

Research Article

The Effect of Environmental, Social, and Governance (ESG) Disclosure on Firm Value Evidence from Infrastructure and Property & Real Estate Firms in Indonesia

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Abstract: This study aims to examine the effects of ESG disclosure, profitability, and leverage on firm value among infrastructure and property and real estate companies listed on the Indonesia Stock Exchange during the 2021–2024 period. Using a quantitative approach, this study analyzes 38 companies, resulting in 152 firm-year observations. ESG disclosure is measured using a disclosure index, profitability is proxied by Return on Assets (ROA), leverage is measured by the Debt-to-Asset Ratio (DAR), and firm value is represented by Tobin's Q. The data are analyzed using multiple linear regression to examine both the partial and simultaneous effects of the independent variables on firm value. The results indicate that ESG disclosure does not have a significant effect on firm value ($p = 0.2530$), and profitability also has no significant effect on firm value ($p = 0.0916$). In contrast, leverage has a positive and significant effect on firm value ($p = 0.0007$; $\beta = 0.602271$). The simultaneous test indicates that ESG disclosure, profitability, and leverage jointly have a significant effect on firm value ($p = 0.000053$). However, the model explains only 12.28% of the variation in firm value, suggesting that other factors outside the model play a substantial role in determining market valuation. These findings indicate that leverage represents a more prominent determinant of firm value than ESG disclosure and profitability within the observed sectors and period.

Keywords: ESG Disclosure; Firm Value; Leverage; Profitability; Tobin's Q; Infrastructure Firms.

1. Introduction

The increasing global attention to sustainable business practices has shifted the assessment of corporate performance from a purely financial perspective toward a broader consideration of environmental, social, and governance (ESG) aspects. ESG has become an important framework for assessing how companies manage environmental and social impacts as well as corporate governance practices and their relationships with stakeholders (Friede et al., 2015). The growing relevance of ESG is reflected in the increasing consideration of sustainability factors by investors, regulators, and society in evaluating corporate performance and long-term prospects. In this context, ESG disclosure provides information regarding corporate sustainability practices and may influence stakeholders' perceptions of the company. In Indonesia, the importance of ESG disclosure has been strengthened by the development of sustainable finance regulations. The Financial Services Authority (OJK) issued Regulation No. 51/POJK.03/2017 concerning the implementation of sustainable finance for financial institutions, issuers, and public companies, which encourages companies to disclose information regarding their economic, social, and environmental impacts through sustainability reports. The increasing implementation of sustainability reporting among companies listed on the Indonesia Stock Exchange indicates that ESG disclosure has become an increasingly important component of corporate transparency. However, the increasing extent of ESG disclosure raises an important question regarding whether such disclosure is actually reflected in investors' assessments of firm value or primarily represents compliance with regulatory requirements. Firm value reflects investors' perceptions of a company's current performance and future prospects and is commonly associated with market-based indicators such as stock prices

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(Brigham, 2019). From the perspective of signaling theory, financial information such as profitability and leverage can provide signals regarding a firm's internal condition to external investors (Ross, 1977). Meanwhile, ESG disclosure can function as a non-financial signal that demonstrates corporate responsibility and strengthens legitimacy among stakeholders (Deegan, 2002). Therefore, profitability, leverage, and ESG disclosure may simultaneously influence how investors assess firm value. Profitability reflects the company's ability to generate earnings from its resources, whereas leverage represents the extent to which corporate operations are financed through debt. Both variables can affect investors' perceptions of corporate performance and risk, while ESG disclosure provides additional information concerning the company's non-financial performance and sustainability practices. The infrastructure and property & real estate sectors provide a relevant context for examining these relationships. Both sectors involve substantial capital requirements, long-term investment projects, and considerable exposure to financing conditions. Infrastructure companies may require significant debt financing to support the development of transportation, telecommunications, utilities, and other infrastructure projects, while property and real estate companies require substantial financing for land acquisition and residential or commercial development. Consequently, changes in financing costs and economic conditions may influence profitability, leverage, and ultimately investors' assessments of firm value. At the same time, both sectors have considerable environmental, social, and governance exposure because their activities are closely associated with land use, environmental impacts, public infrastructure, community interests, and regulatory requirements. The 2021–2024 observation period is particularly relevant because it covers substantial changes in Indonesia's economic and monetary conditions following the COVID-19 pandemic. Bank Indonesia maintained a relatively accommodative interest-rate environment during the initial recovery period before gradually increasing its policy rate from August 2022 in response to global inflationary pressures and exchange-rate stability concerns (Bank Indonesia, 2024a). Such changes are particularly relevant to infrastructure and property & real estate companies because their capital-intensive business models make them relatively sensitive to changes in financing costs. The property market also experienced considerable fluctuations during this period. Bank Indonesia reported that primary residential property sales contracted in 2021 before recovering in 2022, followed by renewed fluctuations during 2023 and 2024 (Bank Indonesia, 2022, 2023, 2024b).

