

# Effect of Liquidity and Solvency on Profitability of Banking Companies in Indonesia

Hariatih <sup>\*1</sup> Indrawan Aziz <sup>2</sup>

<sup>\*1,2</sup> Institut Teknologi dan Bisnis Nobel Indonesia, Makassar City, 90231, South Sulawesi Province, Indonesia

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## ARTICLE INFO ABSTRACT



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### Correspondence Email:

[hariatih@stienobel-indonesia.ac.id](mailto:hariatih@stienobel-indonesia.ac.id)

[indrawan@stienobel-indonesia.ac.id](mailto:indrawan@stienobel-indonesia.ac.id)

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*This study aims to determine the effect of liquidity and solvency on profitability as one of the company's main objectives. The population in this study was 36 banks listed on the Indonesia Stock Exchange for the period 2014-2018. This research was conducted using secondary data from the Indonesia Stock Exchange (IDX). Sample selection was made using the purposive sampling technique. Of the 36 banks listed on the Indonesia Stock Exchange, ten have had a positive profitability trend in the last four years. The type of data used in this research is quantitative data. The data was obtained from the official website of the Indonesia Stock Exchange, namely [www.idx.co.id](http://www.idx.co.id), in the form of quarterly financial reports (March 2014-September 2018). Go public, commercial banks. The data collection technique used in this research is the method of documentation analysis or literature study. The results obtained are 1) Liquidity variable (LDR) has a positive and significant effect on the profitability (ROE) of banks listed on the Indonesia Stock Exchange. 2) Solvency variable (DER) has no (negative) and no significant effect on the profitability (ROE) of banks listed on the Indonesia Stock Exchange. 3) Liquidity (LDR) and Solvency (DER) variables have a significant positive effect on the profitability (ROE) of banks listed on the Indonesia Stock Exchange.*

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## INTRODUCTION

The era of globalization is a hope and a challenge; apart from opening increasingly global business opportunities, businesspeople are also faced with increasingly complex and dynamic problems such as the financial crisis. Financial crises are always preceded by macroeconomic fluctuations and instability that lead to a significant depreciation of the domestic currency, considering high-interest rates and inflation as well as macroeconomic instability. The incident in the banking sector was an unexpected event that caused businesspeople to panic. For this reason, the banking sector needs to regenerate the image of banking by increasing trust in the public and business actors. So that when facing a global crisis, the banking industry can still exist and be strong in terms of capital, asset quality, income, and liquidity. However, pressure on national economic conditions is usually considered unfavorable for the business and banking world; until now, not a few banks are still able to manage risk in all their business activities based on conservative banking principles. In addition, the risk control system, in general, remains strong because banks will continue to improve risk management adjustments in all their functional activities so that any existing risks can be identified, measured, monitored, and controlled correctly. This is important to note as one of the factors that supports a robust and quality banking system that is still based on trusted principles and can meet the requirements for realizing a healthy bank.

The definition of a bank according to Law Number 10 of 1998 states that a bank is a business entity that collects funds from the public in the form of savings and distributes it to the public in the form of credit and or other documents to improve the standard of living of the people at large. So, it can be concluded that the main activities of banking are collecting funds in the form of collecting funds from the

public in the form of demand deposits, savings, and deposits and channeling them to the people in the form of credit and providing other bank services such as clearing and transfers. As an industry based on trust that functions as a "financial intermediary" institution, if it can carry out its functions properly, it will positively impact the economy.

In running a business or any activity, the main expectation is to make a profit (Amelia & Hernawati, 2016). Establishing a bank is to achieve maximum profit, which is expected to support the survival and development of these business activities. The Bank's business as a financial business in achieving profitability is by placing funds from its customers into productive assets, which with the availability of these funds can be used for lending to the public with credit interest determined by the Bank, which debtors must pay. So that this loan disbursement can generate profits from the credit interest (Enggarwati & Yahya, 2016), not all banks in Indonesia can be healthy, especially in the capital sector. The role of capital is vital in the banking business.

Profitability performance is an essential aspect of the Bank. This study wants to determine the level of bank profitability by measuring the Bank's ability to gain profit, which can be seen through the Return on Equity (ROE) financial ratio. ROE is a benchmark indicator of how much profit returns (profit) on invested capital (Adisamartha & Noviani, 2015). If the ROE of a bank is significant, the greater the position of the Bank in terms of the use of equity. The amount of ROE owned by banks should always increase from time to time, but this is not the case with Go Public Commercial Banks; this is based on information that can be obtained on the website ([www.bi.go.id](http://www.bi.go.id)) about the magnitude of the development of Return on Equity (ROE), based on the percentage of these banks over the last four years, can be seen in table 1.

