The effect of environmental, social, and governance (ESG) performance and capital structure on firm value in manufacturing companies listed on the Indonesia Stock Exchange for the 2019–2023 period

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Abstract: *This study aims to analyze the effect of Environmental, Social, and Governance (ESG) performance and capital structure on firm value in the manufacturing sector listed on the Indonesia Stock Exchange (IDX) for the period 2019–2023. ESG performance is measured using individual and combined scores from LSEG Datastream (Refinitiv). Capital structure is proxied by the Debt-to-Equity Ratio (DER), while firm value is measured using the Tobin's Q ratio. This research adopts a quantitative approach using panel data regression analysis. The sample consists of 20 manufacturing firms selected through purposive sampling. Control variables include firm size, profitability (ROA), and macroeconomic factors such as stock return sensitivity to inflation, interest rate changes, and global oil price fluctuations. The results show that partially, both individual and combined ESG scores, as well as capital structure, do not significantly affect firm value. However, ESG performance and capital structure jointly have a significant effect on firm value.*

Keywords: *ESG; Capital Structure; DER; Firm Value; Manufacturing Sector*

Introduction

A company is established to achieve the objectives set by its owners and management (Oktrima, 2017). For owners or shareholders, the primary goal is to generate optimal profits, earn returns on invested capital, and create welfare for both owners and employees. On the other hand, management focuses on achieving performance targets, which not only reflect the success of running the business but also serve as indicators of managerial effectiveness. Moreover, a business entity is expected to accommodate the needs, expectations, and demands of various stakeholders such as the public, communities, consumers, labor, government authorities, and suppliers (Freeman, 1984). This condition pushes companies to take strategic steps, optimize value creation processes, and maintain long-term performance and business continuity (Mahajan et al., 2023).

One of the key aspects in realizing these objectives is firm value, which reflects the market's perception of a company's business prospects (Yanti & Darmayanti, 2019). Firm value represents the company's current condition and is believed to capture future business prospects. It therefore becomes a major consideration for both current and potential investors in making investment decisions (Khoiroh et al., 2024). This highlights the importance of investors' assessment of firm value in projecting potential returns. Investors assess various factors to evaluate a company's worth and prospects to ensure that expected returns are aligned with the risk they undertake.

Investor behavior has shifted significantly in recent years. Investors no longer rely solely on financial indicators in assessing corporate performance. Non-financial disclosures, particularly those related to sustainability, have gained increasing attention (Ernst & Young, 2017). Sustainability encompasses environmental, social, and governance (ESG) dimensions. The environmental dimension focuses on risk mitigation related to environmental

degradation, such as preventing pollution and addressing climate change. The social dimension covers human rights protection, equality, and stakeholder relations, including employees, consumers, and communities (Shahrun et al., 2024). Governance includes risk management, transparency, accountability, and integrity practices.

ESG measures are increasingly utilized to evaluate listed companies due to their relevance to investment performance and ethical considerations (Amir & Serafeim, 2018). Gillan et al. (2021) also confirm that non-financial factors, such as ESG performance, have become indicators of a firm's long-term risks and opportunities. Amir & Serafeim (2018) note that institutional investors are incorporating ESG performance into their investment strategies due to its proven impact on corporate reputation, risk management, and long-term growth potential.

The concept of ESG has become a central issue in global business and investment practices. According to the United Nations Principles for Responsible Investment (UN PRI), signatories are integrating ESG criteria into their investment processes to support a sustainable financial system (Bauckloh et al., 2023). Furthermore, ESG reflects the implementation of the Sustainable Development Goals (SDGs), a global agenda led by the United Nations (UN) to achieve sustainable development by 2030.

ESG investment in Indonesia has been trusted and implemented by retail and institutional investors, and is only awaiting more active efforts from regulators (Tamara & Budiman, 2022). Sustainability and ESG have become priorities in several Indonesian plans, such as the Green Taxonomy launched in 2022, the Indonesia Stock Exchange (IDX) joining the SSE (Sustainable Stock Exchanges), the existence of an ESG index, and the empowerment of women on the IDX board of directors (Bursa Efek Indonesia, 2023).

In Indonesia, the issue of sustainability has been accommodated through regulations set out in the Financial Services Authority Regulation (POJK) No. 51/POJK.03/2017 concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies. This regulation mandates several categories of companies to prepare and disclose sustainability reports. With the existence of this regulation, Indonesia demonstrates its commitment to promoting the principles of sustainable finance and ensuring transparency in environmental, social, and governance (ESG) reporting. Since its implementation, the number of issuers submitting sustainability reports has increased significantly, reaching 873 issuers or 97% of the total listed companies in 2023 (Katadata, 2024).

ESG performance has been proven to enhance firm value (Aydoğmuş et al., 2022), with overall ESG scores showing a positive and significant relationship with both firm value and profitability. A similar study conducted on listed companies in Japan also indicates that environmental, social, and governance (ESG) initiatives contribute positively to firm value (Chen et al., 2024). In Indonesia, similar findings were reported, where ESG performance positively affects firm value (Adhi & Cahyonowati, 2023).

