

GREEN FINANCING IN THE PERSPECTIVE OF FINANCIAL PERFORMANCE: EMPIRICAL EVIDENCE FROM BANKING SECTOR IN INDONESIA (2019-2024)

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Abstrak: Green Financing dalam Perspektif Kinerja Keuangan: Bukti Empiris dari Sektor Perbankan Indonesia (2019-2024). Penelitian ini bertujuan untuk menganalisis pengaruh green financing terhadap kinerja keuangan dan nilai perusahaan pada sektor perbankan Indonesia periode 2019-2024. Metode penelitian yang digunakan adalah kuantitatif dengan menguji hubungan antara pembiayaan hijau, risiko kredit (LLP), profitabilitas (ROE), dan nilai perusahaan (Tobin's Q). Hasil penelitian menunjukkan bahwa green financing berpengaruh positif terhadap profitabilitas dan nilai perusahaan, meskipun terdapat potensi peningkatan risiko kredit akibat kompleksitas proyek hijau. Temuan ini menegaskan bahwa integrasi aspek lingkungan dapat memperkuat reputasi, menarik investor, dan mendukung keberlanjutan ekonomi nasional.

Abstract: Green Financing in the Perspective of Financial Performance: Empirical Evidence from Banking Sector in Indonesia (2019-2024). This study aims to analyze the impact of green financing on financial performance and firm value in Indonesia's banking sector from 2019 to 2024. Using a quantitative method, the research examines the relationships between green financing, credit risk (LLP), profitability (ROE), and firm value (Tobin's Q). The results indicate that green financing positively influences profitability and firm value, despite potential increases in credit risk due to green project complexity. These findings confirm that integrating environmental aspects strengthens reputation, attracts investors, and supports national economic sustainability.



INTRODUCTION

In the era of modern economy, firm value has been one of the main indicators that reflect company's performance, competitiveness, and sustainability (Lindawati et al., 2023). In the midst of the increase of global awareness regarding the importance of sustainable business practice, firm value is not only measured through financial aspect, but also through the social and environmental sustainability that the company bears. In the context of banking industry, firm value becomes a benchmark that determines investors' interest and a broader financial market stability (Hasbi, 2021). Therefore, the studies about factors that affect firm value, including green financing, become more relevant to conduct, especially in Indonesia, where the transformation toward green and sustainable economy is in force.

High firm value reflects positive public perception regarding companies' performance and reputation that may strengthen the trust of stakeholders such as investors, customers, and regulators (Hariono & Azizuddin, 2022). In banking industry, public trust becomes a main foundation in maintaining business sustainability, considering that this sector highly depends on transparency and accountability in financial management. The increase in firm value does not only picture a solid financial condition, but also indicates a good governance, compliance to regulation, and commitment to transparency (Angraini & Murtanto, 2023). Disclosing relevant and reliable information, including financial report and sustainability report, may increase investors and stakeholders' trust. Kurnianto et al. (2016) stated that adequate

information disclosure may reduce information asymmetry between management and investors, and thus will increase the firm value.

Business sustainability becomes a crucial aspect in maintaining firm value. Companies that are able to integrate environment, social, and governance (ESG) aspects in their business operation tend to have a more stable and sustain performance (Rohman et al., 2024). Align with that point of view, a study by Dubravská et al. (2020) also showed that market gives a different evaluation toward companies that implement environmental and social responsibilities in their business strategy, including those in financial services sectors. In this context, green financing does not only act as companies' social responsibility, but also a business strategy that contribute to the sustainability of firm value. Sustainability practice may become a catalyst in forming a solid and long-term oriented firm value (Suhatmi et al., 2024).

High firm value is not only the ultimate goal of a business strategy, but also plays a role as a driver in making decision about sustainability oriented policy, such as the implementation of green financing. According to Probojakti et al. (2024), banks that have positive firm value will be pushed more to expand their green financing portfolio as a reputation and differentiation strategy. A study by Hayati et al. (2020) highlights that the practice of sustainable financing has a positive effect to financial institutions' competitiveness and sustainability, which clarify the reciprocal relationship between green financing and firm value in building inclusive and responsible financial practice. A similar statement also mentioned in a study by Lai et al. (2022), who found that green financing has a significant effect to firm value, showing that investors are paying attention to environmental aspect in making investment decision. Therefore, the effort to integrate green financing is not only a financial strategy, but also a concrete action in responding global sustainability agenda which is increasingly receiving serious attention. Companies who succeed in increasing their value through green financing practice reflects the conformity with sustainable development goals.

