



Influence Of Green Banking Disclosure, CAR And ROE On PER

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Abstract: The banking sector plays a pivotal role in Indonesia's economy, yet during the 2020–2024 period, conventional banks experienced substantial fluctuations in firm value, as measured by the Price Earnings Ratio (PER). This study investigates the influence of Green Banking Disclosure (GBD), Capital Adequacy Ratio (CAR), and Return on Equity (ROE) on the firm value of conventional banks listed on the Indonesia Stock Exchange (IDX). Utilizing a quantitative panel data approach, the research analyzes 160 quarterly observations from eight banks over the study period using Eviews 13 software. The findings indicate that GBD does not significantly affect firm value, suggesting that sustainability disclosures have yet to be perceived as a critical signal by investors. Similarly, CAR shows no statistically significant impact, implying that capital adequacy is not a decisive factor in market valuation. In contrast, ROE demonstrates a positive and significant effect on PER, confirming that profitability serves as a strong signal to investors, in line with Signaling Theory. The model's adjusted R-squared of 0.401 suggests that 40.12% of the variation in firm value can be explained by GBD, CAR, and ROE, while 59.88% is attributable to other factors beyond the study's scope. These results highlight that in the Indonesian banking sector, firm value is primarily driven by financial performance rather than sustainability practices or capital adequacy. Therefore, banks are encouraged to enhance profitability to maintain investor confidence and strengthen market valuation, while continuing to develop green banking initiatives for long-term strategic positioning.

Keywords: Green Banking Disclosure, Capital Adequacy Ratio, Return On Equity, Firm Value.

INTRODUCTION

The banking sector is a fundamental pillar of the national economy, serving as a key intermediary in mobilizing funds, providing credit, and supporting investment activities (Khan et al., 2022). In Indonesia, conventional commercial banks have experienced substantial dynamics over the past five years, especially in terms of firm value, which is often proxied by the Price Earnings Ratio (PER). The PER reflects investors' assessment of a company's profitability and growth prospects, indicating market optimism when high and investor caution when low (Ross et al., 2021). Between 2020 and 2024, major banks in Indonesia, such as BCA, BNI, BRI, and Mandiri, demonstrated significant fluctuations in PER, reflecting instability in stock valuations



and investor confidence (Anjarkasih, 2025). These fluctuations highlight the need to examine factors that influence firm value to guide management and investors in strategic decision-making.

Firm value is affected by multiple internal and external factors, including financial performance and corporate social responsibility initiatives. Among the internal determinants, profitability, measured by Return on Equity (ROE), is a significant indicator of a company's efficiency in generating profits from shareholders' equity (Pasukodewo & Susanti, 2020). ROE serves as an important signal to investors, as suggested by Signaling Theory, which posits that management conveys critical information through financial performance to reduce information asymmetry between insiders and the market (Spence, 1973). Previous studies have consistently shown that higher ROE positively influences firm value because it reflects effective management and sustainable profit generation (Badruzaman et al., 2022; Risqi & Suyanto, 2022).

Another critical financial indicator is the Capital Adequacy Ratio (CAR), which represents a bank's capacity to withstand financial shocks and meet its obligations. CAR is considered a measure of financial health and stability, influencing both investor perception and regulatory compliance (Kansil et al., 2021). Some studies have found that CAR significantly affects firm value, as a higher CAR demonstrates strong capitalization and reduces bankruptcy risk (Adissa & Syafrida, 2024). However, other research suggests that CAR may not directly impact market valuation, as investors may prioritize profitability signals over capital adequacy (Ardyansyah & Arifin, 2023).

In addition to financial performance indicators, sustainability initiatives have gained prominence in shaping firm value. Green Banking Disclosure (GBD) reflects a bank's commitment to environmental and social responsibility, as well as its alignment with stakeholder expectations (Hilleri et al., 2025). The concept of green banking encourages banks to integrate environmentally friendly practices into their operations, including financing sustainable projects and reporting environmental performance (Loissa, 2025). Stakeholder Theory emphasizes that firms should address the interests of all parties affected by corporate actions, including employees, customers, communities, regulators, and shareholders (Freeman, 1984). GBD serves as a medium for communicating sustainability efforts to stakeholders, potentially enhancing reputation and firm value (Umbing et al., 2024).



Despite its growing importance, research on the effect of GBD on firm value in the Indonesian banking context remains inconclusive. Some studies suggest a positive relationship, arguing that transparency in green banking practices signals corporate responsibility and attracts environmentally conscious investors (Hilleri et al., 2025; Elisa & Amanah, 2021). Conversely, other research finds no significant impact of GBD on firm value, implying that sustainability disclosures are not yet fully perceived as critical by investors (Romli & Zaputra, 2021; Anjarkasih, 2025). This divergence indicates a need for further empirical investigation, especially in light of fluctuating PER values during 2020–2024.

