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Green banking, green investment, and sustainability development banking in Indonesia

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ABSTRACT

Sustainability development was the primary imperative to protect the planet from damage. Sustainabilty development transformed business practices into environmentally responsible initiatives within the community, focusing on green projects and operations with sustainability at the forefront. This research analyzed the influence of green banking and green investment on firm value with profitability as an intervening variable. The research population was the banking sector listed on the Indonesian Stock Exchange in 2018-2022. Data analysis is performed using double regression with estimated data panel fixed effect model and sobel test. The research results indicate that green banking significantly and negatively affects profitability, while green investment has an insignificant and negative impact. However, both green banking and profitability have a positive and statistically significant influence on firm value. Green investment has a negative and insignificant effect on firm value. Lastly, profitability does not intervening the relationship between green banking and green investment on firm value.

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1. INTRODUCTION

The climate crisis is now one of the focus issues of society. Sustainability development and environmental preservation are now globally recognized as a top imperative to protect the planet from damage caused by humans. The awareness of the importance of environmental issues has led every sector to be called upon to reduce their impact on sustainable environments by ensuring the use of eco-friendly resources. Companies are not just striving to generate significant profits. They also need to manage their businesses with social and environmental responsibility.

Raising global living standards for current and future generations while conserving natural resources to the extent that the planet can sustain them is the objective of sustainable development (Hasanah & Hariyono, 2022). Sustainability development is a concept that combines economic growth, social needs and enviromental preservation in the long term for banks, sustainability is essential since it helps them lessen the effects of climate change (Malini, 2022). Sustainability development involves responsible business practices towards the environment and society, implementing social and enviromental risk management, making investment decisions in sustainable projects, supporting green initiatives and developing operations focused on sustainability. The banking sector uses natural resources to a lesser extent compared to other sectors and possesses none immediate influence on the environment. However, the banking sector is not exempt from enviromental responsibilities because banking can additionally be one of the influencing elements to activities with direct detrimental impacts on the environment. As a result, the banking industry acts as a bridge between social responsibility, sustainable environmental preservation and economic development. Essentially, sustainability is the practice of doing things well now without compromising the capacity to do them well later (Saleh, 2020).

Green banking is how the banking industry adopts the idea of a green economy. Green banking is an approach to business that focuses on long-term environmental preservation through the implementation of ecologically friendly operational practices. This is anticipated to be a long-term business plan that isn't just focused on making money but also objective to empower and preserve the environment within the community. According to the research Ramila & Gurusamy (2015) in research (D. Anggraini et al., 2020), the implementation of sustainable banking or green banking involves conducting environmentally friendly operational activities, such as using the internet and technology, which reduces paper usage, as well as green financing. Green banking focuses on transforming into an environmentally friendly banking in carrying out its operational activities.

Investment is the activity of purchasing assets with the aim of making a profit with fairly predictable income and appreciation over the long term. Green investment is an alternative solution for banks to get capital support for banks in implementing an environmentally friendly economy (Anisah, 2020). By lowering the detrimental or negative consequences of business operations on environmental sustainability and boosting revenues, green investment gives enterprises control over environmental preservation (Chandra & Sumani, 2023). The green investment aims to maintain the sustainability of the economy and life from social, environmental and governance aspects (Dani & Harto, 2022).

Maximizing firm value is the main goal that the company will achieve (Mardiana et al., 2019). Based on the state of the firm, investors will invest capital to purchase company shares. If the company can promise earnings, a large number of investors will finance the company (Ramdhonah et al., 2019). Because of the company's high worth, investors trust and interest in investing in the company using the firm value as an indication of the degree of the business's success in managing the firm.