**Tabel 1. Perkembangan ROE Pada Perbankan Go Public Tahun 2014-2018**

No	Nama Bank	Tahun				
		2014	2015	2016	2017	2018
1	Bank Rakyat Indonesia Agroniaga, Tbk	6,86	5,95	5,32	4,52	3,81
2	Bank Capital Indoneisa, Tbk	7,65	8,62	7,11	6,12	6,74
3	Bank Central Asia, Tbk	21,19	20,12	18,30	17,75	12,88
4	Bank Bukopin, Tbk	10,65	12,80	11,43	2,01	3,76
5	Bank Negara Indonesia (Persero), Tbk	17,75	11,65	12,78	13,65	13,67
6	Bank Rakyat Indonesia (Persero), Tbk	24,82	22,46	17,86	17,36	8,96
7	Bank Tabungan Negara (Persero), Tbk	9,35	13,35	13,69	13,98	9,62
8	Bank Danamon Indonesia, Tbk	8,12	7,22	7,68	10,59	6,87
9	BPD Jawa Barat dan Banten, Tbk	15,81	17,80	11,92	1,07	11,61
10	Bank QNB Indonesia, Tbk	5,30	6,44	-18,70	-19,79	-4,18
11	Bank Mandiri (Persero), Tbk	19,70	17,70	9,55	12,61	13,98
12	Bank Bumi Arta, Tbk	8,61	4,62	6,07	6,57	4,35
13	Bank CIMB Niaga, Tbk	8,24	1,49	6,09	8,06	9,10
14	Bank Permata, Tbk	9,28	1,31	-33,61	15,51	2,27
15	Bank Sinarmas, Tbk	4,90	5,05	8,28	6,58	5,06
16	Bank Of India Indonesia, Tbk	18,94	-4,01	-45,57	-11,33	2,94
17	Bank Tabungan Pensiun Nasional, Tbk	15,20	12,59	11,50	8,27	11,66
18	Bank Victoria Internasional, Tbk	6,01	4,45	3,82	4,78	2,34
19	Bank Artha Graha Internasional, Tbk	4,07	2,58	1,65	1,51	1,01
20	Bank Mayapada Internasional, Tbk	15,27	14,22	11,63	7,91	7,55
21	Bank Mega, Tbk	8,61	9,14	9,44	73,10	8,87
22	Bank OCBC NISP, Tbk	8,94	9,15	9,18	9,99	10,80
23	Bank Pan Indonesia, Tbk	11,12	5,09	7,36	5,53	5,53

24	Bank Dinar Indonesia, Tbk	0,74	3,24	2,93	2,20	1,56
25	Bank Woori Saudara 1906, Tbk	3,54	6,41	7,02	7,18	6,12
26	Bank MNC Internasional, Tbk	-4,42	0,48	0,50	-54,70	7,37
27	Bank Agris, Tbk	0,97	0,69	0,59	-1,47	-1,67
28	Bank Mestika Dharma, Tbk	11,12	10,64	6,68	8,56	7,07
29	Bank BPD Banten, Tbk	-18,73	-106,60	-46,86	-9,68	-15,21
30	Bank Ina Perdana, Tbk	5,07	5,28	3,78	1,52	0,32
31	Bank BPD Jawa Timur, Tbk	15,54	14,05	14,26	14,83	14,88
32	Bank Maspion Indonesia, Tbk	3,86	4,74	6,13	5,98	3,47
33	Bank Maybank Indonesia, Tbk	4,86	7,26	10,21	9,35	6,48
34	Bank China Construction Bank Indoneisa, Tbk	4,33	4,77	0,93	2,04	2,68
35	Bank Nationalnobu, Tbk	1,33	1,53	2,28	2,51	2,60
36	Bank Jtrust Indonesia, Tbk	-64,93	-67,73	-53,11	8,04	-15,24

*Source: Data, Go Public Tahun 2014-2018*

Based on table 1 above that, from 2014 to 2018, ROE at Go Public Commercial Banks experienced many increases and decreases. When viewed from 36 Go Public, commercial banks, ten banks experience an increase or dominant increase yearly, namely Bank Bukopin, Tbk, Bank Negara Indonesia (Persero), Tbk, BPD West Java, and Banten, Tbk, Bank BPD East Java, Tbk., Bank Mandiri (Persero), Tbk, Bank CIMB Niaga, Tbk, National Pension Savings Bank, Tbk, Bank OCBC NISP, Tbk, Bank Nationalnobu, Tbk, Bank Capital Indonesia, Tbk. This shows an increase or a more dominant increase from year to year, so it must be maintained. Moreover, it can also be an example for other banks. Therefore, research is continued to see which aspect makes it increase.

In assessing the performance of a company, or in this case, banking, ROE is an essential measure in fundamental analysis because ROE measures how much the company can satisfy the interests of shareholders (who invest in the company) (Akbar & Fahmi, 2020). As for the factors considered in investment, ROE always increases yearly or at least is in an uptrend for several years. That way, the company can maximize the return on equity to generate net income. When someone decides to become an investor, especially in the stock market, an investor needs to understand or know the ratios in measuring the company's profitability or ability to generate profits (MA'ARIF, 2019). With these ratios, it allows a shareholder to be able to measure the effectiveness of the company in minimizing its costs and utilizing all its resources. If the company cannot reduce costs and use its resources effectively, it will impact the profits earned (Christine et al., 2019).

