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Do Sustainable Practices Amplify Financial Performance? ESG as a Moderator of Profitability and Firm Value

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Abstract

This study examines the impact of profitability on firm value as well as the moderating role of Environmental, Social, and Governance (ESG) in commercial banks listed on the Indonesia Stock Exchange during 2023–2024. Profitability is measured by Return on Assets (ROA), while firm value is proxied by Tobin's Q. The results show that banks generally exhibit healthy profitability, with KBMI-4 banks outperforming lower KBMI groups. Firm value is mostly categorized as fair, although KBMI-4 banks tend to be overvalued, reflecting strong market confidence. ESG implementation has been adopted but remains at a moderate level overall. Hypothesis testing indicates that profitability affects firm value. Additionally, ESG strengthens this relationship, suggesting that banks integrating ESG into their strategies has an advantage to strengthen long-term performance and stakeholder trust. These results emphasize ESG's role as a strategic factor in increasing firm value beyond financial performance alone.

Keywords: ROA, ESG, Firm Value.

1 Introduction

The COVID-19 pandemic significantly disrupted socioeconomic conditions and created various environmental challenges, including increased medical waste, pollution, and ecosystem degradation. These challenges also affected the real sector and increased uncertainty in the banking industry, particularly due to higher credit and business risks. The decline in economic activity was reflected in the contraction of banking credit growth by 2.41% (year-on-year) in December 2020, despite Third-Party Funds (TPF) experiencing growth of 11.11% (year-on-year). As a result, banking intermediation weakened, with the Loan-to-Deposit Ratio (LDR) declining to 82.24% (Financial Services Authority – OJK, 2021). This situation emphasized that banks need to strengthen not only their financial performance but also their ability to manage various risks, including social and environmental risks, to maintain stakeholder trust and business sustainability.

As economic conditions gradually recovered, the Indonesian banking sector showed positive developments during 2021–2023. Commercial bank assets increased by 16.35%, rising from Rp10,112,304 billion in 2021 to Rp11,765,868 billion in 2023 (Financial Services Authority, 2024). The recovery was also reflected in several key banking indicators, including credit growth of 10.38% (year-on-year), a Capital Adequacy Ratio (CAR) of 27.65%, and an improvement in

gross Non-Performing Loans (NPL) to 2.19% in 2023 (Financial Services Authority, 2024). These improvements indicate that profitability continues to be an important determinant of banking performance, as the ability to generate profits reflects effective resource management and operational efficiency. Nevertheless, investors' assessments of companies have increasingly expanded beyond financial achievements, as sustainability considerations have become more relevant in determining corporate value.

The growing emphasis on sustainable business practices has encouraged investors to consider Environmental, Social, and Governance (ESG) factors when evaluating corporate performance. Within the banking industry, ESG practices represent the commitment of financial institutions to manage environmental impacts, address social responsibilities, and establish effective governance mechanisms. Banks that are able to achieve strong profitability while maintaining high ESG performance are likely to receive greater market recognition due to enhanced reputation, improved stakeholder confidence, and lower long-term risks. Therefore, ESG disclosure is expected to strengthen the relationship between profitability and firm value. The 2023–2024 period provides an appropriate setting to investigate whether ESG performance enhances the extent to which profitability contributes to the creation of corporate value in the banking sector.

Firm value represents stakeholders' perceptions of a company's growth potential and business sustainability. From a financial perspective, firm value often refers to stock valuation factors, leverage, and the company's assets. From an accounting perspective, returns (profitability) are based on revenue rather than cash flow; thus, a high rate of return does not necessarily increase firm value, and vice versa. However, in relation to the cost of capital, every interest payment on a loan reduces taxable income, so the resulting tax savings can increase firm value (Ross et al., 2017: 440). Furthermore, the differing interests of shareholders and creditors support Damodaran's (2015: 317) argument that returns exceeding the minimum required rate of return—which reflects risk—can enhance firm value. Brealey et al. (2014: 105) state that a high rate of return is identified as increasing the company's value.

