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The Role Of Non-Performing Loans In Moderating The Relationship Between Asset Quality And Liquidity On Banking Profitability

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Abstract

This study aims to analyze the influence of asset quality and liquidity on profitability, with non-performing loans as a moderating variable, in banking sector companies listed on the Indonesia Stock Exchange for the period 2019–2023. The study uses a quantitative approach with secondary data in the form of annual financial reports from banking companies. The sampling technique used purposive sampling based on specific criteria to obtain a relevant research sample. Data analysis was conducted using multiple linear regression and Moderated Regression Analysis (MRA) with the aid of statistical software. The results indicate that asset quality, proxied by the Net Interest Margin (NIM), has a positive and significant effect on Return on Assets (ROA). Meanwhile, liquidity, proxied by the Loan to Deposit Ratio (LDR), does not have a significant effect on ROA. Non-performing loans (NPLs), proxied by the Non-Performing Loan (NPL) ratio, do not moderate the relationship between asset quality and profitability or the relationship between liquidity and profitability. The research findings indicate that banking profitability is more influenced by a bank's ability to manage productive assets, maintain operational efficiency, and control credit risk. Therefore, the banking sector needs to strengthen risk management and the quality of credit disbursement to maintain sustainable profitability.

Keywords: Asset Quality; Liquidity; Profitability; Non-Performing Loans; Banking

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INTRODUCTION

The banking sector plays a very significant role in a country's economy. The banking sector provides many services that are vital to people's lives. Based on Law of the Republic of Indonesia No. 10 of 1998, dated November 10, 1998, banking is defined as a business entity that collects funds from the public in the form of deposits and channels them back to the public in the form of loans and/or other forms to improve the standard of living of the general public.

The primary objectives of the banking sector are to generate long-term profits through sound management of assets and liabilities, provide the best financial services to customers, and contribute to economic stability. However, when a bank experiences poor financial performance and low liquidity, achieving profitability becomes difficult (Editorial, 2024). This is because banks may incur losses from non-performing loans and face difficulties in meeting short-term obligations, which ultimately affect their profitability and financial health. Therefore, the banking sector must improve its financial performance to maintain the stability and sustainability of its operations, even though its primary objective remains profit generation.

Banking profitability in Indonesia has shown a significant downward trend from 2019 to 2023, influenced by various factors that have weighed on the sector's financial performance. In 2019, although profitability remained relatively stable, some banks began to show a decline in performance. The following presents data on the average *Return on Assets* (ROA) of the banking sector in Indonesia from 2019 to 2023.



Figure 1. Average Return on Assets (ROA) of the banking sector in Indonesia from 2019 to 2023

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The year 2020 brought significant challenges to the banking sector, primarily due to the COVID-19 pandemic. A decline in consumer purchasing power and an increase in loan restructurings led to a drop in interest income, which impacted profitability. PT Bank Negara Indonesia (BNI), for example, recorded a 78.7% drop in net profit from Rp15.38 trillion in 2019 to just Rp3.3 trillion in 2020. The primary factor behind this decline was the high level of non-performing loans (NPLs), which forced the bank to set aside substantial provisions, thereby eroding net profit (Pusparisa, 2021). Bank Mandiri also reported a decline in ROA from 3.03% in 2019 to 1.64% in 2020, in line with the increase in the non-performing loan (NPL) ratio due to the COVID-19 pandemic.

The trend of declining banking financial performance continued in 2021, driven by various factors including deteriorating asset quality and suboptimal liquidity. The Net Interest Margin (NIM), as a measure of asset quality, reflects a bank's ability to generate net interest income. The consistent decline in NIM reflects pressure on banks' interest income. For example, PT Bank Tabungan Negara (BTN) recorded a decline in NIM from 4.2% in 2021 to 3.9% in 2022. This decline was primarily due to rising funding costs resulting from competition in mobilizing third-party funds (BTN Annual Report, 2022). A significant decline in NIM reduces the bank's profit margin and is one of the main causes of declining profitability.

In 2022, for example, PT Bank Tabungan Negara (BTN) recorded a decline in its net interest margin (NIM) from 4.2% in 2021 to 3.9% in 2022. This decline was primarily due to rising *funding costs* resulting from competition in mobilizing third-party funds (BTN *Annual Report*, 2022). PT Bank Neo Commerce (BNC) also faced a significant decline in profit margins, largely due to an increase in non-performing loans. Additionally, PT Bank Mandiri reported an increase in the NPL ratio to 2.9% in 2022 compared to 2.5% in the previous year. These conditions led to an increase in provisioning costs and compressed the ROA ratio from 2.2% in 2021 to 1.9% in 2022 (Mandiri Annual Report, 2022). Consequently, many banks are beginning to face challenges in maintaining their Return on Assets (ROA) levels amid external pressures and increasingly intense competition (Chusna, 2024).

Asset quality and liquidity are two key factors influencing bank profitability, where asset quality reflects the bank's profit margin derived from the difference between interest income received from loans and interest expenses paid to depositors, while liquidity describes the bank's ability to meet its short-term obligations. The relationship between these two factors and profitability can be moderated by the level of non-performing loans (NPLs). High NPLs can worsen a bank's profitability by causing a decline in interest

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income and an increase in loan loss provision costs. Asset quality and liquidity positively contribute to profitability; however, when NPLs are high, the positive effects of asset quality and liquidity on profitability tend to weaken (Lestari & Setianegara, 2020).

Spence's (1973) Signaling Theory states that under conditions of asymmetric information, internal parties within a company send signals to external parties regarding the company's financial condition. In the banking context, asset quality, liquidity, and non-performing loans (NPLs) serve as signals to investors and stakeholders. Good asset quality and adequate liquidity send positive signals about the bank's financial health, which can enhance investor confidence in the bank's profitability. Conversely, high NPLs send negative signals, indicating higher potential risks in credit management and reducing external confidence in the bank's performance.

