

FACTORS AFFECTING THE RISK AND FINANCIAL PERFORMANCE OF BANKS IN INDONESIA

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Abstract: This study aims to determine the effect of systematic risk (Beta) and COVID-19 as independent variables, then non-performing loans (NPL), liquidity risk (LR), solvency risk (SR), bank risk (Z-score), and ownership type (OT) as control variables on the dependent variables financial performance proxied using ROA and ROE. The research method is quantitative covering data from 17 banks listed in Indonesia over a six-year period (2017-2022) and using panel data regression analysis technique processing. The addition of new independent variables in this study is operational risk which has a positive and significant effect on ROA and ROE. In addition, liquidity risk and solvency risk also have a positive and significant effect on ROA and ROE, while ownership type variables have negative and significant effect on ROA and ROE. Understanding the impact of these factors will help companies make the right decisions to reduce risk and optimize their financial performance in Indonesia. The implication for financial managers is to maximize the long-term debt and leverage of the company which aims to support the company's operational activities. This research also provides important information for investor in making investment by assessing companies that have good financial performance.

Keywords: Financial Performance, Systematic Risk, Operational Risk, Liquidity Risk, non-performing loans, solvency risk, bank risk, ownership type, COVID-19

INTRODUCTION

The COVID-19 pandemic has had a major negative impact on the global economy with many job losses. The pandemic has also increased the risk to business income prospects in developed and developing countries. In other words, this condition poses serious challenges to the world economy and has an impact on financial conditions in many countries (Park & Shin, 2021). This includes the risk and performance conditions of banks in Indonesia. The level of bank risk and performance during COVID-19 is still a concern and requires further empirical investigation (Tran et al., 2022)

Financial performance of a company is very attractive to managers, so it is very important for company growth. By assessing the financial elements of a business, it will be seen the development of the industry and assess whether the policies implemented by the company are feasible or not (Phulong & Gladys Legotlo, 2021). Financial performance is proxied by return on assets (ROA) which shows that the business is successful in generating profits (Dura, 2022). When a company uses its asset efficiently, then it leads to an increase in its profit margin. The higher the return on assets (ROA), it shows a favorable indication because the company will generate profits, thus attracting the attention of investors to engage in stock transactions (Ramadhan et al., 2023). ROA

will measure the effectiveness of the bank's management in generating profits from its assets and is calculated as the ratio between the company's income and total assets and total assets. Therefore, ROA provides an overview of the bank's ability to generate profits from the limited resources it has (Kwashie et al., 2022). In addition, return on equity (ROE) is also an important part of considering how much an investor's investment in a company can generate the return expected by investors (Kohar et al., 2021). Assessing the extent to which a company is able to generate profits from capital that has been invested by high shareholders can be measured using ROE. This ratio is calculated using net income and total equity (Wahyu & Budianto, 2023).

Previous research Goswami & Malik, (2024) there are several factors that affect financial performance, namely systematic risk, operational risk (BOPO), COVID-19, non-performing loans (NPL), liquidity risk (LR), solvency risk (SR), bank risk (Z-score), and ownership type (OT). systematic risk is one of the parameters often used to evaluate systematic risk is beta. systematic risk is a type of risk that cannot be avoided or reduced through diversification.

This relates to overall market conditions, such as changes in the macro economy, interest rate fluctuations, political risk, changes in inflation, currency exchange rate instability, and other market risks (Tampi, 2022). The results of (Goswami & Malik, 2024) found that systematic risk has a negative influence on return on assets (ROA) during wave II of the COVID-19 pandemic. This is in line with research conducted by (Adrian & Brunnermeier, 2016) which found that there is a significant negative influence between systematic risk and financial performance. The results of research (Goswami & Malik, 2024) also see that there is a strong and negative influence between systematic risk and the financial performance of banks in India. Based on this situation, there is an influence of Systematic Risk on Financial Performance.

The government's prevention of COVID-19 represents a significant decline in economic activity and loss of income for companies and households. As a result, creditors experience decreased creditworthiness and difficulty repaying their loans, which adversely affects the performance of the banking system. The results of (Goswami & Malik, 2024) found that there is a positive influence between the COVID-19 pandemic and the financial performance of banks in India. Meanwhile, the results of research (Beck & Keil, 2022) found that the impact of COVID-19 has a negative influence on financial performance. In line with research (Baumöhl et al., 2022) which found that the negative impact of COVID-19 on financial performance. Based on this situation, there is an influence of COVID-19 on Financial Performance.

Non-performing loans (NPL) can also affect financial performance. The higher the NPL value, the higher the risk of default (Goswami & Malik, 2024) NPL as a proxy for default risk, which is calculated using the ratio of gross loans to gross advances. The results of (Goswami & Malik, 2024) found a significant and negative influence between non-performing loans (NPL) and financial performance in the Indian banking industry. This is in line with research conducted by (Tran et al., 2022), which found that there is a negative influence between NPL and financial performance. The results of research by (Kwashie et al., 2022b) also show that non-performing loans (NPLs) negatively affect the financial performance of banks. Based on this situation, there is an influence of Non Performing Loan on Financial Performance.