The concept of business sustainability is not only related to achieving the well-being of company owners but must also consider factors such as the well-being of the surrounding community and the environment. Elkington (2018) revisits the Triple Bottom Line (TBL) concept he first proposed in 1994, in which business should not only focus on profit but also expand its focus to improving the quality of human life and a healthy planet; the TBL concept is not merely an accounting tool to balance trade-offs but should be an integral part of sustainability efforts. The TBL concept has been adopted, among other things, by the ESG framework, which directs investors and financial analysts toward ESG factors, with the aim of helping stakeholders track, understand, and manage the systemic impacts of human activities. Migliavacca (2024: 7) emphasizes that integrating CSR and ESG principles explores how measurement, reporting, and governance frameworks are evolving to incorporate ESG criteria as part of corporate accounting and strategy.

Strengthening the performance of the banking industry in Indonesia must be done holistically, not only considering financial aspects but also ESG factors. Financial institutions, issuers, and publicly listed companies in Indonesia are required to implement sustainable finance practices as part of regulatory efforts to encourage organizations to integrate ESG aspects into their business activities and reporting (Insani et al., 2023). The integration of these three factors is expected to support financial performance and business sustainability in the long term. This is based on the notion that banks that apply ESG concepts in their business are perceived to have a positive image and a good reputation in managing financial risks—particularly those caused by environmental and social factors—while driving operational efficiency through the use of renewable energy and digitalization, increasing green financing, and fostering sustainable product and service innovations. On the other hand, banks that implement ESG concepts have better access to capital

and attract the interest of long-term committed investors. The combination of stable bank financial performance and ease of access to capital provides better opportunities to achieve sustainable business, thereby increasing the company's long-term value.

Empirical studies conducted by Aydoğmuş et al. (2022) and Tyas & Prastiwi (2025) indicate that return levels (profitability) positively influence on firm value with ESG factors further strengthening this relationship. ESG disclosure is considered strategically important in enhancing firm value, ass it signals responsible business conduct to investors, where transparent ESG disclosure strengthens stakeholder trust and drives sustainable financial performance (Nugroho & Sabaruddin, 2025: 8). Constrasting findings were presented by Safitri & Paramita (2025) that although profitability positively affects firm value, ESG factors do not. Meanwhile, Zailani & Razak (2024) found that ESG does not affect firm value or profitability.

Based on the central theme outlined above, the author formulates the research questions as follows:

1. How does profitability affect firm value in commercial banks in Indonesia?
2. Does ESG moderate the relationship between profitability and firm value in commercial banks in Indonesia?

Based on the research questions identified above, the objectives of this study are to determine:

1. How does profitability affect firm value in commercial banks in Indonesia?
2. Does ESG moderate the relationship between profitability and firm value in commercial banks in Indonesia?

This study contributes to the sustainability and corporate finance literature by introducing ESG as a strategic amplification mechanism between profitability and firm value. Unlike prior research that focuses on the direct effect of ESG on firm performance, this research explores whether ESG strengthens investor interpretation of profitability signals in capital markets. Therefore, the study moves beyond linear ESG-performance models toward a contingency-based framework that captures the interaction between financial capability and sustainable corporate behavior.

This research attempts to offer both advancement of knowledge and practical applications in the fields of financial accounting and financial management. Practically, the results of this research provide valuable information that stakeholders can use to support companies to adopt more integrated and sustainable business practices through the incorporation of ESG factors.

2 Literature Review

2.1 Signalling Theory

Signaling Theory by Spence (1973) explains that companies provide signals to external parties to reduce information asymmetry between management and inFvestors. One of the most important signals is financial performance, particularly Return on Assets (ROA), which reflects the company's effectiveness in generating profits from its assets. A high ROA is interpreted as a positive signal regarding the company's operational efficiency and future prospects, thereby increasing investor confidence and firm value. However, investors today not only consider financial performance but also pay attention to corporate sustainability practices in assessing long-term business prospects.