Agency Theory by Jensen and Meckling (1976) explains the potential for conflicts of interest between the principal (shareholders) and the agent (management). In banking, shareholders expect management to manage assets and liquidity effectively to maximize profits. However, due to information asymmetry, management may make decisions that benefit their personal interests or are short-term in nature, such as granting high-risk loans. This can increase NPLs and jeopardize profitability, creating agency problems that harm shareholders and the bank's stability.

Profitability is a ratio used to measure the level of performance effectiveness management in generating profits through all normal business activities (Utina et al., 2024). Return on Assets (ROA) is used to measure a bank's profitability because Bank Indonesia, acting as the banking sector's regulator and supervisor, prioritizes and emphasizes the bank's profitability as measured by assets, the funds for which primarily originate from public deposits. (Ishak & Pakaya, 2022)

Asset quality assessment reflects the bank management's ability to manage its earning assets (Rusnidita, 2021). Asset quality, or *the quality of earning assets*, serves as a benchmark to determine the likelihood of recovering funds invested in earning assets—such as interest and principal—based on specific criteria.

Asset quality, as measured by *the Net Interest Margin* (NIM), refers to the extent to which a financial institution can generate profits from its assets after deducting interest expenses. NIM is calculated by dividing interest income from assets and interest expenses paid on liabilities by the total amount of interest-earning assets. This indicator reflects a bank's efficiency in managing assets and liabilities, as well as its ability to generate profits from its operations. The higher the NIM, the better the asset quality in generating net income.

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The Net Interest Margin reflects a bank's potential to generate greater net interest income through its performance in extending loans. In this context, banks must pay close attention to the level of NIM as it directly impacts the bank's profit and loss (Fanny et al., 2020). Liquidity, measured using *the Loan to Deposit Ratio* (LDR), is a key indicator for assessing how efficiently a bank manages its customers' deposits in the form of loans (Invesnesia, 2024). The LDR is calculated by dividing total loans granted by total deposits received by the bank. This ratio indicates the proportion of deposits that have been lent out and provides insight into the bank's ability to meet its liquidity obligations in the event of a sudden deposit withdrawal.

Non-performing loans refer to loans that are experiencing difficulties in paying interest or principal according to the agreed schedule, often potentially causing losses for the lender (Anugrah, 2023). This condition is typically classified based on the duration of payment delays, such as loans that are past due for more than 90 days and are usually referred to as *non-performing loans* (NPLs). Non-performing loans reflect high credit risk and can negatively impact the financial health of financial institutions. According to Allegra (2022), non-performing loans are a critical issue that must be managed effectively to ensure the stability of the financial system

The higher a company's assets, the higher its profits, as the company uses its assets for operational activities aimed at generating profits (Diana & Osesoga, 2020). Research by Patni & Darma (2017) found that the net interest margin (NIM) has a significant impact on bank profitability. They state that a high NIM is positively correlated with *Return on Assets* (ROA), which is a measure of bank profitability. NIM influences profitability by taking into account factors such as monetary policy and economic stability (Goddard et al., 2004). They found that while NIM plays a crucial role in enhancing profitability, its impact can vary depending on macroeconomic conditions and banking regulations.

The relationship between NIM and profitability is not always positive. This aligns with the research by Claessens et al. (2016), who found that while a high NIM is typically associated with higher profitability, this relationship can be influenced by macroeconomic conditions such as low interest rates or market instability. They identified that in a low-interest-rate environment, an increase in NIM does not always contribute to better profitability due to a decline in net interest margins (Claessens et al., 2016)

LDR has a significant positive relationship with bank profitability (Dewi et al., 2015). This study indicates that if a bank's ability to disburse loans relative to the third-party funds it has collected is high, then the amount of loans granted by the bank will also

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increase, thereby boosting the bank's profits— . In other words, an increase *in the Loan-to-Deposit Ratio (LDR)* enhances profitability, leading to improved financial performance, provided the bank can effectively disburse loans, resulting in a low volume of non-performing loans. This is consistent with research by Alifah (2014), who states that the LDR has a positive effect on profitability.

Conversely, a study by Pinasti & Mustikawati (2018) indicates that the relationship between the LDR and profitability can be negative, particularly under unstable economic conditions. This study suggests that to maintain the LDR ratio, banks must consistently maintain or increase the amount of credit extended to the public, in addition to mobilizing funds from the public. A high LDR has two potential outcomes: if credit is extended effectively, it generates profit; however, if credit expansion is poorly controlled and extended carelessly, it poses greater risks. This situation results in the LDR having no significant impact on bank profitability. The findings of this study align with research conducted by Prastiyaningtyas (2010), Hutagalung et al. (2013), and Wicaksono (2016), which state that the LDR does not affect profitability.

RESEARCH METHOD

This study was conducted on banking sector companies listed on the Indonesia Stock Exchange (IDX) with an observation period from 2019 to 2023. Data collection was carried out through the Indonesia Stock Exchange Investment Gallery at the Faculty of Economics and Business, Gorontalo State University. The selection of the research subjects was based on the consideration that the banking sector plays a strategic role in the national financial system; thus, bank profitability is a critical aspect influenced by asset quality, liquidity, and the level of non-performing loans. The research was conducted in stages, beginning with the submission of the title, proposal drafting, data collection, proposal seminar, data analysis, results seminar, thesis drafting, and culminating in the thesis defense.

This study employs a quantitative approach. The quantitative approach was chosen because it can explain relationships between variables through numerical measurements and hypothesis testing based on empirical data. In this approach, relationships between variables are explained through theoretical concepts that can be statistically tested to arrive at objective conclusions. The research design was employed to support both the data exploration process and the testing of hypotheses regarding the influence of asset quality and liquidity on profitability, with non-performing loans serving as the moderating variable. The relationships among variables are depicted through a

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research model that positions asset quality and liquidity as independent variables, profitability as the dependent variable, and non-performing loans as the moderating variable.