A profitability ratio is a ratio to assess the company's ability to seek profit. Profitability ratio analysis is essential for all parties, especially equity and creditor investors (Agustia & Suryani, 2018). For equity investors, profit is considered a determining factor for changes in the value of securities (securities). For creditor investors, profits and operating cash flows are generally sources of interest and principal payments. This ratio consists of Gross Profit Margin (GPM), Net Profit Margin (NPM), Return on Investment (ROI), Return On Total Assets (ROA), and Return On Equity (ROE). However, apart from looking at the profitability ratios, companies also need to pay attention to other ratios that might affect the effort to achieve the targeted profit, such as the company's solvency and liquidity ratios. Liquidity is a ratio that describes the company's ability to meet short-term or maturing obligations (debts) (Ambarwati et al., 2015). This means that if the company is billed, the company will be able to meet the debt (pay), primarily debts that are due. In determining the appropriate amount, or level of current assets, management must consider the trade-off between profitability and risk. At the same time, solvency is a ratio used to measure the extent to which company assets are financed with debt (Mahulae, 2020). That is, how much debt is borne by the company compared to its assets. The greater the debt, the greater the burden on the company will be. Therefore, solvency is said to be one factor that can affect a company's profitability. The

solvency ratio itself consists of the Debt to Assets Ratio (DAR), Debt to Equity Ratio (DER), Long Term Debt to Equity Ratio (LTDER), Time Interest Earned, and Cash Flow Coverage.

Liquidity measures the company's ability to pay obligations that are soon due. The importance of liquidity can be seen by considering the impact of the company's inability to meet its short-term obligations. Lack of liquidity prevents companies from taking advantage of discounts or profit opportunities, limiting opportunities and management actions (RA Putri, 2014). The types of liquidity ratios that companies can use to measure financial performance are divided into six, namely non-performing loans (NPL), operating expenses to operating income (BOPO), capital adequacy ratio (CAR), net interest margin (NIM), loan to deposit ratio (LDR) and loan to asset ratio (LAR). The purpose of the existence of a liquidity ratio is to measure the company's ability to pay obligations or debts that are due immediately when billed (NWKA Putri & Merkusiwati, 2014), measure the company's ability to pay short-term obligations with current assets as a whole, measure the company's ability to pay short-term obligations with current assets without taking into account inventories or receivables, measuring or comparing the amount of existing inventory with the company's working capital, measuring how much cash is available to pay debts, as a tool for planning cash and future company debt, seeing the condition and position of the company's liquidity from time to time by comparing it for several periods, looking at the weaknesses of the company, from each component in current assets and current liabilities and becoming a trigger tool for management to improve its performance, by looking at the current liquidity ratio (Enggarwati & Yahya, 2016). For parties outside the company, such as funders (creditors), investors, distributors, and the wider community, the liquidity ratio is helpful in assessing the company's ability to pay obligations to third parties (Rahmawati, 2017).

The solvency ratio illustrates a bank's ability to meet its long-term obligations (Saemargani & Mustikawati, 2015). A company's solvency ratio shows its ability to meet its short-term and long-term financial commitments if the company is liquidated. A solvable company means that it has sufficient assets or wealth to pay all its debts and vice versa; a company that does not have enough wealth to pay its debts is called an insolvable company (Mahulae, 2020). According to (Alfiani & Nurmala, 2020), the solvency ratio is a ratio that measures how good the company's capital structure is. The capital structure is permanent funding consisting of long-term debt, preferred stock, and shareholder capital. According to Saemargani & Mustikawati (2015), there are several company goals by using the solvency ratio, namely to determine the company's position towards obligations to other parties (creditors), to assess the company's ability to meet fixed obligations (such as loan installments including interest), to assess the balance between the value of assets, especially fixed assets and capital, to assess how much the company's assets are financed by debt, to assess how much influence the company's debt has on asset management, to evaluate or measure how much of each rupiah of own capital is used as collateral for long-term debt and to assess how much loan funds will soon be billed, there are several times the own money owned. Several types of solvency ratios include debt to assets ratio (DAR) and debt to equity ratio (DER) (Gaganis et al., 2019). The solvency ratio or leverage ratio is measured through two approaches: balance sheet ratios and the extent to which loans are used for capital, and through the profit and loss ratio approach (Alfiani & Nurmala, 2020).

According to Rafsanjani (2016), the profitability ratio is a ratio to assess the company's ability to seek profit. This ratio also measures the level of management effectiveness of a company. This is indicated by the profit generated from sales and investment income. The point is that using this ratio shows the company's efficiency. The purpose of using profitability ratios for the company and for parties outside the company, namely to measure or calculate the profit earned by the company in a certain period, to assess the company's profit position in the previous year with the current year, to assess the progress of profits from time to time, to assess the amount of profit net after-tax with own capital and to measure the productivity of all company funds used both loan capital and own capital (Riyadi & Yulianto, 2014). There

are several types of profitability ratios, including profit margins or profit margins, return on assets (ROA), and return on equity (ROE) (Sumanti & Mangantar, 2015).