Environmental, Social, and Governance disclosure can strengthen the positive signal generated by profitability because it reflects the company's commitment to sustainable, ethical, and transparent business practices. Companies with strong ESG performance are often perceived as

having better risk management and long-term sustainability, which enhances investor trust. Therefore, ESG is expected to moderate the relationship between ROA and firm value, where profitable firms with high ESG performance tend to receive higher market valuations compared to firms with low ESG performance. This perspective is consistent with signaling theory, which states that additional non-financial information can reinforce market perceptions of corporate quality and future performance.

2.2 Firm Value

Firm value is can be understood as investors' perceptions of a company's future performance as reflected in its stock price (Husnan & Pudjiastuti, 2015). It also represents market valuation of a company, which encompasses its physical assets and potential future performance (Sartono, 2016: 9). In this context, firm value reflects public confidence in the company's operational activities since its establishment (Gunardi et al., 2022).

Specifically, corporate performance within the concept of firm value focuses on financial performance, which is often linked to stock valuation factors, debt utilization levels, and corporate assets. Stock valuation represents the amount investors are prepared to pay to acquire the company's shares, taking into account the company's potential for future growth and financial performance. Meanwhile, the debt to asset ratio reflects the cost of capital the company must bear, which influences dividend decisions and indicates the level of business risk affecting the company's capacity to fulfil its obligations—factors that generally consider the company's intrinsic assets. These leverage and asset factors are key considerations for both investors and creditors in evaluating a company's growth potential, financial condition, and long-term business sustainability. In this context, if investors and creditors are concerned with intrinsic asset value, Brigham & Houston (2015: 306) emphasize the need for management to understand how such intrinsic value is estimated. Thus, measuring a company's value serves as a signal to stakeholders—particularly investors and creditors—regarding the company's long-term success, and management utilizes information related to the company's value to shape stakeholders' perceptions of management's success in managing assets and funding sources, as well as the company's potential for growth, performance, and business sustainability.

A company's value can be measured in several ways depending on the desired information. Price-to-Book Value (PBV) and Price-to-Earnings (PE) are frequently used for measuring firm value by investors to determine whether a company's stock price is considered cheap or expensive, enabling investors to decide whether to buy, sell, or hold the stock. This aligns with the concept outlined by Reilly & Brown (2015: 354, 377) who classify PBV and PE as one of the stock valuation models within the relative equity valuation group. Meanwhile, Tobin's Q is commonly used as a company valuation indicator based on the market value of assets relative to their replacement cost. Tobin's Q ratio is considered more robust than the market-to-book ratio, as it emphasizes the relative value of assets in comparison to the current replacement cost (Ningrum, 2022: 22). Tobin's Q is defined as the ratio between company's market value and the replacement cost of its assets (p.1), or the company's market value divided by the book value of its assets as a proxy for the Q ratio (p.2) (Fu et al., 2016). Thus, Tobin's Q can be formulated as follows:

$$\text{Tobin's Q} = \frac{\text{EMV + Debt}}{\text{Assets}}$$

Where:

a) EMV (Ending Market Value) is the closing stock price multiplied by the number of shares outstanding.
b) Interpretation: if $Q < 1$, it indicates undervaluation, where the company's market value is below its book value (investors are interested in owning shares of the company in

question). If Q = 1, it indicates fair value, where the company's market value is considered reasonable. If Q > 1, it indicates an overvaluation, where the company's market value is higher than its book value (the company's business model is attractive to emulate or follow, rather than buying the company's shares).

