THE EFFECT OF OPERATIONAL EFFICIENCY, CREDIT RISK, LIQUIDITY RISK ON PROFITABILITY IN CONVENTIONAL BANKING LISTED ON THE INDONESIA STOCK EXCHANGE PERIOD 2020 – 2021

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Abstract
The purpose of this study was to analyze the effect of Operational Efficiency (BOPO), Credit Risk (NPL), and Liquidity Risk (LDR) on Profitability (ROA) in the banking sector listed on the Indonesia Stock Exchange for the period 2020 – 2022. This type of research is quantitative. The analysis tool used is Multiple Linear Regression. The population of this study was 31 conventional banks listed on the Indonesia Stock Exchange for the period 2020 – 2022. The sampling technique in this study used purposive sampling. The results show that Credit Risk (NPL) has no significant effect on Profitability (ROA), while Operational Efficiency (BOPO) and Liquidity Risk (LDR) have a positive effect on Profitability (ROA). Simultaneously Operational Efficiency (BOPO), Credit Risk (NPL), and Liquidity Risk (LDR) affect Profitability (ROA).
Keywords: Operational Efficiency (BOPO), Credit Risk (NPL), Liquidity Risk (LDR) and Profitability (ROA).

INTRODUCTION

The banking system is very important in the economy as a financial intermediary. However, the bank also acts as a business in itself in its business activities to generate profits because banks are an important part of the smooth running of the economy and are important to operate and work. Banks are also financial institutions whose main activities are collecting funds from the public and channeling these funds back to the public, and providing other banking services. In addition, banks also, as intermediaries, collect and distribute funds to the public and aim to support and implement national development in order to increase development equity and so on (Kasmir, 2016). The ability of banks to generate profits is called profitability.

Profitability is the bank's ability to earn profits effectively and efficiently from funding and lending activities. The main objective of banking operations is to achieve maximum profitability. Banks must maintain their profitability to remain stable to fulfill obligations to shareholders, increase investor confidence in investing, increase public confidence, and save excess funds held in banks. Banking operational efficiency

is the ability of the bank itself to produce maximum output following the performance and results expected by the bank. Operational efficiency is also an important parameter in a bank because it shows whether it has been able to carry out its operational activities (Harun, 2016).

Operational efficiency is proxied using the ratio (BOPO). A high BOPO value also indicates that the bank is inefficient in its operations, so it impacts reducing the profit earned and the level of profitability. So the higher the BOPO value, the more inefficient the bank is. So that the level of profitability decreases. On the contrary, if the BOPO value is low, the profitability will increase. Research conducted by Mukaromah and Supriono (2020) found that the ratio of operating costs and operating income (BOPO) has a positive effect on Return on Assets (ROA). Unlike the research conducted by Prasetyo and Darmayanti (2015), Wahyuni and Suryarini (2022), and Sudarsana & Suarjaya (2019), this study states that operational efficiency proxied using BOPO has a negative and significant effect on Return On Assets (ROA) because operational efficiency has a negative and significant effect on profitability. If operational efficiency increases, profitability decrease.

Credit or credit risk is a source of income, so lending will help banks profit. According to the Indonesian Bankers Association (2015), credit risk results from the debtor's failure to fulfill the obligation to pay off credit at the bank. The ratio used to calculate credit risk is Non-Performing Loan (NPL). NPL defines the ratio of non-performing loans to total loans disbursed and reflects the bank's activities in carrying out financial intermediaries because it generates the largest profit or profit for the bank. The smaller the NPL ratio, the lower the risk a bank faces, so that the Profitability is higher; conversely, when the NPL ratio is greater, the risks faced are higher, causing a bank's Profitability to decrease. Research conducted by Sudarsana and Suarjaya (2019) found that NPL has a negative and significant effect on Profitability; this explanation is supported by Hidayah & Prabowo (2017) and Prasetyo and Darmayanti's research (2015) found that credit risk has a negative and significant effect on Profitability. The greater the NPL, the lower the Profitability because non-performing loans do not yield results.