The concept of sustainability has been a global focus since the formulation of Sustainable Development Goals 2030 by United Nation in 2015. There are 17 pillars sustainable development which summarized into three dimensions such as environment, social, and governance. In the environment perspective, greenhouse gas emission has increased more than 50% compare to the condition in 1990 due to various human activities, such as the burning of fossil fuels, deforestation, unsustainable farming practice, poor waste management, and industrial activities (Environmental Protection Agency, 2024). Global warming has reached a 1°C increase in 2017 out of 3°C maximum limit, which may disrupt the living of all ecosystem due to average increase in the earth's temperature and climate (UNDP, 2015). According to The Intergovernmental Panel on Climate Change (IPCC) report in 2023, which align with Paris Agreement 2015, there is a necessity to limit the global temperature increase up to 1.5-2°C, by encouraging various industries to adapt sustainable practice, invest more in renewable energy, and reach net-zero emission in 2050, which is in accordance with SDGs' target (Boehm & Schumer, 2023). Socially, the insufficient equal access to resources and healthcare makes community engagement become highly needed to achieve the target because sustainable actions are in line with life quality improvement. In the economy perspective, the technology advancement in industrial sector produces a high production capability and has a positive impact to a country's economy, however, the economy development is often not in line with environmental sustainability (IMAGAMA, 2022; Hasanah & Hariyono, 2022). It is needed to enhance the focus on sustainable economy development by implementing green economy as the solution for environmental, social, and economy problems.

Basically, green economy or sustainable economy drive economic activities that give minimum impact to the environment (Hasanah & Hariyono, 2022). Awareness of the importance of environmental issues has forced various business sectors to contribute in reducing impact to the environment and green financing is one of the act of green economy

implementation, which recorded to has been developing from year to year. Based on the data from Bloomberg, the consistency of volume increase in green financing, including green bond and green loan, indicates that the awareness of global societies in maintaining environmental effect through green financing is also increasing (Zhang & Garvey, 2023). In 2020, the issue of green bond reached \$269,5 billion, and Indonesia by 19% is included in the top 20 countries for annual green bond issuance (Carolina, 2021).

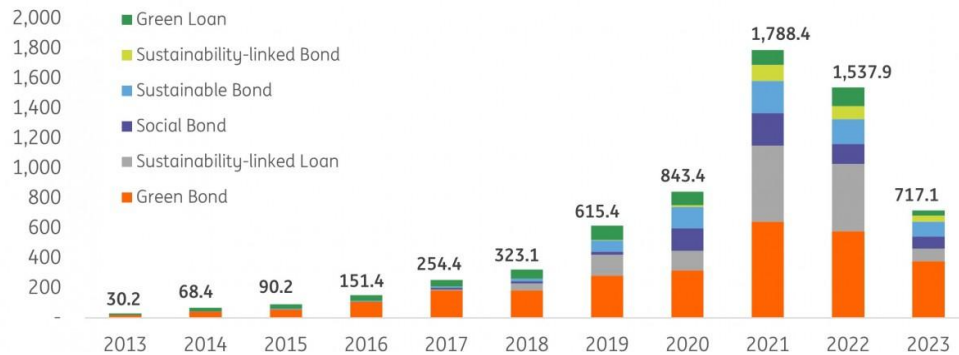


Figure 1.1 Global sustainable financial product issuance (2013-2023) (Source: Zhang & Garvey, 2023)

The same trend also presented by Climate Bond Initiative (2020) at the data collection of sustainable finance products issuance in ASEAN countries that increased from 2016 to 2020, where Singapore, the Philippines, Indonesia, Malaysia, Thailand, and Vietnam as the six leading countries for sustainable finance practice. Indonesia participation in sustainable finance practice is not only a form of contribution to SDGs, but also may become an opportunity for national economic development and expand financial product diversification that may increase global competitiveness and attract investors (Andaiyani et al., 2023).