2.3 Rentability

Cash flow from operating activities consists of cash inflows and outflows related to profit-generating operations; therefore, profitability is often referred to as the result of a company's operations (Bettner, 2015: 30). Profitability is the primary objective of all business ventures; without it, a business cannot survive in the long term (Samon, 2015: 35). Profitability ratios provide an indication of how profitably a company operates and utilizes its assets (Brigham & Houston, 2015: 99). Information regarding profitability is used by stakeholders to assess a company's financial performance and to make decisions regarding asset management, investments, financing, dividend policies, as well as to project future financial performance and growth related to the company's business sustainability. Therefore, when analyzing a company's profitability, it is important to measure how efficiently the company utilizes resources to generate revenue and enhance its claims on assets (Bettner, 2015: 51).

Samonas (2015: 35–36) outlines the profitability ratios commonly used in financial statement analysis, namely:
a) Gross Profit Margin
b) Net Profit Margin
c) EBITDA Margin
d) EBIT Margin or Operating Profit Margin
e) Return on Equity – ROE
f) Return on Assets – ROA.
g) Return on Invested Capital – ROIC.

Return on assets is a financial ratio used to assess a bank's profitability (earnings) in terms of how efficiently assets are utilized to generate profit. OJK (2017-a: 29) defines the return on assets formula as follows:

$$\text{ROA} = \frac{\text{Earning Before Tax}}{\text{Average Total Assets}}$$

2.4 Environmental, Social, and Government (ESG)

In Indonesia, every financial services institution, issuer, and public company must implement sustainable finance, which refers to the comprehensive support of the financial services sector to foster sustainable economic growth by aligning economic, social, and environmental interests (OJK, 2017-b: 5). An empirical study conducted by Friede et al. (2015: 227) shows that a focus on responsible long-term investment is crucial for all types of rational investors to fulfill their fiduciary duties and better align investor interests with broader societal goals—namely, integrating ESG criteria into the investment process to fully leverage the value-enhancing potential of ESG factors. Companies with high sustainability levels tend to have well-established processes for stakeholder engagement, are more long-term oriented, and demonstrate higher levels of non-financial measurement and disclosure; furthermore, companies with high sustainability levels significantly outperform their peers in the long term, both in terms of stock market performance and accounting performance (Eccles et al., 2014: 2835).
Sustainability as a strategic success factor explores how the three dimensions—ESG—become integral parts of business strategy, stakeholder communication, and value creation in modern companies (Kirchhoff et al., 2024: 1). Hanggraeni (2023) outlines the environmental dimension

as a strategy to address the impacts of natural resource use, greenhouse gas emissions, and waste management through efforts to reduce the carbon footprint by utilizing renewable energy and effectively managing biodiversity; the social dimension focuses on relationships with stakeholders, commitment to human rights, improving working conditions, and promoting diversity in the workplace, as well as strengthening reputation and customer loyalty by actively engaging stakeholders to create and support an inclusive work environment; and the governance dimension, which refers to strategies regarding the structures and processes used to manage the business, including transparency, business ethics, and legal compliance.

ESG disclosure is necessary to communicate a company's commitments to ESG issues, as well as to drive innovation and enhance reputation, thereby contributing to the creation of long-term value for the company (Tiranda et al., 2025). The OJK requires financial institutions, including banks, issuers, and public companies, to publish annual sustainability reports that include, among other things, ESG disclosures (OJK, 2017-b). In this regard, the disclosed ESG framework refers to the reporting standards of the Global Reporting Initiative (GRI standards) and complements the sustainable reporting guidelines established by the OJK. ESG indices can be calculated using several methods, such as those developed by S&P, MSCI, and Sustainalytics. Additionally, ESG indices can be calculated based on GRI standards, which consist of general components and ESG components. In this context, the ESG index is calculated by comparing the value of ESG disclosures with the total possible disclosures (Tiranda et al., 2025: 907), or using the following equation:

$$\text{ESG Index} = \frac{\text{ESG Disclosure Score}}{\text{Maximum ESG Disclosure Score}}$$

2.5 Hypotheses

Based on the theoretical framework above, the research hypotheses are formulated as follows:

1. Profitability influences firm value in commercial banks listed on the Indonesia Stock Exchange.
2. ESG moderates the effect of profitability on firm value in commercial banks listed on the Indonesia Stock Exchange.