Operational definitions of the variables are used to provide conceptual boundaries and measurement criteria for each research variable. The independent variables consist of asset quality and liquidity. Asset quality is proxied using the Net Interest Margin (NIM), a ratio indicating a bank's ability to generate net interest income through the effective management of productive assets. The higher the NIM value, the better the bank's asset quality in generating income. The liquidity variable is proxied using the Loan to Deposit Ratio (LDR), a ratio that describes a bank's ability to meet short-term obligations through the management of third-party funds and credit disbursement. Profitability, as the dependent variable, is proxied using Return on Assets (ROA), a ratio that measures a company's ability to generate profit from its total assets. Meanwhile, non-performing loans, as the moderating variable, are proxied using Non-Performing Loans (NPL), which indicates the level of non-performing loans and reflects the quality of banking credit risk management.

The population in this study consists of all banking sector companies listed on the Indonesia Stock Exchange during the 2019–2023 period. The research sample was determined using purposive sampling, which involves selecting samples based on specific criteria tailored to the research objectives. These criteria include banking companies that were continuously listed on the Indonesia Stock Exchange during the study period, published complete annual financial reports, and possessed data relevant to the research variables. The purposive sampling technique was chosen so that the sample obtained could represent the characteristics of the population and produce data suitable for empirical analysis needs.

Data collection was conducted through documentation and literature review. The data used consisted of secondary data in the form of annual financial reports from companies in the banking sector, obtained from the official website of the Indonesia Stock Exchange and the companies' respective annual reports. In addition, the literature review was conducted by examining relevant literature, scientific journals, books, and previous studies to strengthen the theoretical foundation and support the interpretation of the research results. The use of secondary data was chosen because it was considered capable of providing objective information regarding the companies' financial conditions during the research period.

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Data analysis was performed using multiple linear regression and Moderated Regression Analysis (MRA). Before hypothesis testing was conducted, the data was first tested using classical assumption tests, including tests for normality, multicollinearity, heteroscedasticity, and autocorrelation, to ensure that the regression model met statistical assumptions. Furthermore, multiple linear regression analysis was used to test the influence of asset quality and liquidity on profitability, while Moderated Regression Analysis was used to test the role of non-performing loans in moderating the relationship between variables. Hypothesis testing was conducted using partial tests (t-tests), simultaneous tests (F-tests), and the coefficient of determination (R^2) to determine the extent of the influence of independent variables on the dependent variable, both individually and collectively. With this approach, this study is expected to produce empirical findings regarding the influence of asset quality and liquidity on profitability, with non-performing loans as a moderating variable in the banking sector in Indonesia.

RESULT AND DISCUSSION

Normality Test

Table 1: Results of the normality test for Equation 1
One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			181
Normal Parameters [a, b]		Mean	.0000000
		Standard Deviation	.96822168
Most Extreme Differences		Absolute	.061
		Positive	.042
		Negative	-.061
Test Statistic			.061
Asymptotic Significance (2-tailed)			.098[c]

Source: Processed Data, 2025

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Based on Table 1 above, the results of the normality test show that the Asymp. Sig. (2-tailed) value of 0.098 > 0.05; therefore, it can be concluded that the data in this study are normally distributed.

Table 2: Results of the normality test for equation 2
One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			181
Normal Parameters [a, b]		Mean	.0000000
		Standard Deviation	.96573730
Most Differences	Extreme	Absolute	.064
		Positive	.044
		Negative	-.064
Test Statistic			.064
Asymptotic Significance (2-tailed)			.065[c]

Based on Table 2 above, the results of the normality test indicate that the Asymp. Sig. (2-tailed) value of 0.065 is greater than 0.05; therefore, it can be concluded that the data in this study are normally distributed.

Multicollinearity Test

Table 3 Multicollinearity Test
Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	*Net Interest Margin*	.734	1.362
	Loan-to-Deposit Ratio	.724	1.381
	Non-Performing Loans	.984	1.017

a. Dependent Variable: Return on Assets

Based on Table 3 above, it can be seen that the Tolerance values for the *Net Interest Margin* variable (0.734), the *Loan-to-Deposit Ratio* (0.724), and *Non-Performing*

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Loans (0.984) are greater than 0.10, and the VIF value for the *Net Interest Margin* variable is 1.362, *the Loan-to-Deposit Ratio* is 1.381, and *the Non-Performing Loan* is 1.017, are all less than 10.00. Therefore, it can be concluded that multicollinearity does not occur

Heteroscedasticity Test

Based on the data processing results, the resulting *scatterplot* is as follows:

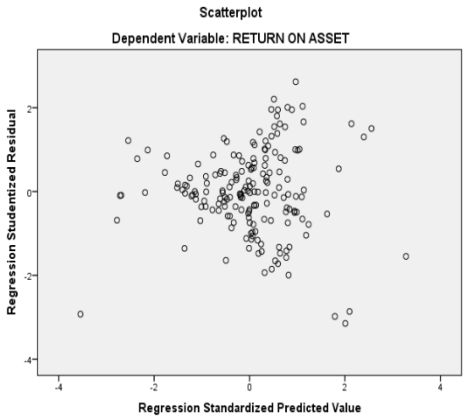


Figure 1 ***Scatterplot*** **(Equation 1)**

From the scatterplot in the figure above, it can be seen that the points are randomly distributed, both above and below the zero line on the Y-axis. This indicates that there is no heteroscedasticity in the regression model.

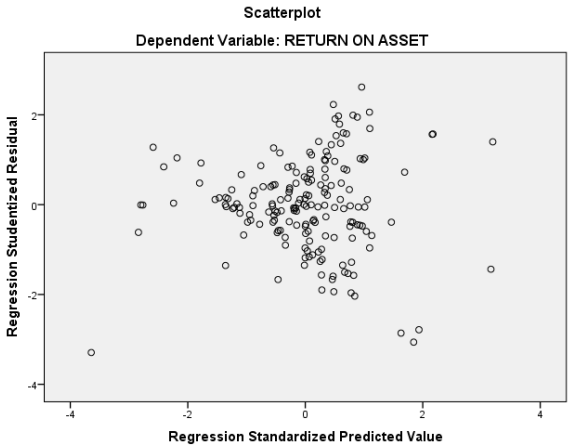


Figure 2 ***Scatterplot*** **(Equation 2)**

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From the scatterplot in the figure above, it can be seen that the points are randomly distributed, both above and below the zero line on the Y-axis. It can be concluded that there is no heteroscedasticity in the regression model.