Indonesian government has issued a regulation through Financial Services Authority in Peraturan OJK No. 51 Tahun 2017 to encourage the system formation in financial sectors such as financial institutions and public companies that contribute and included in providing financial services for sustainable development (Otoritas Jasa Keuangan, 2017). The regulation was well-received and gained positive response, with the increase of green financing disclosure in the bank sustainability reports from 2017 to 2020.

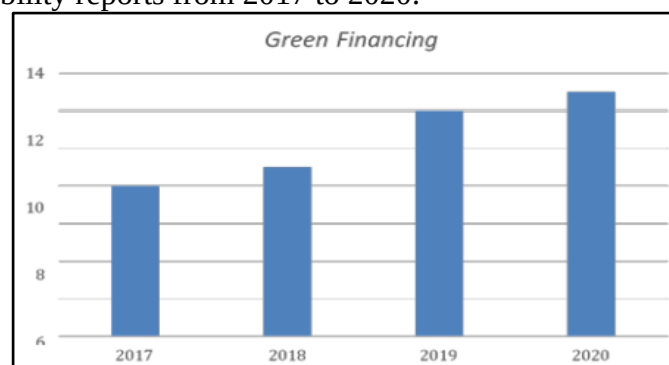


Figure 1.2. Number of banks in Indonesia that disclosed green financing (Source: Bayu & Novita, 2023)

According to study by Andaiyani et al. (2023), banks play a crucial role in green transition due to the possibility of fund distributed by bank to impact the capacity and potential of the sectors what received the funds. Bank and money market as the source of fund are the key to green finance policy success, yet the practice of green financing implementation in

Indonesian banks are still unequal. Afifah et al. (2023) stated that funding environmental sustainable oriented project, such as waste to energy management, electric vehicle development, renewable energy, and hydroelectric, solar, geothermal power plant development, is also known as green financing. Since 2018 until 2021, BTPN Bank has issued green funding to the construction of hydroelectric power plant in Toba Samosir, wind power plant in Sidrap, and other renewable energy projects (Purwanti, 2021). In 2022, BTPN Bank has provided green fund to PT. PLN to support renewable energy transition in Indonesia (Atmoko, 2022). Other green financing activities by Indonesian banks are Bank Mandiri contributed in waste to biogas management project along with Greeneration in 2022-2023 dan green credit by KB Bukopin Bank in 2024 to support electric vehicle ecosystem growth (Kontan, 2023; Damayanti, 2024).



Figure 1.3. Examples of banking green financing practices in Indonesia (Source: Fajarihza, 2024; BNI, 2024; Kontan, 2023)

Company that supports green financing means that the company considers environment consequences in the business activities, which may enhance the brand image of the company. This align with legitimacy theory by Dowling dan Pfeffer (1975) quoted by Aruan et al. (2021), which means companies need to put effort in creating social contract and prove that their business activities are beneficial for the society because the society is one of the determining factor in increasing company performance. This theory also apply for financial service industry that provide green funding through the disclosure of green banking and environment friendly investment practices, where companies can show their commitment toward sustainability and increase public trust, which will give a good impact to companies' reputation, firm value, and ultimately attract investors.

Despite the potential positive impacts of green financing, another study by Furqan & Sutrisno (2024) mentioned the existence of credit risk in green projects due to longer and more complex business process compare to other credits. High credit risk may disrupt bank performance and become a negative signal for investors, which may impact the firm value (Pitasari & Baehaki, 2020). Poor green financing practice may reduce company's profit and hence will decrease the profitability (Afifah et al., 2023). Wijaya (2022) found that green finance projects are still considered less attractive due to the higher expense and the need of technology compare to fossil fuel investment projects. Furqan & Sutrisno (2024) also stated that green financing requires a relatively large sum of amount with long investment period, which may increase the credit risk. Therefore this study aims to empirically analyze the influence of green financing toward firm value.