Research (Murwaningsari & Rachmawati, 2023), using eco-friendly as moderation for green banking and green investment research on firm value which shows that green banking and green investment have a positive and significant effect on firm value. According to (Pratiwi et al., 2023) stated green banking has no adverse effects and has no detrimental effects on business values. Research (Tanasya & Handayani, 2020) state that green investment have a positive influence on firm value and profitability mediates the impact of green investment on firm value. This research will examine the impact of the implementation of green investment and green banking as a supporter of sustainable development and the value of Indonesian banking companies by using profitability as a mediating variable and using two variable control, laverage and firm size. This research also expands the research pupolation by using banks registered on BEI from 2018-2021. In addition, the author hope this research can make a theoretical contribution to the financial and management banking literature in this context.

2. RESEARCH METHOD

Theory legitimasi is frequently used in research to highlight the company's shortcomings in relation to environmental worker rights. Legitimacy theory describes how an organization adjusts to and complies with the laws and customs that govern its working environment (Nurmalia et al., 2021). Legitimacy theory underscores that companies must assert that their operations are in accordance with societal rules and standards. In research (Indriastuti & Chariri, 2021) findings by Dowling dan Pfeffer (1975) that companies seek legitimacy by aligning social values and norms with corporate values. Therefore, the company conducts its operational activities with the conformity of these social norms and values making the company more accepted by society.

Green banking is a conservative banking concept that emphasizes sustainability for the environment, economy, technology, and society. According to research (Handajani et al., 2019) the condition of environmental issues is crucial in the banking business because of this the bank takes action to implement the initiation of environmentally sound bank practices. In addition, this one of the efforts to meet the expectations and interests of stakeholders in maintaining the existance and good reputation from the stakeholder's point of view. Throught green banking, the social commitment of banks to society and stakeholders will be fulfilled and achive sustainable development.

Green investment is one made by a business that benefits the surrounding community and the environment (Dani & Harto, 2022). Accoriding to United Nations Environment Programme in research (Tran et al., 2020), concept green investment is the use of green capital raised from the investment of both governmental and commercial sectors in the provision of products and services related to the environment, including water management, disposal, safeguarding of ecosystem diversity and natural panoramas, reducing or compensating for environmental damage or climate change such as energy saving and the use of renewable energy.

Investors' firm value is their response to the firm, which is demonstrated by the value of shares traded (Simanungkalit & Mayangsari, 2022). Related to signaling theory that the importance of information about the company's business activities for investor decisions. Firm value is used by stakeholder regarding the performance of a company now and in the future. Increases in the company's share price can boost shareholder profitability since higher share prices translate into better shareholder profits (Ramdhonah et al., 2019).

Evaluating a company's capability to generate profit involves employing profitability ratios, which estimate how effectively the company's management oversees its business (S. Anggraini et al., 2022). Profitability can provide useful considerations to assess how effective a company's operations are and profitability ratios will indicate how the company's liquidity, asset management, and debt affect the company's profit results (Sutama & Lisa, 2018). The value of profitability is the main focus that banks must obtain from the beginning (Nabila et al., 2022). One measure of the company's profitability and financial success is a return on assets. When examining financial accounts, return on assets demonstrates how well a firm is making profits based on its previous and future operations. (Badri et al., 2022).

Green Banking and Profitability

The implementation of green banking is an effort by a banking company to show the company's concern for the environment. By implemanting green banking in daily operations, banks will become environmentally friendly companies. This concept will improve a favorable perception among investors and the public, which will increase the number of investors and increase the company's profit (Nabila et al., 2022). According to studies done by (Rachman & Saudi, 2021) Green banking has a positive impact on profitability, this implies that any additional value of the green banking index will have implications for increasing profitability. Similar to research (Badri et al., 2022) green banking has a significant and positive impact on banking profitability. This was due to an increase in funding and green banking allocation as well as an increased portfolio cash flow to improve the company's performance. H1: Green Banking have a positive and significant effect on profitability