These developments indicate that the financial and market conditions faced by companies in these sectors changed considerably during the observation period. Previous empirical studies have produced inconsistent findings regarding the relationship between profitability, leverage, ESG disclosure, and firm value. Majidah & Habiebah (2019), examining infrastructure, utility, and transportation companies listed on the Indonesia Stock Exchange during 2015–2017, found that profitability and leverage had positive and significant effects on firm value. In contrast, Wildan et al. (2024), using observations from 2018–2022, reported that leverage had a significant negative effect on firm value, while profitability did not have a significant effect. Wiratmoko & Wiro (2025), examining the 2019–2023 period, again found positive and significant effects of profitability and leverage on firm value. These differences suggest that the relationship between financial characteristics and firm value may vary across observation periods and economic conditions. Similar inconsistencies can also be observed in studies concerning ESG disclosure. ESG disclosure is expected to enhance corporate transparency, strengthen legitimacy, and reduce information asymmetry between companies and stakeholders. However, its effect on firm value may depend on the quality, relevance, and extent to which investors perceive the disclosed information as substantive. Christy & Sofie (2023), for example, found that governance disclosure had a positive and significant effect on firm value among companies included in the SMInfra18 index. Nevertheless, the findings of previous studies on ESG-related disclosure and firm value remain inconclusive, indicating that the market does not necessarily respond uniformly to sustainability information. Despite the growing literature on ESG and firm value, several gaps remain. First, previous studies have generally examined ESG disclosure, profitability, or leverage separately, resulting in limited evidence regarding their joint influence on firm value. Second, studies focusing specifically on the combination of infrastructure and property & real estate sectors remain relatively limited, despite the similarities in their capital-intensive characteristics and sensitivity to financing conditions. Third, the 2021–2024 period provides an important research setting because it en-

compasses both the post-pandemic economic recovery and a substantial transition in Indonesia's monetary policy environment. The combination of increasing ESG reporting practices and changing financing conditions during this period provides an opportunity to examine whether financial and non-financial signals are reflected in market-based firm value. Based on these considerations, this study aims to examine the effect of ESG disclosure, profitability, and leverage on firm value among infrastructure and property & real estate companies listed on the Indonesia Stock Exchange during 2021–2024. This study contributes to the existing literature by simultaneously examining financial and non-financial determinants of firm value within two capital-intensive sectors and by focusing on a period characterized by significant economic and monetary changes. The findings are expected to provide empirical evidence for investors in assessing corporate value, for companies in improving financial and sustainability strategies, and for regulators in evaluating the development of ESG disclosure practices in Indonesia.

2. Literature Review

Signalling Theory

Signaling theory explains how firms communicate information about their internal conditions and future prospects to external stakeholders, particularly investors, in the presence of information asymmetry. The theory was initially developed by Spence (1973) and subsequently applied to corporate finance by Ross (1977), who argues that managerial financial decisions can convey information about firm quality to the market. Because managers possess information that is not fully available to external investors, corporate decisions and disclosed financial information may function as signals that investors use in evaluating firm prospects.