LITERATURE REVIEW

Green Financing

Green financing is a practice of allocating capital or fund that consider environmental effect, climate change, environment friendly energy utilization, and management responsibility to all sectors (Urban & Wójcik, 2019). Ozili (2022) defined green financing as utilization of fund or investment in activities that may reduce environmental or climate damage. Thus, we

can conclude that green financing is a form of procuring or distributing financial products as a concept that promote investment of environment friendly and sustainable development in the society. Company's responsibility and concern toward environmental health in the form of funding green sectors may elevate company's reputation and market trust, which may push the increase in firm value and financial performance (Febriyanto et al., 2023). Aligning with legitimacy theory, green financing practice may be one of the way for company to gain acknowledgement and trust from the society, which will encourage positive reputation in the view of the investors Mentari & Dewi (2023).

Functionally, bank as an institution that distributes funds plays a crucial role in supporting green financing in Indonesia. Green financing implementation may be influenced by various aspects, including risk level, banking regulation, company's code of ethics, environmental policy, and innovative technology (Akomea-Frimpong et al., 2022). According to Saputri et al. (2024), the execution of corporate social responsibility, including green financing implementation, will aid in strengthening bank existence in facing global uncertainty toward climate and corporate issues in the future because companies may develop a more comprehensive practical strategy that consider various stakeholders' perspective.

Credit Risk

Credit risk refers to risk that occurs due to the debtors' failure or inability to fulfill the duties to bank in paying off the agreed credit installment or principal in the specified period (Refrayadi & Kufepaksi, 2024). A study by Mosey et al. (2018) mentioned that one of the credit risks is the non-performing loan, which is divided into three categories, such as substandard assets, doubtful assets, and loss assets. Bank should consider those risks to avoid potential default (Afifah et al., 2023). When banks identify any decrease in credit quality or potential of non-performing loans, banks will prepare funds to be used as provision to maintain bank's financial stability (Hamisyah et al., 2018). Therefore, this study will use Loan Loss Provision (LLP) to measure credit risk. LLP is a ratio to measure bank's management ability in managing the credit risk and reserve funds that will be used in case of default (Prasetyo & Mawardi, 2018). Loan Loss Provision is considered more effective to assess credit risk because it directly reflects bank responses toward credit quality distributed through loan loss provision. High LLP associates with high credit risk (Zheng et al., 2019).

Profitability

Profitability defined as organization's ability to effectively and efficiently generate profit by utilizing its' resources, including cash, capital, human capital, and others (Afifah et al., 2023; Kasmir, 2019) in a certain period. According to (2022), profitability is an important aspect in assessing bank financial performance. A high profitability indicates a good financial performance. This study uses Return on Equity (ROE) as a measurement for profitability. Compare to Return on Assets (ROA) that shows efficiency in bank's asset management without considering capital structure and Net Profit Margin (NPM) that focuses on profitability from company's revenue, using ROE is considered more relevant in measuring bank management ability in generating profit from equity or capital (Ash-Shiddiqy, 2019). ROE is an important formula in measuring bank's efficiency in utilizing investors' equity to generate profit (Darmawati, 2025). In the context of green financing, ROE focuses on measuring company's efficiency in managing environmentally friendly funding to generate profit for the investors. Cahya & Riwoe (2018) stated that high ROE shows a good company performance. Based on circular letter issued by Central Bank of Indonesia No. 13/24/DPNP Year 2011 quoted by Darmawati (2025), ROE value should range around 18% to 23% to be categorized as healthy.

Firm Value

Firm value refers to investors' collective assessment regarding the performance of a company, including current and future performance (Brealey et al., 2007). Indrarini (2019) mentioned that firm value is investors' view of company's success level, such as management ability to utilize its resources well in aim to improve investors and stakeholders' well-being. Firm value is the investors' response about company that is shown through public stock value, thus often associated with stock price, which its movement affected by public trust toward the company (Simanungkalit & Mayangsari, 2020).

Hariono & Azizuddin (2022) stated that the success of a company can be measured through the growth of firm value, which also influences the raise in stock price. Firm value is not only useful for investors to make investment decisions but also plays a role as an important tool for the management to evaluate the performance and progress of the company in achieving its' goals (Ningsi et al., 2024). One way to measure the firm's value is Tobin's Q, which is an indicator to assess whether a company is facing overvalued or undervalued by the market. Tobin's Q is considered more sensitive in market price changes and economic conditions compared to Price-to-Book-Value (PBV) and provides clearer guidance in determining whether the stock price reflects the real value of the assets, which includes all elements in debt & equity (Martini, 2024; Apriyanti et al., 2023). A high Tobin's Q value shows a good growth prospect for the company.