Green Investment and Profitability

Green investment can provide the company with community legitimacy because the company strives to be oriented according to societal and environmental norms to provide stakeholders with trust. Companies that practice green investment will make a good assessment in the community the company will be able to keep running. Research conducted (Tanasya & Handayani, 2020) Claims that implementing green investment the company can maximize profitability from the legitimacy of the community towards the company. However, in contrast to the research (Chandra & Sumani, 2023) green investmet has no significant influnce on profitability because it is not explained in the company's sustainability in detail the burden of green investment. This only illustrates how compliant or intentional the company is in supporting environmental sustainability but does not explain the burden of implemanting green investment which will effect company profit. H2: Green investment have a negative and insignificant effect on profitability

Profitabilitas and Firm Value

Firm value serves as an image for investors of the efficiency of the performance of the firm, depending on by the value of its shares. High-profitability business Values demonstrate that the company can generate high profits, attracting investors to invest their share capital. Firm value rises as a result of the magnitude of the company's dividend payment capacity. According to research (Hidayat & Khotimah, 2022) shows that profitability as measured using ROA has a significant impact on firm value. A declining profitability will likewise result in a declining corporate valuation. Research (Tanasya & Handayani, 2020) also states that profitability influences firm value, the share price of the firm will rise in tandem with an enhance in the profitability value of the firm. H3: Profitabilty have a positive and significant effect on firm value

Green Banking and Firm Value

The practice of green banking requires the banking sector to conduct operations that prioritiez environmental sustainability or have the least possible impact on the environment. By implementing green banking, the company is considered to have complied with the provisions of stakeholders (Simanungkalit & Mayangsari, 2022). Performed research (Winarto et al., 2021) states green banking disclosure have a significant positive effect on firm value. This demonstrates that green banking initiatives have an impact on firm value because the indicator in helping to improve their performance is the company's interest in the environment which can also foster public environmental trust in the company. H4: Green banking have a positive and significant effect on firm value

Green Investment and Firm Value

Green investment is a corporate investment concept that support environmentally friendly activities. Green investment is expected to increase competitive eminence, company good name and company value. Green investment operations are consistent with legitimacy theory, which states that corporations would carry out their activities by societal values and norms to gain legitimacy (Triyani & Rusmanto, 2022). Climate change has become a global issue that must be considered, so stakeholders will invest their capital if the company is environmentally responsible (Rahmanita, 2020). Based on research conducted (Murwaningsari & Rachmawati, 2023), Green investment boosts firm value because banks continue to invest in the environment, where funds can be used for environmental preservation, water sanitation, and other purposes. On research (Safitri et al., 2019) additionally stated that investments in environmental R&D have a significant and positive influnce on the firm value. H5: Green investment have a positive and significant effect on firm value

Profitability Mediates Green Banking and Firm Value

Green banking is one way that banks carry ot environmental responsibility. Companies need a good image to attarct the attenion of investors by proving a good financial performance and the company's commitment to environmental considerations. The larger the firm's profitability value, more valuable the company's worth because the high profitability number implies that the company can obtain significant earnings and outstanding prospects. A firm's profitability will be affected by high demand for shares since it indicates that the company has a strong probability of becoming profitable (Amro & Asyik, 2021). Research (Karyani & Obrien, 2020) was stated that implementing green banking practices may have a negative impact on bank profitability because of the increased pressure to disclose these practices. However, green banking practices positively affect bank value, which is expected to provide long-term benefits to stakeholders. However, in the research (Kurniawan, 2021) stated that financial performance through the use of profitability ratios will increase the transparency of green banking by banks. The increasing profitability is a strong indicator of the company's exceptional financial management and commitment to green banking practices, showcasing their ability to effectively manage the business and maintain a solid reputation. H6: Profitability mediate has effected of green investment on firm value

Profitability Mediates Green Investment and FirmValue

One of the banking tactics to increase profits by reducing the impact on the environment is green investment. From legitimacy therory that companies can gain trust and support from society by following the standars and values that are applicable in society and the environment. If banks gain public legitimacy, banking operations will be supported by the public, which cause the firm profitability to increase. With increasing profitability, it will affect the demand for shares and the price of the firm shares. The desire of investors to invest cash in the firm is reflected in the firm financial success; The more significant firm financial performance, the greater the investor's willingness to invest (Chandra & Sumani, 2023). Based on research (Tanasya & Handayani, 2020) states that profitability mediates the influence of green investment of firm value, this is because if higher profitability will encourage green investment in creasing firm value. H7: Profitability mediate has effected of green investment on firm value.