Conversely, some studies show opposite results. Prabawati & Rahmawati (2022), in their study on ASEAN countries, found that ESG negatively affects firm value. Stakeholders in developing countries generally do not emphasize non-financial factors. Investors prioritize financial aspects in decision-making; therefore, high ESG scores are not viewed as an advantage for firms. This finding aligns with Fahad & Busru (2020), who concluded that ESG scores negatively affect firm value in India. The reason lies in the lack of positive corporate behavior toward CSR activities, the absence of a sustainable investment culture among investors, and the insensitivity of consumers toward CSR practices compared to those in developed countries. Investors perceive ESG disclosures as a wasteful investment used by management to enhance firm value for personal gain rather than shareholder interest (Möller et al., 2015).

A study on Malaysian issuers revealed that ESG performance has no significant relationship with firm value (Atan et al., 2018). Similar results were found in studies on non-financial companies listed in Indonesia, where ESG disclosure levels do not significantly affect firm value. It is believed that firm value is more influenced by other factors beyond ESG disclosure. Whether ESG disclosure is minimal or optimal, it does not significantly influence market value (Rohendi et al., 2024).

One relevant industrial sector to examine this phenomenon is the manufacturing

sector, often categorized as ESG-concerned. The high ESG risk rating in manufacturing subsectors, such as consumer staples (31.6) and healthcare (30.9), indicates the substantial exposure to environmental, social, and governance risks inherent in their operational activities (Karoui et al., 2023). According to Climate Watch (2024), total greenhouse gas (GHG) emissions from the Manufacturing/Construction and Industrial Processes sectors in Indonesia reached 198 Mt CO_2e. Of this total, the Manufacturing/Construction sector contributed 162.18 Mt CO_2e, while the Industrial Processes sector contributed approximately 36.30 Mt CO_2e. Emissions from these sectors continue to increase annually.

However, on the other hand, the manufacturing sector serves as a backbone of the national economy. According to Badan Pusat Statistik Indonesia (2024), national income from the manufacturing sector in 2023 amounted to IDR 3,900.1 trillion, making it the highest contributor to national income. In both nominal and real terms, this sector consistently contributes the most to the country's value-added creation. In 2023, the nominal value added of the Manufacturing Industry reached IDR 3,900,061.7 billion, a significant increase from IDR 3,119,593.8 billion in 2019. In real terms, value added also rose from IDR 2,276,667.8 billion in 2019 to IDR 2,507,799.8 billion in 2023. Despite its high contribution to national income, the manufacturing sector faces high ESG-related risks, thus drawing increasing attention from the public and stakeholders.

Investors are increasingly imposing penalties on companies with poor ESG scores or those involved in controversies (Mahjabeen et al., 2020). In line with this, a survey conducted by Katadata Insight Center (KIC) involving 595 investors in Indonesia revealed that 66.1 percent of respondents owned shares in companies that prioritize ESG, while only 15.1 percent stated that their investments were in companies that did not emphasize ESG, and the remaining 18.8 percent were unaware of the ESG status of the companies they invested in. These findings indicate that Indonesian investors have a relatively high level of awareness regarding the importance of ESG practices in investment decision-making (Rahman, 2022). This is further supported by findings from the OJK Institute (2022), which show that domestic investors, both retail and institutional, are becoming more informed and interested in ESG aspects of investing. Investors perceive that companies with strong ESG performance tend to have better management quality and higher potential returns, making ESG one of the primary considerations in their investment strategies.

Beyond individual investor preferences, the ESG trend in Indonesia is also reflected in the significant growth of ESG-based investment flows and products. According to Bain and Company (2023), ESG-based investment inflows to Indonesia nearly reached 1.6 billion US dollars in 2023, growing approximately 28 percent compared to the previous year (Kompas.id, 2024). Data from OJK also reported that as of May 2022, there were 25 ESG-themed mutual funds in Indonesia with a total asset under management of approximately 3.5 trillion rupiahs (Kusno et al., 2024). Furthermore, as of November 2024, the total asset under management in Indonesia's ESG indices, namely the ESG Leaders and SRI Kehati indices, reached 7.4 trillion rupiahs, representing a 204-fold increase compared to 2015. Additionally, the number of ESG investment products in the market grew 24 times during the 2015 to 2024 period (Bisnis Indonesia, 2025).

Nevertheless, despite the notable rise in ESG-related practices in Indonesia evident from the increase in ESG scores of manufacturing companies listed on the Indonesia Stock Exchange from 47.24 in 2019 to 51.23 in 2023, the firm value as measured by the Tobin's Q ratio experienced a decline over the same period, dropping from 2.30 in 2019 to 1.71 in 2023. This empirical gap is not only reflected in the aggregate ESG score and Tobin's Q data for the manufacturing sector, but is also evident in the stock market performance of several issuers that have consistently been recognized as ESG leaders. For instance, PT Semen Indonesia Persero Tbk and PT Unilever Indonesia Tbk, both listed in the ESG Star Listed Companies by the Indonesia Stock Exchange (2025), have experienced significant declines in their stock prices over the past five years. Based on TradingView (2025), the share price of PT Semen Indonesia has dropped by 69.28 percent, while PT Unilever Indonesia saw an even sharper decline of 78.30 percent from 2020 to 2025.

This condition gives rise to an empirical gap in which the improvement in ESG performance has not been positively responded to by the market in the form of increased firm value. In theory, and based on surveys and investor trends that increasingly consider sustainability aspects, companies with strong ESG performance should be able to create higher value in the eyes of investors. The inconsistency between the direction of increasing ESG scores and the decreasing Tobin's Q ratio becomes an important issue that needs further examination, particularly in the context of manufacturing companies in Indonesia.

