Green Banking Disclosure, Financial Performance and Profitability: Evidence from Indonesian Bank

Sugeng Riadi[a] and Erika Anggrayni
Managerial Accounting, Batam State Polytechnic, Ahmad Yani St, Batam, Indonesia

Keywords: Green Banking Disclosure, Financial Performance, Profitability.

Abstract: This research is aimed at determining the impact of various factors-namely, green banking disclosure (as indicated by the green coin rating indicator), net interest margin, non-performing loans, operating costs, and operational income the profitability of state-owned banks in Indonesia over an eight-year period (2014–2021), as gauged by the return on assets. Secondary data, derived from annual reports and sustainability reports available on the official websites of state-owned banks (Mandiri Bank, BNI Bank, BRI Bank, and BTN Bank), constitute the basis of this study. The analytical process involves testing the data with classical assumptions to ensure its suitability for statistical testing. The data is then subjected to multiple linear regression analysis, followed by hypothesis testing, which involves partial and coefficient determination tests. The statistical evidence shows that green banking disclosure does not have any noticeable impact on profitability. Profitability is positively impacted by net interest margin and non-performing loans, while operating costs and operational income show a negative correlation.

SCITEPRESS SCIENCE AND TECHNOLOGY PUBLICATIONS

1 INTRODUCTION

Green banking refers to banking institutions' efforts to promote environmental sustainability. Green banking practices have been adopted by numerous foreign banks and financial institutions worldwide, and some have even included them in their annual reports. Presently, the adoption of green banking within domestic banking remains a voluntary initiative and is not yet mandated (Rahmah & Fitriani, 2016). Therefore, green banking must be widely implemented to help companies improve their ecological footprint.

Green banking is a concept that aims to motivate banking institutions to decrease environmental pollution and generate environmental advantages (Setyoko & Wijayanti, 2022). As indicated by the Green Banking Report referenced in Zaputra, (2021), banks are not solely concentrated on their financial obligations for efficiently running their businesses to maximize shareholder profits, but they also give precedence to their duty of conserving the environment and improving the societal welfare of the populace.

A bank's effectiveness depends on its ability to maintain a high level of profitability. The bank's continuous efforts to enhance public trust and manage surplus funds can lead to this achievement (Azizah, 2021). Profitability, as indicated by its value, correlates directly with the level of financial performance: higher profitability scores signify stronger financial performance, making it a valuable metric for evaluating financial health (Rachmawati & Jayanti, 2023). The findings from previous research studies conducted by Gunawan et al., (2022), Anggraini et al., (2020), and Saryani, (2013) emphasize a detrimental effect of operating costs and operational income on profitability. Sudarsono (2017) investigated and found a positive correlation between operating costs and operational income with Return on Assets (ROA), despite these results being different.

The research findings of Nadi, (2016) and Gunawan et al., (2022) indicate that Non-Performing Loans (NPL) exert a negative impact on profitability. However, these results are in contrast to the conclusions drawn from Sigid, (2014) study, which suggests a positive relationship between NPL and profitability. On the other hand, the research conducted by Gunawan et al., (2022), Dana, (2019) and Nadi, (2016) demonstrate a positive correlation between Net Interest Margin (NIM) and profitability.

[a] https://orcid.org/0000-0003-1727-5791

Riadi, S. and Anggrayni, E.
Green Banking Disclosure, Financial Performance, and Profitability: Evidence from Indonesian Bank.
DOI: 10.5220/0012646700003798
Paper published under CC license (CC BY-NC-ND 4.0)
In *Proceedings of the 2nd Maritime, Economics and Business International Conference (MEBIC 2023) - Sustainable Recovery: Green Economy Based Action*, pages 128-135
ISBN: 978-989-758-704-7
Proceedings Copyright © 2024 by SCITEPRESS – Science and Technology Publications, Lda.

Nonetheless, these outcomes stand in opposition to the outcomes of Saryani, (2013) research, which asserts a negative influence of NIM on profitability.

