

**THE EFFECT OF DEPOSITS AND NON-PERFORMING LOANS
ON BANK PROFITABILITY
(Case Study on Conventional Commercial Banks listed on the
Indonesia Stock Exchange for the period 2015 - 2021)**

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Abstract

This study aims to examine the effect of deposits and non-performing loans on bank profitability. The population in this study were conventional commercial banks listed on the Indonesia Stock Exchange during the observation period, namely from 2015 – 2021. After using a purposive sampling technique to select the sample, 41 sample data were chosen. The type of data in this research is unbalanced panel data. The analysis technique in this study is panel data regression with the selected regression model being the fixed effect model. The results of testing the hypothesis stated that partially savings had an effect but not significant on bank profitability. Meanwhile, non-performing loans have a significant effect on profitability. Simultaneously, savings and non-performing loans have a significant effect on profitability.

Keywords: *Deposit, Non Performing Loans, Profitability, Savings*

1. INTRODUCTION

Currently, the banking industry as an intermediary institution is the industry that has experienced the most rapid development, both in terms of business volume, mobilization of public funds and lending. This situation was made possible as a result of deregulation in the banking world carried out by the government through Bank Indonesia (BI) on June 1, 1983. With liberalization in the banking sector, the banking industry was able to open barriers that previously put pressure on the sector and the financial system as a whole, thus causing very rapid development with increasingly fierce competition in the banking business in Indonesia.

The impact of deregulation in the banking sector has resulted in an increase in the number of banks, and an impact on increasing competition to withdraw funds from the public as much as possible and channel them back to the people who need them both for the purpose of increasing production and public consumption.

For a bank, funds are the most important problem, because without funds the bank cannot function at all. Most of the sources of banking funds are collected from public funds and are the most reliable source of funds for banks. Nearly 80% to 90% of all funds managed by banks are third party funds, both from the government, the business world and the public in general, while the remainder is own capital and capital reserves. In order to attract people's interest in saving money in banks, banks must provide incentives in the form of remuneration to be provided to customers. If the amount of capital is large, it can affect the amount of profit earned, because this capital can be used to invest in sectors

that are profitable for the bank. However, if the amount of capital is small, it means that the bank cannot properly absorb the losses that occur, so that it can limit expansion and affect debtors, depositors and shareholders which can lead to delays in obtaining profits. Thus, the size of the capital owned can affect public confidence in the ability to generate profits (Muhammad, 2005).

Therefore, banks must be able to channel financing effectively, so that the liquidity in these banks is good. This shows how capable a bank is in paying back withdrawals made by depositors by relying on credit. Therefore, the greater the LDR value, the greater the chances for profit for the bank, assuming appropriate credit distribution. Non-performing credit is a circumstance in which the client is unable to pay all or a portion of his obligations to the bank within the timeframe stipulated in the credit agreement. This allows it to affect the profits that banks get so that it has an impact on bank profitability.

Maintaining a bank's level of profitability is crucial since profitability indicates a company's ability to produce profits or profits related to sales, assets, own capital, number of employees, total capital, etc. The bigger a company's level of profitability, the better its financial performance; thus, the greater a company's level of profitability, the stronger its position in terms of asset utilization.

Hence, we intent to perform a research on “the effect of deposits and non-performing loans on bank profitability (Case Study on Conventional Commercial Banks listed on the Indonesia Stock Exchange for the period 2015 - 2021). This research is expected as a reference or reading material that provides an outline of the circumstances under which banks can increase their profitability.

2. LITERATURE REVIEW

2.1. Agency Theory

Agency theory is a relationship between the owner of a company or shareholder (principal) and company management (agent) which aims to adjust interests in carrying out the activities of a company. The owner of the company has an obligation to provide facilities and funds that will be used to meet the needs of the company. According to the statement Jensen, & Meckling (1976) the owner of the company assigns the management of the company to run the company and gives authority to make decisions to fulfill the interests of the company's principal. Conflicts of interest can occur due to the inability of management to investors' wealth which causes problems for the agency. Broadly speaking, company owners and company management have contractual ties that contain obligations and rights to develop company value.

2.2. The Bird in Hand Theory

Baker et al. (2019) explained the bird in hand theory that investors avoid risk so they prefer dividends rather than price increases in the stock market as a company appreciation for the capital that investors have placed. The yield or income obtained from dividends will reduce future risks because it is a certainty of income. Stocks that pay high dividends will be sought after by investors so that the market price becomes higher. Investors will discount dividends at a lower rate of return than capital gains and firms will pay attention to dividend returns for company valuation. This is because dividends are

still under the control of company policy while capital gains are the result of price fluctuations through market mechanisms.

2.3. Savings

According to Kasmir (2010) deposits are funds entrusted by the public to be deposited in a bank, these funds are then managed by the bank in the form of deposits, such as checking accounts, savings accounts, and deposit accounts to then be worked on by channeling them to the community.

Savings in this study are used by adding up all customer deposits consisting of demand deposits, savings deposits and time deposits in units of trillion rupiah values units.

2.4. Problem Credit

According to Hendy Herianto (2013), “the definition of non-performing loans is credit that occurs due to arrears of interest or principal installments, all loans that are incorporated in the collectability level, namely substandard, doubtful and loss”.

Non-performing loans in this study use gross Non-Performing Loan (NPLgross) presentation data. Gross Non Performing Loan (NPL) can be measured using the following calculation:

$$\text{NPL gross} = x 100\% \frac{\text{Total NPL}}{\text{Total Loan}}$$

2.5. Profitability

Fransiska & Hartini (2014) explain that “Return on Equity (ROE) is a profitability ratio that can be used to measure how effectively the equity provided by investors and managed by management is to operate to generate profits. The higher the ROE value, the more efficiently the company uses its own capital to generate profits. With the increase in company profits, the stock price will also increase and thus the return obtained will also be greater”.