**H1:** Liquidity has a significant positive effect on the profitability of banking companies listed on the Indonesia Stock Exchange

**H2:** Solvency has a significant positive effect on the profitability of banking companies listed on the Indonesia Stock Exchange

## RESEARCH METHOD

The population in this study were 36 banks listed on the Indonesia Stock Exchange for the period 2014-2018. This research was conducted using secondary data from the Indonesia Stock Exchange (IDX). Sample selection was made using the purposive sampling technique. Of the 36 banks listed on the Indonesia Stock Exchange, ten have had a positive profitability trend in the last four years. The type of data used in this research is quantitative data. These data were obtained from the official website of the Indonesia Stock Exchange, namely: [www.idx.co.id](http://www.idx.co.id), in the form of quarterly financial reports (March 2014-September 2018) Go public, commercial banks. The data collection technique used in this research is the method of documentation analysis or literature study. The data that has been collected will be analyzed through four stages of testing. The first stage is to perform descriptive statistical tests. The second stage is the multiple linear regression test. The third stage is the classical assumption test (normality test, multicollinearity test, heteroscedasticity test, autocorrelation test). The fourth stage is to test all hypotheses proposed in this study, which will be proven through the coefficient of determination, partial, and simultaneous tests.

**Table 2. Definition of Operational Variables and Measurements**

Variabel	Indikator	Referensi
Likuiditas (X1)	Loan to deposit ratio (LDR) = Kredit atau loan: DPK atau total deposit.	(Sudiani & Darmayanti, 2016)
Solvabilitas (X2)	Debt to Equity Ratio (DER) = Total hutang: Modal sendiri x 100%	(Mahulae, 2020)
Profitabilitas (Y)	Return On Equity (ROE) = Laba bersih setelah pajak: Ekuitas x 100%	(Dewi, 2016)

*Source: Processed Data, 2022*

## RESULTS AND DISCUSSION

Descriptive statistics in this study refer to the average value (mean) and standard savings (standard deviation). The following are the results of the statistical description of the research variables consisting of ROE (Y), LDR (X1), and DER (X2) in table 3.

**Table 3. Descriptive Statistics**

	Mean	Std. Deviation	N
ROE (Y)	10,0502	4,91110	50
LDR (X1)	77,1162	16,37447	50
DER (X2)	6,6908	2,63638	50

*Source: Processed Data, 2022*

The calculation results from table 3 show that (N) or the amount of data on each variable are 50 pieces that come from a sample of banks listed on the IDX starting in 2014-2018. Return On Equity (ROE) averages 10.0502, with a standard deviation of 4.91110. The To Deposit Ratio (LDR) averages 77.1162

with a standard deviation of 16.37447. The debt-to-equity ratio (DER) averages 6.6908 with a standard deviation of 2.63638.

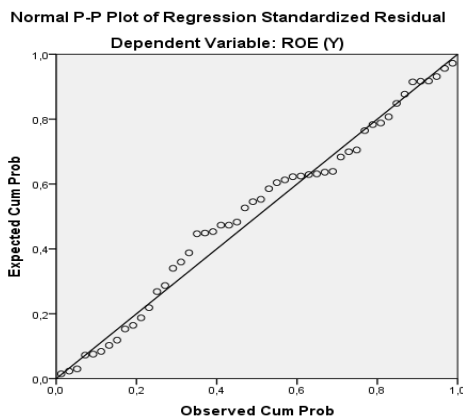
Then, the data normality test was conducted to see whether the residual value was normally distributed. In this study, the Kolmogorov Smirnov normality test is a normality test that compares the distribution of the data (which will be tested for normality) with the standard normal distribution. So, the Kolmogorov Smirnov test is a test of the difference between the data being tested for normality and common normal data. The requirements to meet this normality test are, If the significance is below 0.05, the data is not normal. On the other hand, if the importance is above 0.05, the data can be said to be normal.

**Table 4. Kolmogorov Smirnov-Normality Test Results**

<i>One-Sample Kolmogorov-Smirnov Test</i>		
		Unstandardized Residual
N		50
Normal Parameters <sup>a,b</sup>	Mean	,0000000
	Std. Deviation	4,51529653
Most Extreme Differences	Absolute	,106
	Positive	,058
	Negative	-,106
Test Statistic		,106
Asymp. Sig. (2-tailed)		,200c,d

Source: Processed Data, 2022

Table 4 shows the sig value of 0.200, which means that the sig value is more significant than 0.05. So, it can be concluded that  $0.200 > 0.05$ , where the data is said to be expected. In addition to comparing substantial values, the author can also use an average probability plot graph. If the data spread around the diagonal line and follows the direction of the diagonal line, the regression model meets the assumption of normality.