Liquidity risk is a fund obtained mostly from the public and can be withdrawn anytime. Liquidity risk is caused by the bank's inability to pay back withdrawals made by customers by relying on loans as a source of liquidity. Liquidity risk in this study is proxied using the Loan Deposit Ratio (LDR). The greater the amount of funds channeled to customers in the form of credit, the amount of available funds will decrease, and the level of Profitability will increase. However, if the amount of credit decreases, the level of Profitability will be low. A high or low LDR means that many loans are distributed and will affect the level of Profitability (Kasmir, 2012). Research conducted by Hidayah and Prabowo (2017) found that LDR negatively and significantly affects Profitability. The explanation is supported by research by Prasetyo

and Darmayanti (2015) and Firmanila (2023), stating that liquidity risk proxied using LDR has a positive and significant effect on Return On Assets (ROA).

Conventional banking is where banks conduct their activities conventionally, referring to national and international agreements based on formal state law—banking profitability as the client wishes. Interbank business competitors are increasingly unique and tight to increase profits, with various competitive advantages; a company with many strategies to improve banking is expected to continue to run by earning profits at the end of each activity. One aspect of profit-making is using a strategy to manage resources, reduce costs, distribute goods to consumers with promotions, and so on. According to data from the financial services authority (OJK), the achievement of profits from net interest income banking was 13.14% on an annual basis at the end of December 2022. According to Piter (2023), the Profitability of national banking in the future will continue to increase. Based on their ownership, state-owned banks are again the largest contributor to industry profit, with a net profit of 106.45 trillion of the total net profit of the banking industry. Banking also has unique characteristics as technology advances in the banking world, and information is useful for companies to change their business strategy and earn higher profits than before. Therefore, the banking world is one of the interesting sectors to be studied more related to the factors influencing Profitability. So, researchers are interested in conducting research titled "The Influence of Operational Efficiency, Credit Risk and Liquidity Risk on the Profitability of Conventional Banking Companies for 2020 - 2022.

The formulation of the problem is as follows:

1. Does Operational Efficiency Affect Profitability?

2. Does credit risk affect Profitability?

3. Does Liquidity Risk affect Profitability?

4. What is Operational Efficiency, Credit Risk, Liquidity Risk

Figure 1 below will be described further in the following part to explain on Simultaneous effect on Profitability.
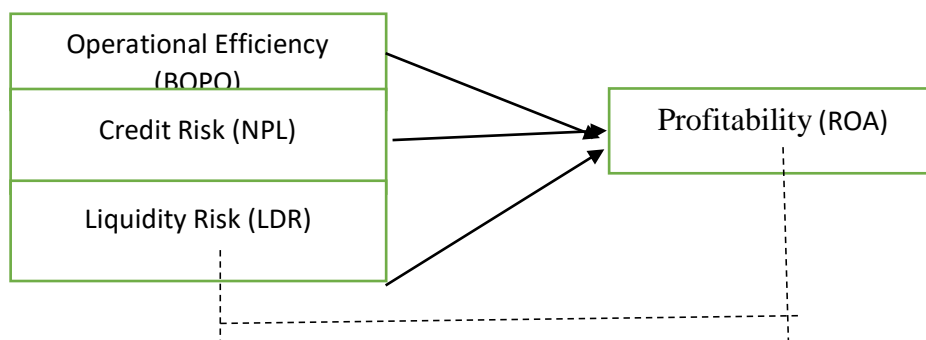

Figure 1. Research Framework

THEORY AND HYPOTHESIS DEVELOPMENT
Effect of Operational Costs and Operating Income (BOPO) on Profitability.

Operating Costs to Operating Income is the ratio of Operating Costs to Operating Income (BOPO), formulated as a comparison or operating costs to operating income in the same period (Hasubuan, 2017). Dendawijaya (2009) The ratio of operational costs is used to measure the level of efficiency and ability of banks to carry out operational activities. The lower the BOPO means, the more efficient the bank is in controlling its operational costs; with cost efficiency, the greater the bank's profit will get. Operational efficiency is proxied using the ratio (BOPO). A high BOPO value also indicates that the bank is inefficient in its operations, which has an impact on reducing the profit earned by the bank and the level of profitability. So the higher the BOPO value, the more inefficient the bank is. Therefore, the level of profitability decreases. Conversely, if the BOPO value is low, the profitability increases.