Liquidity risk has significant potential to generate more interest income for the banks involved. This is due to the banks' ability to use available funds to lend to

borrowers at higher interest rates, which in turn can increase their overall interest income. The positive effect of this increase in interest income on the bank's performance level can be seen through an increase in net income, net interest margin, and possibly an increase in the bank's overall asset value (Goswami, 2022a). The results of the study (Goswami & Malik, 2024) liquidity risk has a negative influence with ROA.

In the research of Ben Zeineb & Mensi (2018a) shows that there is a significant negative effect on liquidity risk (LR) on bank performance. Conversely, research (Goswami, 2022a) states that there is a positive influence between liquidity and bank financial performance. Based on this situation, there is an influence of Liquidity Risk on Financial Performance.

Solvency risk uses a ratio that is used for the bank's ability to withstand in the long term. In Solvency risk if the solvency ratio is high, there will be a high level of risk of loss but also a great opportunity for profit. Conversely, if the solvency ratio is low, there will certainly be a lower level of risk of loss (Aryaningsih et al., 2022). According to the results of research conducted by (Goswami & Malik, 2024), it was found that solvency risk had a significant negative impact on the financial performance of banks in India during waves I and II of the COVID-19 pandemic. Meanwhile, the results of the study (Ahmad Wani & Ahmad Dar, 2015) confirmed that solvency risk, as expected, has a negative and significant impact on financial performance. Based on this situation, there is an influence of Solvency Risk on Financial Performance.

Bank risk describes the level of risk or potential vulnerability faced by a financial institution in carrying out its operations. according to (Goswami & Malik, 2024) one of the bank risk measurements is using Z-score. The results of (Goswami & Malik, 2024) showed that bank risk (Z-score) has a positive impact on financial performance. This finding is supported by data from (Dayal, 2021) Meanwhile, during wave II of the COVID-19 crisis 2020-2021 the study found that Z-score had a negative effect with ROA. However, the ROE coefficient has a negative impact. In the study (Ahmed et al., 2022) found that the Z-score coefficient has a positive and statistically significant impact on both measures of financial performance of banks in India. Based on this situation, there is an influence of Bank Risk on Financial Performance.

Ownership type is the share ownership that exists in a company Fahdiansyah et al., (2018). The main significance of ownership type (OT) lies in its capacity to shape the direction of company operations, so that it can affect financial performance (Ivan, 2020). Corporate governance consists of several parts, one of which is ownership composition (Mardianto & Khellystina, 2021). The results of (Goswami & Malik, 2024) show a positive and significant influence between ownership and financial performance. (Din et al., 2022) found that ownership type (OT) has a positive and significant impact on return on equity (ROE). This is in line with research conducted by (Aboagye-Otchere & Boateng, 2023) showing a positive influence between ownership on financial performance as measured using return on assets (ROA) and return on equity (ROE). Based on this situation, there is an influence of Ownership type on Financial Performance.

This research will add the novelty of operational risk. The most important thing in implementing risk management is to implement proper procedures and risk management so that the bank's business activities can function efficiently. The results of research by (Kandie & Bitange , 2023) show that operational risk (BOPO) has a positive influence between operational risk and financial performance. Meanwhile, the results of research conducted by (Grace et al., 2020) found that operational risk management and financial

performance have a negative and significant effect. The results of this study are in line with research (Nurul et al., 2023) found that operational risk (BOPO) has a negative and significant effect on financial performance. Based on this situation, there is an influence of Operational risk on Financial Performance. This study will investigate various banks listed in Indonesia during the period 2017 to 2022. The research objective is to determine the factors that affect the risk and financial performance of banks listed in Indonesia for the COVID-19 period.

METHODS

In this study, the sampling method used was purposive sampling, which is a method used to select samples based on certain criteria relevant to the research objectives. The type of data used in the research is quantitative. The data collection method in the research is the secondary data collection method. The data source comes from the Indonesia Stock Exchange website (<https://www.idx.co.id/>) and from the website of each company. The sample of this study includes 102 periods of financial statements, consisting of 17 banks for 6 years (period 2017-2022). Table 1 displays the criteria used to select the sample in this study. To ensure validity and reliability, steps such as consistency checking of data from different sources and data completeness analysis were taken. In addition, the collected data will be processed using quantitative analysis methods such as regression or statistical tests. The validity of the research results is also supported by testing the research variables that have been clearly defined, including independent, dependent and control variables.