**Figure 1. Normality Test Diagonal Line**

As seen in Figure 1, the resulting data is usually distributed. This is because the distribution of the data remains around the residual line. So, the regression model meets the assumption of normality.

The multicollinearity test aims to test whether the regression model found a correlation between independent variables. To detect it by analyzing the tolerance value and Variance Inflation Factor (VIF). Then it is stated that there is no multicollinearity if the Tolerance value is  $> 0.100$  and the VIF value is  $< 10.00$ .

**Table 5. Multicollinearity Test Results**

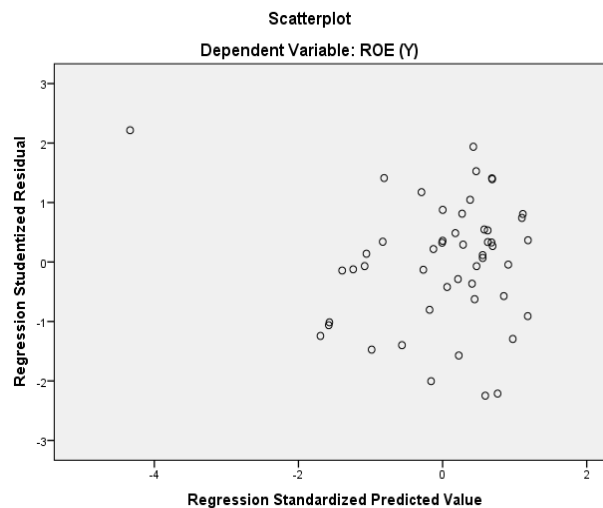
<i>Coefficients<sup>a</sup></i>			
		Collinearity Statistics	
Model		Tolerance	VIF
1	(Constant)		
	LDR (X1)	,985	1,015
	DER (X2)	,985	1,015

a. Dependent Variable: ROE (Y)

Source: Processed Data, 2022

Table 5 shows the LDR(X1) and DER(X2) variables, which have a Tolerance value of  $0.985 > 0.100$  and a VIF value of  $1.015 < 10.00$ . Thus, it can be concluded that the LDR(X1) and DER(X2) variables do not occur in multicollinearity.

Then the Heteroscedasticity test was conducted to regress the independent variables to the absolute value of the residual. Residual is the difference between the observed value and the predicted value, and final is the total value. Using the Scatter Plot method by plotting the ZPRED value (prediction value) with SRESID (residual value) and the Glejser test, the significance value between the independent variable and the absolute residual is more than 0.05; then, there is no heteroscedasticity problem.

**Figure 2. Heteroscedasticity Test Results**

The data results in Figure 2 show the points that spread randomly do not form a specific pattern and are spread above and below the number 0 on the Y axis.

**Table 6. Glejser: Test Heteroscedasticity Test Results**

<i>Coefficients<sup>a</sup></i>							
		Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics	
Model		B	Std. Error	Beta	T	Sig.	Tolerance VIF
1	(Constant)	,051	3,782		,014	,989	
	LDR (X1)	,119	,041	,396	2,929	,005	,985 1,015
	DER (X2)	,126	,252	,068	,502	,618	,985 1,015

a. Dependent Variable: ROE (Y)

Source: Processed Data, 2022



Table 6 shows that the sig value (constant) and the LDR value (X1) are  $0.009 < 0.05$ . While the sig value for DER (X2) is  $0.057 > 0.05$ . Thus, it can be concluded that the independent variable LDR(X1) has problems and DER(X2) does not have heteroscedasticity problems.

Next is to perform an autocorrelation test to test whether, in a linear regression model, there is a correlation between the confounding error in period t and the confounding error t-1 (previous). If there is a correlation, then there is an autocorrelation problem. A good regression model is a regression that is free from autocorrelation.

**Table 7. Autocorrelation Test Results**

<i>Model Summary<sup>b</sup></i>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,393a	,155	,119	4,61037	,889

a. Predictors: (Constant), DER (X2), LDR (X1)

b. Dependent Variable: ROE (Y)

Source: Processed Data, 2022

In table 7, based on the results of the regression analysis, the Durbin-Watson count value is 0.889 while the amount of DW-table (the number of independent variables is two and the number of samples is 50) is  $dL = 1.4625$ ;  $dU = 1.6283$ ;  $4 - dU = 4 - 1.6283 = 2.3717$ ; then from the calculation it is concluded that the DW-test lies between  $du < dw < 4 - du$  or there is no autocorrelation.

