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The Effect Of Operational Efficiency On The Financial Performance Of Banks In Indonesia

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ABSTRACT
This study aims to provide insight into asset utilization, company size, and loan quality significantly affecting the financial performance of banking companies listed on the Indonesia Stock Exchange (IDX). In addition, it can show factors that can strengthen the stability and efficiency of banks which ultimately have an impact on the economy as a whole, especially the community massively. The novelty of this study is the addition of asset utilization variables that are included in the independent variables. The background of this research is driven by the increasing complexity of the banking sector, particularly in Indonesia, where the efficiency and stability of banks play a crucial role in overall economic health. With the rapid growth of the financial sector, especially in the context of banking, it becomes essential to evaluate how effectively these institutions utilize their assets and maintain loan quality in order to optimize financial performance. The research method used by the researcher was quantitative with secondary data sources obtained from 42 banking companies for a 5-year period (2020 - 2023). The data analysis technique used is panel data regression analysis. The results showed that NIITA, NICTA, OEOI, SIZE, and LOAN had a significant impact on financial performance (NIM), and only the CAP variable did not have a significant historical effect. The implications in the research are devoted to financial managers to determine the proper management of assets so that business goals can be obtained, especially in improving investor welfare. The focus of this research is to strengthen the cruciality of ownership structure and liquidity for investors in choosing the right investment opportunities in a banking company.

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INTRODUCTION

Financial performance is a fundamental aspect in measuring the success of a company, with financial ratio analysis that makes it easier for management to evaluate the efficiency of the company in generating profits for investors (Elgi, D., Aydemir, B., & Bhatia, 2023). The banking sector is one of the sectors that is undergoing rapid transformation influenced by technological advances in government policies, and customer demand that continues to develop. This transportation makes the banking sector even more attractive to investors, who often use Net Interets Margin (NIM) to assess banks' performance and profit potential ((Zhang, Li, 2020).

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The efficiency and profitability of financial institutions are highly based on NIM. Although the value of NIM is high in favor of the bang, this has the potential to hinder economic growth and trigger inefficiencies in the financial sector. One of the important indicators in assessing bank performance and managing customer funds is NIM, namely by collecting savings and distributing loans (M., & Jalil, A., 2020). previous studies have shown a diversity of results related to the impact of factors on NIM.

The assessment of the financial condition or profitability of a bank in order to see the picture of the bank's health through financial risk is called financial performance. This is very crucial in understanding the functional status of the company and the level of achievement that has been carried out so far. The performance of finance can be evaluated using several indicators ranging from capital adequacy, provability, and liquidity (Alrabei, A., Jawabreh, O., & Khan, 2022), the influence of this factor certainly includes internal and external conditions such as several elements of cash flow, market risks that occur, inflation rates and exchange rate fluctuations (Adusei, 2022).

Meanwhile, Operating Expensise to Operating Income (OEOI) is also an important indicator in measuring bank operational efficiency. This is due to the fact that if the risk indicated by OEOI is lower, the efficiency will be higher in managing operational costs and vice versa (Eka Wahyu, H. B., & Nindi Dwi, 2024).

The size of a bank can be measured through the total assets owned by the tire size indicator which has an impact on profitability. So that high trust from customers will be obtained if the liquidity risk with effective credit distribution can be carried out appropriately (Kwashie, M., Yawson, A., & Poku, 2022). In line with the measurement of credit risk faced by using the LOAN ratio related to possible losses due to non-payment of loans by debtors. High risk of credit has an effect on the provision of productive assets and disrupts bank performance (Ahmed, S., Ghosh, P., & Uddin, 2021).

The research conducted (Onaolapo, A. R., 2024) found that a significant influence was shown by Net Interest Income (NIITA) on net interest margin. In line with the study, (M., & Jalil, A., 2020)strengthened that there are other variables that can significantly and positively affect NIM, namely Non-interest Cost (NICTA). In contrast to that, the research findings (Onaolapo, A. R., 2024) that the effect of NICTA on NIM are significantly negative. Meanwhile, other studies conducted ((Henny, S., Helda, Y., 2021) have other elements that contribute positively and significantly to the net internet margin, namely Operating Expense To Operating Income (OEOI), while insignificant and significant negative influences were found by two similar studies conducted (Paula, M., Smith, R., 2020). and (Onaolapo, A. R., 2024).