Research conducted by Anggraini et al., (2020), Ratnasari et al., (2021), Saudi, (2021), and Hanif et al., (2018) collectively suggest that green banking policies yield a positive impact on profitability. Nevertheless, the outcomes of this study are at odds with the research conducted by Rachmawati & Jayanti, (2023), which concludes that the disclosure of green banking practices does not exert a significant influence on profitability.

This research is from the development of Gunawan et al., (2022) with the title "The Effect of Operational Costs, Operating Income, Non-Performing Loans, and Net Interest Margins on the Profitability of State-Owned Banks Listed on the Indonesia Stock Exchange in 2009-2018" and Hanif et al., (2018) with the title "Green Banking on the Profitability of Islamic Commercial Banks in Indonesia". The researcher added an extra variable, Green Banking Disclosure, and incorporated research data from 2014 to 2021.

The implementation of green banking and its impact on profitability in the banking sector will be influenced by this research, which is expected to contribute to existing references. In this study, the indicators utilized include the green banking indicator, specifically the green coin indicator, and various financial ratios in the banking industry.

2 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

According to Pranaditya, (2017), the signal theory posits that an entity is obligated to furnish signals to users of financial statements. These signals materialize in the form of details regarding managerial endeavors aimed at fulfilling the owner's aspirations. The signalling theory holds that shareholders and management are not given equal access to company information. The act of delivering signals to external parties encompasses the provision of precise financial particulars, the alleviation of uncertainty regarding the company's future prospects, and the mitigation of information asymmetry (Triyanto, 2019).

The central idea of legitimacy theory is that an entity has an intrinsic responsibility to ensure its operations align with appropriate frameworks and standards within its social context. This commitment guarantees that the entity's activities are acknowledged within legal boundaries (Iqbal, 2020). The emergence of legitimacy theory is rooted in the challenge of establishing social cohesion between entities and their environment, as these entities' objectives harmonize with prevalent societal values.

An entity gains legitimacy when its conduct and value system align with the broader social fabric of the community it operates within Zaputra, 2021. In the context of legitimacy theory, a company must consistently demonstrate its adherence to social norms while conducting its business affairs. Financial statement disclosures frequently serve as instruments to attain this objective.

Drawing from prior research findings, specifically the study conducted by Gunawan et al., (2022), it was revealed that the correlation between the Non-Performing Loans to Net Interest Margin ratio exhibits a positive impact on ROA (Return on Assets), whereas the Operating Costs to Operational Income ratio demonstrates a negative influence on ROA. Additionally, the research conducted by Hanif et al., (2018) posited that the implementation of green banking policies has a positive effect on profitability.

Further insights from Sudarsono, (2017) investigation highlight the affirmative relationship between Operating costs, operational income, and ROA. In contrast, Saryani, (2013) study indicated a negative association between Operating Costs and Operational Income and ROA, while conversely noting a positive correlation between NIM and ROA. The research of Nadi, (2016) underpins the notion that NPL negatively impacts ROA while NIM positively contributes to its enhancement. Building on Dana, (2019), it is reaffirmed that NIM exerts a favourable influence on ROA.

Research by Anggraini et al., (2020) asserts that green banking exerts a positive influence on ROA, while simultaneously highlighting the negative impact of Operating Costs Operational Income on ROA. According to the Saudi study of 2021, green banking and ROA have a positive connection, which is echoed by this sentiment. However, a distinct perspective arises from the research conducted by Rachmawati & Jayanti, (2023), indicating that green banking disclosure does not significantly affect profitability.

The Impact of Green Banking Disclosure on Profitability (ROA)

Legitimacy theory states that a company should align its operations with environmental policies, such as the go-green program, that are aimed at conserving nature. Such policies can increase investor confidence and financial support for the business. This alignment

is corroborated by the affirmative findings of Anggraini et al., (2020), Saudi, (2021), and Hanif et al., (2018) regarding the positive impact of green banking on profitability. Building upon this theory and prior research, the first hypothesis is formulated:

H1: Green banking disclosure positively affects profitability.