Table 1. Sampling Criteria

	Criteria	Amount
Population	Banks listed on the Indonesia Stock Exchange for the period 2017-2022.	47
	Banks that have domestic and foreign institutional shares on the Indonesia Stock Exchange for the period 2017-2022.	(17)
	Banks that do not have data availability related to the measurement of each variable in each company.	30
	Banks that are eligible to be sampled	17
	Total data used for research (6 years x 17 Banks)	102

Source: E-views 10 Output (2024)

This study aims to determine and examine the effect of systematic risk (Beta), operational risk (BOPO), COVID-19, non-performing loans (NPL), liquidity risk (LR), solvency risk (SR), bank risk (Z-score), and ownership type (OT) on financial performance. The secondary data obtained previously were taken for six years (2017-2022). This research uses the panel data regression analysis method with E-views 10 software. The following is the measurement process for each variable:

Table 2. Variable Measurement

Variable Type	Variable Name	Formula	Reference
Variable Dependent	ROA	$\frac{\text{Net Income}}{\text{Total Asset}}$	(Aboagye-Otchere & Boateng, 2023)
	ROE	$\frac{\text{Net Income}}{\text{Total Equity}}$	
Variable Independent	Beta	$\frac{\sigma_{im}}{\sigma_m^2}$	(Safitri & Handayani, 2017)
	BOPO	$\frac{\text{Operating Cost}}{\text{Operating Income}} \times 100\%$	(Astuti & Husna, 2018)
	COVID-19	<i>covid = 1 if the year incurs COVID – 19, covid = 0 otherwise</i> 1 = 2020,2021,2022; 0 = 2017,2018,2019	(Nguyen et al., 2024)
Variable Control	NPL	$\frac{\text{Non performing loans}}{\text{Total Loans \& Advances}} \times 100\%$	(Goswami, 2022b)
	LR	$\frac{\text{Liquidity asset}-\text{Short term borrowing}}{\text{Total Deposit}} \times 100\%$	(Ben Zeineb & Mensi, 2018)
	SR	$\frac{\text{Net Income}}{\text{Total asset}}$	(Morara & Sibindi, 2021)
	Z-score	$\frac{\text{ROA} + \frac{\text{Equity}}{\text{Assets}}}{\text{Standart Deviantion of ROA}}$	(Pham & Nguyen, 2023)
	OT	$\frac{\text{number of shares owned by managerial + institutions}}{\text{number of shares outstanding}}$	(Pinto et al., 2024)

The available data will be measured and tested using Eviews 10 software. The regression equation is as follows:

Model 1:

$$\text{ROA} = \beta_0 + \beta_1 \text{Beta} + \beta_2 \text{BOPO} + \beta_3 \text{COVID19} + \varepsilon$$

$$\text{ROA} = \beta_0 + \beta_1 \text{Beta} + \beta_2 \text{BOPO} + \beta_3 \text{COVID19} + \beta_4 \text{NPL} + \beta_5 \text{LR} + \beta_6 \text{SR} + \beta_7 \text{Zscore} + \beta_8 \text{OT} + \varepsilon$$

Model 2:

$$\text{ROE} = \beta_0 + \beta_1 \text{Beta} + \beta_2 \text{BOPO} + \beta_3 \text{COVID19} + \varepsilon$$

$$ROE = \beta_0 + \beta_1 \text{Beta} + \beta_2 \text{BOPO} + \beta_3 \text{COVID19} + \beta_4 \text{NPL} + \beta_5 \text{LR} + \beta_6 \text{SR} + \beta_7 \text{Zscore} + \beta_8 \text{OT} + \varepsilon$$

Description:

ROA	= Return on Assets
ROE	= Return on Equity
Beta	= Systemic Risk
BOPO	= Operating Risk
COVID-19	= Covid-19
NPL	= Non Performing Loans
LR	= Liquidity Risk
SR	= Solvency Risk
Z-score	= Bank Risk
OT	= Ownership type
β_0	= Constant
$\beta_1 \beta_2 \beta_3$	= Koefisien regresi
ε	= Standard error

RESULTS AND DISCUSSION

In the ROA model, based on the Hausman test that has been carried out, with a significance level of 5%, it can be stated that the Fixed Effect Model (FEM) is better than the Random Effect Model (REM). From these two tests, it is concluded that with a significance level of 5%, the model that best fits the data is the Fixed Effect Model (FEM). Meanwhile, in the ROE model, based on the LM test, with a significance level of 5%, the Random Effect Model (REM) is better than the Common Effect Model (CEM). From these three tests, it is concluded that with a significance level of 5%, the model that best fits the data is the Random Effect Model (REM). Table 3 presents a sample size of 102 observations in the 2017-2022 period used to test the effect of systematic risk, operational risk, Covid-19, non-performing loans, liquidity risk, solvency risk, bank risk, and ownership type on financial performance. The statistical table displays the mean, maximum, minimum, and standard deviation values for each variable. ROE has a mean value of 0.0460, standard deviation of 0.0443, minimum -0.5470, and maximum 0.3412. ROA has a mean value of 0.0064, standard deviation of 0.0198, minimum -0.0892, and maximum 0.0867. Systematic Risk has a mean value of 0.3795, a standard deviation of 1.5881, a minimum of -3.2192, and a maximum of 5.7198. Operating Risk has a mean value of 0.9689, standard deviation 0.5249, minimum 0.0011, and maximum 3.3522. NPL has a mean value of 0.0364, standard deviation 0.0397, minimum 0.0004, and maximum 0.2158. Liquidity Risk has a mean value of 2.7912, a standard deviation of 5.2338, a minimum of -4.5366, and a maximum of 42.2573. Solvency Risk has a mean value of 0.0046, a standard deviation of 0.0363, a minimum of -0.2001, and a maximum of 0.1167. Ownership Type has a mean value of 0.5637, a standard deviation of 0.3970, a minimum of 0.000001, and a maximum of 1.1123. Bank Risk has a mean value of 46.9384, a standard deviation of 45.9964, a minimum of 1.3306, and a maximum of 250.0046.