Based on the description above, the following research framework can be built:

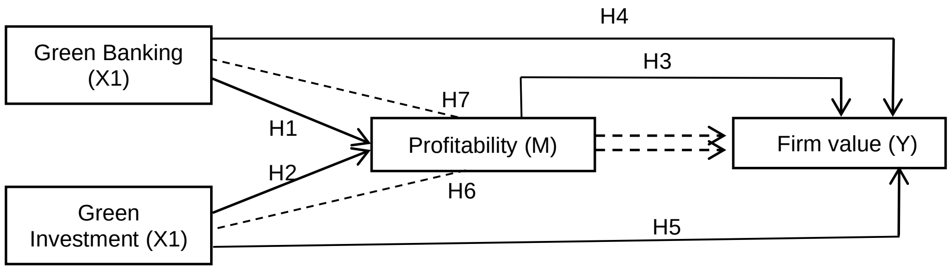

Figure 1. conceptual framework

This study employs secondary data and quantitative research to examine the annual report of Indonesian banks listed on the Indonesia Stock Exchange (BEI). The data was obtained from the official websites of each bank and the IDX website. The study's population consists of the 47 banks listed in the banking sector on the Indonesia Stock Exchange from 2018 to 2022. The sample selection in this study used a purposive sampling method based on the following criteria, Banks that are publicly traded on the Indonesia Stock Exchange (IDX) from 2018 to 2022, publish annual report and sustainability report, banks that state financial statement and have complete data for research data. The analysis technique uses the sobel test and panel data regression analysis. The sobel test is then conducted to ascertain if a mediating variable significantly mediates there is a connection between the independent and dependent variable. There are two equation models:

$M = b_1X1 + b_2X2 + \varepsilon 1 \ldots..(1)$

$Y = b_1X1 + b_2X2 + M + \varepsilon 2 \ldots..(2)$

X1 = Green Banking
X2 = Green Investment
M = Profitability (ROA)
Y = Firm value
$\varepsilon 1$ = Error of term variable profitability
$\varepsilon 2$ = Error of term variable firm value

Variable and Measurements

Green banking and green investment are included as independent variables in this study. The dependent variable in this study is the firm value, whereas profitability is the mediating variable. Variable control include leverage and firm size.

Green Banking.

This study uses the green banking index used in research (Rachman & Saudi, 2021) which is based on research (Handajani et al., n.d. 2019) by using 16 indicators of green banking reporting, a score of 1 is assigned; otherwise, a score of 0 is assigned.

$$GDB = \sum_{i=1}^{n} di$$

Green Investment

Green investment is calculated by dividing all expenditures for renewable and environmentally friendly technology research and development by the company's total assets after the fiscal year (Murwaningsari & Rachmawati, 2023).

$$GI = \frac{R\&D\ of\ the\ renewable\ and\ environmentally\ friendly}{Total\ assets}$$

Firm value

The use of Tobins'Q calculation can provide a view of the market value of a company that is more comprehensive in its calculation as follows (Tanasya & Handayani, 2020):

$$Tobin's\ Q = \frac{(MV + DEBT)}{TA}$$

Profitability

The Return on Assets (ROA) is a profitability ratio used to determine the rate of return on the assets of a business (Kweeswara & Irawan, 2023). The ROA ratio shows the return on all invested funds (Madyoningrum, 2019).

$$ROA = \frac{Profit}{total\ assets}$$

Leverage

Leverage indicates the quantity of debt a business incurs to fund its operations. Leverage is widely used testing the value of the company (Simanungkalit & Mayangsari, 2022). To calculate leverage, it is proxied by using the formula DER (Kolamban et al., 2020).