Prasetyo & Darmayanti, n.d. (2019) Found that operational efficiency has a negative and significant effect on profitability. Whereas Wahyuni and Suryarini (2022) found that the variable operating costs and operating income (BOPO) harmed profitability, and Hidayah and Prabowo (2017) showed that BOPO had a negative and significant effect on profitability. Based on these references, the first hypothesis is prepared, namely: H1: Operating Costs and Operating Income (BOPO) negatively and significantly affect the profitability of conventional banking listed on the Indonesia Stock Exchange for 2019 – 2021.

The Effect of Non-Performing Loans (NPL) on Profitability.

Non-Performing Loan (NPL) is a ratio that shows the ability of bank management to manage non-performing loans provided by banks. NPLs are high, showing commercial banks' inability in the appraisal process to search for credit to debtors (Julius et al. 2014).

According to Darwani (2015) Credit risk is the inability of the debtor to pay the credit at the time (maturity) of the credit. There are many reasons why customers cannot pay off loans at any time. Credit risk proxied by Non-Performing Loans (NPL) is the ratio used to measure problem loans. The higher the risk of non-performing loans, the lower the profit earned by the bank. Bank income from debtor interest, if credit risk occurs, the bank bears losses in its operational activities. This affects the profit received by the bank. The lower the credit risk, the higher the profitability; the higher the risk, the lower the profitability. This explanation concludes that NPL has a significant negative effect on profitability.

The results of research conducted by Wahyuni and Suryarini (2022) found that NPL significantly negatively affected profitability. This explanation is supported by Hidayah and Prabowo's research (2017) and Adhim's (2018) found that credit risk significantly negatively affected profitability. Based on this understanding, the second hypothesis is structured as follows:

H2: NPL has a significant negative effect on the profitability of conventional banking listed on the Indonesia Stock Exchange for the 2019-2021 period.

Effect of Loan to Deposit Ratio (LDR) on Profitability.

According to Malayu S.P. Hasubuan (2011) liquidity risk is the risk faced banks in providing liquid tools to be able to meet debt obligations – debts and other obligations as well as the ability to apply for credit without any suspension. Liquidity risk can be measured by Loan to Deposit Ratio (LDR). According to Dendawujaya (2015) if the growth in the amount of credit is given greater than the growth in the amount of funds raised then the value The bank's LDR is getting higher. On the other hand, a bank that has a higher LDR value low indicates the amount of credit disbursed is lower than with third party funds that have been collected. If funds are disbursed to finance a little credit, will have an impact on decreasing opportunities to obtain profits from lending. However, if many banks are channeling credit will be the greater the opportunity to earn profits and income from interest charged credit. The more advantages that obtained by a bank will increase the profitability of a bank. Conclusions of The description is that the Loan to Deposit ratio has a positive effect on Profitability. The research results of Prasetyo and Darmayanti (2015) found that LDR positive effect on profitability, as well as Hidayah and Prabowo (2017) found that LDR has a positive effect on profitability. Whereas Mukaromah and Supriono (2020) found that LDR has a positive effect not significant to profitability. Thus, this third hypothesis arranged as follows:

H3: LDR has a significant positive effect on banking profitability conventionally listed on the Indonesia Stock Exchange for the period 2020 – 2022.

Effect of Operational Efficiency (BOPO), Non-Performing Loans (LDR), and Loan to Deposit Ratio (LDR).

The financial ratios examined in this study are BOPO, NPL, and LDR, which are the determining factors and strengthen the influence of ROA. This is, for example, if Banks must be able to suppress NPLs and maintain LDR stability to optimize profit. Non-performing low loans can increase profits and maintain the bank's intermediary function and capital allocated for credit. Hidayah and Prabowo's research results (2017) found that all independent variables, namely BOPO Operational Efficiency, Credit Risk (NPL), and Liquidity risk (LDR), have a significant effect simultaneously on profitability (ROA). This is supported by research by Mukaromah and Supriono (2020) shows that the independent variables are, NPL, LDR, and BOPO simultaneously affect profitability (ROA).

H4: BOPO, NPL, and LDR simultaneously affect the profitability of conventional banking listed on the Exchange.