Table 3. Test Results of the Fourth Week of Effects

Variable	Mean	Maximum	Minimum	Standard Deviation
ROA	0.0064	0.0870	-0.0892	0.0180
ROE	0.0460	0.3413	-0.5470	0.1035
Systemic Risk	0.3795	5.7198	-3.2192	1.5881
Operating Risk	0.9689	3.3522	0.0011	0.5249
NPL	0.0364	0.2158	0.0004	0.0397
Liquidity Risk	2.7912	42.2573	-4.5366	5.2338
Solvency Risk	0.0046	0.1167	-0.2001	0.0363
Ownership Type	0.5637	1.1123	0.000001	0.3970
Bank Risk	46.9384	250.0046	1.3306	45.9964

Source: E-views 10 Output (2024)

This test aims to evaluate whether each independent variable has a significant impact on the dependent variable. If the significance value (sig) of the t test is less than 0.05, then the null hypothesis (H_0) will be rejected, indicating that the independent variable has a significant influence on the dependent variable. Conversely, if the sig value of the t test is greater than 0.05, then the null hypothesis will be accepted, indicating that the independent variable does not have a significant effect on the dependent variable.

H_1 : There is an Effect of Systematic Risk on Financial Performance

The statistical test results show that the effect of systematic risk on ROA has a probability value of 0.9702, which is greater than the alpha value of 0.05. This means there is not enough statistical evidence to reject the null hypothesis. The null hypothesis in this context states that systematic risk has no significant effect on ROA. In other words, this test result implies that statistically, there is no significant relationship between systematic risk and ROA. Meanwhile, the effect of systematic risk on ROE also shows a probability value of 0.3049, which is also greater than the alpha value of 0.05. This indicates that there is not enough statistical evidence to reject the null hypothesis. Therefore, based on the results of this test, there is no significant relationship between systematic risk and ROE.

The test results show that there is not enough evidence to state that systematic risk has a significant influence on ROA and ROE. This is not in line with the results of (Goswami & Malik, 2024) which says that there is a strong and negative influence between systematic risk and the financial performance of banks in India. Systematic Risk does not significantly affect ROE and ROA can be caused by several factors. Systematic risk does not directly affect the financial performance of banks, including ROE and ROA, because banks have mechanisms and factors that can mitigate its impact. First, banks tend to have broad portfolio diversification and a large scale of operations. This allows them to earn revenue from various sources such as loans, investments, and other financial services. Second, banks are tightly managed by regulators and subject to careful supervision, so they must adhere to strict standards and requirements designed to strengthen the resilience of the financial system as a whole. This helps insulate banks from the direct impact of systematic risk. Third, banks usually have greater access to liquidity and emergency reserves that can be used in crisis situations. By having access

to sufficient liquidity, banks can fulfill their financial obligations and maintain smooth operations. In addition, there is a large variance in the systematic risk data that causes insignificance in the results, which suggests that in systemic risk analysis, large variations in data can reduce the relevance or importance of the results obtained.

H_2 : There is an Effect of Operational risk on Financial Performance

The results showed that the effect of Operational Risk on ROE has a probability value of 0.0000, while on ROA is 0.0003. Both values are smaller than the alpha value of 0.05. This indicates that there is sufficient statistical evidence to reject the null hypothesis in both cases. In this context, the null hypothesis states that there is no significant effect of Operational Risk on ROE and ROA. However, since the probability value obtained is less than 0.05, we can reject the null hypothesis. The coefficient values for both models are positive. Therefore, it can be concluded that Operational Risk has a significant and positive influence on bank financial performance as measured by ROE and ROA. The results of this study are in line with the research of (Kandie & Bitange, 2023) and show that operational risk (BOPO) has a positive influence between operational risk and financial performance. Intuitively, there are several explanations why the effect is positive. First, higher operational risk may signal that bank firms are taking greater risks in an effort to achieve better results. This can happen for example when banks expand their product or service range, improve operational efficiency, or innovate in their operations. Secondly, well-managed operational risks may reflect the high quality of risk management within the bank firm. In other words, banks that are able to identify, assess, and manage operational risks well have a higher probability of achieving better financial performance.