$$DER = \frac{\sum Liabilities}{\sum Equity}$$

Firm Size

The size of a firm indicates how many resources and assets it has to accomplish its goals. Firm size describes the size of the level of sales and average total assets (Suryandari et al., 2021). To determine the size of the company, use the following formula:

$$Size = Ln\ (Total\ assets)$$

3. RESULTS AND DISCUSSIONS

Descriptive statistics

The sample in this study was 25 banks with data from 2018 to 2022 with a total of 125 observations. The following are the test results in table 1:

Table 1. Descriptive statistics

Variable	N	Min	Max	Mean	Std Deviation
Green Banking	25	0,0625	1,0000	0,6900	0,2120
Green Investment	25	0,0000	0,2757	0,0306	0,0447
ROA	25	-0,0577	0,0414	0,0088	0,0162
Tobinsq	25	0,2300	18,4964	1,3409	1,6969
DER	25	0,7249	16,0786	5,4786	2,7583
Size	25	14,6327	21,4127	18,3419	1,7702

In the table above, the statistical test for green banking have a minimum value 0.0625, maximum value 1.0000, and average value 0.6900, that is greater than the std deviation value 0.2120, which means there is a slight fluctuation in the green banking variable. In the green investment variable, the resulting minimum value 0.0000, maximum value 0.2757, and average value 0.0306, which is a value lower than the std deviation value 0.0447, which means there is a significant fluctuation value in the green investment variable. The firm value variable have a minimum value 0.2300 and maximum value 18.4964 and average value 1.3409, which is a value lower than the std deviation value 1.6969, this implies there is significant fluctuation in the firm value variable. In the statistical test for ROA, the minimum value -0.0577, maximum value 0.0414, and average value 0.0088, which is smaller than the std deviation value 0.0162, which means there is significant fluctuation in the Profitability variable. For the leverage variable, minimum value 0.7249, maximum value 16.0786, and average value 5.4786, which was greater than the std deviation value 2.7583, which means there was slight fluctuation in leverage variable. In the firm size variable, minimum value 14.6327, the maximum value 21.4127, and average value 18.3419 is larger than the std deviation value of 1.7702, this implies there is slight fluctuation in the firm size variable.

Model selection test

The results of selecting sub-structural 1 and sub-structural 2 models are in table 2:

Table 2. model selection test

Equality	Test	(Prob)	Selected model
Sub Structural 1	Chow	0,0000	FEM
	Hausman	0,0096	FEM
Sub Structural 2	Chow	0,0000	FEM
	Hausman	0,0000	FEM

In the substructure of equation1, fixed effect model selected from the chow test with a value of 0,0000 < 0.05 and the hausman test with a value of 0.00096 < 0.05, which means that from the result of the 2 test conducted, with this result the decided the fixed effect model. In substructural equation 2, the fixed effect model was selected from the chow test with a value of 0.0000 < 0.05 and the hausman test with a value 0.0000 < 0.05, which means that founded on the findings of the two tests, the model applied was the fixed effect model.

Panel Data Regression

Simultaneous significance test to test the influence of independent variables together or simultaneously on the dependent variable. Following are the results in table 3:

Table 3. simultaneous significance test

Equality	Prob (F-statistic)
Sub Structural 1	0.000000
Sub Structural 2	0.000142

In sub-structural 1, the value of Prob. (F-statistics) is 0.0000 < 0.005. A conclusion can be drawn from these results that green banking, green investment, leverage, and firm size have a significant effect on profitability if used simultaneously. In substructural equation 2, the value of Prob. (F-statistics) is 0.000142 < 0.05, which means that the green banking, green investment, profitability, leverage, and firm size variables has a significant influence on the firm value if used simultaneously.