Autocorrelation Test

Table 4 *Durbin-Watson* Autocorrelation

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.688[a]	.473	.464	.97639	1.008

a. Predictors: (Constant), NON PERFORMING LOAN, NET INTEREST MARGIN, LOAN TO DEPOSIT RATIO

b. Dependent Variable: RETURN ON ASSET

Source: Processed Data, 2025

Based on Table 4, the autocorrelation test yields a DW value of 1.008. When compared to the table values using a 0.05 confidence level with a sample size (n) of 200 and two independent variables (k), the DW table shows dL values of 1.7483 and dU values of 1.7887. Therefore, since the DW value of 1.060 is below the dU value of 1.6518, it is concluded that positive autocorrelation exists.

Table 5 *Durbin-Watson* Autocorrelation

Model Summary[b]

Model	R	R-Square	Adjusted R-Square	Standard Error of the Estimate	Durbin-Watson
1	.646[a]	.326	.432	.8126	2.060

a. Predictors: (Constant), LAG_Z, LAG_X2, LAG_X1

b. Dependent Variable: LAG_Y

Based on the results in Table 5, after conducting another autocorrelation test using the Cochrane-Orcutt method, the Durbin-Watson (DW) value was obtained to be 2.060.

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With a significance level of 0.05, a sample size of 200, and 2 independent variables. Based on the Durbin-Watson table, the dU value is 1.7887 and the 4-dU value is 2.2113. Thus, the results of this study show that 1.7887 < 2.060 < 2.2113. Since the DW value of 2.060 lies between dU 1.7887 and 4-dU 2.2113, it can be concluded that the regression model in this study does not exhibit autocorrelation.

Multiple Linear Regression Test

Table 6 Multiple Linear Regression Analysis Equation 1

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.006	.223		4.513	.000
	NET INTEREST MARGIN	.235	.033	.455	7.139	.000
	LOAN TO DEPOSIT RATIO	.003	.002	.074	1.159	.248
	NON PERFORMING LOAN	-.340	.038	-.499	-9.068	.000

a. Dependent Variable: RETURN ON ASSET

From the calculations in Table 6, the multiple linear regression equation for this study can be formulated as follows:

Y = 1.006 + 0.235 + 0.003 + (-0.340)

This regression equation indicates that the constant value of 1.006 implies that if the variables Net Interest Margin (NIM), Loan to Deposit Ratio (LDR), and Non-Performing Loan (NPL) are considered constant or equal to zero, then the Return on Assets (ROA) for banking companies listed on the Indonesia Stock Exchange ( ) for the 2019–2023 period is 1.006. This constant value reflects the baseline level of profitability that banks can achieve without being influenced by changes in the independent variables in the research model.

The regression coefficient for the Net Interest Margin (NIM) of 0.235 indicates that NIM has a positive effect on Return on Assets (ROA). This means that a one-unit increase in the Net Interest Margin will increase Return on Assets by 0.235, assuming all other variables remain constant. A significance value of 0.000, which is less than 0.05, indicates that the Net Interest Margin has a significant effect on banking profitability. Thus, the

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higher a bank's ability to manage its productive assets to generate net interest income, the higher the bank's profitability level as measured by ROA.

Table 7 Multiple Linear Regression Analysis Equation 2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.309	.390		3,355	.001
	Net Interest Margin	.203	.072	.392	2,803	.006
	Loan-to-Deposit Ratio	.001	.004	.035	.313	.755
	Non-performing loans	-0.398	.073	-.584	- 5,448	.000
	NIM_NPL	.006	.014	.083	.426	.671
	LDR_NPL	.000	.001	.063	.335	.738

Source: Processed Data, 2025

From the calculations in Table 7, the multiple linear regression equation for this study can be formulated as follows:

$$\mathbf{Y = 1.309 + 0.203X_1 + 0.}001X_2 \mathbf{+ (-0.398)Z + 0.006(X_1Z) + 0.000(X_2Z) + \varepsilon}$$

From the unstandardized coefficients of the regression model, the coefficient values are as follows:

1. The constant value of 1.309 indicates that if all independent variables (*Net Interest Margin, Loan to Deposit Ratio, and Non-Performing Loans*) and interaction variables (X_1Z and X_2Z) are set to zero, the estimated value of the dependent variable is 1.309. This value represents the baseline value of the dependent variable without the influence of independent variables in the model. The regression coefficient for *Net Interest Margin* of 0.203 indicates that *Net Interest Margin* has a positive effect on *Return on Assets* (Y).
2. The coefficient of X1, which is 0.203, indicates that Net Interest Margin has a positive effect on the dependent variable. This means that for every one-unit increase in Net Interest Margin, assuming all other variables remain constant, the value of the dependent variable will increase by 0.203. This indicates a positive relationship between Net Interest Margin and the dependent variable. The regression coefficient

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for *Net Interest Margin and Non-Performing Loans* is 0.006, indicating that *Non-Performing Loans* have no effect on *Return on Assets* (Y).