Legitimacy Theory

Legitimacy theory is based on the premise that firms operate within a social environment and seek to ensure that their activities are perceived as consistent with prevailing social values, norms, and expectations (Suchman, 1995). Corporate legitimacy is important because the continued operation of a firm depends not only on its economic performance but also on the acceptance and support of stakeholders. When a gap emerges between societal expectations and corporate practices, firms may undertake various strategies to maintain or restore legitimacy (Dowling & Pfeffer, 1975).

Environmental, Social, and Governance Disclosure

Environmental, Social, and Governance (ESG) disclosure refers to the disclosure of corporate information concerning environmental, social, and governance aspects as part of a company's commitment to transparency toward investors and other stakeholders. The ESG concept was formally introduced through the Who Cares Wins report (2004), which encouraged the integration of environmental, social, and governance factors into investment decision-making. These three dimensions encompass the management of environmental impacts (environmental), the company's relationships with employees, communities, and other stakeholders (social), as well as corporate transparency, accountability, ethics, and oversight mechanisms (governance). Friede et al. (2015) demonstrate that ESG factors are significantly associated with corporate financial performance, while Deegan (2002) argues that social and environmental disclosure can serve as a means for companies to maintain legitimacy in response to societal expectations and pressures. From the perspective of signaling theory, ESG disclosure may also function as a non-financial signal of the quality of corporate risk management and the firm's long-term sustainability prospects. Accordingly, the more informative the ESG disclosure, the greater the opportunity for investors to obtain relevant information regarding a firm's sustainability practices and risk exposure, which may ultimately influence investors' assessments of firm value.

Profitability

Profitability refers to a company's ability to generate earnings through the effective utilization of its resources and represents one of the key indicators for assessing management effectiveness in conducting business operations. In financial analysis, profitability is fundamentally used to evaluate a company's ability to generate profits from its operating activities and resources, while Kasmir (2019) explains that profitability ratios indicate a firm's ability to generate earnings and reflect the effectiveness of management in managing the company. From the perspective of signaling theory, profitability plays an important role because infor-

mation regarding a firm's ability to generate earnings can serve as a signal to investors concerning its financial condition and future prospects (Ross, 1977). High profitability indicates that a company is capable of managing its resources effectively to generate earnings, thereby strengthening investor confidence in the firm's ability to generate future economic benefits. Therefore, profitability represents an important form of fundamental information that may influence investors' perceptions and, ultimately, the valuation of the firm.

Leverage

Leverage reflects the extent to which a company relies on debt to finance its assets and operating activities. The discussion of financing decisions and capital structure is grounded in the seminal work of Modigliani and Miller (1958), who examined the relationship between financing structure and firm value within the framework of capital structure theory. Ross (1977) subsequently developed the perspective that financing decisions may convey signals regarding a firm's prospects to the market. The use of debt can provide benefits by supplying additional sources of financing to support investment and business expansion; however, it simultaneously increases financial obligations and exposure to financial risk. Leverage that is managed optimally may indicate the firm's ability to utilize external financing to create value, whereas excessive leverage may heighten investors' concerns regarding default risk and financial distress. Thus, leverage may convey different signals to the market depending on the level of debt, the firm's ability to meet its financial obligations, and the prevailing economic conditions.

Firm Value

Firm value refers to the market's perception of a company's performance and future prospects, as reflected in investors' valuation of the firm. The concept of firm value is closely associated with the objective of maximizing shareholder wealth and the economic value of the company. Tobin (1969) introduced the concept of Tobin's Q, which relates a firm's market value to the economic value of its assets and provides a basis for evaluating investment decisions and capital utilization. This concept was subsequently developed and empirically examined by Chung & Pruitt (1994), who demonstrated that Tobin's Q can serve as a practical measure of firm value. Firm value does not merely reflect historical financial performance but also incorporates investors' expectations regarding future growth, risk, and the firm's ability to generate future cash flows. Therefore, firm value represents an important indicator of how the market responds to information concerning both the financial and non-financial conditions of a company, including profitability, leverage, and ESG disclosure.