RESEARCH METHODS

The research method used is quantitative research. Report data financial taken from the official website of each Conventional Bank, the official website Indonesia Stock Exchange, www.idx.co.id and Financial Services www.ojk.co.id. This study used a purposive sampling method. The sampling criteria are as follows: 1. Indonesia's conventional banking sector, which is listed consistently for 2020–2022. 2. Indonesia's conventional banking sector reports a consistent financial period 2020 – 2022. 3. Indonesia's conventional banking sector has financial data from 2020 – 2022. The data collection method used in this research is the study method bibliography and documentation whose data is obtained from the annual report uploaded on the IDX website during 2020-2022, listed on the IDX that is accessed via www.idx.co.id. In this study, there are two variables, namely variables independent and dependent variables. The independent variable consists of Cost Operational and Operating Income (BOPO), Non-Performing Loans (NPL), and Loan Deposit Ratio (LDR). While the dependent variable is Return on Assets (ROA). By collecting data using the following formula:

$$\text{BOPO} = \frac{Operational\ Spending}{Operating\ Income} \times 100\%$$

$$\text{NPL} = \frac{Bad\ Cedit}{Total\ Credit} \times 100$$

$$\text{LDR} = \frac{\text{otal credit to third parties}}{Total\ third\ party\ funds} \times 100\%$$

$$Return\ on\ asset\ = \frac{\text{Net Profit,}}{\text{Total Asset}}$$

Testing the consistency and normality of the data is done by testing traditional assumptions. While testing data analysis and hypothesis testing is done by conducting descriptive statistical tests, multiple linear regression tests, coefficient tests determination, and t-test to determine the relationship of independent variables to the dependent variable partially and the F test to determine the relationship between variables independent of the dependent variable simultaneously. Testing the influence as well as the direction of the relationship of the independent variable to the dependent variable is presented in the equation as follows:

ROA = a + β1BOPO + β2NPL + β3LDR = e

Where A   = Constant
ROA   = Profitability
BOPO   = Operational Efficiency

NPL   = Credit Risk
LDR   = Liquidity Risk
e   = *Error*

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
BOPO	93	1.04	119.36	63.4446	37.15187
NPL	93	.09	9.08	2.7788	1.80415
LDR	93	1.05	92.24	34.8847	32.73817
ROA	93	.02	59.00	2.3095	6.28344
Valid N (listwise)	93				

Source: primary data processed by SPSS SPSS version 25, 2023

The table shows that the amount of research data or N The data used is in the form of financial report data from conventional commercial banks listed on the IDX during the period 2020 to 2022 obtained from the website official of each conventional bank, the official website, and the Indonesian Stock Exchange, www.idx.co.id and Financial Services.

Based on the descriptive statistical data above, the minimum value of BOPO (cost operational and operating income) is 1.04% contained in the Bank Victoria Inti Tbk in 2021. Meanwhile, the maximum value of the BOPO variable is 119.36, owned by Bank Amar Indonesia Tbk in 2022. Then for the average (mean) owned by BOPO, namely 63.4446%, and the standard, the deviation is 37.15187%. A smaller standard deviation in comparison with the mean indicates that the level of distribution of the BOPO data used in this study is good because there are no gaps which are quite large, between the lowest and highest BOPO ratios.

Based on the statistical data above, the minimum value of NPL (Non-Performing Loan) is 0.09% in Bank Central Asia Tbk in 2022. While the maximum value for the NPL variable is 9.08% owned by Bank Of India Indonesia Tbk in 2021. Then the average (mean) owned by the NPL is 2.7788%, and the standard deviation is 1.80415%. The smaller standard deviation compared to the mean shows that the distribution level of NPL data used in this study can be good due to the absence of a sizeable gap between the lowest and the highest NPL ratios.

Based on the statistical data above, the minimum value of LDR (Loan to Deposit ratio) is 1.05% contained in Bank Of India Indonesia Tbk in 2020. At the same time, the maximum value for the LDR variable is 92.24%. They were owned by Bank China Constr Tbk in 2020. Then the average (mean) owned by the LDR is 34.8847%, and the standard deviation is 32.73817%. The standard deviation is smaller than the mean, showing that the distribution level of the LDR data used in this study is good because there is no big enough gap.