Moreover, the integration of financial indicators and sustainability disclosures provides a comprehensive framework for understanding firm value. Combining ROE, CAR, and GBD allows researchers to assess both traditional financial health metrics and emerging sustainability practices, offering a holistic view of what drives market valuation (Napitupulu et al., 2021). Empirical studies in other countries support the notion that profitability and capital adequacy are primary drivers of firm value, while sustainability practices play a supplementary role (Khan et al., 2022; Loissa, 2025). However, localized research is crucial due to Indonesia's unique economic, regulatory, and cultural environment.

This study aims to bridge the research gap by examining the influence of GBD, CAR, and ROE on the firm value of conventional banks listed on the Indonesia Stock Exchange between 2020 and 2024. By employing panel data analysis, the research seeks to determine which factors significantly contribute to PER fluctuations and provide insights for bank management and investors. Understanding these determinants is essential for developing strategies that enhance profitability, maintain investor confidence, and strengthen market valuation while promoting sustainability practices. In summary, the study investigates three key dimensions of firm value: (1) financial performance measured by ROE, (2) capital strength represented by CAR, and (3) sustainability engagement indicated by GBD. It contributes to the literature by clarifying the relative importance of profitability, capital adequacy, and green banking practices in influencing firm value in the Indonesian banking sector. The findings are expected to inform strategic decision-making, policy formulation, and future research directions in corporate finance and sustainable banking.

**METHOD**

This study employed a quantitative research approach to examine the influence of Green Banking Disclosure (GBD), Capital Adequacy Ratio (CAR), and Return on Equity (ROE) on firm value, proxied by the Price Earnings Ratio (PER), in conventional banks listed on the Indonesia Stock Exchange (IDX). Quantitative methods were selected due to their ability to provide objective, measurable, and statistically analyzable evidence regarding the relationships between independent and dependent variables (Creswell, 2014). By using a structured numerical approach, the study can accurately evaluate the effect of financial performance and sustainability disclosure on market valuation.

The data source of this research consisted of secondary data derived from financial statements, annual reports, and sustainability reports of eight conventional commercial banks listed on the IDX for the period 2020–2024. These banks included BCA, BNI, BRI, Mandiri, BTN, CIMB Niaga, Panin, and Permata Bank. The data were collected quarterly, yielding a total of 160 observations. The selection of banks was based on the criterion that they had complete financial and sustainability reporting over the research period, ensuring data consistency and reliability.

The study included four variables, with PER as the dependent variable, representing firm value by dividing market price per share by earnings per share (Ross et al., 2021). The independent variables included GBD, CAR, and ROE. GBD was operationalized as the level of voluntary disclosure of environmentally and socially responsible practices reported by the banks (Hilleri et al., 2025). CAR measured a bank's capital adequacy relative to its risk-weighted assets, reflecting its financial stability and capacity to absorb potential losses (Kansil et al., 2021). ROE represented profitability, calculated as net income divided by shareholders' equity, indicating how effectively a bank generates returns on invested capital (Pasukodewo & Susanti, 2020).

For data analysis, the study employed panel data regression using Eviews 13 software. Panel data combines cross-sectional and time-series data, allowing researchers to account for both heterogeneity among banks and dynamics over time, thereby increasing the accuracy and efficiency of estimates (Napitupulu et al., 2021). The study initially considered three regression models: Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The Chow test was first used to compare CEM and FEM, the Hausman test determined



the suitability between FEM and REM, and the Lagrange Multiplier (LM) test identified the most appropriate model for the data.

Before hypothesis testing, classical assumption tests were conducted. The normality test, using the Jarque-Bera statistic, ensured that the residuals followed a normal distribution. Multicollinearity was assessed by evaluating correlation coefficients among independent variables to confirm that no high correlation ($r > 0.90$) existed. Additionally, heteroscedasticity and autocorrelation tests were performed to verify that the regression coefficients were consistent and efficient. Hypothesis testing was carried out using the t-test to assess the significance of individual coefficients and the F-test to evaluate the overall model. The adjusted R-squared was calculated to determine the proportion of variance in PER explained by GBD, CAR, and ROE, while the remaining variance was attributed to other external factors not included in the study

RESULT AND DISCUSSION

Panel Data Regression Model Analysis

According to Napitupulu et al (2021) panels data regression can be analyzed using three different methods models that will be used in this study, specifically the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM) using the Chow, Hausman, and Lagrange Multiplier (LM) tests.