Hypotheses Development

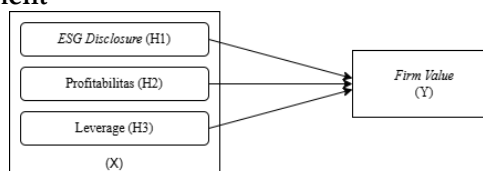


Figure 1. Research Framework.

Environmental, Social, and Governance (ESG) disclosure provides information regarding a firm's environmental, social, and governance practices and is particularly relevant to infrastructure and property and real estate firms due to their substantial exposure to land use, resource consumption, community interests, and public accountability. From the perspective of signaling theory, transparent ESG disclosure can reduce information asymmetry by providing investors with non-financial signals regarding the firm's risk management capabilities, sustainability orientation, and long-term prospects (Ross, 1977). This argument is reinforced by stakeholder theory, which emphasizes the importance of responding to the interests of various stakeholders (Freeman, 1984), and legitimacy theory, which suggests that corporate disclosure can help firms maintain social acceptance by demonstrating conformity with societal expectations (Deegan, 2002). Empirically, Li et al. (2018) and Suretno et al. (2022) find that more comprehensive ESG disclosure is associated with higher firm valuation, while Rohendi et al. (2024) show that ESG disclosure can strengthen competitive advantage and firm value. In contrast, Angir & Weli (2024) report a negative relationship, suggesting that investors may perceive ESG practices in Indonesia as largely compliance-driven; however, their cross-sectoral context may not adequately capture the distinctive characteristics of infrastructure and property and real estate firms, which face relatively high social, environmental, and governance exposure. Therefore, more transparent ESG disclosure is expected to provide a positive signal

to investors and strengthen corporate legitimacy, thereby increasing firm value as reflected in Tobin's Q.

H1: ESG disclosure has a positive effect on firm value.

Profitability reflects a firm's ability to generate earnings through the effective utilization of its assets, capital, and operating activities and is particularly important for infrastructure and property and real estate firms because their projects generally require substantial initial investment and long development periods (Brigham, 2019). From the perspective of signaling theory, high profitability provides a positive signal regarding management efficiency, financial strength, and the firm's ability to generate future economic benefits, thereby potentially increasing investor confidence and market valuation (Ross, 1977). Empirical evidence generally supports this relationship: Sabrin et al. (2016) find a positive and significant effect of profitability on firm value, while Majidah and Habiebah (2019) report similar findings for firms in the infrastructure, utilities, and transportation sectors; Wiratmoko and Wiro (2025) further provide evidence of a positive relationship during the 2019–2023 period. However, Octaviani et al. (2026) find that profitability does not significantly affect firm value during 2018–2022, a period encompassing the COVID-19 pandemic, suggesting that macroeconomic uncertainty may weaken the relevance of current profitability in investors' valuation decisions. Nevertheless, given that strong profitability signals effective resource management and favorable future prospects, higher profitability is expected to enhance investor confidence and increase firm value as measured by Tobin's Q.

H2: Profitability has a positive effect on firm value.

Leverage represents the extent to which a firm relies on debt financing to fund its assets and operating activities and is particularly relevant to infrastructure and property and real estate firms because their capital-intensive and long-term projects commonly require substantial external financing. From the perspective of signaling theory, debt financing may convey information about management's confidence in the firm's future cash-generating capacity; a manageable level of leverage can support investment and expansion, whereas excessive leverage may increase financial risk and the likelihood of financial distress (Ross, 1977). This issue is particularly relevant during periods of elevated interest rates because higher financing costs may increase the burden associated with debt obligations. Empirical findings regarding leverage and firm value remain mixed: Majidah and Habiebah (2019) and Wiratmoko and Wiro (2025) report a positive and significant relationship, indicating that appropriately managed debt may support value creation, while Ibrahim and Isiaka (2020) provide similar evidence among Nigerian firms. In contrast, Octaviani et al. (2026) find a negative and significant effect of leverage on firm value, suggesting that excessive debt may increase investors' perceptions of financial risk. Despite these mixed findings, the present study expects that leverage, when managed at an appropriate level, can provide additional financing for long-term investment and signal management's confidence in future cash flows, thereby contributing positively to firm value as measured by Tobin's Q. H3: Leverage has a positive effect on firm value.