3. The coefficient for X3 of 0.001 indicates that *the Loan to Deposit Ratio* has a positive, albeit very small, effect on the dependent variable. This means that a one-unit increase in *the Loan to Deposit Ratio* will increase the value of the dependent variable by 0.001, assuming all other variables remain constant.
4. The coefficient for Z is -0.398, indicating a negative effect on the dependent variable. This means that a one-unit increase *in Non-Performing Loans* will decrease the value of the dependent variable by 0.398, assuming all other variables remain constant. This indicates an inverse relationship between the level of non-performing loans and the dependent variable.
5. The interaction coefficient X1Z of 0.006 indicates that the interaction between these two variables has a positive effect on the dependent variable. This means that the effect of *Net Interest Margin* on the dependent variable increases as *Non-Performing Loans* increase. A one-unit increase in the X1Z interaction will increase the value of the dependent variable by 0.006.
6. The interaction coefficient of X2Z, which is 0.000, indicates that the interaction between these two variables has no effect on the dependent variable. This means that an increase in the X2Z interaction does not result in a change in the value of the dependent variable.
7. The error term (ε) represents other factors outside the model that influence the dependent variable but are not included in the regression equation. This term reflects the variation that cannot be explained by the independent variables and interaction terms in this study.

Hypothesis Testing

Results of the t-test (Partial)

The t-test was used to determine whether Corporate Governance and Company Characteristics influence Earnings Management. The criterion for this partial test (t-test) is that if t-calculated > t-table, then Ha is accepted and H0 is rejected. The results of the partial test (t-test) can be seen in the following table:

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Table 8 Results of the Partial Test (t-Test) for Equation 1

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.006	.223		4.513	.000
	Net Interest Margin	.235	.033	.455	7,139	.000
	Loan-to-Deposit Ratio	.003	.002	.074	1,159	.248
	Non-Performing Loans	-340	.038	-.499	-9,068	.000

The Effect of *Net Interest Margin* on *Return on Assets*

Based on the results of *the* partial regression coefficient calculations shown in the tables, specifically Table 4.7*, the calculated* value *of* the *Net Interest Margin* variable is 7.139 and is significant at the confidence level (α = 0.05), with a p-value of 0.000, which is less than 0.05. With α = 0.05 and degrees of freedom = 200 – 2 – 1 = 197, the *t-table* value is 1.653.

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

Based on the results of the partial regression coefficient calculations shown in the tables, specifically Table 4.7*, the* calculated *t-value for the Loan-to-Deposit Ratio* variable is 1.159 and is significant at the 5% confidence level (α = 0.05); the significance value ( ) is 0.248, which is greater than 0.05. With α = 0.05 and degrees of freedom = 200 – 2 – 1 = 197, the *t-table* value is 1.653.

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

Based on the results of *the* partial regression coefficient calculations shown in the tables, specifically Table 4.7*, the t-value* for the *Non-Performing Loan* variable is -9.068 and is significant at the 0.05 confidence level; the significance value obtained is 0.000, which is less than 0.05. With α = 0.05 and degrees of freedom = 200 – 2 – 1 = 197, the *critical t*-value is 1.653.

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Table 9 Results of the Partial Test (t-Test) for Equation 2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.309	.390		3,355	.001
	Net Interest Margin	.203	.072	.392	2,803	.006
	Loan-to-Deposit Ratio	.001	.004	.035	.313	.755
	Non-performing loans	-0.398	.073	-.584	-5,448	.000
	NIM_NPL	.006	.014	.083	.426	.671
	LDR_NPL	.000	.001	.063	.335	.738

a. Dependent Variable: Return on Assets

Source: Processed Data, 2025

The Effect of *Net Interest Margin* on *Return on Assets*

Based on the results of *the* partial regression coefficient calculations shown in the table, specifically Table 4.8*, the calculated* value *for* the *Net Interest Margin* variable is 2.803 and is significant at the confidence level (α = 0.05); the significance value obtained is 0.006, which is smaller than 0.05. With α = 0.05 and degrees of freedom = 200 – 2 – 1 = 197, the *t-table* value is 1.653.

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

Based on the results of *the* partial regression coefficient calculations shown in the tables, specifically Table 4.8*, the calculated t-value for the Loan-to-Deposit Ratio* variable is 0.313 and is significant at the 0.05 confidence level; the significance value obtained is 0.755, which is greater than 0.05. With α = 0.05 and degrees of freedom = 200 – 2 – 1 = 197, the *t-table* value is 1.653.

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

Based on the results of the partial regression coefficient calculations shown in the tables, specifically Table 4.8*, the* calculated *t-value for the Non-Performing Loan* variable is -5.488 and is significant at the 5% confidence level (α = 0.05), with a p-value of 0.000,

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which is less than 0.05. With α = 0.05 and degrees of freedom = 200 – 2 – 1 = 197, the *critical t*-value is 1.653.

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

Based on the results of *the* partial regression coefficient calculations shown in the tables, specifically Table 4.8, *the calculated t-values for* the *Net Interest Margin* and *Non-Performing Loan* variables are 0.426 and 0.671, respectively, and are significant at the 0.05 confidence level. The significance value of 0.671 is greater than 0.05. With α = 0.05 and degrees of freedom = 200 – 2 – 1 = 197, the *t-table* value is 1653.

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

Based on the results of *the* partial regression coefficient calculations shown in the table, specifically Table 4.8*, the calculated* values for *the Loan-to-Deposit Ratio* and *Non-Performing Loans* variables are 0.335 and are significant at the 0.05 confidence level; the significance value obtained is 0.738, which is less than 0.05. With α = 0.05 and degrees of freedom = 200 – 2 – 1 = 197, the *t-table* value is 1653.

Simultaneous Test (F-Test)

Table 10 Results of the Simultaneous Test for Equation 1

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	179.680	3	59,893	10,449	.000[b]
	Residual	1,083,354	189	5,732		
	Total	1,263,034	192			

a. Dependent Variable: Return on Assets

b. Predictors: (Constant), *Non-Performing Loans, Net Interest* Margin, Loan-to-Deposit Ratio

Source: Processed data, 2025

Table 10 shows that the calculated F-value is greater than the table F-value, namely calculated F 10.449 > table F 2.65, and the significance value is also less than

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0.05, namely 0.000 < 0.05. This means that the variables *Net Interest Margin and Loan-to-Deposit Ratio* together (simultaneously) have a positive effect on Return on Assets.