Based on the descriptive statistical data above, the minimum Profitability (ROA) value is 0.02% in Bank Amar Indonesia Tbk in 2021. In contrast, the maximum

value for the ROA variable is 59.00%. They were owned by Bank Bumi Arta Tbk in 2022. Then for the average value – the mean (ROA) is 2.3905%, and the standard deviation is 6.28344%. The standard deviation is larger than the mean, showing that the level of distribution of the ROA data used in this study can be good due to the gap between the lowest ROA ratio and the high.

Classical Assumption Test Results

The results of the classical assumptions used in this study are through 4 testing: multicollinearity test, heteroscedasticity test, autocorrelation test, and test normality.

Normality test The normality test aims to test whether it is in the regression model that the dependent variable and three independent variables are normally distributed or No. A good regression model has a normal data distribution or is close to normal. The following are the results of the Kolmogorov – Smirnov test.

Kolmogorov Test Table – Smirnov Test
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		93
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	6.10581033
Most Extreme Differences	Absolute	.332
	Positive	.332
	Negative	-.241
Test Statistic		.332
Asymp. Sig. (2-tailed)		.000[c]

a. Test distribution is Normal.
b. Calculated from data.
    Source: primary data processed by SPSS SPSS version 25, 2023

These results indicate that the data in this study were not normal. Therefore, treatment is needed in this study. In this research first Screening is carried out by detecting the presence or absence of extreme data (outliers). *Screening* is the first step that must be done in normality testing. Univariate outliers can be detected by determining the limit value that will be categorized as outlier data by converting data values into standardized scores or what is commonly called scores. After the outlier data is carried out, it is re-tested and gets the following results.

Kolmogorov Test Table – Smirnov Tes

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		83
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.91731928
Most Extreme Differences	Absolute	.084
	Positive	.084
	Negative	-.071
Test Statistic		.084
Asymp. Sig. (2-tailed)		.200[c,d]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

Source: primary data processed by SPSS SPSS version 25, 2023

Normality test results through Kolmogorov-Smirnov non-parametric statistics (K-S) show that the significance value is 0.200. The results of this significance greater with a significance level of 0.05, it can be concluded that H0 is accepted, which means the residual data is normally distributed and does not violate the normality assumption.

Multicollinearity Test

The multicollinearity test aims to test whether a correlation between independent variables was found in the model regression. The regression model well there should be no correlation between the independent variables. Multicollinearity can be reviewed through the Tolerance and Inflation variance factor (VIF) value. Commonly used values indicate multicollinearity if the Tolerance value is < 0.10 and the VIF value is> 10. Meanwhile, the value is the opposite, namely Tolerance > 0.10, and VIF value < 10 indicates no symptoms of multicollinearity between the variables used in the study. Following is the result of the multicollinearity test regarding the two values.

Multicollinearity test table

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF

Source: primary data processed by SPSS SPSS version 25, 2023

1	(Cons tant)	2.582	.312		8.27 1	.000					
	BOPO	-.010	.003	-.352	- 3.47 2	.001	-.312	-.364	-.349	.983	1.01 8
	NPL	-.131	.075	-.176	- 1.74 1	.086	-.142	-.192	-.175	.987	1.01 3
	LDR	-.009	.003	-.275	- 2.73 1	.008	-.253	-.294	-.274	.995	1.00 5

a. Dependent Variable: ROA

Based on the results of the multicollinearity test, it can be concluded that the third of the variables used in this study are free from multilinearity symptoms. This is not seen from the results of the Tolerance value test, which shows no independent variables that have a Tolerance value of less than 0.1 and a value Variance Inflation Factor (VIF) that is at most 10.