Green Financing and Credit Risk

Afifah et al. (2023) explained that as the number of green credit distributed increase, the credit risk will also increase, which means that green financing positively influences credit risk, due to the longer credit duration compare to conventional credit, which may have a potential increase in credit risk because of market condition or government regulation, despite having the lower interest rates. The credit risk or default risk is measured by the liquidity, financial indicators, and debtors' capital that influence debtors' ability in paying off the loan. Ozili (2024) found that bank activity in providing loans that support SDGs 7 regarding renewable energy, positively affect bank's credit risk. The effort of the bank to participate in SDG in terms of clean and affordable energy, significantly connected to the increase of credit risk in banking sector. Bank provides loan for high-risk SDGs 7 related activity as the form of commitment to sustainable action, but it causes increase in the credit risk.

Study by Zhou et al. (2022) proved that other variables such as difference in bank size and ownership structure may affect green financing credit risk. For instance, the proportion of green financing will reduce the credit risk for large state-owned banks, but it will increase the credit risk for smaller commercial banks or rural banks. Bank size affects its capacity in conducting risk management for its financial products. This finding explained that there are number of small scale commercial or rural banks that have a less developed risk management system and limited industrial capabilities compared to other large-scale banks, which affecting their ability in creating green financing policy along with minimum default risk.

H1: Green financing positively affects banks' credit risk.

Green Financing and Profitability

One form of green financing is green credit. A study by Amin & Zaman (2025) explained that banks' green credit positively influences banks' profitability which is represented by ROA and ROE. As the number of green credits increases, profitability will increase as well. The reason behind this is caused by the green economy which triggers green credit demand and potentially increases company's profitability. This is also in line with Thomas et al. (2021) who mentioned that green financing activities are a form of corporate

social responsibility which has been proved to positively impact banks' performance, especially the profitability which was measured by ROE.

Previous study by Kim & Li (2021) also supported the same finding, which is the positive impact of Environmental, Social, Governance (ESG) practices toward company's profitability, showing that company's profitability may increase if the company engage in ESG practices, which is proved by the finding showing that company's portfolio with higher contribution in environment tend to give a better investment return. Through this study, we can conclude that green financing as a form of ESG related action may encourage the increase in company's profitability.

H2: Green financing positively affects bank's profitability

Credit Risk and Firm Value

Credit risk is one of the crucial factors that influence firm value because it determines investors' trust regarding credit management in the company. A study by Apriyanti et al. (2023) found that credit risk has a negative effect toward firm value. The high risk-profile or the large number of non-performing loans distributed by banks indicates poor bank performance, hence decreasing the firm's value. Companies with high credit risks will be detrimental to the bank because of their difficulty in paying off bank loans in large amounts and reducing firm value, which affects bank performance.

Theoretically, the negative relationship between LLP and profitability as well as the positive relationship between profitability and firm value indicates that an increase in credit risk may reduce firm value. This is caused by the lower amount of net profit when the loan loss provision is getting higher. Loan loss provision will reduce net income, which negatively affect investors' perception about company's financial performance, which triggers the decrease in firm value (Setiawan et al., 2024; Pratiwi et al., 2023).

Ng et al. (2020) mentioned that in a high uncertainty condition, banks tend to increase loan loss provision as the signal of the increase in credit risk in the future. The increase in credit risk measures by high percentage of LLP may lower market trust in bank financial health, which contributes to the decrease in firm value. In line with this study, another study also stated that low credit risk will be a positive information for investors in making investment decision, because bank that able to manage non-performing loan well, will increase the firm value (Wiadnyani & Artini, 2023).