The Impact of Net Interest Margin on Profitability (ROA)

Investors rely on financial performance ratios as indicators of a company's health. The Net Interest Margin (NIM) is an informative signal that reflects a bank's ability to manage interest rate risk. Higher NIM scores indicate greater contributions to loan income and effective third-party fund management, as supported by Amalia & Budhi, (2014). Notably, the research of Gunawan et al., (2022), Dana, (2019), and Nadi, (2016) underscores the favourable link between NIM and profitability. Guided by these insights, the second hypothesis is posited:

H2: Net Interest Margin has a positive effect on profitability.

The Impact of Non-Performing Loan on Profitability (ROA)

The theory of signaling emphasizes that companies provide financial information signals that aid in evaluating their performance. The Non-Performing Loan (NPL) ratio is a crucial indicator of credit risk control. Elevated NPL values suggest increased credit risk, potentially reducing interest income and profits, as noted by Manikam, (2013). The result of Gunawan et al., (2022), and Nadi, (2016) further substantiate the adverse impact of NPL on profitability. Drawing on these foundations, the third hypothesis is formulated:

H3: Non-Performing Loans have a negative effect on profitability.

The Impact of Operating Costs Operational Income on Profitability (ROA)

The company's prospects are conveyed to management through the use of signals. One such signal is operating costs and operational income, which reflect a bank's efficacy and competence in its operations, which in turn influences profitability. The research of Yatna, (2019) aligns with this view, demonstrating the inverse relationship between Operating Costs Operational Income and ROA. This sentiment is reaffirmed by Gunawan et al., (2022), and Saryani, (2013), thereby leading to the formulation of the fourth hypothesis:

H4: Operating Costs Operational Income negatively affects profitability.

3 RESEARCH METHODS

The research approach employed by the author in this study is quantitative research. This approach utilizes descriptive statistical techniques to delve into specific social phenomena characterized by distinct attributes, elucidated through various variables and indicators. The study's target population consists of state-owned banks that have been listed on the Indonesian Stock Exchange (IDX) between the years 2014 and 2021. The entire population encompasses four state-owned banking entities; BNI, BRI, BTN, and Mandiri banks.

For sampling purposes, a purposive sampling technique was adopted, guided by specific criteria. These criteria stipulated that selected banks must qualify as State-Owned Enterprises (BUMN) in Indonesia and must possess comprehensive and available financial reports spanning the designated study period (2014-2021).

Table 1: Green Coin Ratings Indicator.

No	Indicator
1	Green Rewards: a. Recognition/Awards b. Certification
2	Carbon Emission: a. Development of Bio fuels b. b. Electricity Usage
3	Green Building: a. Energy Conservation b. Efficient Water Usage c. Waste Management d. Strengthening Connection with Nature e. Building Renovation
4	Reuse, Recycle, and Refurbish: Waste Upcycling into Products
5	Paper Work/Paperless: a. Smartphone App Usage b. ATM, Debit, Credit Card Utilization c. c. Computerized Programs
6	Green Investment: a. Implementation of Water and Air Projects b. Use of Environmentally Friendly Input Materials c. Low-Carbon Technologies d. Alternative Energy Usage

Measurement of Operational Variables

Green banking is implemented through the examination of the yearly financial reports of state-owned banks. The analytical process employs

indicators that are relevant to green banking practices. The formulation employed to quantify Green Banking within this study is as follows (Hanif et al., (2018).

$$GB = Total\ banks\ in\ the\ application\ of / GRI \quad (1)$$

The subsequent indicators are encompassed within the table 1 for Green Coin Rating (Hanif et al., 2018):