Multiple linear regression analysis was used to conclude the characteristics of the population using sample data. Multiple regression is used to determine the linear relationship between the Loan To Deposit ratio and Debt To Equity Ratio variables on the Return On Equity variable, whether all independent variables have a positive or negative effect, and to predict the value of the dependent variable if the independent variable increases or decreases. As for the summary of the results of the multiple linear regression analysis, whose print outs are attached, the following will show an overview of the number and percentage of partial coefficients, regression coefficients, and the significance of the two independent variables (LDR and DER) that affect the dependent variable (ROE) which can be seen in table 8

**Table 8. Multiple Linear Regression Test Results**

<i>Coefficients<sup>a</sup></i>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	,051	3,782	,014	,989
	LDR (X1)	,119	,041	,396	,005
	DER (X2)	,126	,252	,068	,618

a. Dependent Variable: ROE (Y)

Source: Processed Data, 2022

From the results of the regression analysis in table 8, the regression equation  $Y = 0 + 1X_1 + \beta_2X_2 + e$  then  $Y = 0.051 + 0.119LDR + 0.126DER$ . From the regression equation, it can be explained as follows:

1. The constant value is 0.051, which means that if the LDR (X1) and DER (X2) variables are fixed, the ROE is 0.051.
2. The LDR coefficient value (X1) is 0.119, meaning that if the variable increases by 1 unit, the ROE increases by 11.9%. The coefficient value is positive, meaning there is a positive relationship between LDR (X1) and ROE in banks listed on the IDX.
3. The DER coefficient value (X2) is 0.126, meaning that if the variable increases by 1 unit, the ROE increases by 12.6%. The coefficient value is positive, meaning there is a positive relationship between DER (X2) and ROE at banks listed on the IDX.



**Table 9. Termination Coefficient Test Results**

<i>Model Summary<sup>b</sup></i>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,393a	,155	,119	4,61037	,889

Source: Processed Data, 2022

Table 9 shows the value of the correlation coefficient ( $R$ ) = 0.393, indicating a relationship between LDR, DER, and an ROE of 0.393. This relationship can be categorized as weak, as it is known that a relationship is said to be perfect if the correlation coefficient reaches 100% or 1 (both with numbers). Positive or negative). The value of the coefficient of determination ( $R^2$ ) = 0.155 indicates that the variation of ROE (Y) in banks listed on the IDX can be explained by the LDR and DER variables of 15.5%. The remaining 84.5% is influenced by other factors not included in this research.

A statistical t-test is used to measure how far the influence of the independent variables individually in explaining the variation of the dependent variable. If the t-count value is greater than the t-table value, it can be stated that the independent variables individually have a positive effect on the dependent variable. If the significant value of t is 0.05, it can be noted that the independent variable individually has a substantial impact on the dependent variable.

**Tabel 10. Hasil Uji Statistik t**

<i>Coefficients<sup>a</sup></i>					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1	(Constant)	,051	3,782	,014	,989
	LDR (X1)	,119	,041	,396	,005
	DER (X2)	,126	,252	,068	,618

a. Dependent Variable: ROE (Y)

Source: Processed Data, 2022

#### **Hypothesis I: Effect of LDR on ROE**

The sig value on the LDR is 0.005. If the sig value is less than the probability value of 0.05 or  $0.005 < 0.05$ , then H1 is accepted, and H0 is rejected. Based on the partial test, the t-count = 2.929 is greater than the t-table = 2.011 or  $2.929 > 2.011$ . So, it can be concluded that partially LDR has a positive and significant effect on ROE.

#### **Hypothesis II: Effect of DER on ROE**

The sig value on the DER is 0.618. If the sig value is greater than the probability value of 0.05 or  $0.618 > 0.05$ , H1 is rejected, and H0 is accepted. Based on the partial test, the t-count = 0.502 is smaller than the t-table = 2.011 or  $0.502 < 2.011$ . So, it can be concluded that partially DER has a negative and insignificant effect on ROE.

F statistical test is used to measure how far the independent variables' influence together explains the variation of the dependent variable. If the significant value of F is 0.05, it can be stated that the independent variable simultaneously has a significant effect on the dependent variable.

**Tabel 11. Simultaneous Test Results (F)**

ANOVA <sup>a</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	182,820	2	91,410	4,301	,019b
Residual	999,007	47	21,255		
Total	1181,827	49			

a. Dependent Variable: ROE (Y)

b. Predictors: (Constant), DER (X2), LDR (X1)

Source: Processed Data, 2022

Based on table 11, the Fcount value of 4.301 has a greater value than Ftable of 3.19 or 4.301 > 3.19. And for the significant value 0.019 < 0.05. So, it can be concluded that simultaneously LDR and DER have a positive and significant effect on ROE.

## Discussion

Loan to Deposit Ratio (LDR) is the ratio between the total amount of credit extended by the bank and the funds received. The results of this study indicate that the liquidity variable (LDR) has a positive and significant effect on the profitability (ROE) of banking, so the first hypothesis which states, "Liquidity has a significant positive effect on the profitability of banking companies listed on the IDX" is accepted. This indicates that if the LDR increases, the amount of credit the bank provides will increase more than the increase in third-party funds. Thus, increasing recognition will increase interest income for banks, while increasing third-party funds will increase interest costs. The higher the LDR, the company's profit will increase (assuming the bank can channel credit effectively).

