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THE IMPACT OF GREEN FINANCE IMPLEMENTATION ON THE FINANCIAL PERFORMANCE OF BANKS IN INDONESIA

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Abstract
The purpose of this study is to see if the implementation of green finance has any influence on the financial performance of Indonesian banks. The population consists of Indonesian banks that use green finance within their products and services, listed in the Indonesia Stock Exchange (IDX), and publish their sustainability reports and annual reports from 2020 to 2024. The technique used for sampling was non-probability sampling, specifically purposive sampling, with a total of seven banks as samples.The data utilized in this study were derived from 35 secondary data observations (panel data across seven banks and five years). The data analysis technique applied was simple linear regression with the assistance of IBM SPSS Statistics 27, with a Cochrane-Orcutt correction applied to address autocorrelation. The results indicate that the hypothesis that green finance implementation has a significant effect on the financial performance of banks in Indonesia is only partially supported: green finance has no significant effect on Return on Assets (ROA) or Return on Equity (ROE), but has a significant positive effect on Net Interest Margin (NIM).
Keywords*: Green Finance, Return on Assets, Return on Equity, Net Interest Margin.*

1. Introduction

Environmental issues are no longer considered simple issues, but rather major issues concerning the sustainability of human life. In 2013, the World Economic Forum stated that environmental and economic issues were the two biggest risks facing the world (Romli & Reza Zaputra, 2022). This awareness has driven consumers to demand that businesses change their operating methods and strategies to be more environmentally friendly (Riyanti et al., 2025).

For example, Jakarta's air pollution levels are high, with an Air Quality Index (AQI) of 127, categorized as "unhealthy for sensitive groups" due to high PM2.5 levels, significantly higher than Switzerland's score of 21 (IQAir, 2025). In addition to pollution, climate change due to global warming also increases the risk of natural disasters, prompting the global community, including COP26 members, to commit to reducing greenhouse gas emissions (Ma et al., 2025).

In response to this sustainability issue, banking institutions have begun developing green finance practices as a means of raising and allocating funds to support environmentally conscious projects (Riyanti et al., 2025). Some Indonesian banks continue to issue reports of their activities in support of sustainability, and they continue to pursue green finance policies through the issuance of green loans. Additional research is necessary to determine the degree to which green financing will affect the profitability of these banks.

The study developed from the above described background was designed to answer the following question: How does the implementation of green finance affect the financial performance of Indonesian banks, based on measurements of Return on Assets (ROA), Return on Equity (ROE) and Net Interest Margin (NIM)? It is anticipated that this study will provide a valuable academic resource for those interested in green finance; serve as a tool for potential green entrepreneurs to evaluate the feasibility of their venture; and provide input to Indonesian banks so that they can develop long-term business strategies which meet their commitments toward achieving the country's Net Zero Emission target by 2060.

2. Literature Review

2.1 Green Finance

The concept of green finance is the environmentally friendly business operation, which ensures the sustainability of the environmental quality and provides credit or financing to the clients who do not cause any environmental pollution (Suharto, 2023). In relation to the banking sector, this method is used to promote the growth of environmentally-friendly financing and to alter investment behavior to respond to the challenges related to climate change mitigation (Riyanti et al., 2025). According to research conducted in Bangladesh by Bose and Khan (2022), there is a connection between bank financial performance and green banking implementation, which proves that sustainable financing is a key strategy of financial institutions.

2.2 Bank Profitability

Profitability is the ratio that is utilized to calculate a company's capability to earn profits through its regular operations (Hery, 2015). Three profitability indicators are utilized within this study: Return on Assets (ROA) – the indicator of the firm's ability to earn net profit through total assets; Return on Equity (ROE) – the ratio that represents the capability of earning profit through the company's capital; and Net Interest Margin (NIM) – the indicator that shows the efficiency of disbursing credits (Samosir & Faddila, 2023).

2.3 Hypothesis

The above-stated theoretical concept forms the basis for the following hypothesis proposed in this research work:

H_1: The application of green finance contributes to positive financial performance of banks in Indonesia.

The conceptual framework of this study is shown in Figure 1.

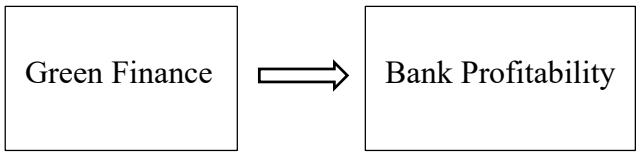


Figure 1. Conceptual framework
Source: Azzahra et al. (2023); Subastine et al. (2025)

3. Research Findings and Discussion

3.1 Findings

A summary of the green finance ratios of the seven sample banks from 2020 to 2024 shows considerable variation. BRI consistently recorded the highest green finance ratio, ranging from 63.9% to 67.5%, while BCA and Bank Mandiri recorded relatively lower but stable ratios. Conversely, Bank Maybank Indonesia and Bank Danamon showed a downward trend in their green finance ratios towards the end of the study period, from 42.82% to 19.4% and from 37% to 21%, respectively.

The t-test results show that green finance has no significant effect on Return on Assets (significance value 0.586 > 0.05) or Return on Equity (significance value 0.808 > 0.05). In contrast, green finance has a positive and significant effect on Net Interest Margin, with a significance value of 0.001 ≤ 0.05 and a B coefficient of 0.037. The R Square value in the NIM model of 0.295 indicates that green finance is able to explain 29.5% of the variation in NIM, while the ability of green finance to explain variations in ROA and ROE is very low (0.9% and 0.2%, respectively). Thus, H_1 is only partially accepted.

Table 1. Hypothesis Testing Results

Dependent Variable	Koef.	Sig.	Decision
ROA	0.008	0.586	Not significant
ROE	0.023	0.808	Not significant
NIM	0.037	0.001	Significant

Source:processed data (2026)

3.2 Discussion

The finding that green finance had no significant effect on ROA and ROE indicates that the implementation of green finance by banks in Indonesia has not yet significantly impacted banks' overall profit-generating capabilities, both in terms of assets and capital. This finding aligns with research (Riyanti et al., 2025), which also found that green finance has not significantly increased bank profitability. This reinforces the hypothesis that the benefits of green finance on profitability take longer to be seen, given that investments in the green sector are generally long-term.

Conversely, the significant effect on NIM indicates that green finance is quite effective in increasing banks' net interest income, as NIM more specifically measures a bank's efficiency in disbursing credit, including green credit. The differences in results between these indicators are also influenced by the study period, which encompasses the pandemic and post-COVID-19 recovery period, when ROA and ROE are influenced by many other operational factors beyond the scope of the study, making them more volatile than NIM.

4. Conclusion

4.1 Conclusion

Based on the analysis of seven banks listed on the Indonesia Stock Exchange (IDX) that implemented green finance during the 2020–2024 period, green finance had varying impacts on each profitability indicator. Green finance had no significant effect on ROA and ROE, but did significantly affect NIM. Therefore, during this research period, green finance had a greater impact on the efficiency of bank interest income than on the bank's overall ability to generate profits. Consequently, the research hypothesis was only partially accepted.

4.2 Implications

For Indonesian banks, the finding that green finance significantly impacts NIM suggests that green financing can be a strategy to increase net interest income efficiency, thus warranting continued strengthening of the green finance product portfolio. However, because green finance has not yet significantly impacted ROA and ROE, banks also need to comprehensively evaluate their risk management strategies and operational efficiency. Future researchers are advised to expand the research area to other sectors, extend the research period, increase the sample size, and include other variables such as credit risk, operational efficiency, company growth, or macroeconomic factors.

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