Aside from ESG performance, capital structure is also an important characteristic worth considering in explaining firm value dynamics, particularly in the manufacturing sector. This is based on the characteristic of the manufacturing sector as a capital-intensive industry, in which companies require significant investments in fixed assets such as factories, machinery, and production equipment (Madhani, 2015). This substantial funding requirement drives companies to make strategic decisions regarding their capital structure, whether through debt or equity.

Data from the Financial Services Authority (OJK) shows that as of November 2023, approximately 15.87 percent of total national bank credit was distributed to the manufacturing sector, making it one of the sectors with the largest credit absorption (AntaraNews, 2024). During the same period, credit growth in this sector was recorded at 4.84 percent on a year-on-year basis. This increase mainly occurred in strategic sub sectors such as food and beverages, basic metals, and basic chemicals. The high credit allocation indicates that manufacturing companies have significant financing needs, which are closely related to capital structure decisions. OJK also considers the manufacturing sector as one of the sectors that remains prospective for bank financing, especially due to its substantial contribution to the national economy (AntaraNews, 2025).

Furthermore, data from several manufacturing issuers listed on the Indonesia Stock Exchange also show a trend of increasing Debt to Equity Ratio from 2019 to 2023. However, behind this increase in financing, there are significant risks to be aware of, particularly related to corporate capital structures that rely heavily on debt. Several large companies in the manufacturing sector have experienced defaults on issued debt securities. Nevertheless, a high dependence on external financing, especially debt, can also become a double-edged sword if not managed properly. An overly aggressive capital structure that excessively utilizes debt can increase the company's financial risk, particularly under unstable economic conditions or when operating cash flows are insufficient to meet short term obligations. One concrete example is PT Wijaya Karya Persero Tbk, a state owned construction company that also operates in manufacturing, which defaulted on two maturing debt securities in early 2024 with a total value of 495.47 billion rupiahs (IDNFinancials, 2025).

Another example of the impact of poor capital structure management is the bankruptcy of PT Sri Rejeki Isman Tbk (Sritex), once known as the textile king of Southeast Asia. According to the bankruptcy curator's report, Sritex had total debts amounting to 29.8 trillion rupiahs, with the largest portion originating from concurrent creditors or unsecured creditors totaling 24.7 trillion rupiahs. This massive debt burden could not be borne by the company, which ultimately led to Sritex being officially declared bankrupt in October 2024 (Tempo.co, 2025). This case highlights that decisions regarding capital structure must be taken with great caution, as mistakes in financing strategies can destroy a company's value and sustainability, reduce investor confidence, and lead to downgrades in company ratings.

In this regard, various empirical studies have been conducted to understand the extent to which capital structure affects firm value, both in terms of risks and potential benefits. These studies have yielded diverse conclusions. Akin et al. (2024) found that capital structure positively influences firm value, especially in large firms that significantly utilize debt. A study conducted in Ghana by Antwi et al. (2012) also revealed that long term debt is the main determinant of firm value, and its use is recommended over equity. In Indonesia, Uzliawati et al. (2018) discovered that both the Debt-to-Equity Ratio and Long-term Debt to Asset Ratio positively and significantly affect firm value, supporting the tradeoff theory. This theory suggests that firms gain advantages from using debt such as tax shields, but must balance these with the risk of bankruptcy or financial

distress. Therefore, debt usage in capital structure can increase firm value as long as it remains within optimal limits.

On the other hand, Luu (2021) found that in chemical companies listed on the Vietnamese stock market, capital structure as measured by the debt ratio negatively correlates with firm value measured by the Tobin's Q ratio. This occurs due to the increase in debt usage, which reduces firm value because of higher financial risk and interest expense burdens. Similar findings were reported by Dang et al. (2019), stating that capital structure negatively influences enterprise value. Excessive debt increases the potential for bankruptcy and agency costs, while also worsening investor perceptions of the firm. Research in Indonesia by Ristiyana et al. (2024) supports this result. The increase in debt causes a rise in the cost of capital and a decline in earnings per share, ultimately leading to a decrease in firm value.

Another study by Murni et al. (2022) concluded that capital structure does not significantly influence firm value, because investors' perceptions are more influenced by other fundamental performance indicators. Similarly, Oktaviani et al. (2019) found that capital structure has no significant effect on the Price-to-Book Value ratio, and that dividend distribution does not mediate this relationship.

Considering these inconclusive conditions and empirical studies, further research is needed regarding capital structure in the manufacturing sector, especially in relation to firm value. Choosing the appropriate capital structure is essential for a company's ability to maintain long term financial stability and create sustainable value for shareholders. Therefore, examining how capital structure, particularly the composition of debt in corporate financing, affects firm value becomes relevant and urgent, especially amid rising external pressures such as high interest rates, global economic uncertainty, and elevated default risks affecting Indonesia's manufacturing sector.

Previous studies have generally tested the effect of ESG or capital structure separately on firm value. However, both factors have complementary characteristics where ESG represents nonfinancial aspects increasingly considered by investors, while capital structure reflects a company's financial fundamentals and funding capacity. Thus, this study analyzes both variables simultaneously to provide a more comprehensive insight into the factors that influence firm value and to serve as strategic considerations for investors and other stakeholders.