3 Research Method

The objects of this study are profitability, firm value, and ESG, with the aim of examining the causal relationship between profitability and firm value, as well as addressing the question of whether ESG can strengthen this causal relationship. The scope of the study is limited to commercial banks—both conventional and Sharia-based—classified in the KBMI-4 to KBMI-1 categories that are listed on the Indonesia Stock Exchange during the 2023–2024 period.

The research was conducted based on the positivist paradigm using quantitative research with a descriptive study design. The research strategy employed was a holistic multiple-case study (focusing on the case of commercial banks listed on the IDX, without analyzing sub-cases, i.e., individual commercial banks).

The research variables are abstracted based on their concepts and their roles within the structure of relationships among variables, as shown in Table 1

Table 1. Operationalization of Variables

No	Variables	Indicator	Measurement	Scale
1	Rentability (X)	ROA Ratio	%	Ratio
2	Firm Value (Y)	Tobin's Q	Index	Interval
3	Environmental Social and Governance (Z)	ESG Index	Index	Interval

Source: Data Processed (2026)

The target population in this study consists of KBMI-1, KBMI-2, KBMI-3, and KBMI-4 commercial banks listed on the Indonesia Stock Exchange, totaling 47 banks as of 2024. The research sample was selected using purposive sampling based on the completeness of financial data and market value sourced from each company's annual reports and sustainability reports for the 2023 and 2024 periods. The unit of analysis consists of 35 commercial banks, with 35 data sets observed, representing the average value of each variable over the two-year period.

Due to the fixed sample size of secondary data (35 banks over 2023-2024, N = 70), a sensitivity power analysis was conducted. With a significance level of 0.05, a target power (1-β) of 0.80 and 3 predictors, the calculation yielded a Minimum Detectable Effect Size (f^2) of 0.16. In Cohen (1988) criteria, this value exceeds the threshold of a Medium Effect Size ($f^2 \geq 0.15$). Therefore, the sample of 70 observations is statistically valid and has adequate power to reliably detect the moderating effect of esg.

This study is based on secondary data sourced from the IDX, the annual reports and sustainability reports of each commercial bank, and data from Katadata.com. Additionally, to supplement the presentation and explanation, data from other competent sources were also utilized. The data measurement and collection stages followed the case study protocol.

The collected data was verified for measurement accuracy, the average values of the variables for each unit of analysis were calculated, and the data was prepared in tabular form. Subsequently, analysis was conducted in two stages, namely:
1. Descriptive analysis for each variable, including the mean, minimum, and maximum values, as well as the standard deviation.
2. Moderated Regression Analysis (MRA) to test hypotheses regarding the structure of relationships between variables that include moderating variables.

4 Result and Discussion

4.1 Descriptive Statistics

Table 2 below presents the descriptive statistics for the mean values of the return on assets, ESG, and firm value variables for the 2023–2024 period.

Table 2. Descriptive Statistics

	Banks				Bank KBMI-4			
	Mean	**Max**	**Min**	**SD**	**Mean**	**Max**	**Min**	**SD**
ROA	2,49	3,92	1,10	0,98	3,75	3,85	3,60	0,11
ESG	49,09	63,09	40,70	8,18	62,16	63,09	61,68	0,64
FV	1,01	1,65	0,71	0,18	1,29	1,65	0,96	0,29
Valid (N) listwise	33				4			

Source: Data Processed (2026)