Chow Test

The Chow test is used to determine which of the CEM and FEM models is the best. If the probability value is greater than 0.05, CEM is chosen; if it is less than 0.05, FEM is chosen.

Redundant Fixed Effects Tests			
Equation: Untitled			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	9.771977	(7,149)	0.0000
Cross-section Chi-square	40.449653	7	0.0000

Table 1. Results Chow Test

The probability value for Cross Section F is $0.000 < 0.05$, so FEM is the selected model. A Hausman test is then performed to compare FEM and REM.



Hausman Test

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Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	3.661186	3	0.3005

Table 2. Results Hausman Test

The probability value for Cross Section F is $0.3005 > 0.05$, so the chosen model is REM. Next, an LM test is conducted to compare REM and CEM.

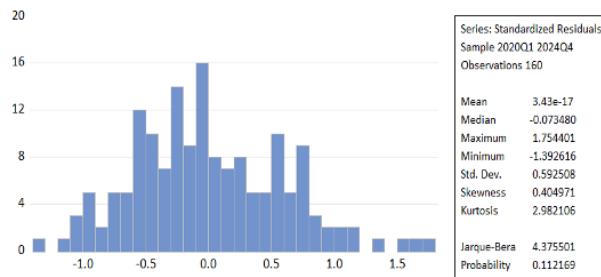
Lagrange Multiplier Test

Lagrange Multiplier Tests for Random Effects			
Null hypotheses: No effects			
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives			
	Cross-section	Test Hypothesis	
		Time	Both
Breusch-Pagan	84.29002 (0.0000)	28.99327 (0.0000)	113.2833 (0.0000)
Honda	9.180960 (0.0000)	5.384540 (0.0000)	10.29936 (0.0000)
King-Wu	9.180960 (0.0000)	5.384540 (0.0000)	10.64225 (0.0000)
Standardized Honda	11.76234 (0.0000)	5.593120 (0.0000)	7.908654 (0.0000)
Standardized King-Wu	11.76234 (0.0000)	5.593120 (0.0000)	9.101244 (0.0000)
Gourieroux, et al.	--	--	113.2833 (0.0000)

Picture 1. Results LM Test

The Breusch-Pagan Cross Section value is $0.0000 < 0.05$, so the best regression model to use in this study is REM.

Normality Test



Picture 2. Results Normality Test

Based on picture 1.2, the Jarque-Bera Probability value is $0.112169 > 0.05$, so it can be said that the data in the study is normally distributed.

Multicollinearity Test



	X1	X2	X3
X1	1.000000	-0.009960	-0.222667
X2	-0.009960	1.000000	-0.017965
X3	-0.222667	-0.017965	1.000000

Table 3. Results Multicollinearity Test

It may be inferred from figure 1.3 that the independent variables do not exhibit multicollinearity because there are no high correlation values between them that surpass 0.90.

Hypothesis Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.304767	0.744612	4.438242	0.0000
GBD	3.247082	2.234401	1.453223	0.1483
CAR	-0.460192	0.323174	-1.423974	0.1565
ROE	0.170892	0.064871	2.635738	0.0093

Table 4. Results t Test

Based According to the GBD variable (X1) t-test results, the calculated t-value is 1.453223 < table t 2.13185. 0.05, while the probability value is 0.1483 >. The calculated t-value for the CAR variable (X2) is 1.423974 < table t 2.13185. 0.05, and the probability value is 0.1565 >. The determined t-value for the variable ROE (X3) is 2.635738 > table t 2.13185 and the probability value is 0.0093 < 0.05.

Coefficient of Determination Test (R^2)

R-squared	0.438858
Adjusted R-squared	0.401198
S.E. of regression	0.609183
Sum squared resid	1.585186
F-statistic	11.65301
Prob(F-statistic)	0.000000

Table 5. Result R^2 Test

The Adjusted R Square value is 40.1198%, or 0.401198. This coefficient of determination indicates that the independent factors GBD, CAR, and ROE may account for 40.1198% of the PER of conventional commercial banks, with other variables not covered in this study accounting for the remaining 59.8802%.