H_3 : There is an Effect of COVID-19 on Financial Performance

The results showed that the effect of COVID-19 on ROA had a probability value of 0.1142, while on ROE it was 0.9021. In both cases, the probability value is greater than the alpha value of 0.05. In this context, a probability value greater than 0.05 indicates that there is not enough statistical evidence to reject the null hypothesis. The null hypothesis in this case may state that there is no significant effect of COVID-19 on ROA and ROE.

This is not in line with the results of (Goswami & Malik, 2024) which found that there is a positive influence between pandemic and ROE.

Found that there is a positive influence between the COVID-19 pandemic and the financial performance of banks in India during the observed study period. The interpretation of this result is that, based on statistical analysis, there is not enough evidence to conclude that COVID-19 has a significant impact on the financial performance of banks as measured by ROA and ROE. This could be due to various factors, such as stimulus policies implemented by the government, the adaptive response of the financial industry, or perhaps the duration of the impact of the pandemic which may not have covered a sufficient period of time in this study.

H_4 : There is an Effect of Non Performing Loan on Financial Performance

The results showed that the effect of Non Performing Loan (NPL) on ROA has a probability value of 0.6810, while the ROE is 0.3318. Both values are greater than the

alpha value of 0.05. This indicates that there is insufficient statistical evidence to support the rejection of the null hypothesis in both cases. In this context, the null hypothesis states that there is no significant effect of NPL on ROE and ROA. Therefore, by not being able to reject the null hypothesis, we cannot conclude that there is a significant effect between NPL and ROE or ROA.

This study is not in line with the results of (Goswami & Malik, 2024) who found a significant and negative influence between non-performing loans (NPL) and financial performance in the Indian banking industry using ROA and ROE measurements. The insignificant effect of NPL on ROE and ROA may be due to several factors. One is that NPLs may not have a significant direct impact on the profitability and efficiency of bank firms. While NPLs may signal credit risk, their impact on financial performance may be offset by other factors, such as interest income and operating expenses.

H_5 : There is an Effect of Liquidity Risk on Financial Performance

The results showed that the probability of Liquidity Risk has a low probability value on ROA and ROE, namely 0.0000 and 0.0001. This value is smaller than the alpha value of 0.05. This indicates that there is strong evidence to reject the null hypothesis in both cases. In this context, the null hypothesis states that there is no significant effect of Liquidity Risk on ROA and ROE. With a probability value less than 0.05, we can reject the null hypothesis. Based on the regression coefficients generated by both models, the regression coefficient values are positive. Therefore, it can be concluded that there is a significant and positive relationship between Liquidity Risk and ROA and ROE.

This is in line with the results of research by Goswami & Malik, (2024) indicating that liquidity risk (LR) has a positive influence on profitability, indicating that the presence of more significant liquidity flows and better financial conditions of banks contribute to improved financial performance among Indian banks. The positive effect of liquidity risk suggests that higher liquidity risk can contribute positively to the financial performance of bank firms, which is reflected in higher ROA and ROE. This could be due to several factors. First, well-managed liquidity risk may encourage banks to allocate their assets more efficiently, which in turn may increase their income from banking operations and, consequently, result in higher ROA and ROE. Secondly, well-managed liquidity risk can also reflect strong risk management within bank firms, which includes appropriate strategies to address liquidity risk and maintain the financial health of the bank. This can increase the confidence of investors and other stakeholders, which can have a positive impact on the bank's ROE.

H_6 : There is an Effect of Solvency Risk on Financial Performance

The results showed that Solvency Risk has a very low probability value on ROA and ROE, which is 0.0000. This value is much smaller than the alpha value generally used in statistical tests, which is 0.05. Thus, there is evidence to reject the null hypothesis in both cases. In this context, the null hypothesis states that there is no significant effect of solvency risk on ROA and ROE. With a probability value less than 0.05, we can reject the null hypothesis. From the regression coefficient results, it is found that the regression coefficient values for both models are positive. Therefore, it can be concluded that there is a significant and positive relationship between solvency

risk and ROA. significant and positive relationship between solvency risk and ROA and ROE.

This is not in line with the results of research conducted by Goswami & Malik, (2024) which found that solvency risk has a significant negative impact on the financial performance of banks in India. The positive effect of solvency risk suggests that higher solvency risk can contribute positively to the financial performance of bank firms, which is reflected in higher ROA and ROE. One explanation for this positive impact is that well-managed solvency risk may indicate that the bank firm has sufficient capital to bear financial risks and meet its financial obligations. This can increase investor and other stakeholder confidence, which in turn can increase the bank's enterprise value and drive ROE growth.

H₇: There is an Effect of Bank Risk on Financial Performance

The results showed that the effect of bank risk on ROA has a probability value of 0.0482, while on ROE it is 0.4523. In this context, the alpha value used in the statistical test, which is 0.05, indicates that there is enough statistical evidence to reject the null hypothesis for ROA and there is not enough statistical evidence to reject the null hypothesis for ROE. Therefore, it can be concluded that there is an effect of bank risk on ROA and there is no effect of bank risk on ROE.