Heteroscedasticity Test

The heteroscedasticity test aims to determine whether the variance is dissimilar from the residual of an observation to another in a regression model. If the variance of the residual from an observation to an observation other remains, it is called homoscedasticity. Suppose different will be called heteroscedasticity. Whether there is a heteroscedasticity problem can be known through a scatterplot chart. The scatterplot graph shows whether there is a problem with heteroscedasticity. If there is no heteroscedasticity problem, then test heteroscedasticity is declared passed to proceed to the linear regression test.
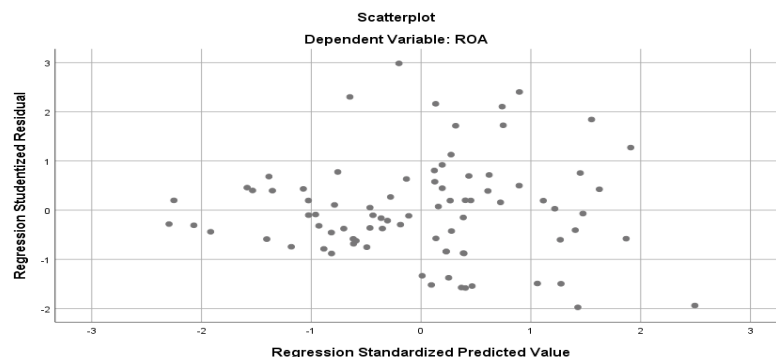

Figure 2. Heteroscedasticity test

Source: primary data processed by SPSS SPSS version 25, 2023

Autocorrelation Test

Autocorrelation arises because of successive observations over time-related to each other. A good regression model is free from autocorrelation. This study tested autocorrelation deviations using the Durbin-Watson test (DW test). Test rules determine that the regression model is free from autocorrelation if DW calculated lies between dU and (4-dU) or Du<DW<4-dU.

Autocorrelation Test table

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.452[a]	.204	.174	.93457	1.987

a. Predictors: (Constant), LDR, NPL, BOPO

b. Dependent Variable: ROA

Source: primary data processed by SPSS SPSS version 25, 2023

Based on the table above, it is known that the value of DW = 1.987 with the number sample 83 and the number of independent variables 3 (k = 3), so the results obtained dU from the Durbin Watson table = 1.7187, result dL = 1.5693, result 4 – dU = 2.813 result 4 - dL = 2.4307. So it can be concluded that dU < dW < 4 – dL, so no autocorrelation occurs, and the results of this test pass.

Multiple Linear Regression Analysis

Multiple linear regression analysis determines the effect between two or more independent variables with one dependent variable. Multiple linear regression analysis in this study was used for calculating the magnitude of the influence of the independent variable, namely operational efficiency (BOPO), credit risk (NPL), and liquidity risk (LDR), to variables dependent, namely profitability (ROA).

Multiple Linear Regression test table

		Coefficients[a]				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	2.582	.312		8.271	.000
	BOPO	-.010	.003	-.352	-3.472	.001
	NPL	-.131	.075	-.176	-1.741	.086

LDR	-.009	.003	-.275	-2.731	.008

a. Dependent Variable: ROA

From the data test, it can be seen that the results of the multiple linear regression equation can be written as follows:

Based on the results of the multiple linear regression above, the results are obtained as follows:

1. A constant value of 2.582 indicates that the independent variable is considered constant then, the average value of Profitability is 2.582.
2. The BOPO coefficient value is -0.010, indicating that the BOPO value harms the value of Profitability. This matter shows that for every 1% increase in BOPO, the value profitability will decrease by 0.010 percent.
3. The NPL coefficient value is -0.131, indicating that the NPL value negatively affects the value of Profitability. This matter shows that for every 1% increase in NPL, the value profitability will decrease by 0.131 percent.
4. The LDR coefficient value is -0.009 indicating the negative effect on the profitability value. This matter shows that for every 1% increase in LDR, then the value profitability will decrease by 0.131 percent.

Hypothesis testing

T-test

The t-statistical test shows how far the influence of one independent variable individually in explaining the dependent variable (Ghozali, 2011). To test the effect, parts can be reviewed through the value t and its significance. The t value indicates the occurrence of positive and negative influences between the independent and dependent variables. Moreover, the significance value is reviewed by comparing the independent variables with a significance level of 5% (a = 0.05). If the significance value is less than 0.05, then there is an influence significant. However, on the contrary, if the significance value is more than 0.05, then there is no significant influence between the independent and dependent variables. The following are the results of the t-statistical test:

T-test hypothesis table

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.582	.312		8.271	.000
	BOPO	-.010	.003	-.352	-3.472	.001

NPL	-.131	.075	-.176	-1.741	.086
LDR	-.009	.003	-.275	-2.731	.008

a. Dependent Variable: ROA

Source: primary data processed by SPSS SPSS version 25, 2023

In this study, the significant level used for the t-test is 5% or 0.05. Based on the table above, the t-test can be explained as follows:

1. In the sig. Operational efficiency (BOPO) of 0.001 is smaller than alpha 0.05, so operational efficiency has a significant effect on Profitability. It shows Ho is rejected and H1 is accepted, so operational efficiency has a significant positive effect on Profitability in banking conventionally listed on the Indonesia Stock Exchange (IDX) period 2020–2022.
2. In the sig value table. The NPL of 0.086 is greater than alpha 0.05, so there is no significant effect on NPL Profitability. This shows that Ho is accepted and H2 is rejected; NPL has no significant effect on Profitability at conventional banking listed on the Indonesia Stock Exchange (IDX) period 2020 – 2022.
3. In the sig value table. The LDR is 0.008, which is smaller than alpha 0.05, so LDR has a significant effect on Profitability. This shows that if Ho is rejected and H3 is accepted, LDR significantly positively affects Profitability at conventional banking listed on the Indonesia Stock Exchange (IDX) period 2020 – 2022.

F-test

The simultaneous hypothesis test or F test is used to examine the effect of independent variables on the dependent variable in a simultaneous way. The F test can be seen in the ANOVA table. To determine influence or not simultaneously is seen from the value of its significance.

F-test hypothesis table

ANOVAa

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	17.692	3	5.897	6.752	.000b
	Residual	69.001	79	.873		
	Total	86.693	82			

a. Dependent Variable: ROA

b. Predictors: (Constant), LDR, NPL, BOPO

Source: primary data processed by SPSS SPSS version 25, 2023

Based on the results of the statistical test f in the table, it can be seen that the value f in the regression model is equal to 6.752 with a significance level of 0.000. The significance value is smaller than 0.05, meaning that all the independent variables

consisting of BOPO, NPL, LDR, and ROA simultaneously affect the dependent variable, Profitability in conventional banking listed on the Indonesia Stock Exchange (IDX) for 2020 – 2022.

Determination Coefficient Test

The coefficient of determination test in this study was carried out to measure how much influence the independent variable has on the variable simultaneously dependent, as seen from the value of the adjusted R square. So that this test can show how much the variable contributes simultaneously to be able to explain the dependent variable. The coefficient of determination in this study can be seen in the model table summary.

Determination Coefficient Test table
Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.452[a]	.204	.174	.93457	1.987

a. Predictors: (Constant), LDR, NPL, BOPO

b. Dependent Variable: ROA

The table above shows that the values analyzed in the coefficient test determination are adjusted R square. The adjusted R square value is 0.174, which means the magnitude of the contribution of the independent variables simultaneously in affecting the dependent variable is 0.174 or 17.4%, while the rest, or 82.6%, is influenced by other variables that are not in this study. So the magnitude of the influence of operational efficiency, credit risk, and liquidity risk, in general, simultaneous to Profitability, is 0.174 or 17.4%.

FINDINGS

Effect of Operational Efficiency (BOPO) on Profitability Based on the regression results, the operational efficiency ratio BOPO has a positive and significant effect on Profitability received. If the bank in carrying out its operations efficiently, namely by reducing the BOPO ratio, then the income earned by the bank will certainly increase and also be offset by increasing Profitability. BOPO, or operational costs to operating income, is a ratio that describes a bank's efficiency in carrying out its activities. Operational expenditure is the cost of interest given to customers; meanwhile, Operating income is interest earned from customers. Getting a smaller BOPO value

means more efficient banking operations. In other words, if BOPO increases, it shows the bank's ability to produce decreased income, and decreased income affects the decline ratio of income to bank assets. This study follows the results of Hendratni's research (2018) and Prasanja and Rahmantha (2013), who found that BOPO positively affected Profitability. In addition, these results also confirm the research conducted by Suryadi and Mayliza et al. (2020) found that BOPO had a positive effect on Profitability.