In addition to internal factors such as ESG performance and capital structure, firm value is also heavily influenced by macroeconomic conditions that are beyond managerial control. In recent years, Indonesia has experienced significant economic fluctuations. The inflation rate, for instance, was as low as 1.32 percent in 2020 but rose sharply to 5.95 percent in 2022 (Bank Indonesia, 2025). These macroeconomic conditions indicate that external economic fluctuations can influence firm value and should therefore be considered as control variables in this study.

Literature Review and Hypothesis Development

Stakeholder Theory

Stakeholder Theory, introduced by Freeman in 1984, fundamentally redefines the purpose of firms beyond the traditional shareholder-centric model, emphasizing the importance of managing relationships with a diverse array of stakeholders to ensure long-term sustainability and value creation. This comprehensive approach recognises stakeholders as any individuals or groups affected by the company's activities, encompassing employees, customers, suppliers, communities, regulatory bodies, and even the environment. The theory advocates for inclusive decision-making processes that consider the interests and expectations of all these parties, thereby fostering ethical governance and social responsibility. Its principles closely align with contemporary environmental, social, and governance (ESG) practices, which aim to meet stakeholder expectations through responsible and sustainable strategies. Such ESG initiatives not only enhance a firm's reputation and competitive edge but also contribute to increased firm value by building trust, mitigating risks, and promoting operational efficiency, as evidenced in studies by Eccles et al. (2014) and Mahajan et al. (2023).

Legitimacy Theory

Legitimacy Theory, as conceptualised by Dowling and Pfeffer (1975), posits that

organisations must operate in concordance with prevailing societal norms, values, and expectations to secure and sustain their legitimacy, which is pivotal for continued operations and public trust. This perceived legitimacy serves as a foundational element that influences how stakeholders view and interact with a firm, contributing to its long-term stability and success (Deegan, 2002; Suchman, 1995). In this context, Environmental, Social, and Governance (ESG) disclosures have emerged as strategic tools, especially within industries highly exposed to environmental scrutiny, such as manufacturing. Firms actively utilise ESG reporting not only to demonstrate compliance and accountability but also to proactively manage perceptions, aiming to either uphold or recover their legitimacy when challenged (Cho et al., 2015; Deegan, 2023). Furthermore, robust ESG performance is instrumental in mitigating reputational risks, fostering greater stakeholder confidence, and reinforcing an organisation's social licence to operate (Pineiro-Chousa et al., 2017). Therefore, based on Stakeholder Theory and Legitimacy Theory, the following hypotheses are proposed:

H_1: *The environmental performance has a significant effect on firm value in manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2019 to 2023 period.*

H_2: *The social performance has a significant effect on firm value in manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2019 to 2023 period.*

H_3: *The governance performance has a significant effect on firm value in manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2019 to 2023 period.*

H_4: *The environmental, social, and governance performance collectively has a significant effect on firm value in manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2019 to 2023 period.*

Trade off Theory

The Trade-off Theory, introduced by Kraus and Litzenberger (1973) and further developed by Myers (1984), posits that firms strive to attain an optimal capital structure by carefully balancing the benefits and costs associated with debt financing. On one hand, debt provides significant tax advantages through interest tax deductions, which can enhance the firm's value. However, these benefits are countered by the potential risks and costs linked to high levels of debt, including the increased probability of financial distress, bankruptcy risks, and agency costs as highlighted by Altman (1984). Firms characterized by substantial tangible assets and stable cash flows—commonly found in the manufacturing sector—are generally perceived to have a higher debt capacity since their assets can serve as collateral, reducing lender risk (Rajan & Zingales, 1995). This dynamic interplay between tax benefits and financial risks forms the core of the Trade-off Theory, guiding firms in making strategic financing decisions to optimise their capital structure. Therefore, based on Trade off Theory, the following hypothesis is proposed: **H_5:** Capital structure has a significant effect on firm value in manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2019 to 2023 period.

Integration of Stakeholder Theory, Legitimacy Theory, and Trade off Theory

A comprehensive integration of these theories suggests that ESG (Environmental, Social, and Governance) practices play a pivotal role in enhancing stakeholder trust by demonstrating a company's commitment to ethical operations, social responsibility, and environmental stewardship. This heightened trust fosters stronger relationships with key stakeholders, including investors, customers, and employees, thus bolstering the company’s organizational legitimacy in the broader societal context. Simultaneously, maintaining an efficient capital structure ensures optimal allocation of financial resources, reducing costs and improving the company’s financial performance through effective risk management and strategic investment decisions. The synergistic effect of robust ESG practices and a well-structured capital framework not only fortifies the company’s

market position but also contributes to the sustained growth and long-term value of the firm, reflecting a holistic approach to corporate success. Therefore, the following hypothesis is proposed:

H₆: *The environmental, social, and governance performance and capital structure of issuers simultaneously have a significant effect on firm value in manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2019 to 2023 period.*