Profitability in this study uses data on the percentage value of Return On Equity (ROE). ROE can be measured using the following calculation formula:

$$\text{ROE} = \frac{\text{Profit After Tax}}{\text{Own Capital}} \times 100\%$$

2.6. Hypothesis Development

2.6.1. Savings Against Profitability

The need for bank capital according to Wilson, JSG (1988) in Werdaningtyas (2022) are to: (1) protect the owner of the funds and maintain public trust, (2) to cover operational risks that may occur, (3) remove non-performing loan assets where the borrower cannot pay the debt at a predetermined time, (4) sources preliminary funding. If the amount of capital is large, it can affect the amount of profit earned, because this capital can be used to invest in sectors that are profitable for the bank. However, if the amount of capital is small, it means that the bank cannot properly absorb the losses that occur, so that it can limit expansion and affect debtors, depositors and shareholders which

can lead to delays in obtaining profits. Therefore, the size of the capital owned can affect public confidence in the ability to generate profits (Muhammad, 2005).

This is also proven by research that has been conducted by Fadli (2019) that savings affect the profitability of the Bank which show that the wadi`ah yad adh – dhamanah savings contract has an influence on the net profit of Bank Syariah Mandiri. Furthermore, in research conducted by Fitri (2018b) it can be concluded that “there is a significant influence between the growth of savings, time deposits and demand deposits on profitability growth”.

H1: There is a positive influence between the savings variable on profitability

2.6.2. Non-Performing Loans on Profitability

Non-performing loans are loans that experience difficulty in returning them due to intentional factors or the customer's inability to pay off the loan (Dahlan, 2005). The extent of a bank's nonperforming loans is dependent on the management of the disbursed credit funds. If the quantity of non-performing loans increases, the bank's income will decline, which would have a negative impact on Profitability (Hadiyati, P., & Baskara, 2013). Financing risk can be seen from the level of Non-Performing Loans (NPL), which consists of substandard, doubtful and non-performing loans with the total loans disbursed as a whole. The size of this non-performing loan shows the performance of a bank in managing the funds disbursed. If the portion of non-performing loans increases, this will ultimately reduce the amount of income earned by the bank (Ali, 2004) According to (Gongera 2013) the company must ensure constant monitoring of credit. An increase in non-performing loans will affect a decrease in company profits, resulting in a negative relationship between NPL and profitability, this is in accordance with the results of the study (Mabvure, 2012)

H2: There is a negative influence between non-performing credit variables on profitability

2.6.3. Savings and Non-Performing Loans on Profitability

If the amount of capital is large, it can affect the amount of profit earned, because this capital can be used to invest in sectors that are profitable for the bank. However, if the amount of capital is small, it means that the bank cannot properly absorb the losses that occur, so that it can limit expansion and affect debtors, depositors and shareholders which can lead to delays in obtaining profits. Thus, the size of the capital owned can affect public confidence in the ability to generate profits (Muhammad, 2005). As a result, banks derive most of their revenue from funding distribution activities in the form of markup, rental, and profit sharing. Firdaus (2009) explain, by obtaining income from credit, it is expected that bank profitability will improve which is reflected in increased profits. Bank credit distribution can result in the emergence of potential problem financing.

Non-performing loans are loans that experience difficulty in returning them due to intentional factors or the customer's inability to pay off the loan (Dahlan, 2005) the size of the non-performing loans of an Islamic bank depends on the management of the credit funds distributed.

If the amount of non-performing financing increases, then the income of Islamic banks will decrease and will affect profitability (Hadiyati, P., & Baskara, 2013).

H3: There is a simultaneous effect of savings and non-performing loans on profitability

3. RESEARCH METHODS

This study uses quantitative approaches and panel data for its analysis. The population of this study consists of 46 conventional commercial banks listed on the Indonesia Stock Exchange from 2015 to 2021. The sample was selected using non-probability sampling with the approach of purposive sampling. The criteria and number of Conventional Commercial Banks selected as samples are listed in Table 1.

Table 1. Sample Criteria

No	Information	total
1	Conventional Commercial Banks that are listed on the Indonesia Stock Exchange and regularly publish financial reports from 2015-2021	46
2	Banks that are not Conventional Commercial Banks (Sharia Banks)	(4)
3	Banks that do not have the completeness of the required data on the research variables	(1)
Number of samples		41

Source: Processed secondary data, 2022

This research makes use of panel data. The first step is to perform a descriptive statistical analysis on the data, after which the researcher will conduct an estimation model selection test to select the most appropriate regression model. If a suitable regression model has been selected, then a requirements analysis test and classical assumption test are carried out. After the data passes the classical assumption test, a panel data regression test will be performed. Then a hypothesis test was carried out consisting of a t test, F test, and a test of the coefficient of determination on the data. The software used to process data in this study is Eviews 12.