Effect of Non-Performing Loan (NPL) on Profitability Based on the regression results, it shows that Non-Performing Loans (NPL) do not affect Profitability. This means that H2 is rejected and states Non-Performing loans have no significant effect on Profitability. Based on statistical data, the average Non-Performing Loan is greater than the Profitability, so there is no deviation. Non-Performing loans (NPL) is a ratio that shows the ability of bank management to manage problem loans provided by banks. The high NPL shows the inability of commercial banks in the appraisal process to seek credit from debtors (Julius et al. 2014). Matter This affects the profit received by the bank. The lower the risk credit, the higher the Profitability, and the higher the risk, the higher the risk lower the Profitability. The conclusion from this explanation is that NPL does not significantly affect Profitability. This shows that the NPL does not significantly influence or has little effect on Profitability; the small effect of NPL on Profitability is thought to be due to NPL that happened to most of the banks on the Indonesia Stock Exchange less than 5 percent indicating that these banks are experiencing high credit risk low so that the NPL has no significant effect on Profitability. The results of this study are in line with those conducted by (Wahyuni & Suryarini, 2022) found that NPL had no significant effect on Profitability; this explanation is supported by research (Hidayah & Prabowo, n.d.) and Setyarini research (2020) found that credit risk (NPL) is not significant effect on Profitability.

Effect of Loan-to-Deposit Ratio (LDR) on ROA Based on the regression results, the Loan-to-Deposit ratio positively and significantly affects Profitability. This means H3 is accepted. Based on the sig value, the Loan Deposit ratio is 0.008, which is less than alpha 0.05, so there is a significant effect of LDR on Profitability Dendawujaya (2015) when the growth in the amount of credit given greater than the growth in the amount of funds raised, the LDR value the bank is getting higher. On the other hand, a bank with a higher LDR value low indicates the amount of credit disbursed is lower than with third-party funds collected. If funds are disbursed to finance a little credit, it will have an impact on decreasing opportunities to obtain profits from lending. However, if many banks channel credit, the greater the opportunity to earn profits and income from interest-charged credit. The more advantages obtained by a bank will increase the Profitability of a bank. Conclusions The description is that the Loan Deposit ratio positively affects Profitability.

Effect of Operational Efficiency (BOPO), Credit Risk (NPL), and Risk Liquidity (LDR) on Profitability. The results of the f test show that the value of f in the regression model is 6.752 with a signification level of 0.000. The significance value is smaller than

0.05, which means that all independent variables consisting of BOPO, NPL, and LDR simultaneously influence the dependent variable, namely Profitability. So that the BOPO, NPL, and LDR coefficients have increased, this will improve Profitability. The magnitude of the coefficient of BOPO, NPL, and LDR is 0.000, which means that every 1% increase in BOPO, NPL, and LDR will make a Profitability increase of 0.000. This means that H4 stated that BOPO, NPL, and LDR simultaneously affected the Profitability received. The results of this study are in line with Hidayah and Prabowo's (2017) findings that all independent variables, namely BOPO Operational Efficiency, Risk Credit (NPL), and Liquidity Risk (LDR), have a significant effect simultaneously on Profitability (ROA). This is supported by research by Mukaromah and Supriono (2020) as well as Pratiwi and Wiagustini's (2015) research which shows that the independent variables are NPL, LDR, and BOPO simultaneously affect Profitability (ROA).

CONCLUSIONS

Based on the results of the research and discussion in Chapter 4, the researchers took some conclusions as follows:

1. Operational Efficiency (BOPO) has a significant positive effect on Profitability in the conventional banking sector for 2020 – 2022.
2. Credit Risk (NPL) has no effect on Profitability in the sector of conventional banking period 2020 – 2022.
3. Liquidity Risk (LDR) positively affects Profitability in the conventional banking sector for the period 2020 – 2022.
4. Operational Efficiency (BOPO), Credit Risk (NPL), and Liquidity Risk (LDR) simultaneously affect Profitability (ROA) in the conventional banking sector for the period 2020 – 2022

Research Limitations

The limitations of researchers in this study are as follows:

1. This research carried out only three independent variables related to Profitability so that the R square is only 0.204.
2. The research period is relatively short, namely only 3 years, so the sample obtained is less.
3. In this study, there was a distribution of data that was not normal at first normal by using the outlier test.

Suggestions

Based on the limitations of existing research, the researchers provide suggestions as material considerations for further research as follows:

1. It is hoped that further researchers will add variables that influence Profitability in the model research variables such as DER, CAR, and other variables.

2. The sample under study should be expanded within the coverage period research that is longer and its scope is not limited to one particular country or region.

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