Discussion



The results of this study indicate that Green Banking Disclosure (GBD) does not have a significant effect on firm value, as measured by the Price Earnings Ratio (PER), in conventional Indonesian banks during the 2020–2024 period. This finding suggests that sustainability disclosures, while increasingly recognized globally, are not yet perceived by investors in Indonesia as a critical determinant of bank valuation. Stakeholder theory posits that companies should address the interests of all stakeholders, including environmental and social concerns, to enhance corporate reputation and value (Freeman, 1984). However, the empirical evidence from this study indicates that Indonesian investors primarily focus on profitability rather than voluntary green banking practices when making investment decisions. These findings align with studies by Umbing et al. (2024) and Romli & Zaputra (2021), which reported an insignificant relationship between green banking disclosure and firm value, highlighting that stakeholder-oriented initiatives may not always translate into immediate financial recognition in emerging markets.

The Capital Adequacy Ratio (CAR) was found to have no significant impact on firm value. CAR is traditionally considered a measure of a bank's financial health and its capacity to absorb potential losses (Kansil et al., 2021). However, in this study, the market did not appear to respond strongly to variations in CAR, suggesting that investors may rely more on profitability indicators than capital ratios when assessing future growth prospects. This result partially contradicts previous studies by Adissa & Syafrida (2024), which indicated a positive effect of CAR on firm value, but it is consistent with research by Ardyansyah & Arifin (2023) and Refrayadi & Kufepaksi (2024), which also reported no significant relationship. One possible explanation is that CAR fluctuations within the observed banks remained within safe regulatory thresholds, and thus did not create substantial signaling effects to influence investor perceptions.

In contrast, Return on Equity (ROE) demonstrated a significant positive effect on firm value, indicating that profitability plays a crucial role in shaping investor expectations and market valuation. ROE reflects the efficiency of a bank in generating returns from shareholders' equity, and a higher ROE signals superior management performance and financial health (Pasukodewo & Susanti, 2020). This finding supports Signaling Theory (Spence, 1973), which emphasizes that financial performance serves as a credible signal to investors under information asymmetry conditions. The result is consistent with previous studies by Badruzaman et al. (2022) and Pasukodewo & Susanti (2020), which found that profitability measures, especially ROE, are



critical determinants of stock market valuation. Investors are likely to prioritize tangible financial indicators over sustainability disclosures or capital adequacy ratios in their investment decisions, especially in conventional banks where profit generation remains the primary focus.

The coefficient of determination (Adjusted $R^2 = 0.401$) suggests that GBD, CAR, and ROE collectively explain approximately 40.12% of the variation in firm value, while other unobserved factors account for the remaining 59.88%. This indicates that while ROE is a strong predictor, additional variables such as macroeconomic conditions, market sentiment, corporate governance quality, and regulatory changes may also significantly influence firm valuation. Future research could expand the model by incorporating these variables to provide a more comprehensive understanding of the determinants of firm value in Indonesian banks.

The study highlights a gap between sustainability practices and investor recognition in emerging markets. Despite growing global emphasis on environmental, social, and governance (ESG) reporting, Indonesian banks' voluntary disclosure of green banking initiatives may not yet be sufficient to affect market valuation. Policymakers and banking regulators could encourage more robust and standardized green banking reporting to enhance transparency and potentially improve market responsiveness. Moreover, banks could integrate sustainability performance more directly with financial outcomes to signal long-term value creation to investors.

The discussion confirms that in the context of Indonesian conventional banks, profitability—as measured by ROE—remains the most influential determinant of firm value, whereas GBD and CAR have limited impact. This suggests that investors continue to prioritize short-term financial performance over sustainability and capital adequacy when making investment decisions. Consequently, banks aiming to increase market valuation should focus on enhancing profitability and effectively communicating these results to stakeholders, while gradually strengthening green banking initiatives to align with emerging ESG trends.

CONCLUSION

Based on the results of the research and discussion conducted in accordance with the hypothesis objectives using data regression analysis with Eviews 13 software, it can be concluded that Green Banking Disclosure does not significantly impact the firm value of conventional commercial banks listed for the time period on the IDX 2020-2024. This indicates that the disclosure of green banking



practices is not yet fully considered an important signal by investors in assessing company performance. Furthermore, CAR is also proven to have no significant effect on firm value, which means that capital adequacy does not directly influence the market's assessment of the bank's prospects. On the other hand, ROE significantly and favorably affects business value, indicating that high profitability, proxied in this case by ROE, serves as a positive signal of the company's ability to generate profits efficiently and sustainably. Furthermore the value of the Adjusted R Square of 40.12% shows that the variables GBD, CAR, and ROE can explain the variations in firm value, while the remaining 59.88% is influenced by other factors outside this research model. Therefore, it can be concluded that firm value, especially in the banking sector, is more determined by profitability performance than by sustainability factors or capital adequacy, so companies need to focus their strategies on increasing profitability to maintain investor confidence and enhance market valuation.

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