H3: Credit risk negatively affects bank's firm value

Profitability and Firm Value

Profitability is one of the indicators in measuring company's financial performance. A high value in profitability shows a good financial performance and thus will gain trust in maintaining its business stability and create good value in society (Hartono et al., 2020). Study by Asyura et al. (2023) stated that firm value along with high profitability shows that the company able to generate a relatively large profit which attracts investors to invest in that company. Using ROE to measure profitability has also been found to positively affect firm value, which measured by Tobin's Q (Listiadi, 2023). Maintained profitability encourages investors' trust toward the company which influences firm value. High profit also shows company performance efficiency in investors' returns, which build stakeholders' trust. Another finding by Alviansyah & Sulistiyowati (2023) also showed similar results, which is the positive influence between profitability and firm value in state owned companies, where profitability measures company's ability to reach profitable stage from investment activities and other financial products. Therefore, high profitability also indicates a promising future for the

companies and attracts investors' intention toward the company, which will increase the firm's value.

H4: Banks' profitability positively influences banks' firm value.

Green Financing and Firm Value

Previous study mentioned green financing as a form of sustainable finance practices that proved to positively affect market performance in banking sector (Artika et al., 2023), which means that the implementation of sustainable finance practices may encourage the growth of firm value. This shows that companies obtain trust from investors and societies from the sustainable practices that have been conducted. The better the sustainable finance practices carried out by a company will lead investors and societies' trust to grow, which will influence the growth of firm value. Winarto et al. (2021) mentioned the impact of green banking activities disclosure toward banks' annual report, proving that green banking disclosure positively affects Tobin's Q, indicating that banks show their commitment to environmental awareness through green banking disclosure, which encourages a positive brand image in the eye of investors and societies. Societies' trust in banks' concern in environment will push the increase of banks' value. Moreover, Zaneta et al. (2023) also explained that the variation of green financing is a part of banks' green product innovation, which can foster resources efficiency and support environmental awareness practices.

H5: Green financing positively influences banks' firm value.

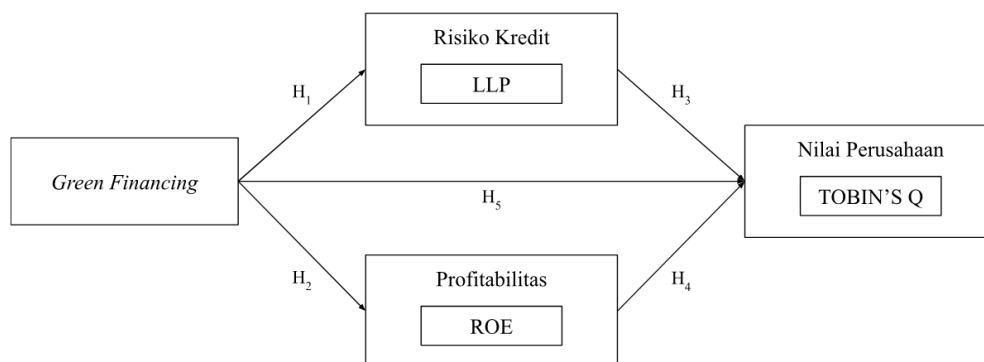


Figure 2.1. Research Model

METHODOLOGY

This study employs quantitative methods to statistically assess the causal relationship between variables. Population of this study is the banks registered in Indonesia Stock Exchange in the period of 2019 to 2024, which is 47 banks. Banks are chosen in this study due to its' strategic roles in supporting the implementation of green financing through sustainable funding that can encourage environment friendly economic growth in Indonesia. Purposive sampling technique is used to determine the sample with criteria such as (1) the latest IPO in 2018, (2) complete annual and financial report from year 2019 to 2024, and (3) provide necessary information like sustainable/green financing data. Through this sampling, data collected from 18 companies through official website of each bank or report in Indonesia Stock Exchange.

Observed variables are green financing, profitability, credit risk, and firm value. Green financing was measure by calculating the percentage of green financing to total loans distributed in a year, credit risk measured using loan loss provision (LLP), profitability measured using return-on-equity (ROE), and firm value measured using Tobin's Q. Data analyzed using Structural Equation Modeling (SEM) based on path analysis, which enable the direct and indirect effect test between exogen and endogen variables simultaneously in one

model (Pramudita et al., 2020). This study used AMOS as a tool of analysis, which supports complex SEM analysis and provide goodness-of-fit index that assist in evaluating the model fit (Sarker et al., 2024). This approach enables deeper exploration regarding the direct effect of green financing toward banks' firm value and examines the role of banks' financial performance such as credit risk and profitability, as mediators of the causal relationship.