Table 11 Results of the Simultaneous Test for Equation 2

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	152.225	5	30.445	31.737	.000[b]
Residual	167,877	175	,959		
Total	320,102	180			

a. Dependent Variable: Return on Assets

b. Predictors: (Constant), LDR_NPL, Net Interest Margin, Loan-to-Deposit Ratio, Non-Performing Loans, NIM_NPL

Source: Processed data, 2025

Table 11 shows that the calculated F-value is greater than the table F-value, namely calculated F 31.737 > table F 2.65, and the significance value is also less than 0.05, namely 0.000 < 0.05. This means that the variables *Net Interest Margin, Loan-to-Deposit Ratio,* and *Non-Performing Loans,* as well as the combination of *Loan-to-Deposit Ratio* and *Non-Performing Loans*, collectively (simultaneously) have a positive effect on Return on Assets.

Coefficient of Determination Test (R^2 Test)

Table 12 Coefficient of Determination Test (R^2) Equation 1

Model Summary[b]

Model	R	R-Square	Adjusted R-Square	Standard Error of the Estimate
1	.688[a]	.473	.464	.97639

a. Predictors: (Constant), *Non-Performing Loans, Net Interest Margin, Loan-to-Deposit Ratio*

b. Dependent Variable: *Return on Assets*

Source: Data Analysis, 2025

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Based on Table 12 above, it is known that the coefficient of determination (R^2) in this study is 0.473, or 47.3% of the *Return on Assets* is influenced by the *Net Interest Margin* and *Loan-to-Deposit Ratio* variables. Meanwhile, the remaining 100% - 47.3% = 52.7% is influenced by other variables.

Table 13 Coefficient of Determination (R^2) for Equation 2

Model Summary[b]

Model	R	R-Square	Adjusted R-Square	Standard Error of the Estimate
1	.690[a]	.476	.461	.97944

Source: Data Analysis, 2025

Based on Table 13 above, it is known that the coefficient of determination (R^2) in this study is 0.476, or 47.6% of the *Return on Assets* is influenced by the variables *Net Interest Margin, Loan-to-Deposit Ratio*, *NIM_Non-Performing Loan, and LDR_Non-Performing Loan*. The remaining 100% - 47.6% = 52.4% is influenced by other variables.

DISCUSSION

The Effect of Net Interest Margin on Return on Assets

The research results indicate that asset quality influences the profitability of banking sector companies listed on the Indonesia Stock Exchange during the 2019–2023 period. Asset quality, proxied by the Net Interest Margin (NIM), reflects a bank's ability to generate net interest income through the effective management of productive assets. The higher the NIM, the greater the opportunity for banks to increase their profitability. This condition is evident in large banks that were able to maintain profits during the Covid-19 pandemic through selective credit management. These findings are consistent with the research by Pratiwi (2022), Hindasah (2021), and Hutagalung (2013).

The Effect of the Loan-to-Deposit Ratio on Return on Assets

The research results indicate that liquidity does not affect the profitability of banking sector companies listed on the Indonesia Stock Exchange for the 2019–2023 period. Liquidity, proxied using the Loan to Deposit Ratio (LDR), suggests that an increase in credit disbursement does not necessarily lead to higher company profits. This

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condition is influenced by banks' prudence in extending credit during the economic recovery period following the COVID-19 pandemic. Additionally, factors such as operational efficiency, funding costs, credit quality, and non-interest income have a more dominant influence on profitability. These findings align with the research by Saputra (2018) and Dewi (2020).

Net Interest Margin, Non-Performing Loans, and Return on Assets

The research results indicate that non-performing loans do not moderate the influence of asset quality on the profitability of banking sector companies listed on the Indonesia Stock Exchange during the 2019–2023 period. This suggests that asset quality remains the dominant factor in determining profitability despite changes in non-performing loan levels. During the study period, loan restructuring and loss provisions helped maintain the stability of bank performance. Additionally, large banks were able to maintain profitability due to their superior credit quality and risk management. These findings align with the research by Anindiansyah (2020), Saputra (2018), and Dewi (2021).

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

The research results indicate that non-performing loans do not moderate the effect of liquidity on the profitability of banking sector companies listed on the Indonesia Stock Exchange for the 2019–2023 period. This suggests that changes in non-performing loan levels do not significantly strengthen or weaken the relationship between liquidity and profitability. This occurs because bank profitability is more influenced by credit quality, operational efficiency, funding costs, and non-interest income than by liquidity levels. During the COVID-19 pandemic, banks focused more on maintaining financial stability than on aggressively increasing profits.

Net Interest Margin, Loan to Deposit Ratio versus Return on Assets

The research findings indicate that non-performing loans have not been able to strengthen the relationship between asset quality and liquidity on the profitability of banking sector companies listed on the Indonesia Stock Exchange for the 2019–2023 period. Bank profitability is more influenced by the company's ability to manage productive assets, maintain operational efficiency, and control credit risk. During the Covid-19 pandemic, many banks maintained liquidity reserves to anticipate economic uncertainty, so profitability has not yet improved optimally. These findings indicate that

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strategies to strengthen risk management and improve the quality of credit disbursement remain critical factors for the sustainability of bank profitability.