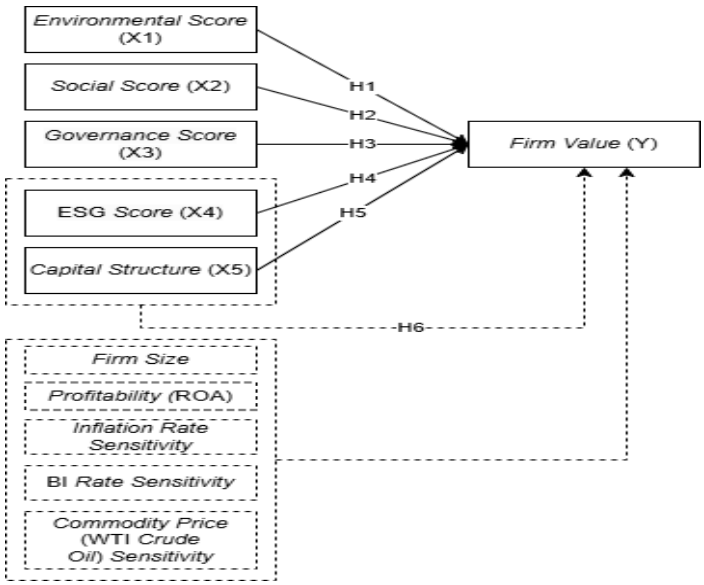

Figure 1. *Research Framework*

Research Method

Population and Sample

The sampling technique employed in this study is purposive sampling, where the researcher establishes specific criteria to ensure that only units meeting these requirements are included in the sample. The selected sample consists of manufacturing sector companies listed on the Indonesia Stock Exchange during the 2019 to 2023 period, which have available ESG scores in the Refinitiv Eikon database and provide complete data relevant to this study throughout the observed period.

Table 1. *Sample Selection Criteria*

Sample Criteria	Number
Manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period	548
Companies without ESG scores available in the Refinitiv Eikon Database during the 2019–2023 period	(511)
Companies that did not provide complete data relevant to this study during the 2019–2023 period	(17)
Companies meeting all criteria	20
Observation years	5
Total sample	100

Independent Variables

The independent variables in this study include environmental, social, and governance (ESG) performance, as well as capital structure. ESG performance is proxied by the ESG score obtained from the Refinitiv (LSEG) database. The ESG score is based on ten categories grouped into three main pillars: environmental, social, and governance. Scores are adjusted for industry materiality using a matrix and graded from 0 to 100. In this study, ESG scores are lagged by one period to reflect delayed market responses, following prior research (Atan et al.,

2018; Makridou et al., 2024). Capital structure is measured by the debt-to-equity ratio (DER), calculated as total liabilities divided by total equity. DER reflects a firm's financial leverage and risk exposure. This measure aligns with trade-off and pecking order theories and is widely used in previous literature (Adamu & Hamidah, 2023; Uzliawati et al., 2018).

Dependent Variable

Firm value, serving as the dependent variable in this context, is effectively proxied by Tobin's Q, a widely recognised financial metric that provides an insightful measure of a firm's market performance. Tobin's Q is meticulously calculated by adding the market value of equity to the total debt and then dividing this sum by the total assets, as articulated by Chung and Pruitt (1994). This ratio is particularly significant because it encapsulates the perspectives of both shareholders and creditors, thereby offering a holistic view of a firm's valuation. It reflects not only the firm's current market standing but also its potential for future growth and profitability, making it a comprehensive tool for assessing the efficiency with which a firm utilises its assets to generate value. This dual-perspective approach ensures that the ratio is robust and informative, catering to diverse stakeholders interested in the firm's financial health and strategic positioning.

Control Variables

To ensure the robustness of the relationship between the independent and dependent variables, several control variables are incorporated in this study. Firm size is measured by the natural logarithm of total assets and represents the company's scale and capacity to generate value. Profitability is assessed using return on assets (ROA), calculated as net income divided by total assets, to capture the firm's operational efficiency. Additionally, macroeconomic sensitivities are accounted for by evaluating the firm's responsiveness to inflation, interest rate (BI7DRR), and global commodity price (WTI crude oil) changes. These are measured through time-series regression of stock returns on macroeconomic variables. The resulting beta coefficients quantify the firm's exposure to each macroeconomic factor. Data for these variables are obtained from the official websites of Bank Indonesia and the U.S. Energy Information Administration.

Table 2. *Operational Definition of Variables*

Variable Name	Indicator	Scale
Independent Variables (X)		
ESG Performance	Refinitiv ESG Score (t-1)	Ratio
Capital Structure	Debt-to-Equity Ratio	Ratio
Dependent Variable (Y)		
Firm Value	Tobin's Q	Ratio
Control Variables		
Firm Size	Ln (Total Assets)	Ratio
Profitability	ROA	Ratio
Inflation Rate Sensitivity	SENS_INF	Ratio
BI Rate Sensitivity	SENS_BIRATE	Ratio
WTI Crude Oil Sensitivity	SENS_WTI	Ratio

Data Analysis Method

This study utilises panel data regression, an advanced econometric technique that integrates both time series and cross-sectional data, thereby enhancing the precision of estimations and effectively accounting for individual heterogeneity across different entities and time periods. By leveraging the strengths of this method, the study ensures a more robust analysis that captures the dynamic relationships and variations within the data. To thoroughly examine and validate the research hypotheses, two distinct panel regression models are implemented, enabling a comprehensive exploration of the variables of interest while controlling for unobserved heterogeneity and mitigating potential biases that could arise from using either time series or cross-sectional data alone.