The generation of net interest income by bank management's effective oversight of productive assets is known as Net Interest Margin (Khairunnisa, 2012). A higher NIM signifies a more substantial contribution from credit-related earnings, coupled with a diminished prevalence of non-performing loans. This corelation indicates proficient management of external funds (Amalia & Budhi, 2014):

$$NIM = Net\ Interest\ Income / Productive\ Assets \quad (2)$$

Non-Performing Loans, represents a ratio that depicts a bank's competence in managing credit allocation fraught with adversity, issues, and adverse outcomes. The composition of the total financing attributed to long-term funding is gauged through Non-Performing Loans. A NPL ratio exceeding 5% is poised to exert an influence on the bank's solvency (Amalia & Budhi, 2014):

$$NPL = Bad\ Debt / Total\ Credit \quad (3)$$

The efficiency ratio, denoted as Operating Costs Operational Income, serves as a gauge for assessing a bank's adeptness in overseeing operational expenses. The bank's management's performance improved when the Operating Costs Operational Income ratio decreased (Amalia & Budhi, 2014).

$$BOPO = Operating\ Expenses / Operating\ Income \quad (4)$$

4 RESULT AND DISCUSSION

Descriptive Statistics

The population data for this study comprises state-owned banking enterprises, totalling four companies, namely BNI, BRI, BTN, and Mandiri banks, all of which have been listed on the IDX for an eight-year period. Presented below is a table illustrating the outcomes of the descriptive statistical tests:

Table 2: Result of Descriptive Statistical Test.

Descriptive Statistics					
	N	Min	Max	Mean	Std. Deviation
Green Banking	32	.19	1.00	.7628	.18418
NIM	32	3.06	8.51	5.6659	1.37419
NPL	32	.40	2.96	1.1984	.69795
BOPO	32	64.98	98.12	76.3753	9.19871
ROA	32	.13	4.73	2.4337	1.14029
Valid N (listwise)	32				

The variable Green Banking (X1), as evaluated through ROA, demonstrates a range from a minimum of 0.19 to a maximum of 1.00, with an average Green Banking score of 0.7628. The accompanying table provides data related to green banking, showing a standard deviation of 0.18418. On the other hand, the variable Net Interest Margin (X2), assessed using ROA, reveals a range from a minimum of 3.06 to a maximum of 8.51, with an average of 5.6659. The standard deviation for NIM data is 1.37419.

The variable Non-Performing Loan (X3), as measured by ROA, has a range from a minimum of 0.40 to a maximum of 2.96, with an average of 1.1984. The standard deviation for NPL data is 0.69795. In contrast, the variable Operating Costs Operational Income (X4), also assessed via ROA, has a range from a minimum of 64.98 to a maximum of 98.12, with an average of 76.3753. The standard deviation for the Operating Costs Operational Income data is 9.19871. As for the Return on Assets (Y) variable, the data indicates a minimum value of 0.13, a maximum value of 4.73, and an average of 2.4337, with a standard deviation of 1.14029.

Classical Assumption Testing

In order to identify classic assumption problems in a linear regression model, it is necessary to perform a set of classic assumption tests. This research utilizes several classic assumption tests, encompassing tests for normality, multicollinearity, autocorrelation, and heteroscedasticity. Presented below is a table illustrating the outcomes of the classic assumption tests:

Table 3: Classical Assumption Test

No	Test	Tools	Sig.	Results
1	Normality	Kolmogorov-Smirnov	0,13	The data follows a normal distribution
2	Multicollinearity	Tolerance/VIF	0,8/ 1,1	There is no evidence of multicollinearity
3	Autocorrelation	Durbin Watson	DW>DU dan DW<4-DU	Autocorrelation is absent
4	Heteroscedasticity	Scatter Plot	Spread	Heteroscedasticity is not observed

Hypothesis Testing

Table 4: Hypothesis Test Results (T-Test).

	Model	t	Sig.
1	(Constant)	12.322	.000
	Green Banking	.208	.837
	NIM	8.826	.000
	NPL	3.568	.001
	BOPO	-13.937	.000
a. Dependent Variable: ROA			

Regarding the t-test results conducted above, it is observed that the significance value for the green banking variable is 0.837, which exceeds the conventional threshold of 0.05. Furthermore, the computed t value is less than the critical t-table value: 0.208<2.052. Consequently, this leads to the rejection of the hypothesis. The interpretation suggests that green banking does not have a discernible impact on ROA.