The coefficient of determination test is used to assess the ability of the independent variable to explain the dependent variable. The following are the results of the coefficient of determination test in table 4:

Table 4. determination coefficient test

Equality	Adjusted R-squared
Sub Structural 1	0.633427
Sub Structural 2	0.286914

According to the table for sub-structural equation 1, Adjust R-squared for the Profitability variable is 0.633427, which means that green banking, green investment, leverage and firm size variables affect profitability by 63,34%, the remaining 36,66% is caused by the other factors outside the study. Sub-structural equation 2, the coefficient of determination Adjust R-Squared for the firm value variable is 0.286914, which means that green banking, green investmeny, profitability leverage and firm size variables affect firm value by 28,69%, the other factors outside the study cause the remaining 71,31%.

The t test was carried out test the regression coefficient used to determine the independent variable agains the dependent variable. Sub structural results 1 and 2 attached in tables 5 and 6:

Table 5. sub-structural panel data regression 1

Variable		Coefficient	Std. Error	t-Statistic	Prob.	Description
	GB	-0.014003	0.006883	-2.034497	0.0447	significant
ROA	GI	-0.002158	0.031930	-0.067585	0.9463	not significant
	DER	-0.001256	0.000607	-2.069946	0.0411	significant
	SIZE	0.014019	0.003569	3.928308	0.0002	significant

M = -2317.03471249 - 0.0140032416183X1 - 0.00215794352276X2 - 0.00125589873049Z1 + 0.014018622746Z2

Based on Table 5, the Green Banking (GB) coefficient value is -0.014003, and Prob value is 0.0447 <0.05, this implies that Green Banking (GB) have a negative and significant impact on Profitability (ROA). It can be inferred, testing hypothesis 1 is rejected. The Green Investment (GI) coefficient value is -0.002158, and Prob value is 0.9463 > 0.05, this implies that Green Investment (GI) have a negative and not significant impact on Profitability (ROA). So, testing hypothesis 2 is accepted. Leverage coefficient (DER) value is -0.001256 and Prob 0.0411 < 0.05, this implies that Leverage (DER) have a negative and significant impact on Profitability (ROA). The SIZE coefficient value is 0.014019, and the Prob value is 0.0002, meaning that Firm Size (SIZE) positively and significantly influences Profitability (ROA).

Table 6. Sub-structural panel data regression 2

Variable		Coefficient	Std Error	t-Statistic	Prob.	Description
	GB	2.043284	1.024548	1.994327	0.0490	significant
	GI	-3.458875	4.653686	-0.743255	0.4592	not significant
Tobin's Q	ROA	70.12590	14.87507	4.714325	0.0000	significant
	DER	-0.057495	0.090380	-0.636146	0.5262	not significant
	SIZE	-0.148158	0.560355	-0.264401	0.7920	not significant

Y = 24512.6752282 + 2.0432842247X1 - 3.45887466897X2 + 70.1258998769M - 0.0574948393334Z1- 0.148158326784Z2

Based on Table 6, the Green Banking (GB) coefficient value is 2.043284, and the Prob value is 0.0490 < 0.05, which implies that Green Banking (GB) have a positive and significant influence on Firm Value (TOBINSQ). Therefore, testing hypothesis 4 is accepted. The Green Investment (GI) coefficient value is -3.458875, and the Prob value is 0.4592 > 0.05, this implies that Green Investment (GI) have a negative and not significant influence on Firm Value (TOBINSQ). Therefore, testing hypothesis 5 is rejected. The Profitability (ROA) coefficient value is 70.12590, and the Prob value is 0.0000 <0.05, this implies that Profitability (ROA) have a positive and significant influence on Firm Value (TOBINSQ). Therefore, testing hypothesis 3 is accepted. Leverage coefficient (DER) value obtained is -0.057495, and Prob value is 0.5262 > 0.05, this implies that Leverage (DER) have a negative and insignificant influence on Firm Value (TOBINSQ). The coefficient value for Firm Size (SIZE) is -0.0148158 and Prob 0.7920 > 0.05, this implies that Firm Size (SIZE) have a negative and not significant influence on Firm Value (TOBINSQ).