4. RESULTS AND DISCUSSION

4.1. Profitability Descriptive Statistical Analysis

Descriptive analysis was carried out on all research variables consisting of one dependent variable, namely Profitability (ROE) (Y) and two independent variables, namely savings (X1) and problem loans (X2) to find out a descriptive picture including the average value (mean), standard deviation, minimum value and maximum value. The results of the descriptive analysis in this study are as follows:

Table 2. Descriptive Statistical Analysis of Profitability

	Y	LOGX1	X2
Means	6.109757	3.141836	3.071845
Median	5.805000	2.917500	2.810000
Maximum	20.50000	7.037643	8.540000
Minimum	-6.730000	-2.688248	0.000000
Std. Dev.	5.153745	1.970034	1.692682
Skewness	0.547962	-0.048227	0.893243
kurtosis	3.479918	2.601618	3.774478

Source : Output Eviews 12

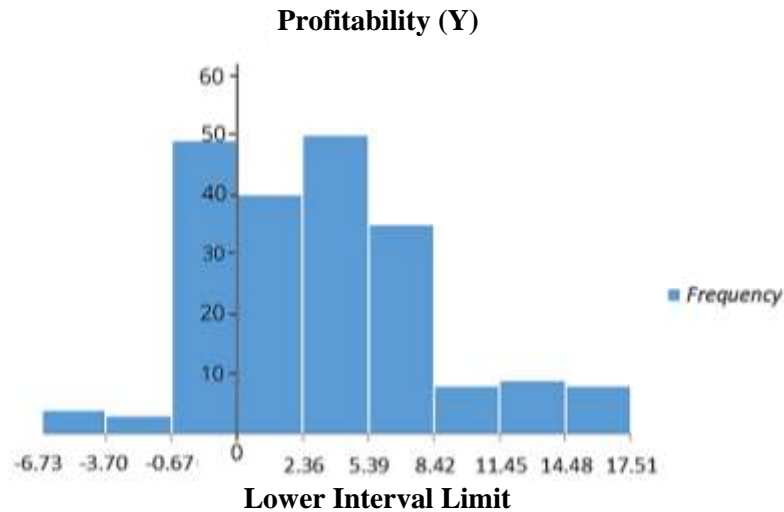
Table 2 shows that the average value (mean) of profitability (ROE) is 6.109757. The lowest value (minimum) Profitability (ROE) is -6.730000 in the company PT. Bank Jago Tbk in 2017. The highest (maximum) Profitability (ROE) value is 20.50000 at PT. Bank Central Asia Tbk in 2016. the standard deviation value of the profitability variable is 5.153745.

Table 3. Profitability Frequency Distribution (Y)

Class	Intervals		Bottom edge	Top Edge	Absolute Frequency	Relative Frequency	
1	-6.73	-	-3.71	-7.23	-3.21	4	2%
2	-3.70	-	-0.68	-4.2	-0.18	3	1%
3	-0.67	-	2.35	-1.17	2.85	49	24%
4	2.36	-	5.38	1.86	5.88	40	19%
5	5.39	-	8.41	4.89	8.91	50	24%
6	8.42	-	11.44	7.92	11.94	35	17%
7	11.45	-	14.47	10.95	14.97	8	4%
8	14.48	-	17.5	13.98	18	9	4%
9	17.51	-	20.53	17.01	21.03	8	4%

Source: Secondary data processed by the author

Descriptive analysis of profitability data (X1) is also presented in the form of a frequency distribution table obtained from calculating the number of classes, ranges and intervals. The range is obtained by calculating the difference between the maximum and minimum with a result of 27.23. The interval is the class obtained by dividing the range and the number of classes, namely 3.03.



Source: Processed by the author

Figure 1. Profitability Histogram Graph

The histogram graph above shows that the highest frequency of the profitability variable of 50 is in the 5th interval between 5.39 – 8.41. While the lowest frequency in the 2nd interval between -3.70 – -0.68 is 3 data.

Table 4. Descriptive Statistical Analysis of Savings

	Y	LOGX1	X2
Means	6.109757	3.141836	3.071845
Median	5.805000	2.917500	2.810000
Maximum	20.50000	7.037643	8.540000
Minimum	-6.730000	-2.688248	0.000000
std. Dev.	5.153745	1.970034	1.692682
Skewness	0.547962	-0.048227	0.893243
kurtosis	3.479918	2.601618	3.774478

Source: Output Eviews 12

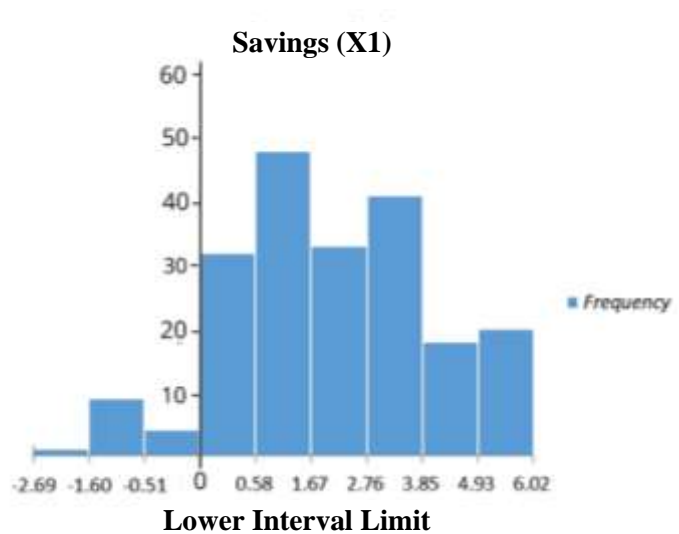
The average value of deposits (Logx1) is 3.141836. The lowest (minimum) deposit value is -2.688248 at PT. Bank Amar Indonesia Tbk in 2016. The highest (maximum) value of deposits is 7.037643, at PT Bank Rakyat Indonesia Tbk in 2021. The standard deviation value of the saving variable is 1.970034.