This is not in line with the results of research by Goswami & Malik, (2024) showing that bank risk (Z-score) found a positive impact on financial performance. When bank risk does not significantly affect return on equity (ROE) and return on assets (ROA), there are several phenomena that may be the cause. It can be concluded that bank risk has a significant impact on ROA, but no significant effect on return on equity (ROE). This indicates that bank risk tends to have a more direct and measurable impact on profitability reflected in ROA, but may not affect the return on equity reflected in ROE in the same way. This can be understood by considering the difference between ROA and ROE. ROA measures how efficient a bank is in generating profits from the assets it owns, while ROE measures the rate of return provided to the bank's shareholders from the capital they invest. Bank Risk, such as credit risk or operational risk, may have a direct impact on a bank's profitability as it may reduce revenue or increase operating expenses, thus affecting ROA. However, the impact of bank risk may not always be directly related to the bank's return on equity. ROE is also influenced by capital structure and leverage, as well as other factors that are not only related to the daily operations of the bank. Therefore, while Bank Risk may impact the overall profitability of the bank as reflected in ROA, its impact on the rate of return enjoyed by shareholders may be more complex and not always directly measurable in ROE. In addition, Bank Risk has a positive influence on ROA due to several factors associated with risk itself. One of them is that banks that take measured and well-managed risks tend to invest more aggressively or lend to customers that have the potential to generate higher returns. In this context, the bank may be able to achieve greater earnings from its assets, which in turn increases ROA.

H₈: There is an Effect of Ownership Type on Financial Performance

The results showed that the effect of Ownership type on ROA has a probability value of 0.0257, while on ROE is 0.0088. In this context, the probability value is smaller than the alpha value of 0.05. The effect of Ownership type on ROA shows that there is

sufficient statistical evidence to reject the null hypothesis. The regression coefficient value for Ownership type on ROA is negative. This means that there is a significant and negative relationship between Ownership type and ROA. Furthermore, for the effect of Ownership type on ROE, the probability value is 0.0129 or less than the alpha value of 0.05 also indicates that there is enough statistical evidence to reject the null hypothesis. In this context, the null hypothesis states that there is no significant effect of Ownership Type on ROE. The regression coefficient value for Ownership type on ROE is negative. Therefore, we can conclude that Ownership type has a significant and negative relationship with ROE.

This is not in line with the results of research by Goswami & Malik, (2024) which shows a positive and significant effect between ownership and financial performance and research by (Din et al., 2022) which found that ownership type (OT) has a positive and significant impact on ROE, which indicates that an institutional investor plays a significant role in improving the financial performance of companies in Pakistan. The negative effect of Ownership Type on ROA and ROE in bank companies can be explained through several factors that affect financial performance. First, firms owned by government or financial institutions often have different objectives compared to private firms. Social or political objectives may dominate over profitability objectives, leading to decision-making that may not always optimize financial outcomes. Secondly, stricter regulatory structures or constraints on certain decision-making may inhibit flexibility and innovation, which are important for improving profitability.

The panel data regression model used by previous research Goswami & Malik, (2024) can be written as follows:

$$ROA = -0.0074 + 0.000002\text{Beta} + 0.0103\text{BOPO} - 0.0022\text{COVID19} - 0.0094\text{NPL} + 0.0015\text{LR} + 0.5854\text{SR} + 0.00004\text{Zscore} - 0.0074\text{OT}$$

$$ROE = -0.0180 - 0.0039\text{Beta} + 0.0623\text{BOPO} + 0.1805\text{NPL} + 0.0054\text{LR} + 2.4832\text{SR} + 0.0001\text{Zscore} - 0.0001\text{OT}$$

CONCLUSION

Based on the tests that have been carried out, the results obtained operational risk variables have a significant positive effect on return on assets and return on equity. Liquidity risk variables have a significant positive effect on return on assets and return on equity. The solvency risk variable has a significant positive effect on return on assets and return on equity. The ownership type variable has a significant negative effect on return on assets and return on equity. Bank risk variable has a significant positive effect on return on assets and has no effect on return on equity. Systematic risk, non-performing loan, and COVID-19 variables have no effect on financial performance.

The benefits suggested for financial managers and investors as a consideration when making decisions. This research is expected to provide information to financial managers to evaluate the company's financial condition and increase their understanding of the factors that can affect financial performance, which can be seen from operational risk, liquidity risk, solvency risk and type of company ownership on financial performance. By considering these variables, financial managers can make the right decisions to maximize company profits. This research is also expected to provide

information for investors in making investments by evaluating companies that have good financial performance, with the aim of assisting in making valuable investment decisions. Therefore, investors should also consider factors such as operational risk, liquidity risk, high solvency risk and low company ownership type in order to improve company performance. In addition, it is hoped that further researchers will add other variables, namely the capital adequacy ratio (CAR) as has been studied by (Natufe & Evbayiro-Osagie, 2023).