The debt-to-Equity Ratio (DER) is a ratio used to measure the ability of a bank to cover part or all its long-term and short-term obligations. The results show that solvency (DER) does not have a significant impact on the profitability (ROE) of banking, so the second hypothesis, which states, "Solvency has a significant positive effect on the profitability of banking companies listed on the IDX," is rejected. This indicates that the higher the solvency (DER), the more significant the company's burden on outsiders; it is possible to reduce the company's performance because its dependence on outsiders is higher. The greater the use of debt capital structure, the increasing ROE of a company.

Return On Equity (ROE) compares net income and equity. This ratio measures what percentage of net income is obtained when measured from equity. These results indicate that the profitability of banks listed on the Indonesia Stock Exchange for 2014-2018 is influenced by the Liquidity (LDR) and Solvency (DER) variables, and the rest is controlled by variables not described in this study. Thus, the third hypothesis in this study is accepted. From the results of this study, the researcher concludes that the variables of liquidity (LDR) and solvency (DER) have a significant positive effect on profitability (ROE) in banks listed on the Indonesia Stock Exchange 2014-2018. This states that the greater the ratio, the better because the company is considered capable of using its assets effectively to generate profits.

## CONCLUSIONS

The liquidity variable (LDR) positively and significantly affects the profitability (ROE) of banks listed on the Indonesia Stock Exchange. This is indicated by the t-count value being more significant than the t-table, and the significance value for the liquidity variable (LDR) is greater than the probability. The solvency variable (DER) has no (negative) and no significant effect on the profitability (ROE) of banks listed on the Indonesia Stock Exchange. This is indicated by the t-count value being smaller than the t-

table. And the value of sig is greater than the probability value, meaning it is not significant. Liquidity (LDR) and Solvency (DER) variables have a significant positive effect on the profitability (ROE) of banks listed on the Indonesia Stock Exchange. This is indicated by the value of F-count having a value greater than the F-table. The sig value is smaller than the probability value indicating that the effect of all the independent variables is significant.

Suggestions that researchers can give both for further research or for companies, especially those engaged in banking, namely for the banking sector, to improve the solvency value (DER) by reducing the use of significant assets to third parties; this can cause an increase in the burden on banks in attracting investors to invest in a bank. Future research is expected to use a more extended period to be able to use more samples and be more accurate in conducting the analysis. The following study is expected to have more independent variables. Because there are still many that affect ROE in creating profits for investors, research for profitability should be more dominant using the ROE variable than ROA because there are still few researchers who examine the ROE variable compared to the ROA variable. So that this helps researchers find it easier to find references or a recent article.

## REFERENCE

- Adisamartha, I. B. P. F., & Noviani, N. (2015). Pengaruh likuiditas, leverage, intensitas persediaan dan intensitas aset tetap pada tingkat agresivitas wajib pajak badan. *E-Jurnal Akuntansi*, 13(3), 973–1000. <https://repositori.unud.ac.id/protected/storage/upload/repositori/45062de0ced5bfa97cb61e8ee2dfee17.pdf>
- Agustia, Y. P., & Suryani, E. (2018). Pengaruh ukuran perusahaan, umur perusahaan, leverage, dan profitabilitas terhadap manajemen laba (Studi Pada Perusahaan Pertambangan yang Terdaftar di Bursa Efek Indonesia Periode 2014-2016). *Jurnal ASET (Akuntansi Riset)*, 10(1), 71–82. <https://doi.org/10.17509/jaset.v10i1.12571>
- Akbar, F., & Fahmi, I. (2020). Pengaruh ukuran perusahaan, profitabilitas dan likuiditas terhadap kebijakan dividen dan nilai perusahaan pada perusahaan manufaktur yang terdaftar di bursa efek Indonesia. *Jurnal Ilmiah Mahasiswa Ekonomi Manajemen*, 5(1), 62–81. <https://doi.org/10.24815/jimen.v5i1.13710>
- Alfiani, D., & Nurmala, P. (2020). Pengaruh ukuran perusahaan, profitabilitas, solvabilitas, dan reputasi kantor akuntan publik terhadap audit delay. *Journal of Technopreneurship on Economics and Business Review*, 1(2), 79–99. <https://doi.org/10.37195/jtebr.v1i2.39>
- Ambarwati, N. S., Yuniarta, G. A., AK, S. E., & SINARWATI, N. I. K. (2015). Pengaruh modal kerja, likuiditas, aktivitas dan ukuran perusahaan terhadap profitabilitas pada perusahaan manufaktur yang terdaftar di bursa efek Indonesia. *JIMAT (Jurnal Ilmiah Mahasiswa Akuntansi) Undiksha*, 3(1). <https://doi.org/10.23887/jimat.v3i1.4727>
- Amelia, W., & Hernawati, E. (2016). Pengaruh komisaris independen, ukuran perusahaan dan profitabilitas terhadap manajemen laba. *Neo-Bis*, 10(1), 62–77. <https://doi.org/10.21107/nbs.v10i1.1584>
- Christine, D., Wijaya, J., Chandra, K., Pratiwi, M., Lubis, M. S., & Nasution, I. A. (2019). Pengaruh profitabilitas, leverage, total arus kas dan ukuran perusahaan terhadap financial distress pada perusahaan property dan real estate yang terdapat di bursa efek indonesia tahun 2014-2017. *Jesya (Jurnal Ekonomi Dan Ekonomi Syariah)*, 2(2), 340–350. <https://doi.org/10.36778/jesya.v2i2.102>
- Dewi, D. M. (2016). Pengaruh likuiditas, leverage, ukuran perusahaan terhadap kebijakan dividen tunai dengan profitabilitas sebagai variabel intervening. *Jurnal Bisnis Dan Ekonomi*, 23(1).