Conversely, in the case of the NIM variable, the significance value is 0.000, falling below the 0.05 threshold, and the computed t value surpasses the critical t-table value: 8.826>2.052. Consequently, the hypothesis is upheld, indicating that NIM indeed exerts a positive influence on ROA.

Similarly, the significance value for the NPL variable is 0.001, which falls below the 0.05 threshold, and the computed t value exceeds the critical t-table value: 3.568>2.052. The hypothesis has been refuted, which indicates that NPL has a positive impact on ROA. Likewise, for the Operating Costs Operational Income variable, the significance value is 0.000, which is less than 0.05, and the computed t value is lower than the critical t-table value: -13.937<2.052. The hypothesis is confirmed, indicating that ROA is negatively impacted by Operating Costs Operational Income.

Determination Coefficient Test

The coefficient of determination test is utilized to assess the accuracy of regression analysis. The coefficient of determination ranges between 0 and 1 ($0 \leq R^2 \geq 1$). A value of 1 signifies that the independent variable almost entirely accounts for the information regarding the dependent variable. In simpler terms, a higher (R^2) percentage indicates a stronger relationship of the independent variable with the dependent variable (Amalia & Budhi, 2014):

Table 5: Result of Determination Coefficient.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.990a	.980	.977	.17311
a. Predictors: (constant), BOPO, Green Banking, NPL, NIM				

Based on the table above, the coefficient value of R Square (R^2) is 0.980 or 98%. This indicates that the combined impact of Green Banking, NIM, NPL, and Operating Costs to Operational Income variables on ROA is substantial, accounting for 98%.

Profitability (Return on Assets) is Positively Influenced by the Disclosure of Green Banking Practices

The initial hypothesis was tested and the results indicate that green banking has no impact on profitability. The outcomes of the hypothesis testing reveal a significance value of 0.837, which is greater than 0.05, and the calculated t-value is less than the critical t-table value of 0.208 < 2.052. This suggests that there is no significant influence between green banking and profitability in state-owned banks in Indonesia from 2014 to 2021.

The findings of this study are reinforced by the research conducted by Nanda & Bihari, (2012). Banks have tried to implement green banking practices, but they have not been successful in improving company profitability. This substantiates the conclusion that there is no significant correlation between green banking and profitability.

The outcomes of this study align with prior research conducted by Rachmawati & Jayanti, (2023), indicating the absence of an impact from green banking disclosure on profitability. The banking sector has a relatively low level of green banking data disclosure, which averages around 70% of the total green banking disclosure indicators. However, the conclusions of this study contrast with those of Hanif et al., (2018), who suggest that green banking, as proxied by Green Coin Ratings (GCR), has a favourable influence on profitabilitys.

Profitability (Return on Assets) is Positively Influenced by Net Interest Margin (NIM)

The results of hypothesis testing demonstrate a positive impact on profitability. Upon examining the test results, with a significance value of 0.000, indicating a value less than 0.05, and a positive coefficient of 8.826, it can be inferred that Net Interest Margin has a positive impact on the profitability of state-owned banks in Indonesia from 2014 to 2021. This underscores the fact that both favourable and unfavourable financial performances of banks are affected by their capacity to generate profits. Enhancing the NIM ratio results in an augmentation of the bank's financial performance.

This study corroborates the findings of previous research conducted by Gunawan et al., (2022), Dana, (2019), and Nadi, (2016), all of which affirm the positive influence of Net Interest Margin (NIM) on profitability. Nonetheless, the conclusions drawn from this study diverge from the research conducted by Pranaditya, (2017), which posits a negative impact of NIM on profitability.