The influence of bank size or bank size on NIM also illustrates various results. (Eferakeya, R., & Erhijakpor, 2020) It found that the size of the bank had a significant positive effect on NIM. However, on the contrary, in the research by (Onaolapo, A. R., 2024), it was emphasized that there was a significant negative influence and (Nguyen, 2024) stated that the influence was not significant. Meanwhile, in the bank equity (CAP) variable, it was found that the impact of the variable was positive and significant. On the other hand, several studies also gave different results because of the significant negative influence of the research

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(Henny, S., Helda, Y., 2021), in line with the results of the research study conducted by (Hossain, M., Ahamed, M., & Mkadmi, 2021) whose influence was also not significant.

The conduct of this study refers to the findings, (Paula, M., Smith, R., 2020) which emphasizes that the bank equity variable has a significant influence on the financial performance of a company. A higher level of asset utilization can also produce good performance with bank equity is a mirror of the efficiency of using equity in generating income or profit from structured financial management (Sukmadewi, P., & Revi, 2020). Bang equity covers efficient asset management, the use of well-optimized facilities in accordance with portions, and maximizing the use of other productive assets owned. In addition, research from (Onaolapo, A. R., 2024) that loan balance (LOAN) illustrates its effect on NIM positively and significantly.

In relation to previous research, the main difference in this study is the addition of the asset utilization variable as an independent variable, which has not been widely discussed in prior studies. Previous research has primarily focused on variables such as Net Interest Income (NIITA), Non-interest Cost (NICTA), Operating Expense to Operating Income (OEOI), bank size (SIZE), and loan balance (LOAN), but rarely included asset utilization as a factor affecting financial performance.

Additionally, previous studies have not thoroughly examined how asset utilization can strengthen bank stability and efficiency, which ultimately impacts the overall economy. This study also integrates different findings regarding the impact of various factors on the Net Interest Margin (NIM), such as the positive and negative effects of NICTA and OEOI, which have shown mixed results in the past.

As for the research object, the use of banking companies in Indonesia listed on the IDX is a recommendation from previous studies that emphasize the importance of understanding financial performance in the banking sector, particularly in the context of emerging markets like Indonesia. This study further expands on those recommendations by investigating factors that have not been extensively explored before, such as asset utilization in relation to financial stability..

METHODS

This type of research is associative with a quantitative approach. The sample used is a banking company listed on the Indonesia Stock Exchange (IDX) in the period of 2020-2023. The selection is based on the purposive sampling method which is based on the criteria for determining certain requirements. The number of companies listed on the Indonesia Stock Exchange during the 2020-2023 period is 172 companies. Meanwhile, banking companies that do not have the availability of data related to the measurement of each variable in each company are 4. So that the total data used for the research is 168 samples of financial statements. The selection of data as a sample with criteria includes (1) banking companies registered in Indonesia from 2020 to 2023, and (2) listing on the IDX during the 5-year period. Data collection through literature studies and documentation with secondary data sources through the financial statements of banking companies. Obtained from the official website or IDX website. There are two variables, namely dependent and independent. The independent

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variables include Net Interest Income to Total Asset (NIITA), Operating Expenses to Operating Income (OEOI), Bank Equity (CAP), Bank Size (BSZE), and Bank Loan (LOAN). Meanwhile, the bound variable is NIM.

Multiple linear regression is used in this study as a data analysis method. The implication is to test the correlation or influence of six independent variables (X) on one of the bound variables (Y). The calculation value determined in this study is sourced from the company's financial and annual statements through the https://www.idx.co.id Role. The steps of the panel data regression model are used with three approaches starting from the common effect model, the second is the fixed effect model, and the last is carried out with the random effect model. Meanwhile, the determination of the most appropriate model to be used is carried out by testing chow and hausman. The purpose of this process is which is included in the most appropriate regression model so that the resulting analysis can provide accurate and valid results.

RESULTS AND DISCUSSION

The results of this study began with a descriptive analysis derived from the variables studied. This analysis provides an overview related to the characteristics of the use of data in research. The values displayed include the mean or mean, minimum value, standard deviation and maximum value of each variable listed. The following are the results of the descriptive analysis presented in the table.