RESULTS

Prior to structural analysis, the first step conducted was classic assumption test such as normality test to ensure that normality distributed spread of the data.

Table 4.1. Normality Test

Variable	Skew C.R.	Kurtosis C.R.	Conclusion
GF	8.621	10.509	Not normally distributed
LLP	2.063	-1.031	Normally distributed
ROE	0.133	-0.636	Normally distributed
Tobin's Q	7.729	6.574	Not normally distributed
Multivariate		3.940	Not normally distributed

Source: data analyzed by author

The normality test in table 4.1 showed that several variables such as Green Financing (GF) and Tobin's Q (TQ) as well as multivariate are not normally distributed. Thus, there's an indication that the data are not completely distributed normally. However, based on the number of 108 observed samples, the violation of normality assumption can be tolerated based on Central Limit Theorem, a theory that justifies that sampling distribution will be normal when the sample size is large enough, thus this study may ignore the normality of the data. Generally, it is common for financial data to have imperfect data distribution. Therefore, SEM analysis can proceed using Maximum Likelihood which fits in the sample size range 100-150.

Goodness-of-fit test was also conducted to ensure the model fit. It is shown in table 4.2 that the structural model qualified the Goodness-of-fit index.

Table 4.2. Goodness of Fit

Index	Cut-off Value	Result	Conclusion
CMIN/DF	≤ 2.00	0.027	Good Fit
GFI	≥ 0.90	1.000	Good Fit
AGFI	≥ 0.90	0.999	Good Fit
TLI	≥ 0.90	1.127	Good Fit
CFI	≥ 0.90	1.000	Good Fit
RMSEA	≤ 0.05	0.000	Good Fit
Hoelter	≥ 200	15021	Good Fit

Source: data analyzed by author

The next step was testing the significance of parameter in each path between variables in the model. Table 4.3 shows that not all relationships between variables in the model have a statistically significant relationship. Green financing was not significant in influencing firm value (p-value $1.582 > 0.05$), rejecting H5. Green financing also had a negative and significant effect toward loan loss provision (-0.061 , p-value < 0.05), which is the opposite direction with H1, thus H1 is also rejected. Meanwhile, green financing positively affects ROE with estimation value 0.381 , thus H2 is accepted. Credit risk was found to have no significant effect toward firm value, rejecting H3. However, profitability was found to have a positive effect toward firm value with estimation value of 0.004 , thus H4 is accepted.

Table 4.3. Hypotheses test

Hypothesis	Estimate	C.R.	P-Value	Conclusion
H1 GF $\rightarrow$ LLP	-0.061	-3.282	0.001	Rejected
H2 GF $\rightarrow$ ROE	0.381	4.250	***	Accepted

H3 LLP → TQ	0.014	1.328	0.184	Rejected
H4 ROE → TQ	0.009	4.118	***	Accepted
H5 GF → TQ	0.004	1.582	1.582	Rejected

Source: data analyzed by author

The final step in the analysis process is the mediation test to find out whether credit risk and profitability mediate the relationship between green financing and firm value of the bank. Table 4.4 shows that profitability plays a significant role as a mediator of green financing and firm value. Despite the insignificant direct effect of green financing on firm value, the indirect path through profitability shows a structural significant contribution. Thus, it can be concluded that profitability fully mediates the relationship between green financing and firm value. On the contrary, credit risk failed to mediate the relationship between variables. Therefore, it can be summarized that in this model, the effectiveness of green financing is determined by to what extent it can encourage profitability, rather than reducing credit risk.

Table 4.4. Direct, Indirect, and Total Effect

	Indirect Effect	Direct Effect	Total Effect
GF → TQ	0.003	0.003	0.006
GF → LLP	0.000	-0.061	-0.061
GF → ROE	0.000	0.381	0.381
LLP → TQ	0.000	0.014	0.014
ROE → TQ	0.000	0.009	0.009