Sobel Test

The sobel test is then conducted to ascertain if a mediating variable significanly mediates there is a connection between the independent and dependent variable. The following are the results of the sobel test in table 7:

Table 7. Sobel test

Hypothesis	t-statictic	t	t-table
Profitability mediates green banking on firm value	$t = \frac{ab}{\sqrt{(b^2SEa^2) + (a^2SEb^2)}}$	1,8490	1,97
Profitability mediates green investment on firm value	$t = \frac{ab}{\sqrt{(b^2SEa^2) + (a^2SEb^2)}}$	-0,06756	1,97

T-Statistic for green banking in the indirect effect path coefficient of 1,8490 is smaller than t-table, which means that profitability is unable to mediate between green banking and firm value. As a result, it is possible to conclude that hypothesis testing for H6 rejected. T-statistic for green investment in the indirect effect path coefficient of -0,06756 is smaller than the t-table, which means that profitability is unable to mediate between green investment and firm value. As a result, it is possible to conclude that hypothesis testing for H7 rejected.

The influence of Green Banking on Profitability

According to the testing of the one hypothesis results that green banking have a negative and significant influence on profitability, therefore the proposed hypothesis is rejected. This indicates that the application of green banking in Indonesian banking has not increased the company’s profitability because green banking is a new application in banking so it increases operational costs which will affect banking profits. This study aligns with prior research (Fajriah et al., 2023) that implementing green banking will add a number of compliance costs that negatively impact profitability. In addition, this research is supported by previous research (Setiadi et al., 2023) which state that green banking is not related to profitability and research (Karyani & Obrien, 2020) that the implementing of green banking puts pressure on companies in their disclosure. However contrary to research (Badri et al., 2022) there is an increase in the cost of implementing green banking to improve company performance.

The influnce of Green Investment on Profitability

According to the testing of the second hypothesis results that Green Investment have a negative and insignificant impact on profitability, therefore the proposed hypothesis is accepted. This is because green investment shows that the company cares about environmental sustainability but does not provide definite benefits for the company and environmental expenses incurred by the company may increase operational expenses, affecting the firm profitability. This study aligns with prior research (Chandra & Sumani, 2023) that indicates green investment have a negative and not significant impact on firm profitability beacuse the actual green investment expense is not explained. This research is also in accordance with (Pramyswari & Marsono, 2023) the distribution of environmentally friendly finance has minimal influence on profitability owing to banks' unequal distribution of green financing. However, in contrast to research (Tanasya & Handayani, 2020) green investments have a positive impact that maximizes profitability.

The influence of Profitability on Firm Value

According to the testing of the thrid hypothesis results that, Evident from the findings of this study is that profitability have a positive and significant impact on firm value, so the proposed hypothesis is accepted. Enhanced profitability have the potential to elevate the firm value as investors place a significant level of trust in the company, evident through its profitability. This study aligns with prior research (Husna & Satria, 2019) Large earnings give a solid indication of the company's position and might encourage investors to engage in raising demand for shares. According to research (Mubyarto, 2020), generating high profits will provide an excellent signal to investors and (Pratiwi et al., 2023) that profitability serves as an indicator of a company's managerial effectiveness. However, research from (Rosita & Richawati, 2021) the statement posits that Return On Assets (ROA) have no impact on firm value, as any fluctuations, whether positive or negative, in ROA do not impact the overall value of the firm.

The influence of Green Banking on Firm Value

According to the results of the analysis, evident from the findings of this study is that green banking have a positive and significant impact on firm value, therefore the proposed hypothesis is accepted. Concern for the environment is a concern of today’s society. Disclosure of the environment in banking affects investors investing in banking. By implementing green banking, banks are considered to be doing something positive for the community because it shows that the company cares about the environment and the bank will get an excellent view in order to raise the firm's value. The findings of this study align with the research (Wachyu et al., 2021) that the implementation of green banking gives people confidence in the company. According to (Murwaningsari & Rachmawati, 2023) the trust given by the bank by implementing green banking will have a good view that will affect the firm value and (Hastuti & Kusumadewi, 2023) that green banking will affect investors. In contrast to research (Simanungkalit & Mayangsari, 2022) that investors prioritizing profits do not use green banking in making their investment decisions.