CONCLUSION

Based on the research results and discussion conducted regarding "The Effect of Asset Quality and Liquidity on Profitability with Non-Performing Loans as a Moderating Variable (A Study of Companies in the Banking Sector Listed on the IDX for the Period 2019–2023)," the following conclusions can be drawn:

1. Asset quality, as measured by the Net Interest Margin (NIM), has been statistically proven to have a positive impact on Return on Assets (ROA). This indicates that the higher a bank's efficiency in generating net interest income from earning assets, the greater its profitability. In other words, a bank's ability to maintain earning assets that yield optimal returns is a key determinant of its profit performance. This finding also reinforces that asset management is a crucial element in bank management, particularly in maintaining interest income margins amid macroeconomic dynamics and competition among financial institutions.
2. Liquidity, as measured by the Loan-to-Deposit Ratio (LDR), does not have a significant impact on ROA. This suggests that even if a bank has high liquidity or is able to channel third-party funds in the form of loans, this does not necessarily lead to increased profitability. One reason is the potential risks arising from credit expansion that is not accompanied by adequate credit risk management. In practice, the efficiency of credit disbursement has a greater impact on profits than simply a high level of fund disbursement.
3. The research results indicate that the interaction between asset quality and non-performing loans (NPLs) does not have a significant effect on profitability. In other words, even though NPLs increased, their impact on the relationship between NIM and ROA was not statistically significant. This suggests that the direct influence of NIM on profitability is quite strong, while the variation in NPLs within the sample was not extreme enough to significantly disrupt that relationship.
4. The research results show that the interaction between LDR and NPL also does not have a significant effect on ROA. Theoretically, high NPLs can weaken the effect of LDR on profitability, but in the context of this study, this was not proven. This indicates that the effects of LDR and NPL on profitability may operate independently, rather than as a moderating interaction.

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REFERENCES

Accenture. (2020). *Intelligent Operations in Banking: Making Digital Banking More Human*. https://www.accenture.com/us-en/insights/banking/consumer-study-banking-reignite-human-connections

Alifah, Y. B. (2014). *Pengaruh CAR, NPL, BOPO, Dan LDR Terhadap Profitabilitas Bank (ROA) Pada Perusahaan Perbankan Yang Terdaftar Di Bursa Efek Indonesia Periode 2009-2012*. Universitas Negeri Yogyakarta.

Allegra, A. (2022). *Analisis Stabilitas Sistem Keuangan Bank Syariah Di Indonesia*. Universitas Islam Indonesia.

Alwi, Bahari, Ramadhan, Andriani, & Semmawi. (2024). Tantangan dan Peluang Perbankan Digital: Studi Kasus Inovasi Keuangan dan Transformasi Perbankan. *Jurnal Cahaya Mandalika*, 2160–2177. https://doi.org/10.36312/jcm.v3i2

Anugrah, A. P. (2023). Pelaksanaan Resheduling pada Pembiayaan Modal Kerja Bermasalah dengan Akad Murabahah. *Journal on Education*, *05*(03), 7465–7476.

Ardiansyah, M. D. (2021, October). *Opini : Strategi Memperkuat Perbankan di Era Digital*. Bisnis.Com. https://finansial.bisnis.com/read/20211006/90/1451048/opini-strategi-memperkuat-perbankan-di-era-digital

Bordens, & Abbott. (2009). Research Design and Methods. In *Listening in the Language Classroom*. https://doi.org/10.1017/cbo9780511575945.009

Budhiani, O. (2024, May). *Tren Digital Bank di Indonesia: Masa Depan Perbankan yang Lebih Inklusif dan Inovatif*. Digital Transformation Indonesia. https://digitaltransformation.co.id/tren-digital-bank-di-indonesia-masa-depan-perbankan-yang-lebih-inklusif-dan-inovatif/

Chandro. (2021). *Rumus ROE – Pengertian Return on Equity dan Cara Hitungnya*. Lifepal. https://lifepal.co.id/media/rumus-roe-ini-pengertian-dan-cara-hitungnya/

Claessens, S., Coleman, N., & Donnelly, M. (2016). *"Low-for-long" interest rates and net interest margins of banks in Advanced Foreign Economies*.

Desy Setyowati. (2022). *Deretan Fintech Indonesia Akuisisi dan Investasi di Bank*. Katadata. https://katadata.co.id/digital/fintech/625cda452cf24/deretan-fintech-indonesia-akuisisi-dan-investasi-di-bank

Dewi, L. E., Nyoman, T. H., & Sulindawati, L. G. E. (2015). Analisis Pengaruh NIM, BOPO, LDR, DAN NPL Terhadap Profitabilitas (Studi Kasus Pada Bank Umum Swasta Nasional Yang Terdaftar Pada Bursa Efek Indonesia Periode 2009-2013). *Universitas Pendidikan Ganesha Jurusan Akuntansi Program S1*, *1*.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Diana, L., & Osesoga, M. S. (2020). Pengaruh likuiditas, solvabilitas, manajemen aset, dan ukuran perusahaan terhadap kinerja keuangan. *Jurnal Akuntansi Kontemporer*, *12*(1), 20–34. https://doi.org/10.33508/jako.v12i1.2282

Didin. (2023). *Return on Asset Adalah: Pengertian dan Cara Menghitungnya*. PT Zahir Internasional. https://zahiraccounting.com/id/blog/return-on-asset/

Dionisio Damara. (2022). *Waduh! OJK Catat Profitabilitas Bank Menyusut per Februari 2022*. Bisnis.Com. https://finansial.bisnis.com/read/20220331/90/1517515/waduh-ojk-catat-profitabilitas-bank-menyusut-per-februari-2022

Fanny, F., Wijaya, W., Indahwati, I., Silcya, M., Wijaya, V. C., & Ginting, W. A. (2020). Analisis Pengaruh NPL, NIM, LDR, Dan CAR Terhadap Profitabilitas (ROA) Pada Bank Pemerintah Dan Bank Konvensional Yang Terdaftar Di BEI. *Profita : Komunikasi Ilmiah Akuntansi Dan Perpajakan*, *13*(1), 112–122. https://doi.org/10.22441/profita.2020.v13i1.009

Farichatul Chusna. (2024). *Teknologi Finansial (Fintech) dan Dampaknya terhadap Investasi*. Investbro.Id. https://investbro.id/teknologi-finansial-fintech-dan-dampaknya-terhadap-investasi/

Goddard, J., Molyneux, P., & Wilson, J. O. S. (2004). The Profitability Of European Banks: A Cross-Sectional And Dynamic Panel Analysis. In *The Manchester School* (Vol. 72, Issue 3).