3. Research Method

Population and Sample

According to Sugiyono (2019), a population refers to the entire group of objects or subjects possessing specific characteristics determined by the researcher for investigation and subsequent generalization. The population of this study comprises all infrastructure and property and real estate companies listed on the Indonesia Stock Exchange (IDX) during the study period, totaling 163 companies. The sample was selected using a purposive sampling technique, which involves selecting observations based on specific criteria relevant to the research objectives (Roger Bougie, 2016). This sampling procedure resulted in 38 companies being included in the final sample. The sample selection criteria were as follows: (1) companies that published complete annual reports throughout the study period; (2) companies that provided information on ESG disclosure in their annual reports or sustainability reports throughout the study period; and (3) companies that had conducted an Initial Public Offering (IPO) and had been listed on the IDX before or at the beginning of the study period. These criteria were applied to ensure the availability and comparability of the data required to examine the relationship between ESG disclosure, profitability, leverage, and firm value.

Variables and Measurement

The dependent variable in this study is firm value, which refers to the variable affected by the independent variables in the research model (Sugiyono, 2019). Firm value is measured using Tobin's Q, which was introduced by Tobin (1969) as a market-based measure comparing the market value of a firm with the replacement value of its assets. Tobin's Q is employed because it captures investors' market valuation of a firm and its future prospects and has been widely used in studies examining corporate performance, governance, and sustainability. In addition, Jensen (1986) suggests that Tobin's Q can serve as an indicator of a firm's ability to create economic value through investment and asset management decisions. In this study, Tobin's Q is calculated as the sum of Market Value of Equity (MVE) and total debt divided by total assets, where MVE is calculated as the closing share price multiplied by the number of outstanding shares, while total debt and total assets are obtained from the firm's financial statements. The measurement is expressed as a ratio scale. The independent variables are variables that influence or cause changes in the dependent variable (Sugiyono, 2019). This study employs ESG disclosure, profitability, and leverage as the independent variables. ESG disclosure is measured using an ESG Disclosure Index (ESGDI) based on sustainability reporting indicators developed by the Global Reporting Initiative (GRI). The measurement is conducted through content analysis of firms' annual reports and sustainability reports by assigning a score of 1 when an ESG item is disclosed and 0 when it is not disclosed, with ESGDI calculated as the total number of disclosed ESG items divided by the total number of applicable ESG disclosure items; this approach is consistent with the use of content analysis in social and environmental disclosure research (Deegan, 2002). Profitability is measured using Return on Assets (ROA), which represents the firm's ability to generate net income from its total assets, calculated as net income divided by total assets multiplied by 100%. Leverage is measured using the Debt-to-Asset Ratio (DAR), which indicates the proportion of a firm's assets financed through debt (Kasmir, 2019), calculated as total debt divided by total assets multiplied by 100%. Data for ROA and DAR are obtained from the annual financial statements of the sampled firms published through the official IDX website for the 2021–2024 study period, and all three independent variables are measured using a ratio scale.

4. Results and Discussion

Table 1. Descriptive Statistical Analysis.

Variable	Mean	Max	Min	Std. Dev	N
Firm Value	0.969114	2.131570	0.153899	0.405544	152
ESG Disclosure	0.564895	0.951456	0.097087	0.206578	152
Profitability	0.027431	0.348190	-0.418788	0.070809	152
Leverage	0.529052	1.851398	0.002312	0.287331	152

Source: Output EVIEWS, 14 (2026).