Based on the data analysis, the average return on assets (ROA) for the banking sector during the 2023–2024 period was 2.49, which falls within the healthy category. Commercial banks included in the KBMI-4—namely BBCA, BMRI, BBRI, and BBNI—had an average ROA of 3.75 during the studied period, which is higher than the average banking sector ROA. This indicates a significant difference in profitability levels among banks during the 2023–2024 period. Large banks in the KBMI-4 group have relatively high ROA values compared to other banks, with a much smaller standard deviation of 0.11, reflecting management's ability to manage assets more efficiently to generate profits. Additionally, there are banks with very high ROA, such as BTPS, indicating a more focused business strategy and optimal asset structure for profit generation. Conversely, several other banks exhibit relatively low ROA, indicating that the efficiency of asset utilization remains limited. The variation in ROA values, with a standard deviation of 0.98, demonstrates that banking profitability performance in Indonesia is not yet uniform across banks, as presented in Table 2.

4.2 Classic Assumption Test

To test the hypothesis using Moderated Regression Analysis (MRA), we first conducted assumption tests, including tests for the normality of the data distribution, multicollinearity, and heteroscedasticity, namely:

Table 3. Normality Test

Test Name	**Sig**	**Meaning**
Kolmogorov Smirnov	0.200	Normal

Source: Data Processed (2026)

Based on the Lillifors Significance Correction for a two-tailed test, the probability α of 0.200 > 0.05, indicating that the data are normally distributed.

Table 4. Multicollinearity Test

Test Name	**Tolerance**	**VIF**	**Meaning**
ROA	0.859	1.164	There is no multicollinearity
ESG	0.859	1.164	There is no multicollinearity

Source: Data Processed (2026)

According to Table 4, the multicollinearity statistics for the ROA Tolerance and ESG indicators are 0.859 > 0.10, and the Variance Inflation Factor (VIF) is 1.164 < 10.00, indicating that there is no multicollinearity.

Table 5. Heteroskedasticity Test

Variables	**Sig**	**Meaning**
ROA	0.220	There is no heteroscedasticity

ESG	0.052	There is no heteroscedasticity

Source: Data Processed (2026)

The Glejser test based on Table 5 shows that the unstandardized coefficient b for ROA is 0.20 with a t-value of 1.252 and a significance level of 0.220 > 0.05, and the unstandardized coefficient b for ESG is 0.193 with a t-value of 2.021 and a significance level of 0.052 > 0.05. Thus, there is no issue of heteroscedasticity.

4.3 Simultaneous Test

To examine whether the independent variables and the moderating variable collectively influence firm value, a simultaneous significance test (F-test) was conducted. This test evaluates the overall feasibility of the regression model by determining whether ROA, ESG, and interaction between ROA and ESG simultaneously contribute to explaining variations in firm value.

Tabel 6. Simultaneous Test

Model	**F**	**Sig**	**Meaning**
Regression	342.894	0.000	Significant

Source: Data Processed (2026)

The results of the simultaneous significance test (F-Test) indicate that the regression model is statistically significant. The F-statistic value obtained is 342.894 with a significance value of 0.000 which lower than the 0.05 significance level. This indicates that the model is fit enough to simultaneously affect firm value. Therefore, the regression model is considered appropriate for explaining the relationship between the independent variables, the moderating variable, and firm value.

Tabel 7. Adjusted R Squared

R	**R^2**	**Adjusted R^2**	**Std Error**
0.969	0.940	0.937	0.083

Source: Data Processed (2026)

The coefficient of determination analysis indicates that the regression mode has an R value of 0,969, demonstrating a very strong correlation between ROA, ESG, the ROA x ESG interaction term, and firm value. The model produces an R Square value of 0,940 which means that 94.0% of the variation in firm value can be explained by profitability, ESG, and moderating effect of ESG. The remaining 6.0% is influenced by other variables not included in this study. In addition, the adjusted R square value of 0.937 shows hat the model maintains a high explanatory capability even after adjusting for the number of predictors used. These results indicate that the regression model provides a strong explanation of the factor influencing firm value.