Model I:

$$TBQ_{it} = \alpha + \beta_1 ENV_{it-1} + \beta_2 SOC_{it-1} + \beta_3 GOV_{it-1} + \beta_4 SIZE_{it} + + \beta_5 ROA_{it} + \beta_6 SENS\_INF_{it} + \beta_7 SENS\_BIRATE_{it} + \beta_8 SENS\_WTI_{it} + \varepsilon_{it}$$

This model is used to test H_1, H_2, and H_3.
Where:

- TBQ_{it} = Firm value (Tobin's Q) for firm i in year t
- α = Intercept
- $\beta_1, \beta_2, \ldots, \beta_8$ = Regression coefficients for each explanatory variable
- ENV_{it-1} = Environmental performance (Environmental Score) of firm i in year $t-1$
- SOC_{it-1} = Social performance (Social Score) of firm i in year $t-1$
- GOV_{it-1} = Governance performance (Governance Score) of firm i in year $t-1$
- $SIZE_{it}$ = *Firm Size* of firm i in year t (control variable)
- ROA_{it} = Profitability of firm i in year t (control variable)
- $SENS\_INF_{it}$ = Inflation sensitivity of firm i in year t (control variable)
- $SENS\_BIRATE_{it}$ = Interest rate sensitivity of firm i in year t (control variable)
- $SENS\_WTI_{it}$ = WTI crude oil price sensitivity of firm i in year t (control variable)
- ε_{it} = *Error term* for firm i in year t

Model II:

$$TBQ_{it} = \alpha + \beta_1 ESG_{it-1} + \beta_2 DER_{it} + \beta_3 SIZE_{it} + \beta_4 ROA_{it} + + \beta_5 SENS\_INF_{it} + \beta_6 SENS\_BIRATE_{it} + \beta_7 SENS\_WTI_{it} + \varepsilon_{it}$$

This model is used to test H_4, H_5, and H_6. Where:

- ESG_{it-1} = ESG score of firm i in year $t-1$
- DER_{it} = Capital structure (Debt-to-Equity Ratio) of firm i in year t

Result and Discussion

Descriptive Statistics

The descriptive statistics for the research variables are presented in Table 3. The Environmental Score ranges from a minimum of 4.92 to a maximum of 88.59, with a mean of 48.94 and a standard deviation of 20.95, indicating substantial variation among companies. The Social Score has a minimum value of 12.01 and a maximum of 93.48, showing a slightly higher mean (54.07) compared to the Environmental Score, with a similar degree of dispersion (standard deviation = 20.16). The Governance Score exhibits a broad range, spanning from 2.98 to 94.56, and has a mean of 46.22, accompanied by the highest standard deviation among ESG dimensions at 22.56, highlighting considerable variability in governance practices across the sampled companies. The overall ESG Score, aggregating environmental, social, and governance aspects, ranges from 13.06 to 89.17, with a mean of 50.34 and a standard deviation of 19.36, suggesting a balanced distribution across these dimensions.

Table 3. *Descriptive Statistics of Research Variables*

Variable	Min	Max.	Mean	Std. Deviation
Environmental Score	4,92	88,59	48,94	20,95
Social Score	12,01	93,48	54,07	20,16
Governance Score	2,98	94,56	46,22	22,56
ESG Score	13,06	89,17	50,34	19,36
Debt-to-Equity Ratio	0,11	0,99	0,46	0,21
Tobin's Q	0,69	16,26	2,22	2,53

In terms of financial variables, the Debt-to-Equity Ratio ranges from 0.11 to 0.99, with an average value of 0.46, reflecting relatively moderate leverage across the sample, and has a standard deviation of 0.21, indicating limited dispersion. Finally, Tobin's Q, a proxy for firm valuation, demonstrates considerable variability, ranging from 0.69 to 16.26, with a mean of 2.22 and a relatively high standard deviation of 2.53, indicating diverse market valuations among the analyzed firms.

Model Selection Tests

Panel regression model selection involves three tests: the Chow test, the Hausman test, and the Lagrange Multiplier (LM) test. These are applied to both Model I and Model II to determine the most appropriate model among

the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The Chow test compares CEM and FEM. Both Model I and Model II yield p-values < 0.05, indicating that FEM is more appropriate. The Hausman test compares FEM and REM. Both models produce p-values < 0.05, confirming FEM is superior.

Panel Regression Analysis- Fixed Effect

The results of the fixed-effect panel regression analysis for Models I and II are presented in Table 4. In Model I, environmental (ENV), social (SOC), and governance (GOV) scores from the preceding year were individually assessed for their effects on firm value (Tobin's Q). The results indicate negative but statistically insignificant relationships for both ENV (β = -0.012, p = 0.232) and GOV (β = -0.010, p = 0.501), and a positive yet insignificant relationship for SOC (β = 0.006, p = 0.483). Among the control variables, only profitability (ROA) significantly influences Tobin's Q positively (β = 7.340, p = 0.009). Firm size (SIZE) and sensitivities to inflation (SENS_INF), interest rate (SENS_BIRATE), and WTI crude oil price (SENS_WTI) were not significant. The high R-squared value (0.917) and the significant Prob(F-statistic) value (p = 0.000) indicate strong explanatory power of the model.

In Model II, the aggregate ESG score from the prior year and capital structure (Debt-to-Equity Ratio or DER) are evaluated as predictors of firm value. ESG score shows a negative but insignificant coefficient (β = -0.018, p = 0.150). Similarly, DER reveals a negative and insignificant association with Tobin's Q (β = -2.892, p = 0.148). Again, profitability (ROA) emerges as a significant determinant, positively affecting firm value (β = 5.313, p = 0.024). Firm size and sensitivity variables (inflation, interest rate, WTI crude oil price) remain statistically insignificant in this model as well. Model II exhibits a comparable R-squared value (0.918) and significant Prob(F-statistic) (p = 0.000), confirming robust model fit.