Source: data analyzed by author

DISCUSSION

Green financing was found to negatively affect credit risk, rejecting H1. This finding is in line with a study by Umar et al. (2021), who mentioned that green loans distributed will reduce the banks' credit risk. Zhou et al. (2022) also found that green loans did not increase credit risk. It means that green financing may increase the quality of credits through a selective mechanism and transparency in the operation. Conversely, green financing had a positive effect toward ROE, representing profitability, thus H2 is accepted. This finding is in line with previous study that mentioned how green financing significantly increases banks' profitability through better operational effectiveness and better risk management (Kim & Li, 2021). Thomas et al. (2021) also mentioned that as the sustainable practice disclosure increases, the better ROE of the banks, meaning that information and green activities management in financial reports help companies to obtain investors' trust and increase capital efficiency. The higher the proportion of funds distributed by banks to green sectors, the greater its' ability to generate profit on its equity, reflecting the efficiency in financing portfolio management and a potential added value from sustainable projects.

Relationship between credit risk and firm value is not statistically significant, rejecting H3. This shows that any increase or decrease in loan loss provision doesn't always related to decrease in firm value in the perspective of investors or market, especially in the context of banks who already implement adequate risk management and transparency. This result is consistent with previous study by Hossain & Golder (2022) in the context of financial market, who found that credit risk was not significant influencing firm value due to the limitation of transparency or access to depth financial information and investors literacy, which cause the market value of the company doesn't quickly respond to change in credit risk indicators, such as non-performing loan and provision for credit losses to total credit (PCLTC). Putrianti & Yuyetta (2025) also mentioned that credit risk was not a main determinant of firm value.

Profitability was found to positively affect banks' firm value, accepting H4. This indicates that the higher the equity returns, the higher market perception toward the value of that company. High ROE reflects company's efficiency in generating profit based on investors'

capital, which increases investors' trust and fosters an increase in the company's market value. This result is in line with a study by Listiadi (2023), who showed that ROE contributes significantly to increasing firm value through increase in market trust and internal operation efficiency. Moreover, Claudia et al. (2024) also stated that ROE is a fundamental indicator and as an important reference for investors to evaluate banks prospects in the future. This finding is also consistent with signaling theory, which explained that high profitability level becomes a positive signal for company's financial prospect, which reflects in the increase of company's stock demand and affects the increase in market value. Therefore, banks' success in managing its' resources to efficiently generate profit will give a direct effect to firm value increase in investors and stakeholders' perspective. Green financing was found not significant in affecting firm value, thus H5 is rejected. This finding is in line with a study by Tanasya & Handayani (2020), showing that green investment does not directly affecting Tobin's Q, which indicates that firm value usually get influence from internal operational factors, such as profitability or capital structure, compare to green financing activities.

CONCLUSION

This study shows that green financing influence toward firm value doesn't happen directly, but a more complex indirect path. Based on the first and second hypothesis tests, it is concluded that green financing had a significant effect to two bank's financial performance indicators, but with different direction. In the first hypothesis, green financing negatively influence credit risk instead, meaning that the more green loans distributed, the credit risk bear by the bank will decrease. Meanwhile, in the second hypothesis, green financing proved to positively affect banks' profitability, measure by ROE, indicates that green financing policy may enhance the efficiency in funding management and give a better returns for investors. The third and fourth hypothesis shows that only profitability had a significant effect to firm value, while credit risk didn't show a significant effect. This indicates that market respond more to financial indicators that reflect actual performance of the company in generating profit, rather than risk indicators. Thus, ROE becomes an important mediation path in bridging the influence of green financing to firm value. Lastly, the fifth hypothesis test showed that green financing had no significant direct effect to banks' firm value. This shows that the impact of sustainability policy such as green financing is long term and indirect, meaning that the effect will be felt when followed by the increase of profitability as the result of appropriate financial management efficiency and strategy. Therefore, profitability plays a key role in associating green financing policy with long term economic value creation for banking industry. Loan loss provision didn't show a significant contribution as a mediator, showing that reducing credit risk doesn't always give impact to short term firm value. Thus, it is necessary to explore other variables that are more relevant and sensitive with green financing dynamics.

Green financing has a strategic potential in foster financial performance and banks' sustainability, despite the need of Pembiayaan hijau memiliki potensi strategis dalam mendorong kinerja keuangan dan keberlanjutan perusahaan perbankan, although it requires a more comprehensive approach. Thus, synergy between scholars, practitioners, and stakeholders is needed to optimize the role of green financing as the basis toward sustainable financial system.

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