Table 5. Frequency distribution of deposits

Class	Intervals		Bottom edge	Top Edge	Absolute Frequency	Relative Frequency	
1	-2,688	-	-1,609	-3,188	-1,109	1	0.5%
2	-1,599	-	-0.520	-2,099	-0.020	9	4.4%
3	-0.510	-	0.569	-1,010	1,069	4	1.9%
4	0.579	-	1658	0.079	2.158	32	15.5%
5	1668	-	2,747	1.168	3,247	48	23.3%
6	2,757	-	3,836	2,257	4,336	33	16.0%
7	3,846	-	4,925	3,346	5,425	41	19.9%
8	4,935	-	6014	4,435	6,514	18	8.7%
9	6024	-	7.103	5,524	7,603	20	9.7%

Source: Processed by the author

Descriptive analysis of saving data (X1) is also presented in the form of a frequency distribution table obtained from calculating the number of classes, ranges and intervals. The range is obtained by calculating the difference between the maximum and minimum with a result of 9.73. The interval is the class obtained by dividing the range and the number of classes, namely 1.089.



Source: Data processed by the author

Figure 3. Savings Histogram Graph

The histogram graph above shows that the highest frequency of the profitability variable of 48 is in the 5th interval between 1,668-2,747. While the lowest frequency in the 1st interval is between -2,688 – (-1609) in the amount of 1 data.

4.2. Problem Credit

Table 6. Descriptive Statistical Analysis of Non-Performing Loans

	Y	LOGX1	X2
Means	6.109757	3.141836	3.071845
Median	5.805000	2.917500	2.810000
Maximum	20.50000	7.037643	8.540000
Minimum	-6.730000	-2.688248	0.000000
std. Dev.	5.153745	1.970034	1.692682
Skewness	0.547962	-0.048227	0.893243
kurtosis	3.479918	2.601618	3.774478

Source: Output Eviews 12

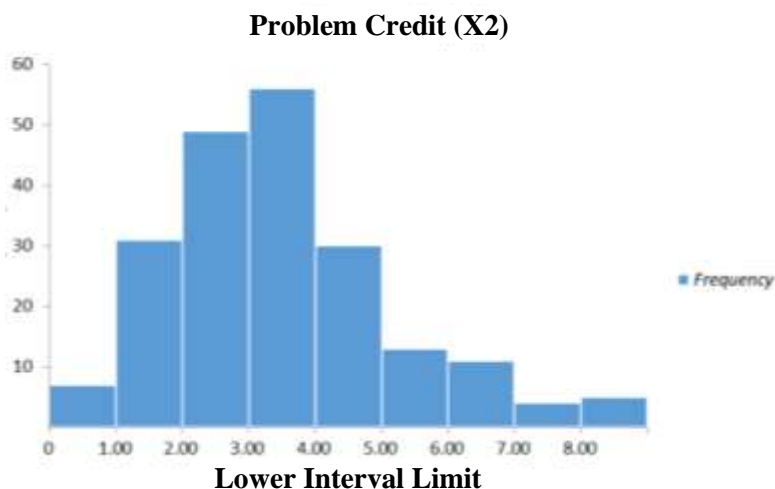
The average value of variable x2 or non-performing loans (NPL) is 3.071845. The lowest (minimum) NPL value is 0.000000 at PT Bank Capital Indonesia Tbk in 2020. The highest (maximum) NPL value is 8.540000 at PT Bank KB Bukopin Tbk in 2017. The standard deviation value of the non-performing loans variable is 1.69268.

Table 7. Frequency Distribution of Non-Performing Loans

Class	Intervals			Bottom edge	Top Edge	Absolute Frequency	Relative Frequency
1	0	-	0.60	-0.5	1.1	7	3.4%
2	1.00	-	1.60	0.5	2.1	31	15.0%
3	2.00	-	2.60	1.5	3.1	49	23.8%
4	3.00	-	3.60	2.5	4.1	56	27.2%
5	4.00	-	4.60	3.5	5.1	30	14.6%
6	5.00	-	5.60	4.5	6.1	13	6.3%
7	6.00	-	6.60	5.5	7.1	11	5.3%
8	7.00	-	7.60	6.5	8.1	4	1.9%
9	8.00	-	8.60	7.5	9.1	5	2.4%

Source: Data processed by the author

Descriptive analysis of non-performing credit data (X2) is also presented in the form of a frequency distribution table obtained from calculating the number of classes, ranges and intervals. The range is obtained by calculating the difference between the maximum and minimum with a result of 8.54. The interval is the class obtained by dividing the range and the number of classes, namely 1.



Source: Data Processed by the Author

Figure 4. Graph of Non-Performing Credit Histogram

In the histogram graph above, it shows that the highest frequency of the profitability variable is 56 in the 4th interval between 3.00 – 3.60. While the lowest frequency in the 8th interval between 7.00 – 7.60 is 4 data.

4.3. Model Selection Test

The first step taken to choose the right regression model is to do a chow test to test the panel data model which is more suitable between the common effect and the fixed effect. Using Eviews 12, here are the results of the chow test.

Table 8. Chow Test Results

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effect Test	Statistics	df	Prob.
Cross-section F	6.784466	(37,166)	0.0000
Chi-square cross-sections	189.758740	37	0.0000

Source: Output Eviews 12

Based on the Table of Chow Test Results in this study, the value of the probability cross section f and chi-square of 0.0000 is smaller than the significance of 0.05. So it can be concluded that the Fix Effect Model (FEM) is better than the Common Effect Model (CEM) in the Chow Test, so that H0 is rejected, H1 is accepted, then the Hausman Test is then carried out.

4.4. Hausman test

Table 9. Hausman Test

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Random cross-sections	9.459645	2	0.0088

Source: Output Eviews 12

According to Table 4.8, the Hausman test in this study yielded a random cross-section probability f value of 0.0088, which is less than the significance threshold of 0.05. Then H₀ is rejected or it may be stated that the Fixed Effect Model was selected as the best model for this study, hence the lagrange multiplier test is unnecessary.