4.4 Hypotheses Test

For the purpose of statistically analyzing the causal relationship between the independent variables and the dependent variable, the operational hypothesis is formulated as follows:

Ho: $\beta_1 = 0$ Profitability, as measured by return on assets, has no impact on the market value of commercial banks listed on the Indonesia Stock Exchange for the 2023–2024 period

Ha: $\beta_1 \neq 0$ Profitability, as measured by return on assets, affects the market value of commercial banks listed on the Indonesia Stock Exchange for the 2023–2024 period

Table 8. Moderating Regression Analysis

Model	Coefficient B	T	Sig	Meaning
C	3.727	1.875	0.071	-
ROA	1.248	-2.106	0.044	Influence
ESG	-0.778	-1.490	0.147	No Influence
ROA*ESG	0.352	2.262	0.031	Moderating

Source: Data Processed (2026)

The model regression conducted in this research are:

$$Firm\ value = 3.727 + \beta 1\ 1.248 - \beta 2\ 0.778 + \beta 3\ 0.352$$

Based on Table 8, the coefficient b for ROA is -1.248 with a p-value of 0.044 < 0.05 in a two-tailed test, which means that the regression coefficient is significant. So, the hypotheses is accepted. Thus, at a 95% confidence level, the profitability variable measured by ROA influences firm value as measured by the Tobin's Q ratio. In this context, any change such as an increase in firm value can be explained by an increase in profitability. If a bank's profitability performance shows improvement over several periods, the bank has the ability to accumulate internal capital in the form of retained earnings, and investors are inclined to increase their investments in the bank in question, which impacts an increase in stock market value. In this context, the rise in stock market value and the growth of the bank's equity serve as factors that enhance firm value.

The findings of this study are consistent with prior research showing that profitability positively influences firm value. Tyas & Prastiwi (2025) found that profitability significantly affects firm value, indicating that companies with stronger profitability tend to receive higher market valuations because investors perceive profitability as a positive signal of corporate performance and future growth prospects. Likewise, Safitri & Paramita (2025) also demonstrated that profitability contributes positively to firm value in companies listed in the IDX ESG Leaders index, suggesting that investors place greater confidence in firms capable of generating sustainable earnings.

This result is further supported by previous studies which explain that profitable companies are considered more capable of strengthening internal capital through retained earnings and maintaining long-term business sustainability. In line with Signaling Theory, higher profitability represented by ROA sends a positive signal regarding managerial efficiency and future business prospects, thereby encouraging investors to increase their investments and positively affecting stock market value. Consequently, the increase in stock prices and equity growth contributes to the enhancement of firm value measured by Tobin's Q.

Furthermore, the hypothesis positioning the ESG variable as a moderator is formulated as follows:

Ho: $\beta_3 = 0$ ESG does not moderate the impact of profitability on firm value for commercial banks listed on the Indonesia Stock Exchange

Ha: $\beta_3 \neq 0$ ESG moderates the impact of profitability on firm value among commercial banks listed on the Indonesia Stock Exchange

Based on Table 8, the coefficient b for LnZ is -0.778, with a p-value of 0.147 > 0.05 in a two-tailed test, indicating that the coefficient is not significant. This suggests that the ESG variable does not directly influence firm value.

The finding that Environmental, Social, and Governance does not directly influence firm value is supported by several previous studies which explain that investors may still prioritize financial performance over sustainability disclosure in making investment decisions. In developing markets, ESG implementation and disclosure are often still considered voluntary and have not been fully standardized, causing investors to perceive ESG information as less relevant in determining market valuation. As a result, ESG alone may not immediately increase firm value when it is not accompanied by strong financial performance.

In the perspective of Signaling Theory, ESG may not function as a strong market signal when investors perceive sustainability reporting merely as compliance or symbolic disclosure rather than as information reflecting real economic benefits. Therefore, ESG alone may not directly affect firm value unless it is supported by strong financial performance that reinforces investor confidence.