REFERENCES

- Aboagye-Otchere, F., & Boateng, P. Y. (2023). Financing decision, ownership type and financial performance of listed non-financial companies in Ghana. *Cogent Business and Management*, 10(1). <https://doi.org/10.1080/23311975.2023.2170070>
- Adrian, T., & Brunnermeier, M. K. (2016). CoVaR. *American Economic Review*, 106(7), 1705–1741. <https://doi.org/10.1257/aer.20120555>
- Ahmad Wani, A., & Ahmad Dar, S. (2015). Relationship between Financial Risk and Financial Performance: An Insight of Indian Insurance Industry. In *International Journal of Science and Research (IJSR) ISSN* (Vol. 4). www.ijsr.net
- Ahmed, H. M., El-Halaby, S. I., & Soliman, H. A. (2022). The consequence of the credit risk on the financial performance in light of COVID-19: Evidence from Islamic versus conventional banks across MEA region. *Future Business Journal*, 8(1). <https://doi.org/10.1186/s43093-022-00122-y>
- Astuti, E. P., & Husna, F. M. (2018). The Effect of Net Interest Margin (NIM) and Operational Costs Operating Income (BOPO) on Return on Assets (RoA) at PT. Bank Rakyat Indonesia, Tbk. In *Pinisi Discretion Review* (Vol. 2, Issue 1). www.ir-bri.com
- Aryaningsih L, Novitasari N, & Widhiastuti N. (2022) Pengaruh Ukuran Perusahaan, Corporate Social Responsibility, Solvabilitas, Dan Likuiditas Terhadap Kinerja Keuangan
- Baumöhl, E., Bouri, E., Hoang, T. H. Van, Hussain Shahzad, S. J., & Výrost, T. (2022). Measuring systemic risk in the global banking sector: A cross-quantilogram network approach. *Economic Modelling*, 109. <https://doi.org/10.1016/j.econmod.2022.105775>
- Beck, T., & Keil, J. (2022). *Have Banks Caught Corona? Effects of COVID on Lending in the U.S.*
- Ben Zeineb, G., & Mensi, S. (2018). Corporate governance, risk and efficiency: evidence from GCC Islamic banks. *Managerial Finance*, 44(5), 551–569. <https://doi.org/10.1108/MF-05-2017-0186>
- Dayal, Y. (2021). REPORT ON TREND AND PROGRESS OF BANKING IN INDIA 2020-21 RESERVE BANK OF INDIA. Reserve Bank of India.
- Din, S. U., Arshad Khan, M., Khan, M. J., & Khan, M. Y. (2022). Ownership structure and corporate financial performance in an emerging market: a dynamic panel data analysis. *International Journal of Emerging Markets*, 17(8), 1973–1997. <https://doi.org/10.1108/IJOEM-03-2019-0220>
- Dura, J., Akuntansi, P., Ekonomi, F., Bisnis, D., Teknologi, I., Malang, A., & Kunci, K. (2022). *MDP STUDENT CONFERENCE (MSC) 2022 Pengungkapan*

Sustainability Kinerja Ekonomi Terhadap Nilai Perusahaan Melalui Kinerja Keuangan Perusahaan Manufaktur.

- Fahdiansyah, R., Qudsi, J., Bachtiar, A., & Bumigora Mataram, S. (2018). *STRUKTUR KEPEMILIKAN DAN NILAI PERUSAHAAN: (STUDI PADA PERUSAHAAN MANUFAKTUR YANG LISTING DI BURSA EFEK INDONESIA)* (Vol. 1, Issue 2).
- Goswami, A. (2022a). Does credit risk persist in the Indian banking industry? Recent evidence. *Asian Journal of Economics and Banking*, 6(2), 178–197. <https://doi.org/10.1108/ajeb-01-2021-0006>
- Goswami, A. (2022b). Does credit risk persist in the Indian banking industry? Recent evidence. *Asian Journal of Economics and Banking*, 6(2), 178–197. <https://doi.org/10.1108/ajeb-01-2021-0006>
- Goswami, A., & Malik, P. (2024). Risks and financial performance of Indian banks: a cursory look at the COVID-19 period. *Benchmarking: An International Journal*. <https://doi.org/10.1108/BIJ-02-2023-0109>
- Grace Kemunto, O., Gideon, Dr. M., & Robert Kisavi, Dr. M. (2020). Operational Risk Management and Financial Performance; Evidence from Deposit Taking Savings and Credit Cooperative Societies in Western Kenya. *Scholars Journal of Economics, Business and Management*, 7(9), 299–303. <https://doi.org/10.36347/sjebm.2020.v07i09.003>
- Inri Gloria Tampi 2022. ().
- Ivan, M. (2020). *PENGARUH MEKANISME CORPORATE GOVERNANCE DAN STRUKTUR KEPEMILIKAN TERHADAP KINERJA KEUANGAN PERUSAHAAN Nur Handayani Sekolah Tinggi Ilmu Ekonomi Indonesia (STIESIA) Surabaya.*
- Kandie, S. K., Bitange, J., & Phd, B. (2023). Risk Management and Financial Performance of Commercial Banks Listed at the Nairobi Securities Exchange. *International Journal of Finance*, 8(2), 40–64. www.carijournals.org
- Kohar Mudzakar, M., & Wardanny, I. P. (2021). The Effect Of Return On Asset, Return On Equity, Earning Per Share, And Price Earning Ratio Toward Stock Return (Empirical Study Of Transportation). In *Turkish Journal of Computer and Mathematics Education* (Vol. 12, Issue 8). www.idx.co.id
- Kwashie, A. A., Baidoo, S. T., & Ayesu, E. K. (2022a). Investigating the impact of credit risk on financial performance of commercial banks in Ghana. *Cogent Economics and Finance*, 10(1). <https://doi.org/10.1080/23322039.2022.2109281>
- Kwashie, A. A., Baidoo, S. T., & Ayesu, E. K. (2022b). Investigating the impact of credit risk on financial performance of commercial banks in Ghana. *Cogent Economics and Finance*, 10(1). <https://doi.org/10.1080/23322039.2022.2109281>
- Mardianto & Khellystina, (2021). Analisis Pengaruh Komposisi Kepemilikan Terhadap Manajemen Laba Pada Perusahaan Yang Terdaftar Di Bursa Efek Indonesia. *Journal of Applied Accounting and Taxation*. Vol. 6, No 2.
- Melisa Safitri, T., Indriyani, H., Bina Darma, U., & Jendral Ahmad Yani No, J. (2017). *Seminar Hasil Penelitian FEB PENGARUH KINERJA KEUANGAN DAN RISIKO SISTEMATIS TERHADAP RETURN SAHAM PADA PERUSAHAAN FARMASI DI BEI.*
- Morara, K., & Sibindi, A. B. (2021). Determinants of Financial Performance of Insurance Companies: Empirical Evidence Using Kenyan Data. *Journal of Risk and Financial Management*, 14(12). <https://doi.org/10.3390/jrfm14120566>