4.5. Fix Effects Model (FEM)

Table 10. Fixed Effect Model (FEM) Output Results

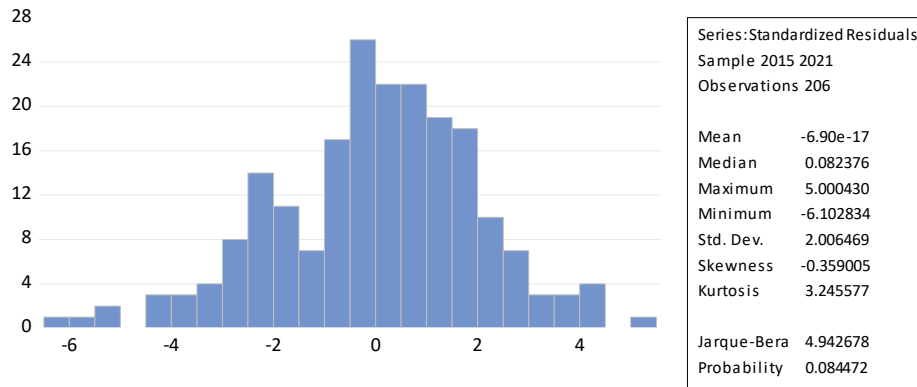
Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	8.305329	1.477252	5.622149	0.0000
LOGX1	0.368923	0.463041	0.796739	0.4267
X2	-1.092069	0.144362	-7.564822	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
Root MSE	2.001593	R-squared	0.848428	
Mean dependent var	6.109757	Adjusted R-squared	0.812818	
SD dependent var	5.153745	SE of regression	2.229745	
Akaike info criterion	4.614113	Sum squared residue	825.3128	
Schwarz criterion	5.260302	Likelihood logs	-435.2536	
Hannan-Quinn criter.	4.875454	F-statistics	23.82537	
Durbin-Watson stat	1.355909	Prob(F-statistic)	0.000000	

Source: Output Eviews 12

4.6. Classic Assumption Test

The classic assumption tests used include the normality, multicollinearity, and heteroscedasticity tests.

4.6.1. Normality Test



Source: Output Eviews 12
Figure 5. Normality Test Result

The decision criteria for the normality test can be seen by comparing the calculated Jarque-Bera probability value with the alpha level (α) used, which is equal to 0.05. Decision making hypothesis:

- H0 : If the Jarque-Bera probability value is greater than 0.05, it can be concluded that the residuals are normally distributed
- H1 : If the Jarque-Bera probability value is greater than 0.05, it can be concluded that the residuals are not normally distributed

Based on Figure 5, the normality test conducted by the researcher resulted in a Jarque-Bera probability value of 0.084472, this result is greater than 0.05, meaning that H0 is accepted. Therefore, it can be concluded that the residuals are normally distributed in the model are met.

4.6.2. Multicollinearity Test

Table 11. Multicollinearity Test

Variables	Coefficient Variances	Uncentered VIF	Centered VIF
C	0.358836	7.237475	NA
LOGX1	0.012884	3.568729	1.003626
X2	0.017452	4.325115	1.003626

Source : Output Eviews 12

Based on the calculations in Table 11 it can be seen that there is no VIF value above 10 (VIF value of 1.003626). So it can be concluded that in this study there is no multicollinearity in the model that can be fulfilled.

4.6.3. Heteroscedasticity Test

Table 12. Heteroscedasticity Test Result

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	1.320637	0.235120	5.616863	0.0000
LOGX1	0.012691	0.044552	0.284852	0.7760
X2	0.065935	0.051852	1.271611	0.2050

Source: Output Eviews 12

The probability value of the independent variable's t-statistic (t-statistic) is used as the decision criterion for assessing heteroscedasticity. If the p-value is greater than 0.05, H0 is accepted. This means that neither heteroscedasticity nor homoscedasticity exists. If the probability value is less than 0.05, H0 is rejected. This indicates that there are indicators of heteroscedasticity. According to Table 12, the probability value of the independent variable is more than 0.05, indicating that H0 is acceptable and no evidence of heteroscedasticity exist.

4.7. Panel Data Regression Equation

The researcher's regression equation for panel data is intended to estimate the dependent variable as the independent variable increases or decreases. Here are the outcomes of the researcher's Fixed Effects Model (FEM) panel data regression analysis.

Table 13. FEM Test Result

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	8.305329	1.477252	5.622149	0.0000
LOGX1	0.368923	0.463041	0.796739	0.4267
X2	-1.092069	0.144362	-7.564822	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
Root MSE	2.001593	R-squared	0.848428	
Mean dependent var	6.109757	Adjusted R-squared	0.812818	
SD dependent var	5.153745	SE of regression	2.229745	
Akaike info criterion	4.614113	Sum squared residue	825.3128	
Schwarz criterion	5.260302	Likelihood logs	-435.2536	
Hannan-Quinn criter.	4.875454	F-statistics	23.82537	
Durbin-Watson stat	1.355909	Prob(F-statistic)	0.000000	

Source: Output Eviews 12

The regression equation for the results of data processing is seen from the coefficient value. The regression equation of this study is $Y = 8.3053289268 + 0.368923019168 \cdot \text{LOGX1} - 1.09206934051 \cdot \text{X2} + [\text{CX}=\text{F}]$. From the above equation it can be interpreted that savings have a positive effect on profitability (ROE) and problem loans have a negative effect (NPL) on profitability.

Based on the regression equation, it can be concluded as follows:

- 1) If the Savings and non-performing loans (NPL) variable has a constant value of 0, the Y variable (ROE) is 8.3053289268
- 2) If the X1 variable (Savings) increases by 1% then the Y variable (ROE) will increase by 0.368923019168%
- 3) If variable X2 (NPL) increases 1% then variable Y will decrease 1.092069%

4.8. T Test Statistics

Table 14. T Test Results

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	8.305329	1.477252	5.622149	0.0000
LOGX1	0.368923	0.463041	0.796739	0.4267
X2	-1.092069	0.144362	-7.564822	0.0000

Source: Output Eviews 12

The statistical t test results indicate that the savings variable has no effect on profitability because the probability value of 0.4267 is more than 0.05, however the non-performing loans variable has an influence on profitability because its probability value is less than 0.05.