Hidayat, M. (2011). *Manajemen Aset (Privat dan Publik)*. LaksBang PRESSindo.

Hutagalung, E. N., Djumahir, & Ratnawati, K. (2013). Alamat Korespondensi: Analisa Rasio Keuangan terhadap Kinerja Bank Umum di Indonesia. *Jurnal Aplikasi Manajemen*, *11*(1).

Invesnesia. (2024). *Loan to Deposit Ratio (LDR) : Rumus, Defisinis, Analisis, Interpretasi*. Invesnesia. https://www.invesnesia.com/loan-to-deposit-ratio-ldr

Ishak, I. M., & Pakaya, S. I. (2022). Pengaruh non-performing financing (NPF) terhadap return on asset (ROA) di perbankan syariah indonesia (Studi kasus pada bank umum syariah yang terdaftar di OJK tahun 2013-2020). *JAMBURA: Jurnal Ilmiah Manajemen Dan Bisnis*, *5*(1), 66-70.

Kasmir. (2014). *Manajemen Perbankan*. Rajawali Pers.

Kasmir. (2018). *Bank dan Lembaga Keuangan Lainnya*. PT Rajagrafindo Persada.

Lestari, W. D., & Setianegara, R. G. (2020). Analisis Pengaruh NIM, BOPO, LDR, dan NPL Terhadap Profitabilitas (Studi Kasus Pada Bank Umum Yang Listed Di Bursa Efek Indonesia Periode 2014-2018). *Keunis Journal Finance & Business* , *8*(1).

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Munandar. (2020). *Metodologi Penelitian* (Issue 1).

Nasution, D. A. D., Supraja, G., & Damanik, A. F. (2022). *Peningkatan Pengelolaan BUMN Sebagai Upaya Kesejahteraan Masyarakat Desa Dengan Menganalisa Faktor-Faktor Yang Mempengaruhi Kinerja Keuangan* (A. Wahdi, Ed.). CV. Dewa Publishing .

Patni, S. S., & Darma, G. S. (2017). Non Performing Loan, Loan to Deposit Ratio, Net Interest Margin, BOPO, Capital Adequacy Ratio, Return on Asset and Return on Equity. *Jurnal Manajemen Dan Bisnis*, *14*(2). http://journal.undiknas.ac.id/index.php/magister-manajemen/

Pinasti, W. F., & Mustikawati, RR. I. (2018). Pengaruh CAR, BOPO, NPL, NIM dan LDR Terhadap Profitabilitas Bank Umum Periode 2011-2015. *Jurnal Nominal*, *VII*(1). https://journal.uny.ac.id/index.php/nominal/article/view/19365/10688

Pratiwi. (2021). *Mengenal Loan to Deposit Ratio (LDR) Untuk Menilai Likuiditas Bank*. Harmony. https://www.harmony.co.id/blog/loan-to-deposit-ratio-ldr-adalah/

Rachman, A., Yochanan, C. E., Samanlangi, A. I., & Purnomo, H. (2024). *Metode Penelitian Kuantitatif Kualitatif dan R & D*.

Redaksi. (2024). *Rumus & Cara Menghitung Non-Performing Loan (NPL) Bank*. Money Nesia. https://moneynesia.com/rasio-keuangan/non-performing-loan/

Reilly, F. K., & Brown, K. C. (2003). *Investment Analysis Portfolio Management*.

Rose, P. S., & Hudgins, S. C. (2019). *Bank Management & Financial Services* (10th Edition). McGraw-Hill Education.

Rusnidita, K. (2021). Pengaruh Kualitas Aset, Likuiditas, Rentabilitas, Efisiensi Operasional dan Leverage terhadap Rasio Kecukupan Modal pada Perusahaan Perbankan di Bursa Efek Indonesia. *Sintaksis : Jurnal Ilmiah Pendidikan* , *1*. https://www.neliti.com/publications/536665/pengaruh-kualitas-aset-likuiditas-rentabilitas-efisiensi-operasional-dan-leverag

Sekaran. (2018). Research Methods For Business. In *Angewandte Chemie International Edition, 6(11), 951–952.* (Vol. 3, Issue 1).

Sunarto. (2023). Pengaruh kredit bermasalah terhadap tingkat profitabilitas dan likuiditas pada industri perbankan yang terdaftar di Bursa Efek Indonesia. *Jurnal Ekonomi, Manajemen Dan Akuntansi (JEKMA)* , *2*, 14–21. https://journal.binainternusa.org/index.php/ecomas

Tampubolon, M. P. (2013). *Manajemen keuangan (Finance management)*. Mitra Wacana Media.

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Utina, U., Monoarfa, M. A. S., & Selvi. (2024). Evaluasi dampak profitabilitas dan leverage terhadap harga saham pada perusahaan IDX Quality30 periode 2020–2022. Jambura: Jurnal Ilmiah Manajemen dan Bisnis, 7(1), 487–497.

Yahya, L. M., Rahman, W., Launtu, A., Hastutik, S., & Mudasetia. (2024). Pengaruh Kualitas Aset Terhadap Kinerja Keuangan Bank Komersial Di Era Digital. *Management Studies and Entrepreneurship Journal*, *5*(1), 377–383. http://journal.yrpipku.com/index.php/msej

Yosepha Pusparisa. (2021). *Terimbas Pandemi Covid-19, Laba Bersih Perbankan Indonesia Menyusut*. Katadata Media Network. https://databoks.katadata.co.id/keuangan/statistik/aac0def7bdacd42/terimbas-pandemi-covid-19-laba-bersih-perbankan-indonesia-menyusut

Yoshiharu Okubo, & Gavin Adrian. (2023). *Menelusuri perkembangan dan peluang fintech di Indonesia*. East Ventures. https://east.vc/id/berita/insights-id/menelusuri-perkembangan-dan-peluang-fintech-di-indonesia

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