Table 1. Analysis Descriptive

	NIM?	NIITA?	NICTA?	OEOI?	SIZE?	CAP?	LOAN?
Mean	5.003690	0.042368	0.074084	0.941319	17.78943	0.203815	0.542339
Median	4.490000	0.037598	0.063011	0.879966	17.17619	0.166253	0.548500
Maximum	27.32000	0.245377	0.300066	2.879174	21.49994	0.670011	0.789000
Minimum	0.220000	0.001613	0.034426	0.463707	14.59478	0.055336	0.139000
Std. Dev.	3.974161	0.035168	0.036860	0.368580	1.663866	0.111883	0.110661
Skewness	3.854656	3.963933	3.189556	2.776174	0.466234	1.702876	-0.549845
Kurtosis	20.67481	21.80951	16.69067	12.05822	2.275488	6.075499	4.194732
Jarque-Bera	2602.826	2916.542	1596.893	790.1595	9.760911	147.4049	18.45693
Probability	0.000000	0.000000	0.000000	0.000000	0.007594	0.000000	0.000098
Sum	840.6200	7.117754	12.44609	158.1415	2988.624	34.24086	91.11300
Sum Sq. Dev.	2637.591	0.206544	0.226901	22.68717	462.3312	2.090479	2.045062
Observations	168	168	168	168	168	168	168
Cross sections	42	42	42	42	42	42	42

Source : Data processing using E-views

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Table 2. Panel Data Regression Model Estimation

Model 1 Fixed Effects Model Variabel Dependen: Net Interest Margin				
Variables	Coefficient	Prob.	Hypothesis	Conclusion
Constanta	-2.533257	0.0024		
Net Interest Income to Total Asset	104.4913	0.0000	Ha Accepted	have a significant effect
Non-Interest Cost to Total Asset	-11.52273	0.0000	Ha Accepted	have a significant effect
Operating Expenses to Operating Income	0.457944	0.0057	Ha Accepted	have a significant effect
Bank size	0.17946	0.0002	Ha Accepted	have a significant effect
Bank Equity	-0.286486	0.4144	Ha Rejected	Anonymous
Loan Balance	0.734541	0.0117	Ha Accepted	have a significant effect

Source : Data processing using E-views

The results of the descriptive analysis, as shown in table 1, show that the NIM has an average value of 5.003690, while the standard deviation value obtained is 3.974161. The minimum value is 0. 22000, and 27.32000 are the maximum values. The mean value owned by NIITA is 0.042368, while 0.035168 is the standard deviation value. Then continued with a maximum value of 0.245377 and a minimum value of 0.001613.

In the OEOI variable, a mean value of 0.941319 was obtained, 0.368580 of the standard deviation value. Meanwhile, 2.879174 is the maximum value, and the minimum value is around 0.034426. On the other hand, SIZE obtained an average value of 17.78943. The standard deviation obtained is 1.663866. The minimum value is 14.59478 and the maximum is 21.49994. In CAP, the mean value is 0.203815, while 0.111883 is the standard deviation value. The maximum score is 0.670011 and the minimum value is 0.055336. In line with this, LOAN obtained a similar result with a mean value of 0.542339. Meanwhile, the maximum value is 0,789,000. 0.13900 is the minimum value with a standard deviation of 0.110661. Based on the tests conducted in table 2. Illustrates that the probability value owned by net Interest income is zero less than 0.05 so that its effect on NIM is said to be significant. So, H0 is accepted. In line with the research that has been conducted by (Onaolapo, A. R., 2024), where the location of income interests in NIM has a significant and positive influence.

The variable non-interest cost probability is less than 0.05 so that the effect is also the same on NIM, which is significant. Relevant to the research conducted by (M., & Jalil, A., 2020) who said positively the effect of non-interest cost on total assets. However, it has different results from the results of the research obtained by (Onaolapo, A. R., 2024) that it has a negative and significant effect. Similar results were obtained by the variable operating expenses to operating income. The probability value is 0.0057 < 0.05 so it is interpreted that it has a significant influence on NIM. In line with the penalty that has been committed by

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(Kwashie, M., Yawson, A., & Poku, 2022), which stated positively that the influence was significant and significant. Meanwhile, (Paula, M., Smith, R., 2020) stated the opposite that the influence between the OEOI variable and the one in question was negative. It is also contrary to the results (Onaolapo, A. R., 2024) which explains that there is no effect.