Table 4. *Panel Data Regression Estimation Results*

	Model I		**Model II**	
	β	**Prob.**	**β**	**Prob.**
C	28.664	0.089	25.297	0.056
ENV	-0.012	0.232		
SOC	0.006	0.483		
GOV	-0.010	0.501		
ESG			-0.018	0.150
DER			-2.892	0.148
SIZE	-0.834	0.118	-0.674	0.116
ROA	7.340	0.009	5.313	0.024
SENS_INF	0.095	0.783	-0.018	0.974
SENS_BIRATE	0.000	0.821	0.001	0.855
SENS_WTI	-20.775	0.282	-27.749	0.092
R-squared	0.917		0.918	
Prob(F-statistic)	0.000		0.000	

The findings from the analysis highlight that profitability, as measured by Return on Assets (ROA), consistently emerges as a significant determinant of firm value, underscoring its pivotal role in shaping financial performance and market perception. This consistent significance suggests that firms with higher ROA are perceived as more efficient in utilising their assets to generate earnings, thereby enhancing their overall value. In contrast, Environmental, Social, and Governance (ESG) related scores, along with the capital structure of firms, do not exhibit any notable direct effects on Tobin's Q within the context of this study. This indicates that, despite growing attention towards sustainable practices and financial leverage

decisions, these factors may not directly translate into immediate market valuation benefits when isolated from other variables. Hence, the emphasis on profitability remains paramount for firms aiming to maximise their market value, while ESG initiatives and capital structuring may exert their influence through more indirect or long-term channels.

Discussion

The Effect of Environmental Performance on Firm Value

The t-test results show that environmental performance does not significantly affect firm value (p-value > 0.05), consistent with previous findings (Amira & Siswanto, 2022; Atan et al., 2018; Aydoğmuş et al., 2022; Rasyad et al., 2024). This insignificance can be explained by the long-term nature of environmental initiatives, which often require substantial upfront investment. As a result, their benefits may not yet be reflected in short-term market valuations (Aydoğmuş et al., 2022). From the perspective of Legitimacy Theory and Stakeholder Theory, although environmental performance can strengthen corporate legitimacy and stakeholder relations, its effect on firm value remains limited because investors in Indonesia tend to focus more on short-term financial information (Handayani, 2023). Moreover, environmental initiatives in the Indonesian manufacturing sector are still in early stages, and many firms remain skeptical about the direct economic benefits or face limited access to sustainable financing (Fransisca et al., 2025).

The Effect of Social Performance on Firm Value

The t-test results show that social performance does not significantly affect firm value (p-value > 0.05), in line with previous studies (Atan et al., 2018; Ni'mah & Kusumaningtias, 2025; Wangi & Aziz, 2023). This insignificance may stem from the complexity of directly measuring the financial impact of social initiatives, variation in stakeholder expectations, and cultural differences across ASEAN (Handoyo & Anas, 2024; Oduro et al., 2022). Many firms undertake social activities more out of moral obligation or regulatory pressure rather than as a strategic business decision, resulting in symbolic rather than substantive actions that offer little tangible value to the market (Firmansyah et al., 2021). Additionally, the relationship between social and financial performance may be U-shaped, where significant benefits emerge only after substantial investment (Barnett & Salomon, 2006). This phenomenon is reinforced by Indonesian investors' prevailing preference for financial disclosures, despite a growing awareness of sustainable investing (Handayani, 2023).

The Effect of Governance Performance on Firm Value

The t-test results indicate that governance performance does not significantly affect firm value (p-value > 0.05), consistent with earlier research (Anita et al., 2025; Kim et al., 2018; Prabawati & Rahmawati, 2022). This insignificance may be due to the compliance-based implementation of governance practices, which are often viewed merely as minimum regulatory requirements and do not translate into value-added for investors (Chanry et al., 2023; Ergene & Karadeniz, 2021). From the Stakeholder and Legitimacy Theory perspectives, if governance practices are not visible or credible to key stakeholders, or not accompanied by solid financial performance, their effect on firm value may be negligible. In developing markets, investor attention remains focused on financial fundamentals, further reducing the perceived importance of governance attributes (Prabawati & Rahmawati, 2022).

The Effect of ESG Performance on Firm Value

The t-test shows that overall ESG performance does not significantly affect firm value (p-value > 0.05), consistent with other studies (Ni'mah & Kusumaningtias, 2025; Wahyuni et al., 2024; Xaviera & Rahman, 2023). This result can be attributed to several factors: the dominant short-term financial focus of Indonesian investors (Narulita et al., 2025); the market's weak-form efficiency, which delays ESG-related valuation adjustments (Aydoğmuş et al., 2022; Hadianto et al., 2021); firm-specific lifecycle effects (Xaviera & Rahman, 2023); greenwashing concerns that generate skepticism (Fatemi et al., 2018); and the relatively nascent, fragmented, and unaudited

ESG regulatory framework in Indonesia (Bing & Li, 2019; Korwatanasakul & Majoe, 2021). Theoretically, these findings suggest that unless ESG efforts are implemented with transparency and consistency, investors may not fully incorporate them into firm value, despite their relevance to stakeholders and legitimacy.