-
- Natufe, O. K., & Evbayiro-Osagie, E. I. (2023). Credit Risk Management and the Financial Performance of Deposit Money Banks: Some New Evidence. *Journal of Risk and Financial Management*, 16(7). <https://doi.org/10.3390/jrfm16070302>
- Nguyen, K. Q. T., Nga Phan, T. H., & Hang, N. M. (2024). The effect of liquidity on firm's performance: Case of Vietnam. *Journal of Eastern European and Central Asian Research (JEECAR)*, 11(1), 176–187. <https://doi.org/10.15549/jeecar.v11i1.1344>
- Nurul, R., Amijaya, F., & Alaika, R. (2023). DOES FINANCIAL RISK MATTER FOR FINANCIAL PERFORMANCE IN SHARIA BANKS? *Jurnal Ilmu Ekonomi Terapan*, 8(1), 24–40. <https://doi.org/10.20473/jiet.v8.i1.44675>
- Otchere, F. A., & Boateng, P. Y. (2023). Financing decision, ownership type and financial performance of listed non-financial companies in Ghana. *Cogent Business and Management*, 10(1), 1–21. <https://doi.org/10.1080/23311975.2023.2170070>
- Park, C. Y., & Shin, K. (2021). COVID-19, nonperforming loans, and cross-border bank lending. *Journal of Banking and Finance*, 133. <https://doi.org/10.1016/j.jbankfin.2021.106233>
- Phulong Mamaro, L., & Gladys Legotlo, T. (2021). *The Financial Performance and Financial Leverage of Retail Listed Firms in South Africa*.
- Pinto, G., Rastogi, S., & Agarwal, B. (2024). Does promoters' holding influence the liquidity risk of banks? *Journal of Financial Regulation and Compliance*. <https://doi.org/10.1108/jfrc-09-2023-0144>
- Ramadhan, S., Afif, M., & Leon, F. M. (2023). *Financial Performance Factors Influencing Initial Public Offering (IPO) of Companies in Indonesia*. <https://doi.org/10.56805/grrbe>
- Tampi, I. G. (2022). The Effect Of Asset Growth, Debt To Equity Ratio And Earning Per Share On Systematic Risk And Stock Returns In Go Public Banks 2014-2018.
- Tran, D. V., Hassan, M. K., Alam, A. W., & Dau, N. (2022). Banks' financial soundness during the COVID-19 pandemic. *Journal of Economics and Finance*. <https://doi.org/10.1007/s12197-022-09591-x>
- Wahyu, E., & Budiarto, H. (n.d.). *The Influence of Return On Equity (ROE) in Islamic Banking: Mapping Research Topics using VOSviewer Bibliometric and Library Research*. <https://doi.org/10.5281/zenodo.10117294>
- Yulianti, M., Hanly, H., Wijaya, F., & Syah Lubis, M. (2022). *ANALISIS PENGARUH LDR, BOPO, NIM DAN NPL TERHADAP RETURN OF ASSET PADA PERBANKAN YANG TERDAFTAR DI BURSA EFEK INDONESIA PERIODE 2017-2020* (Vol. 4, Issue 1).