Table 1 presents the descriptive statistics for all research variables. The descriptive statistics presented in Table 4.1 are based on 152 observations from 38 sampled companies during the 2021–2024 study period. The Firm Value variable has a minimum value of 0.153899, recorded by Repower Asia Indonesia Tbk. in 2023, and a maximum value of 2.131570, recorded by Garuda Maintenance Facility Aero Tbk. in 2021. The mean value of 0.969114 and standard deviation of 0.405544 indicate that, on average, firm value among the sampled companies is slightly below one (Tobin's $Q < 1$), suggesting that market valuations generally remain slightly below the asset benchmark, indicating that growth prospects and the ability to create market value have not been consistently reflected in Tobin's Q values above one. Nevertheless, the relatively large standard deviation compared with the mean indicates substantial variation in market valuation across firms. ESG Disclosure has a minimum value of 0.097087, recorded by Citra Marga Nusaphala Persada Tbk. during 2021–2024, and a maximum value of 0.951456, recorded by Cikarang Listrindo Tbk. in 2023. The mean of 0.564895 and standard deviation of 0.206578 indicate that ESG disclosure among the sampled firms is generally at a moderate to relatively high level, although considerable variation exists across firms, as reflected in the wide range between the minimum and maximum values. Profitability, measured by ROA, has a minimum value of -0.418788, recorded by Inti Bangun Sejahtera Tbk. in 2024, and a maximum value of 0.348190, recorded by Lippo Karawaci Tbk. in 2024. The mean of 0.027431 and standard deviation of 0.070809 indicate that profitability is relatively low on average, with substantial variation across firms; the negative minimum value indicates that

some firms experienced losses, whereas the maximum value reflects the ability of Lippo Karawaci Tbk. to generate earnings efficiently from its total assets. Finally, Leverage, measured by DAR, has a minimum value of 0.002312, recorded by Repower Asia Indonesia Tbk. in 2022, and a maximum value of 1.851398, recorded by Garuda Maintenance Facility Aero Tbk. in 2021. The mean of 0.529052 and standard deviation of 0.287331 indicate that, on average, the sampled firms have a relatively substantial proportion of assets financed by debt, consistent with the capital-intensive characteristics of the infrastructure sector. The maximum value exceeding one indicates that some firms had total liabilities exceeding total assets during the observed period, reflecting a relatively high level of financial risk.

Table 2. Chow Test.

Effect Test	Prob.
Cross-section F	0.0000
Cross-section F Chi Square	0.0000

Source: Output EViews, 14 (2026).

The Chow test results presented in Table 2 show a Cross-section F probability value of 0.0000 and a Cross-section Chi-square probability value of 0.0000. Since both probability values are below the 5% significance level (0.05), the null hypothesis (H_0) is rejected, indicating that the Fixed Effect Model (FEM) is more appropriate than the pooled/common effect specification for the panel data analysis. Accordingly, the analysis proceeds with the Hausman test to determine whether the Fixed Effect Model or Random Effect Model provides the more appropriate estimation method for the research model. This sequential model-selection procedure is commonly applied in panel-data regression to identify the appropriate specification between fixed and random effects.

Table 3. Hausman Test.

Test Summary	Prob.
Cross-section random	0.3261

Source: Output EViews, 14 (2026).

The Hausman test results presented in Table 2 show a probability value (p-value) of 0.3261, which is greater than the 5% significance level (0.05). Therefore, the null hypothesis (H_0) is not rejected, indicating that the Random Effect Model (REM) is more appropriate than the Fixed Effect Model (FEM) for the panel data analysis. Since the model selection results favor the REM, the analysis is subsequently continued with the Lagrange Multiplier (LM) test to determine whether the Random Effect Model provides a better specification than the Common Effect Model (CEM).

Table 4. Langrange Multiplier Test.

Null (no rand. Effect)	Cross-section
Breusch-Pagan	103.0117 (0.0000)

Source: Output EViews, 14 (2026).

The Lagrange Multiplier (LM) test results show a Breusch–Pagan statistic of 103.0117 with a probability value of 0.0000. Since the probability value is below the 5% significance level (0.05), the null hypothesis (H_0) is rejected, indicating that the Random Effect Model (REM) is more appropriate than the Common Effect Model (CEM). Therefore, based on the results of the model selection tests, the Random Effect Model (REM) is selected as the most appropriate estimation model for the panel data regression analysis in this study.

Table 5. Coefficient of Determination Test.

R-squared	0.140234
Adj. R-squared	0.122806

Source: Output EViews, 14 (2026).