4.9. F Test Statistics

The F-statistic test essentially demonstrates whether all independent variables in a model have a simultaneous or combined effect on the dependent variable (Ghozali et al., 2017). Tests can be conducted by comparing the computed probability value F to the alpha error rate (0.05). If the estimated F probability value is less than 0.05, it is assumed that the regression model is feasible, if it is more than 0.05, it is assumed that the regression model is not possible. Table 15 displays the following F test outcomes.

Table 15. F Test Results

Root MSE	2.001593	R-squared	0.848428
Mean dependent var	6.109757	Adjusted R-squared	0.812818
SD dependent var	5.153745	SE of regression	2.229745
Akaike info criterion	4.614113	Sum squared residue	825.3128
Schwarz criterion	5.260302	Likelihood logs	-435.2536
Hannan-Quinn criter.	4.875454	F-statistics	23.82537
Durbin-Watson stat	1.355909	Prob(F-statistic)	0.000000

Source: Output Eviews 12

Based on the test in the table it can be seen based on the F-statistic probability value of 0.000000. Calculated with a confidence level of 95% alpha of 0.05. The probability value is less than 0.05 so that the two independent variables simultaneously affect the dependent variable. The F value table is searched by knowing the degrees of freedom (df) 1 and 2. df 1 with the formula $k-1$. k is the number of variables, then df1 is obtained, namely $3-1 = 2$, df2 with the formula nk . n is the number of observation samples, then df2 is obtained, namely $41-3 = 38$, based on the known degrees of freedom the results obtained for the F table are 3.244818361. Hence, it can be concluded that the F-statistic value is 23.82537, which is greater than the F table, which is 3.244818361.

4.10. Coefficient of Determination

The coefficient of determination is designed to quantify the model's capacity to adequately explain the dependent variable. Between 0 and 1 is the coefficient of determination. A lower value of determination (R^2) suggests a very limited capacity of the independent variable to account for variations in the dependent variable. According to Ghozali (2018), "a number close to 1 indicates that all independent variables supply nearly all of the information necessary to forecast fluctuations in the dependent variable". Table 16 displays the following results of the correlation coefficient.

Table 16. Coefficient of Determination Result

Root MSE	2.001593	R-squared	0.848428
Mean dependent var	6.109757	Adjusted R-squared	0.812818
SD dependent var	5.153745	SE of regression	2.229745
Akaike info criterion	4.614113	Sum squared residue	825.3128
Schwarz criterion	5.260302	Likelihood logs	-435.2536
Hannan-Quinn criter.	4.875454	F-statistics	23.82537
Durbin-Watson stat	1.355909	Prob(F-statistic)	0.000000

Source: Output Eviews 12

According to the table above, the R-squared value is 0.848428, however the corrected R-squared value is 0.812818. R-squared varies between 0 and 1. According to the R-squared value of 0.848428, the independent variable explains 84.84% of the dependent variable, while other factors account for 15.16%. Adjust R-squared adjusts R-squared for the number of independent variables. In this study, the Adjust R square result was 0.812818, meaning that the dependent variable, namely Profitability (ROE), showed that it could be explained by the independent variable, namely savings and non-performing loans of 81.28%, while the remaining 18.72% was influenced by factors outside the model.

a. Savings to the Bank's Profitability

Using the panel data method, the test findings demonstrate that savings have a beneficial impact on profitability. According to the results of the t test on the savings variable, the t-statistic results of 0.796739 are smaller than the t-table of 2.02269092 and have a probability value of 0.4267 greater than the alpha significance of 0.05, indicating that the savings variable does not have a significant relationship with the Bank's profitability. A positive t-statistic value implies a favorable association between variables. Therefore, it may be inferred that the variable savings has a unidirectional effect, meaning that if savings increase, profitability will increase.

According to Prastiyaningtyas, F., & Pangestuti (2010), “Deposits that are part of capital (Capital Adequacy) show the bank's ability to maintain sufficient capital and the ability of bank management to identify, monitor and control risks that arise and can affect the amount of bank capital”.

The importance of capital in banking cannot be overstated. In this case, the bank's financial status is measured by its existing capital. If the amount of capital is large, it can affect the amount of profit earned, because this capital can be used to invest in sectors that are profitable for the bank. However, if the amount of capital is small, it means that the bank cannot properly absorb the losses that occur, so that it can limit expansion and affect debtors, depositors and shareholders which can lead to delays in obtaining profits. Thus, the size of the capital owned can affect public confidence in the ability to generate profits (Muhammad, 2005).

According to study conducted by Fitri (2018), “there is a substantial relationship between the increase of savings, time deposits, and demand deposits and the growth of profitability”.

b. Non-performing loans to Profitability

The test results using the panel data method show that non-performing loans have a negative effect on profitability. Based on the results of the t-test on non-performing credit variables, the t-statistic results are -7.564822 which is greater than the t-table of 2.02269092 and has a probability value of 0.0000 which is smaller than the alpha significance of 0.05, which means that the problem credit variable has a significant influence relationship. The negative value on the t-statistic indicates that the relationship between variables is negative so that it can be concluded that non-performing loans have a negative and significant effect on profitability in conventional commercial banks. This means that if non-performing loans increase, profitability decreases and vice versa if non-performing loans decrease, profitability will increase.