<https://www.unisbank.ac.id/ojs/index.php/fe3/article/view/4302>

- Enggarwati, D., & Yahya, Y. (2016). Pengaruh leverage dan likuiditas terhadap profitabilitas pada perusahaan otomotif di BEI. *Jurnal Ilmu Dan Riset Manajemen (JIRM)*, 5(11). <http://jurnalmahasiswa.stiesia.ac.id/index.php/jirm/article/download/1388/1405>
- Gaganis, C., Pasiouras, F., & Voulgari, F. (2019). Culture, business environment and SMEs' profitability: Evidence from European Countries. *Economic Modelling*, 78, 275–292. <https://doi.org/10.1016/j.econmod.2018.09.023>
- MA'ARIF, S. (2019). PENGARUH PROFITABILITAS, LIKUIDITAS, DAN LEVERAGE DALAM MEMREDIKSI FINANCIAL DISTRESS (Study Empiris Pada Perusahaan Property and Real Estate di Bursa Efek Indonesia). STIESIA SURABAYA. <http://repository.stiesia.ac.id/id/eprint/2466>
- Mahulae, D. Y. D. (2020). Analisis Pengaruh Efisiensi Modal Kerja, Likuiditas, dan Solvabilitas terhadap Profitabilitas. *Jurnal Manajemen Dan Akuntansi Medan*, 2(1). <https://doi.org/10.1234567/jma.v2i1.43>
- Putri, N. W. K. A., & Merkusiwati, N. K. L. A. (2014). Pengaruh mekanisme corporate governance, likuiditas, leverage, dan ukuran perusahaan pada financial distress. *E-Jurnal Akuntansi*, 7(1), 93–106. <https://ojs.unud.ac.id/index.php/akuntansi/article/download/8682/6452>
- Putri, R. A. (2014). Pengaruh Profitabilitas, Likuiditas, dan Leverage Terhadap Pengungkapan CSR. *Business Accounting Review*, 2(1), 61–70. <https://publication.petra.ac.id/index.php/akuntansi-bisnis/article/view/1364>
- Rafsanjani, H. (2016). Pengaruh internal capital adequency ratio (CAR), financing to deposit ratio (FDR), dan biaya operasional per pendapatan operasional (BOPO) dalam peningkatan profitabilitas industri bank Syariah di Indonesia. *Jurnal Masharif Al-Syariah: Jurnal Ekonomi Dan Perbankan Syariah*, 1(1). <http://dx.doi.org/10.30651/jms.v1i1.416>
- Rahmawati, U. N. (2017). Pengaruh likuiditas, leverage, dan profitabilitas terhadap nilai perusahaan dengan kebijakan dividen sebagai variabel moderasi: Studi pada perusahaan manufaktur yang terdaftar di BEI. Universitas Islam Negeri Maulana Malik Ibrahim. <http://etheses.uin-malang.ac.id/id/eprint/11542>
- Riyadi, S., & Yulianto, A. (2014). Pengaruh pembiayaan bagi hasil, pembiayaan jual beli, Financing to Deposit Ratio (FDR) dan Non Performing Financing (NPF) terhadap profitabilitas bank umum syariah di Indonesia. *Accounting Analysis Journal*, 3(4). <https://doi.org/10.15294/aa.v3i4.4208>
- Saemargani, F. I., & Mustikawati, R. I. (2015). Pengaruh ukuran perusahaan, umur perusahaan, profitabilitas, solvabilitas, ukuran kap, dan opini auditor terhadap audit delay. *Nominal: Barometer Riset Akuntansi Dan Manajemen*, 4(2), 1–15. <https://doi.org/10.21831/nominal.v4i2.7996>
- Sudiani, N. K. A., & Darmayanti, N. P. A. (2016). Pengaruh profitabilitas, likuiditas, pertumbuhan, dan investment opportunity set terhadap nilai perusahaan. Udayana University. <https://ojs.unud.ac.id/index.php/Manajemen/article/download/20349/14754>
- Sumanti, J. C., & Mangantar, M. (2015). Analisis kepemilikan manajerial, kebijakan hutang dan profitabilitas terhadap kebijakan dividen dan nilai perusahaan pada perusahaan manufaktur yang terdaftar di BEI. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, 3(1). <https://doi.org/10.35794/emba.3.1.2015.7928>