The influence of Green Investment on Firm Value

According to the results of the analysis, evident from the findings of this study is that green investment have a negative and insignificant impact on firm value, therefore the proposed hypothesis is rejected. Green investment in banking increases banking operating costs, and it still has a low rate of return, so it disrupts operations and firm value. The findings of this study align with the research (Pramyswari & Marsono, 2023) There is no impact of green financing on firm value because investors do not make green financing a critical factor for the company's share price. According to research (Azhari & Hasibuan, 2023) green investment does not affect firm value because environmental activities have not become a positive influence and signal for consumers and investors in making decisions because it is still voluntary. However, in contrast to the research (Murwaningsari & Rachmawati, 2023) that green investment affects firm value by incurring costs for the environment that have a positive impact.

Profitability Mediates the effect of Green Banking on Firm Value

Based on the analysis, obtained that result profitability does not mediate the impact of green banking on firm value, so the hypothesis proposed is rejected. The profitability ratio evaluates a firm capacity to produce a profits. If the profitability ratio is higher, it provides added value for the company. The implementation of green banking in Indonesian banking is still not optimal, so green banking has not been possible to influence the firm profitability value, and the performance of green banking only shows that the company has implemented concern for the environment. However, it only provides some benefits for the company. Research (Azzahra et al., 2023) states that green banking policies have a negative and insignificant impact on ROA because environmental development activities require significant funds which can reduce bank profits. Research (Afinindy et al., 2021) indicates that profitability communicates to investors that if the company consistently increases its profit, the overall firm value is likely to rise.

Profitability Mediates the effect of Green Investment on Firm Value

According to the results of the analysis, it can be seen that profitability is unable to mediate the impact of green investment on firm value, so the hypothesis is rejected. The greater the firm profit, the greater the investors receive dividends, but if the company has low profits, the company also distributes low dividends. The application of green investment in banking affects the bank’s operating costs, and this can lead to less than optimal growth in bank profitability. This research is supported by the study’s results (Pramyswari & Marsono, 2023) which states that the connection between green finance and company value cannot be influenced by profitability (ROA). The bank spends on technology and promotion of new products to meet customer demand, resulting in increased operationg cost. However, it is different from the research (Tanasya & Handayani, 2020) which states that the application of green investment makes the firm profitability improve so that investors are interested.

4. CONCLUSION

This research employs profitability as a mediator to assess the influnce of implementing green banking and green investment on the firm value. The results of the substructural statistical equation 1 of this study state that green banking, green investment, and the two control variables leverage firm size together or simultaneously significantly affect profitability. In partial hypothesis testing, the Green Banking and Leverage variables significantly negatively influence profitability. The firm size variable has a significant effect and positive value on profitability. Meanwhile, the Green Investment variable has an insignificant effect and negatively impacts profitability. In the substructural statistical test of equation 2 in this study, the results prove that green banking, green investment, profitability and the two control variables leverage and firm size significantly influence firm value. Based on partial hypothesis testing, green banking and profitability significantly and positively affect firm value. Green investment has an insignificant and negative impact on firm value. The control variables, leverage and firm size, have an insignificant and negative impact on firm value. Additionally, empirical evidence supports the conclusion that profitability does not mediate between green investment and firm value, as supported by research employing the Sobel test.

Researchers hope banks continue to maintain and optimize the implementation of green banking disclosures by publishing sustainability reports. This can also increase maximum profits for banks, and with this, the bank will also gain stakeholder trust, increasing firm value. Researchers hope that the banking sector will remain optimal in carrying out green investments for investment in environmental sustainability projects. In addition, in this context, the reserarchers hopes that this research can make a theoretical contribution to the financial and management banking literature. The researcher suggests that future researchers add related variables that have a solid influence to measure the implementation of sustainability in the banking sector in Indonesia and expand the research sample

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