Non-Performing Loans (NPL) reflect the level of bank credit risk (Fitria & Sari Raina, 2012). Credit risks will be faced by banks when customers fail to pay the financing they receive when they are due (Sudiyatno, 2013). The higher the NPL ratio indicates the increasing financing which has an impact on the losses faced by banks, causing the poorer quality of bank financing. Conversely, a lower NPL ratio indicates lower non-performing loans faced by a bank so that it can increase the profitability obtained by the bank (Dewi et al., 2015).

An increase in non-performing loans will affect a decrease in company profits, resulting in a negative relationship between NPL and profitability, this is in accordance with research results (Mabvure, 2012). Stiawan (2009) also revealed that NPL has a negative effect on profitability. This opinion is also supported by research conducted by Permana (2019) where non-performing loans have a significant effect on bank profitability.

c. Savings and Non-Performing Loans on Profitability

Based on the test results, it produces an F-statistic probability value of 0.000000. Calculated with a confidence level of 95% alpha of 0.05. The probability value is less than 0.05 so that both savings and non-performing loans variables simultaneously or together have a significant effect on the profitability variable.

Deposits which are part of the capital have a very important role. In this case, the existing capital is used as a measure of the bank's financial level. If the amount of capital is large, it can affect the amount of profit earned, because this capital can be used to invest in sectors that are profitable for the bank. However, if the amount of capital is small, it means that the bank cannot properly absorb the losses that occur, so that it can limit expansion and affect debtors, depositors and shareholders which can lead to delays in obtaining profits. Thus, the size of the capital owned can affect public confidence in the ability to generate profits (Muhammad, 2005). This is in accordance with research conducted by Fitri (2018) concluded that there is a significant influence between the growth of savings, deposits and demand deposits on profitability growth.

Bank credit distribution can result in the emergence of potential problem financing. Because in practice, not all customers can repay loans without any problems. Non-performing loans occur if the loans that are channeled experience non-performance. Non-performing loans are credits that experience difficulty in returning them due to intentional factors or the inability of customers to pay off loans. According to Dahlan (2005), "the size of problem loans in an Islamic Bank depends on the management of the credit funds distributed". Hadiyati, P., & Baskara (2013) explain that "if the number of non-performing loans increases, then the income of Islamic banks will decrease and will affect profitability, so that there is a negative relationship between NPL and profitability", this is in accordance with the results of research Mabvure et al. (2012). Suprianto et al. (2020) also revealed that NPL has a negative effect on profitability. This opinion is also supported by research conducted by Permana (2019) where non-performing loans have a significant effect on bank profitability.

5. CONCLUSION

5.1. Conclusion

Based on the findings of researchers' research on the impact of savings and non-performing loans on the Bank's profitability from 2015 to 2021. On the basis of the results of tests conducted using the t-test, the following conclusions can be drawn:

- 1) Partially, savings have no significant effect on bank profitability
- 2) Partially, non-performing loans have a significant effect on bank profitability.
- 3) Simultaneously, deposits and non-performing loans have a significant effect on the profitability of the Bank

From these results it can be said that profitability is strongly influenced by the variable savings and non-performing loans

5.2. Implications

Based on the conclusions described earlier, it is known that there is an effect of deposits and non-performing loans on profitability, so the implications of this study are as follows

5.2.1. For Companies

- a. Deposits describe the amount of capital collected by the Bank from the public. In this case, the existing capital is used as a measure of the bank's financial level. If the amount of capital is large, it can affect the amount of profit earned, because this capital can be used to invest in sectors that are profitable for the bank. However, if the amount of capital is small, it means that the bank cannot properly absorb the

losses that occur, so that it can limit expansion and affect debtors, depositors and shareholders which can lead to delays in obtaining profits.

- b. Non-performing loans describe the level of effectiveness and efficiency of the Bank in channeling credit. In the results of this research, the non-performing credit variable has a significant effect on profitability. So that the Bank needs to be careful in extending its credit and try as much as possible so that this ratio does not increase because if it increases it will reduce the bank's profitability.

5.2.2. For Investors

- a. Deposits describe the amount of capital raised by the Bank from the public, the higher the amount of deposits can give a signal to investors that the Bank has the trust of the public. So that it can be a reference in making investment decisions. However, based on the results of this study, savings have no significant effect on profitability so that there are other factors that can be taken, one of which is through the Return on Equity (ROE) ratio to see the effectiveness and efficiency of the Bank in managing its capital by comparing the amount of capital owned with its profitability.
- b. The Non-Performing Loans Ratio (NPL) describes the level of effectiveness and efficiency of the Bank in extending its loans. In the results of this study, the variable non-performing loans has a significant effect on profitability, the higher this ratio means that banks have problems in distributing their loans, this gives a signal to investors to avoid banks with high NPL ratios because this will result in bank profitability which will affect the returns obtained. by future investors.

5.3. Research Limitations

In this study there are several obstacles or limitations, namely:

- a. The lack of literature discussing the relationship between the effect of deposits and non-performing loans on profitability in conventional commercial banks
- b. The research object is limited to Conventional Commercial Banks listed on the Indonesia Stock Exchange
- c. Profitability dependent variable can be measured by other indicators such as Return On Assets (ROA), Gross Profit Margin (GPM), net profit margin and earning power
- d. Independent variables can be measured by other indicators such as Operational Income Operating Costs (BOPO), Capital adequacy ratio (CAR) and Loan to Deposit Ratio (LDR)

5.4. Recommendation

- a. For researchers who wish to conduct research on financial institutions, they can replace the research objects of other financial institutions such as Rural Credit Banks (BPR), Sharia Rural Banks (BPRS), Savings and Loans Cooperatives, and Baitul Maal wat Tamwil (BMT).
- b. For future researchers who wish to conduct research related to bank profitability, it is necessary to discuss other variables such as Return On Assets (ROA), Gross Profit Margin (GPM), net profit margin and earning power.