The coefficient of determination, as indicated by the Adjusted R^2 value of 0.122806, shows that approximately 12.28% of the variation in firm value can be explained by the independent variables included in the model, namely ESG disclosure, profitability, and leverage. The remaining 87.72% of the variation in firm value is attributable to other factors that are not included in the regression model.

Table 6. F-Fest Statistic.

F-statistic	8.046612
Prob (F-statistic)	0.000053

Source: Output EViews, 14 (2026).

Based on the F-test results presented in Table 6, the F-statistic is 8.046612 with a probability value of 0.0000, which is below the 5% significance level. This indicates that the regression model is statistically significant simultaneously. Therefore, it can be concluded that ESG disclosure, profitability, and leverage jointly have a significant effect on firm value.

Table 7. Regression.

Variable	Coefficient	t-Statistic	Prob.
Constanta	0.745471	5.633105	0.0000
ESG Disclosure	-0.142906	-1.147462	0.2530
Profitability	-0.519963	-1.698181	0.0916
Leverage	0.602271	3.478481	0.0007

Source: Output EVIEWS, 14 (2026).

The t-test is conducted to examine whether each independent variable partially has a significant effect on firm value in the panel data regression model. Based on the t-test results presented in Table 7, the partial effects can be interpreted as follows: (1) ESG Disclosure has a probability value of $0.2530 > 0.05$, indicating that ESG Disclosure does not have a significant effect on Firm Value. (2) Profitability, measured by Return on Assets (ROA), shows a probability value of $0.0916 > 0.05$, suggesting that profitability does not significantly affect Firm Value. (3) Leverage has a probability value of $0.0007 < 0.05$, indicating that leverage has a significant effect on Firm Value.

Discussions

The Effect of Environmental, Social, and Governance (ESG) Disclosure on Firm Value

The regression results presented in Table 7 indicate that ESG disclosure does not have a significant effect on firm value, as evidenced by a probability value of 0.2530, which exceeds the 5% significance level. Therefore, Hypothesis 1 (H1) is not supported. This finding suggests that variations in the extent of ESG disclosure among the sampled firms do not significantly influence market-based firm valuation. From the perspective of legitimacy theory, ESG disclosure primarily serves as a mechanism through which firms maintain social legitimacy and demonstrate conformity with prevailing societal and regulatory expectations. Accordingly, the absence of a significant association between ESG disclosure and firm value may indicate that investors do not yet perceive ESG disclosure as a sufficiently informative signal of future corporate performance. This condition may be particularly relevant in the Indonesian infrastructure sector, where ESG reporting can remain largely compliance-driven rather than reflecting substantive and strategically integrated sustainability practices. Consequently, the quantity of ESG information disclosed may not necessarily translate into a higher market valuation when investors perceive limited differentiation in the underlying quality of corporate ESG practices. This finding is consistent with Zulianto and Aisjah (2025), who reported that ESG disclosure does not significantly affect firm value as measured by Tobin's Q. It is also consistent with Negara et al. (2024), who found a positive but statistically insignificant relationship between ESG disclosure and Tobin's Q among firms included in the ESG index of the Indonesia Stock Exchange. Furthermore, the result supports the argument of Angir and Weli (2024) that Indonesian investors may not yet fully trust ESG practices when such practices are perceived primarily as regulatory compliance rather than as genuine corporate sustainability commitments. Overall, these findings suggest that ESG disclosure alone may be insufficient to enhance firm value unless it is accompanied by credible, substantive, and strategically embedded ESG performance.