Profitability (Return on Assets) is Adversely Influenced by Non-Performing Loans (NPL)

The hypothesis testing results indicate a positive impact on profitability. Based on the findings from the hypothesis testing, which show a significance value of 0.001, lower than 0.05, and a positive coefficient of 3.568, it can be concluded that there is a positive relationship between Non-Performing Loans and the profitability of state-owned banks in Indonesia from 2014 to 2021. The presence of bad loans leads to a decrease in bank efficiency, which ultimately results in inefficiency due to the inability to repay loan principal and interest. As the magnitude of bad loans increases, the likelihood of the bank incurring losses rises, consequently lowering profitability.

This study aligns with the findings of Sigid, (2014) research, which establishes a positive relationship between the NPL ratio and profitability. Nadi's 2016 research asserts that NPL has a negative impact on profitability, but this study's conclusions do not support this claim.

The Profitability (Return on Assets) is Adversely Affected by Both Operating Costs and Operating Income

The outcomes of hypothesis testing indicated a detrimental impact on profitability. Drawing from the results of hypothesis testing, which exhibit a significance value of 0.000, less than 0.05, and a negative coefficient of 13.937, it can be deduced that there exists a negative correlation between Operating Costs to Operational Income ratio and profitability in Indonesian state-owned bank companies spanning from 2014 to 2021. This suggests that improved operational efficiency within a bank leads to more profits for the company, which in turn improves the bank's financial performance.

This study aligns with the findings of research conducted by Gunawan et al., (2022), Anggraini et al., (2020), and Saryani, (2013), all of which assert a negative impact of the Operating Costs to Operational Income ratio on profitability. However, the conclusions derived from this study are at odds with Sudarsono, (2017) research, which asserts a positive influence of the Operating Costs to Operational Income ratio on profitability, as measured by Return on Assets (ROA).

Table 6: Summarize Research Conclusion.

No	Hypothesis	Sig.	Results
1	Effect of Green Banking Disclosure on Profitability (ROA)	0,837	No influence
2	Effect of NIM on Profitability (ROA)	0,000	There is a positive influence
3	Effect of NPL on Profitability (ROA)	0,001	There is a positive influence
4	Effect of BOPO on Profitability (ROA)	0,000	There are negative influences

5 CONCLUSIONS

Drawing upon the outcomes of an extensive study investigating the interplay between green banking disclosure, financial performance, and banking profitability within Indonesia's state-owned banks spanning the period of 2014 to 2021, the empirical evidence derived from hypothesis testing reveals a notable absence of any discernible impact stemming from green banking practices on the bottom-line profitability. This absence of effect can be attributed to the prevailing scenario of relatively modest green banking data disclosure within the banking sector, with an average attainment of merely 70% across the entirety of the green banking disclosure indicators.

Based on the second hypothesis, the hypothesis test results demonstrate a significant and positive correlation between Net Interest Margin and profitability. This underscores the pivotal role of the bank's profit generation capability in shaping both

favourable and unfavourable financial performance trajectories. The shown positive impact implies that an increase in the NIM ratio directly leads to an improvement in the bank's overall financial performance.

Regarding the third hypothesis, the outcomes of the hypothesis testing reveal a favourable correlation between Non-Performing Loans and profitability. In this context, bad credit leads to a decline in bank efficiency, which results in inefficiency caused by failure to meet loan principal and interest obligations. The escalating magnitude of non-performing loans directly accentuates the likelihood of the bank incurring losses, thereby inversely impacting profitability by causing a reduction in its value.

Regarding the fourth hypothesis, the results of hypothesis testing indicate a detrimental impact of the Operating Costs to Operational Income ratio on profitability. This signifying that when the bank's operational endeavours are executed with heightened efficiency, the resultant profits accrued by the institution are poised to exhibit greater magnitudes, thereby catalysing a consequential enhancement in the bank's overall financial performance.