- c. For future researchers who wish to conduct research related to bank profitability, it is also necessary to discuss other independent variables such as Operational Income Operating Costs (BOPO), Capital Adequacy Ratio (CAR) and Loan to Deposit Ratio (LDR).
- d. Using the latest data in order to enrich research results that are more accurate and broad

REFERENCES

- Ali, M. (2004). *Asset Liability Management*. PT Elex Media Komputindo.
- Company, P., Jensen, C., & Meckling, H. (1976). *Theory Of The Firm : Managerial Behavior , Agency Costs And Ownership Structure I . Introduction and summary In this paper WC draw on recent progress in the theory of (1) property rights , firm . In addition to tying together elements of the theory of e. 3, 305–360.*
- Dahlan, S. (2005). *Manajemen Lembaga Keuangan: Kebijakan Moneter dan Perbankan*. Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.
- Dewasiri, N. J., Yatiwelle Koralalage, W. B., Abdul Azeez, A., Jayarathne, P. G. S. A., Kurupparachchi, D., & Weerasinghe, V. A. (2019). Determinants of dividend policy: evidence from an emerging and developing market. *Managerial Finance*, 45(3), 413–429. <https://doi.org/10.1108/MF-09-2017-0331>
- Dewi, L. E., Herawati, N. T., & Sulindawati, N. 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). *Journal SI AkUniversitas Pendidikan Ganesha Jurusan Akuntansi Program SI, 3 nomor 1.*
- Fadli, T. (2019). Pengaruh Dana Simpanan Wadi'ah Yad Adh–Dhamanah Terhadap Laba Bersih Bank Syariah Mandiri (Studi di PT. Bank Syariah Mandiri Tbk). (*Doctoral Dissertation, UIN SMH BANTEN.*
- Firdaus, H. R. & M. A. (2009). *Manajemen Perkreditan Bank Umum*. Alfabetta.
- Fitri, M. (2018a). *Pengaruh Pertumbuhan Tabungan, Deposito, Dan Giro Terhadap Pertumbuhan Profitabilitas Pada Bank Umum Syariah Di Indonesia*. 1–111.
- Fitri, M. (2018b). *Pengaruh Pertumbuhan Tabungan, Deposito, Dan Giro Terhadap Pertumbuhan Profitabilitas Pada Bank Umum Syariah Di Indonesia. Perbankan Syariah, Fakultas Ekonomi Dan Bisnis Islam UIN Raden Fatah Palembang.*
- Fransiska, D., & Hartini, T. (2014). Pengaruh Return on Equity, Earning Per Share dan Price Earning Ratio terhadap Return Saham Perusahaan Industri Barang Kounsumsi di Bursa Efek Indonesia. *Jurnal Akuntansi, STIE MDP, Voll, No 2.*
- Ghozali, I. (2018). *Aplikasi Analisis Multivariate SPSS 25*. Universitas Diponegoro.
- Gongera Enock George, Barrack Otieno Ouma, dan J. N. W. (2013). Effect of financial risk on profitability of sugar firm in Kenya. *European Journal of Business and Management, Vol. No 5,*
- Hadiyati, P., & Baskara, R. A. (2013). Pengaruh Non Performing Financing Pembiayaan Mudharabah dan Musyarakah Pada Bank Muamalat Indonesia. *E-Jurnal Manajemen Dan Bisnis.*
- Hendy Herianto. (2013). *Selamatkan Perbankan*. PT.Mizan Publika.
- Kasmir. (2010). *Manajemen Perbankan*. Raja Grafindo Persada.
- MabvureTendai Joseph, G. E., Manuere, F., Clifford, M., & Michael, dan K. (2012). Non

- Performing loans in Commercial Banks: A case of CBZ Bank Limited In Zimbabwe. *Interdisciplinary Journal of Contemporary Research in Business.*, Vol 4, No. Muhammad. (2005). *Manajemen Dana Bank Syariah*. Ekonisia.
- Permana, K. W. angga. (2019). Pengaruh Kredit Macet Terhadap Profitabilitas Pt Bank Rakyat Indonesia, TBK Periode 2016-2019. *Jurnal Ilmiah Akuntansi Rahmadiyah (JIAR)*, 9–25.
- Prastiyaningtyas, F., & Pangestuti, I. R. D. (2010). Faktor-faktor yang mempengaruhi profitabilitas perbankan (studi pada bank umum go public yang listed di bursa efek indonesia tahun 2005-2008). *Doctoral Dissertation, Universitas Diponegoro*.
- Stiawan, A. (2009). Analisis Pengaruh Faktor Makroekonomi, Pangsa Pasar dan Karakteristik Bank Terhadap Profitabilitas Bank Syariah. *Tesis. Universitas Diponegoro*.
- Sudiyatno, B. dan A. F. (2013). Terdaftar, Pengaruh Risiko Kredit Dan Efisiensi Operasional Terhadap Kinerja Bank (Studi Empiris pada Bank yang Indonesia, di Bursa Efek. *Jurnal Organisasi Dan Manajemen*, 9, 73–86.
- Suprianto, E., Setiawan, H., & Rusdi, D. (2020). Pengaruh Non Performing Financing (NPF) Terhadap Profitabilitas Bank Syariah di Indonesia. *Wahana Riset Akuntansi*, 8(2), 140. <https://doi.org/10.24036/wra.v8i2.110871>
- Werdaningtyas, H. (2022). Faktor yang Mempengaruhi Profitabilitas Bank Take Over Pramerger di Indonesia. *Jurnal Manajemen Indonesia*.