Based on table 8, the coefficient b for ROA*ESG interaction is 0.352, with a p-value of 0.031 > 0.05 in a two-tailed test, indicating that the coefficient is significant/strengthen, so the hypotheses is accepted. The finding that Environmental, Social, and Governance strengthens the influence of ROA on firm value indicates that ESG acts as an amplifying factor that enhances investor confidence in profitable companies. Although ESG may not directly influence firm value, the presence of strong ESG performance can increase the credibility of profitability information received by investors. Companies with high profitability and strong ESG practices are generally perceived as more sustainable, transparent, and capable of managing long-term risks, causing investors to respond more positively to the company's financial performance. In the perspective of Signaling Theory, ESG functions as an additional positive signal that reinforces the market's interpretation of profitability signals. Therefore, profitable firms supported by strong ESG implementation tend to obtain higher market valuations compared to firms with low ESG performance.

This result is consistent with the study conducted by Tyas and Prastiwi (2025), which found that ESG performance moderates and strengthens the effect of profitability on firm value. Their study explains that investors increasingly appreciate companies that are not only financially profitable but also committed to sustainability practices. These findings support the argument that ESG enhances the positive market response toward profitability, ultimately leading to higher firm value.

5 Conclusions and Suggestion

5.1 Conclusion

Commercial banks listed on the Indonesia Stock Exchange have profitability levels, as measured by ROA, that fall within the healthy category, with the profitability performance of KBMI-4 commercial banks being relatively better than that of commercial banks in the lower KBMI groups. This indicates that with larger capital, banks are able to efficiently maximize their assets to generate profits. Meanwhile, enterprise value, as measured by the Tobin's Q ratio, indicates that stakeholders perceive the company's market value to be higher than its book value. Generally, the enterprise value of commercial banks falls into the "fair" category; in fact, KBMI-4 commercial banks are considered overvalued, making their business models attractive for other

commercial banks outside the KBMI-4 group to emulate. On the other hand, the ESG framework in accordance with OJK regulations has been implemented by commercial banks, but overalls it still needs to be improved as it generally remains at a medium-risk level. However, KBMI-4 commercial banks are able to implement the ESG framework better than commercial banks in the lower KBMI categories.

Based on the results of the hypothesis testing, it can be concluded that profitability, as measured by ROA, influences firm value, where each increase in profitability over several periods contributes to an increase in firm value. Meanwhile, the implementation of ESG can strengthen the influence of profitability on firm value, where banks that implement ESG as part of sustainable finance are able to drive long-term financial performance in terms of asset growth, debt management, and returns for investors. Additionally, the integrated implementation of ESG demonstrates that banks conduct business responsibly toward investors, thereby strengthening stakeholder trust and driving sustainable financial performance.

5.2 Suggestion

Based on the research findings, bank management within the KBMI group under KBMI-4 needs to improve the efficiency of asset utilization to drive sustainable return on assets (ROA). Additionally, the implementation of ESG principles should be integrated as part of the business strategy, rather than merely for regulatory compliance, thereby strengthening the link between profitability and firm value. KBMI-4 banks can serve as a benchmark for performance optimization and ESG implementation; however, they must maintain a balance between fundamental performance and market valuation to avoid potential overvaluation. For investors, it is important to consider ESG aspects alongside financial indicators in investment decision-making, as ESG has proven to provide long-term value.

On the other hand, regulators are expected to promote more substantive improvements in the quality of ESG implementation by strengthening more structured and comparable measurement standards across banks, as well as providing incentives for banks with strong ESG performance. For next research, it is recommended to include additional variables such as Good Corporate Governance (GCG), credit risk, and liquidity, and to use more detailed ESG proxies to ensure more comprehensive research results. Overall, ESG needs to be positioned as a strategic factor capable of enhancing firm value through the strengthening of financial performance and the sustainable improvement of stakeholder trust.

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