The Effect of Profitability on Firm Value

The regression results show that profitability does not significantly affect firm value, with a probability value of 0.0916, which is above the 5% significance threshold. Accordingly, Hypothesis 2 (H2) is not supported. The finding indicates that variations in profitability among the sampled firms are not sufficiently reflected in market valuations during the observation period. According to signaling theory, higher profitability should provide a positive signal regarding managerial efficiency, financial strength, and future prospects. Nevertheless, the insignificant relationship, together with the negative direction of the estimated coefficient, suggests that investors in the infrastructure sector may not consistently interpret current profitability as a primary determinant of firm value. This may be attributable to the capital-intensive nature of the sector, in which firm valuation is strongly associated with long-term investment prospects, asset expansion, project pipelines, and future cash-generating capacity rather than solely with current-period earnings. Thus, short-term profitability may provide relatively lim-

ited information about the long-term value creation potential of infrastructure firms. The finding contrasts with Sabrin et al. (2016) and Majidah and Habiebah (2019), who documented a positive and significant effect of profitability on firm value. However, the present result is in line with the broader indication reported by Octaviani et al. (2026) that the relationship between profitability and firm value in the infrastructure sector may vary according to macroeconomic conditions and interest-rate cycles. In the context of the 2021–2024 observation period, changes in economic conditions and financing costs may have reduced the extent to which profitability was translated into higher market valuations. Therefore, the effect of profitability on firm value appears to be context-dependent, particularly in capital-intensive industries exposed to substantial macroeconomic and financing risks.

The Effect of Leverage on Firm Value

The regression results demonstrate that leverage has a significant effect on firm value, with a probability value of 0.0007, which is below the 5% significance level. Accordingly, Hypothesis 3 (H3) is supported. This result indicates that capital structure, particularly the utilization of debt financing, represents an important determinant of firm value among the sampled firms. From the perspective of signaling theory, leverage can convey information regarding management's expectations concerning the firm's future cash flows and ability to meet its financial obligations. The use of debt may therefore be interpreted positively when investors perceive that additional financing is directed toward productive investments and long-term projects with the potential to generate future returns. This interpretation is particularly relevant to infrastructure and property and real estate firms, which generally require substantial capital expenditure and long-term financing to support project development and asset expansion. The significant relationship identified in this study is consistent with Azaro et al. (2020), who found that leverage has a positive and significant effect on firm value. The finding suggests that, within the context examined, investors may perceive debt financing not merely as an indicator of financial risk but also as evidence of management's confidence in the firm's future investment opportunities and cash-generating capacity. Nevertheless, this result differs from Wildan et al. (2024), who reported an inconsistent or insignificant relationship between leverage and firm value during periods characterized by monetary-policy uncertainty. Such differences imply that the valuation implications of leverage may depend on industry characteristics and macroeconomic conditions. In the present study, debt financing appears to function more strongly as a positive signal of investment capacity than as a manifestation of financial risk.

5. Conclusions

This study examines the effects of ESG disclosure, profitability, and leverage on firm value among infrastructure and property and real estate companies listed on the Indonesia Stock Exchange during the 2021–2024 period. The empirical findings indicate that ESG disclosure does not have a significant effect on firm value, with a significance level of 0.2530 (>0.05). Therefore, Hypothesis 1 (H1) is not supported, suggesting that the extent of ESG disclosure was not a significant determinant of market valuation during the observation period. Profitability also does not significantly affect firm value, as indicated by a significance level of 0.0916 (>0.05) and a negative regression coefficient of -0.519963 . Thus, Hypothesis 2 (H2) is not supported. Although the negative coefficient indicates an inverse relationship between profitability and firm value, the effect is statistically insufficient to conclude that profitability significantly determines market valuation. In contrast, leverage has a positive and significant effect on firm value, with a significance level of 0.0007 (<0.05) and a positive regression coefficient of 0.602271. Accordingly, Hypothesis 3 (H3) is supported. The finding indicates that higher leverage, measured by the Debt-to-Asset Ratio (DAR), is associated with higher firm value. This result is consistent with the signaling perspective, whereby debt financing may be perceived by investors as an indication of management's confidence in the firm's future cash-generating capacity. Overall, the F-test demonstrates that ESG disclosure, profitability, and leverage jointly have a significant effect on firm value, with a significance level of 0.000053 (<0.05). The regression model therefore provides a statistically significant framework for explaining variations in firm value. However, the model explains only 12.28% of the variation in firm value, while the remaining 87.72% is attributable to other factors outside the model. These results highlight the importance of considering additional determinants of firm value in future research, particularly those that may better capture the financial, operational, and market characteristics of infrastructure and property and real estate companies.

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