Limitations and Suggestions

The study's limitations are due to its reliance on green banking and green investment indicators, resulting in a significantly limited sample size. Consequently, the scope of the researchers' conclusions is confined solely to banking entities. To enhance the study's breadth, forthcoming scholars could incorporate a more comprehensive array of Indonesian banking institutions, with a specific focus on Regional Development Banks. Moreover, these researchers might explore alternative methodologies, such as the Green Banking Disclosure Index (GBDI) devised (Bose et al., 2017) to fortify their investigative framework.

REFERENCES

Amalia, P. S., & Budhi, S. (2014). Pengaruh CAR, NPL, BOPO, LDR dan NIM Terhadap Profitabilitas pada Perbankan. *Jurnal Ilmu Dan Riset Manajemen*, *8*(7), 1–20.

Anggraini, D., Aryani, D., & Prasetyo, I. B. (2020). Analisis Implementasi *Green Banking* Dan Kinerja Keuangan Terhadap Profitabilitas Bank Di Indonesia (2016-2019). *JBMI (Jurnal Bisnis, Manajemen, Dan Informatika)*, *17*(2), 141–161. https://doi.org/10.26487/jbmi.v17i2.11264

Azizah, N. U. R. (2021). Pengaruh Kinerja Keuangan Dan Ukuran Perusahaan Terhadap *Financial Distress* Pada Perusahaan Sub Sektor Pembiayaan Yang Terdaftar Pada Bursa Efek Indonesia …. http://repository.teknokrat.ac.id/3635/%0Ahttp://repository.teknokrat.ac.id/3635/3/b218411093.pdf

Bose, S., Khan, H. Z., Rashid, A., & Islam, S. (2017). *What drives green banking disclosure ? An institutional and corporate governance perspective*. https://doi.org/10.1007/s10490-017-9528-x

Dana, N. L. P. S. I. M. (2019). Pengaruh *Loan To Deposit Ratio,* Net Interest Margin *dan Inflasi terhadap Profitabilitas*. *8*(11), 6509–6532.

Gunawan, D., Soleh, J., & Adrianto, N. (2022). *Pengaruh Biaya Operasional Pendapatan* Operasional, *Non-Performing Loan,* dan *Net Interest Margin* terhadap Profitabilitas Bank BUMN yang terdaftar di BEI tahun 2009-2018. 2(2), 209–218.

Iqbal, F. (2020). Analisis Pengaruh *Green Banking* Terhadap Profitabilitas Pada Bank Umum Syariah di Indonesia. 1–82. http://dx.doi.org/10.1016/j.encep.2012.03.001

Khairunnisa, A. (2012). Pengaruh *Loan To Deposit Ratio,* Biaya Operasional Pendapatan Operasional dan *Net Interest Margin* terhadap Profitabilitas Perusahaan Perbankan yang terdafar di Bursa Efek Indonesia. 12(September), 165–183.

Manikam, J., & Syafruddin, M. (2013). Analisis Pengaruh *Capital Adequacy Ratio* (CAR), *Net Interest Margin* (NIM), *Loan To Deposit Ratio* (LDR), *Non Performing Loan* (NPL) dan BOPO Terhadap Profitabilitas Bank Persero di Indonesia Periode 2005-2012 (Doctoral dissertation, Fakultas Ekonomika dan Bisnis).

Nadi, L. (2017). Analisis Pengaruh CAR, NPL dan NIM Terhadap Profitabilitas Perbankan Yang Terdaftar Di Bursa Efek Indonesia. Jurnal Ilmiah Akuntansi Universitas Pamulang, 4(2), 268496.

Nanda, S., & Bihari, S. C. (2012). *Profitability in banks of India : an impact study of implementation of green banking*. 6(3), 217–225.

Ningsih, N. W., Hanif, H., & Iqbal, F. (2020). *Green Banking* Terhadap Profitabilitas Bank Umum Syariah Di Indonesia. Fidusia: Jurnal Keuangan Dan Perbankan, 3(2).

