance with previous studies that together *the Loan to Deposit Ratio* and *Non-Performing Loans* have an influence. on *Return on Assets* in state-owned banks listed on the Indonesia Stock Exchange for the period 2015-2024. The results of this study agree with those

of (Farida Yanti & Jaelani, 2024) and (Nur Syfa & Dailibas, 2025) , which state that *the Loan to Deposit Ratio* and *Non-Performing Loans* simultaneously influence *Return on Assets.*

CONCLUSION

Bank BBTN has the highest average *Loan to Deposit Ratio* of 99.94% with a standard deviation of 7.45, reflecting a more aggressive lending policy. Conversely, BBRI has the lowest average *Loan to Deposit Ratio* of 86.03% and the lowest standard deviation of 3.20, indicating stability in lending. BBNI has an average of 89.81% with a standard deviation of 4.77, which is at a medium level with moderate stability. The minimum *Loan to Deposit Ratio value* recorded by BMRI is 77.61%, while the highest maximum value is achieved by BBTN at 113.50%.

Non-Performing Loan condition at each bank during the 2015-2024 period, BBTN had the highest average and median *Non-Performing Loan* , respectively at 3.41% and 3.27%, reflecting the highest and most consistent level of credit risk among state-owned banks. Conversely, BMRI showed the lowest average *Non-Performing Loan value* of 2.49% and the lowest minimum value of 0.97% in 2024, indicating an increase in credit asset quality. BBNI recorded the lowest median of 2.50% while BBRI showed the highest stability with the smallest *Non-Performing Loan standard deviation* of 0.46, where on the other hand, BMRI experienced the highest fluctuation with a standard deviation of 0.99 indicating a fairly large variability in credit performance.

Return On Assets data for each state-owned bank listed on the Indonesia Stock Exchange, BBRI demonstrated the best profitability performance with the highest average *Return On Assets* of 3.51%, reflecting a fairly high efficiency in asset management. This was followed by BMRI with an average *Return On Assets* of 2.91% and a maximum value of 4.03% in 2023, reflecting a significant recovery after the pandemic. Meanwhile, BBNI with an average of 2.27% fluctuated highly with a standard deviation of 0.74 due to pressure from the pandemic, especially in 2020 with the lowest *Return On Assets* of 0.50%. Furthermore, BBTN showed the lowest profitability, with an average of 1.10% and a minimum value of 0.13%. Although its condition was stable with a low standard deviation, its profitability was limited compared to other state-owned banks.

Partially, *the Loan to Deposit Ratio* does not have a significant effect on *Return on Assets* in state-owned banks listed on the Indonesia Stock Exchange for the period 2015-2024. This indicates that an increase in *the Loan to Deposit Ratio* does not automatically increase bank profitability, which is due to inefficiencies in credit distribution and less than optimal utilization of third-party

funds being the main causes. Several banks were recorded as exceeding *the Loan to Deposit Ratio provisions* from Bank Indonesia, but were not followed by an increase *in Return on Assets* , indicating that a high *Loan to Deposit Ratio* does not necessarily reflect good financial performance.

Non-Performing Loans partially had a significant negative effect on *Return on Assets* at state-owned banks listed on the Indonesia Stock Exchange during the 2015-2024 period. This indicates that the higher the level of non-performing loans, the lower the bank's profitability. *Non-Performing Loans* reflect deteriorating asset quality, ultimately reducing the bank's ability to generate profits. Therefore, effective credit risk management is a crucial factor in maintaining a bank's financial performance.

Together, *the Loan to Deposit Ratio* and *Non-Performing Loans* significantly influence *Return on Assets* in state-owned banks for the 2015-2024 period with a value $F_{statistic}$ of 28.81150 and a significance of 0.000000 <0.05, which indicates that both independent variables jointly influence bank profitability. If *the Loan to Deposit Ratio* and *Non-Performing Loans* are managed in accordance with applicable regulations and support bank operational activities, profitability can be maintained and public trust in the banking system can be increased.

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