In the bang size variable, the probability value is 0.0002 < 0.05. So this is also the hypothesis accepted and has a significant influence. Similar reasoning is carried out by (Eferakeya, R., & Erhijakpor, 2020) who explains with similar results. Meanwhile, it is contradicted by the (Ahamed, 2017), where the natural logarithm of total assets is insignificantly affected. The probability of the variable bang equity is 0.4144 > 0.05. Therefore, there is no effect so that the hypothesis is also rejected. This was contradicted in previous research conducted by Nguyen which showed the results were positive and affected NIM. At the same time, it is in line with (Hossain, M., Ahamed, M., & Mkadmi, 2021) who explained that bank equity (CAP) is insignificantly influential.

Finally, the loan balance variable has a probability value of 0.017 < 0.05. So the hypothesis is accepted and interpreted that it significantly affects NIM. A similar understanding was produced by (Onaolapo, A. R., 2024) which used similar results to similar methods. The use of the panel data regression model can be written as follows:

NIM= -2.533257 + 104.4913NIITA - 11.52273NICTA + 0.457944OEOI +
0.17946SIZE - 0.286486CAP + 0.734541LOAN

The results obtained expand on previous research by confirming that certain variables have a clearer impact on NIM than previously thought. Researchers use the results obtained in the development of more accurate capital to predict the net interest margin, as well as to design policies and strategies that can certainly have a massive effect on the bank's financial performance positively.

The findings of the tests and analyses conducted can influence researchers in the field of economics and management by providing additional perspectives related to operational and structural variables in their influence on the profitability of financial institutions. For example, focusing on the relationship between company size and performance and utilizing data from previously obtained research so that a complete and full understanding of the size of the bank affects operational efficiency as well as financial performance that has been implemented by the company in question.

In addition, the discrepancy in the results shown in some previous studies may expand the study further with stimuli with some choice or element of inclusion of other factors that may cause differences in findings. For the general public, especially those who have interests in the banking industry, this result provides a treasure trove of knowledge on how these various factors affect the performance of banks. This is important for customers and investors to make more accurate decisions regarding the information obtained and sort out banks or be able to invest in the right banking sector. In addition, it will help the community more in the field of managing their resources and how today affects the products and services offered by the bank.

The asset utilization variables revealed in this study as independent variables can provide the latest information in the understanding of NIM. This is a very significant novelty

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so that the perspectives raised are more varied and comprehensive related to asset management in the banking industry used efficiently. The limitations of this study lie in historical data that may not be fully able to see the current conditions or the right market changes are made. On the other hand, the analysis carried out has covered various factors but also does not rule out the possibility that other supporting factors will be further researched related to broader macroeconomic conditions will also affect better results.

The use of panel data regression models also has limitations because they are not able to fully disclose the dynamics that occur in a complex manner and the correlation of each variable. With this limitation, the researcher has explained how to have an in-depth understanding related to the topic being studied and provide references and references in the application of research in the future to complement the limitations by expanding various macro studies.

CONCLUSION

The conclusion of this study reveals that several variables significantly impact the Net Interest Margin (NIM). First, the variable Net Interest Income has a Prob. value of 0 < 0.05, indicating that Net Interest Income to Total Assets (NIITA) significantly affects NIM. Second, the variable Non-Interest Cost has a Prob. value of 0 < 0.05, meaning that Non-Interest Cost to Total Assets (NICTA) significantly influences NIM. Third, the variable Operating Expenses to Operating Income has a Prob. value of 0.0057 < 0.05, demonstrating that Operating Expenses to Operating Income (OEOI) significantly affects NIM. Fourth, the Bank Size variable has a Prob. value of 0.0002 < 0.05, indicating that Bank Size significantly impacts NIM. Fifth, the Bank Equity variable has a Prob. value of 0.4144 ≥ 0.05, suggesting that Bank Equity does not significantly affect NIM. Finally, the Loan Balance variable has a Prob. value of 0.0117 < 0.05, showing that Loan Balance significantly influences NIM. These results provide valuable insights for further understanding the factors affecting bank financial performance. Future research should explore the impact of less studied variables and consider additional factors that may influence overall bank performance.

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