Ariyanti, I., Paramita, P. D., & Pranaditya, A. (2017). Pengaruh CAR, NPF, NIM, BOPO, dan DPK terhadap Profitabilitas dengan FDR Sebagai Variabel Intervening (Studi Kasus Perbankan Umum Syariah Tahun 2011-2014). Journal Of Accounting, 3(3).

Rachman, A. A., & Saudi, M. H. (2021). *Green Banking And Profitability* (Banks Registered On The Sri-Kehati Index In Indonesia Stock Exchange 2015 - 2019). 12(8), 473–486.

Rachmawati, S., & Jayanti, D. (2023). Pengaruh *Human Capital , Green Banking Disclosure* dan Likuiditas terhadap Profitabilitas. 20(1), 1–15.

Rahmah, D. A., & Fitriani, D. (2016). Analisa Penerapan *Green Banking* Pada PT Bank Negara Indonesia,Tbk. Academia.Edu.

Rahman, A., & Zaputra, R. (2021). Pengaruh Implementasi *Green Banking , Corporate Social Responsibility* terhadap Nilai Perusahaan pada Perusahaan Perbankan yang terdaftar di BEI. Jurnal Ekonomi, Bisnis, Manajemen Dan Akuntansi, 18(2), 36–59.

Ratnasari, T., Surwanti, A., & Pribadi, F. (2021). *Implementation of green banking and financial performance on commercial banks in indonesia. International Symposia in Economic Theory and Econometrics,* 28(March 2021), 323–336. https://doi.org/10.1108/S1571-038620210000028018

Saryani, D. (2015). Analisis *Capital Adequacy Ratio, Non-Performing Loan, Net Interest Margin, Biaya Operasional, Loan to Deposit Ratio*, Ukuran Perusahaan terhadap Profitabilitas Bank Umum di Indonesia yang Terdaftar pada Bursa Efek Indonesia. Journal Of Accounting, 1(1).

Saudi, A. A. R. M. H. (2021). Bank Terdaftar Pada Indeks Sri-Kehati Di Bursa Efek Indonesia 2015 - 2019) Laba / Rugi Setelah Taksiran Pajak - Bank Umum Kinerja Bank Umum. 12(8), 473–486.

Setyoko, S. S., & Wijayanti, R. (2022). *Green Banking* Dan Kinerja Bank: Mekanisme *Corporate Governance*. Eqien-Jurnal Ekonomi Dan Bisnis, 10(1), 502-512.

Sigid, A. (2014). Analisis Pengaruh Kredit dan *Non-Performing Loan* (NPL) Terhadap Profitabilitas pada Bank Umum Milik Pemerintah (Studi Kasus : PT.Bank Rakyat Indonesia, (Persero) Tbk. Periode Tahun 2011-2013).

Sudarsono, H. (2017). Analisis Pengaruh Kinerja Keuangan terhadap Profitabilitas Bank Syariah di Indonesia. Economica: Jurnal Ekonomi Islam, 8(2), 175–203. https://doi.org/10.21580/economica.2017.8.2.1702

Triyanto, A. A. N. D. N. (2019). Pengaruh Kinerja Lingkungan dan Pengungkapan Lingkungan Terhadap Profitabilitas Perusahaan (Studi Empiris Pada Perusahaan Pertambangan yang Terdaftar di BEI Tahun 2015-2017). JASa (Jurnal Akuntansi, Audit, Dan Sistem Informasi Akuntansi), 3(1), 14–26.

Yatna, T. A. dan C. N. (2019). Pengaruh *Non-Performing Loan, Loan to Deposit Ratio, Net Interest Margin,* Biaya Operasional Pendapatan Operasional dan *Capital Adequacy Ratio* terhadap Profitabilitas Bank Umum Konvensional Buku 4 Periode 2012-2016. 4(1), 133–144.

Zaputra, A. R. R. (2021). Pengaruh Implementasi *Green Banking, Corporate Social Responsibility* terhadap Nilai Perusahaan pada Perusahaan Perbankan yang terdaftar di BEI. 18(2), 36–59.