The Effect of Capital Structure on Firm Value

The t-test analysis indicates that the Debt to Equity Ratio (DER) does not exhibit a significant influence on firm value, as evidenced by a p-value greater than 0.05, corroborating findings from earlier research conducted by Murni et al. (2022), Oktaviani et al. (2019), and Tambuwun et al. (2024). This outcome can be attributed to the diverse perceptions and preferences of investors concerning capital structure decisions, as highlighted by Murni et al. (2022). While it is recognised that elevated levels of debt can heighten the risk of financial distress and potentially diminish net profits, effective debt management strategies can mitigate these risks and contribute positively to long-term financial health. Additionally, companies with consistent and stable earnings are often viewed as less risky investments, thereby rendering fluctuations in leverage less impactful on their market valuation, as supported by Evianti et al. (2024). This phenomenon is consistent with the principles of the Trade-Off Theory, which suggests that once an optimal capital structure is achieved, any further adjustments in debt levels, whether increases or decreases, are unlikely to significantly influence the firm's overall value.

The Simultaneous Effect of ESG and DER on Firm Value (Simultaneous F-Test)

The F-test results indicate that ESG and DER jointly have a significant effect on firm value (F-statistic = 31.37938; p-value < 0.05). This simultaneous influence can be explained through Stakeholder Theory, where firms that manage ESG effectively gain stakeholder trust, reputational advantage, and long-term business sustainability (Freeman, 1984). Legitimacy Theory is also applicable, as higher ESG scores increase public and investor confidence, consistent with prior studies showing a positive ESG–value relationship (Aydoğmuş et al., 2022; Chen et al., 2024). Meanwhile, Trade-Off Theory suggests that optimal capital structure balances tax shield benefits from debt against bankruptcy risk (Kraus & Litzenberger, 1973; Modigliani & Miller, 1963). Therefore, the integration of sound sustainability practices (ESG) and efficient capital structure (DER) collectively exerts a significant impact on firm value.

Conclusion

This study concludes that environmental, social, and governance (ESG) performance, both individually and collectively, does not significantly influence firm value in the Indonesian manufacturing sector. The limited impact of environmental initiatives may stem from their long-term nature and delayed market response. Similarly, social and governance efforts are often compliance-driven and undervalued by a market that still prioritizes short-term financial outcomes. Capital structure, measured through the debt-to-equity ratio (DER), also shows no significant individual effect, likely due to earnings stability and near-optimal leverage levels in the sector. However, ESG and capital structure jointly exert a significant influence on firm value, supporting the relevance of Stakeholder and Trade-Off Theories in explaining firm performance when sustainability and financial strategy are integrated.

The study faces several limitations that could affect the depth and generalizability of its findings. Firstly, the relatively small sample size poses a constraint, as only a limited number of manufacturing firms provided complete Environmental, Social, and Governance (ESG) data for the period from 2019 to 2023. This limitation restricts the statistical power of the study and may hinder the ability to detect subtle trends or patterns within the data. Additionally, a short observation period of just five years may not be sufficient to fully capture the long-term effects of ESG integration on firms' capital structures. ESG strategies and their impacts often evolve over longer timelines, meaning significant developments or shifts might be overlooked. Moreover, the absence of qualitative data further narrows the scope of the research. Without insights from interviews, case studies, or narrative analyses, the study lacks a deeper exploration into the practical challenges firms face when implementing ESG strategies, the regulatory dynamics influencing

these efforts, and how companies strategically position themselves within the ESG landscape.

Future research can address these gaps by adopting more comprehensive models that include mediating or moderating variables, which can help uncover complex relationships between ESG factors and capital structure. Applying advanced analytical techniques, such as structural equation modeling or machine learning algorithms, could also provide more nuanced insights. Additionally, integrating qualitative approaches, like in-depth interviews with industry stakeholders or case studies of specific firms, can enrich the understanding of contextual factors that quantitative data alone cannot reveal. From a practical standpoint, it is recommended that manufacturing firms embed ESG considerations into their core business strategies and strive to improve the transparency and consistency of their ESG reporting standards. Investors are encouraged to systematically incorporate ESG factors into their investment decision-making processes to better assess potential risks and opportunities. Lastly, regulators play a crucial role in fostering a sustainable financial ecosystem by developing harmonized, enforceable ESG frameworks and continuously monitoring firms' capital structures to mitigate potential systemic risks.

References

Adamu, I., & Hamidah, H. (2023). Assessing The Impact of Capital Structure on Firm Value: A Quantitative Study of Financial Ratios and Stock Prices of Nigeria Food and Beverage Companies. *The Indonesian Journal of Accounting Research*, *26*(03), 483–516. https://doi.org/10.33312/ijar.729

Adhi, R. E., & Cahyonowati, N. (2023). Pengaruh Environmental, Social, And Governancedisclosure Terhadap Nilai Perusahaan Denganukuran Perusahaan Sebagai Variabel Moderasi(Studi Empiris Perusahaan Non-Keuangan di Bursa Efek IndonesiaTahun 2019-2021). *Diponegoro Journal of Accounting*, *12*(3), 1–12.

Akin, I., Akin, M., Satiroglu, H., & Jhamb, M. (2024). Influence of Growth, Capital Structure, Profitability, and Size on FTSE 100 Enterprise Value. *Journal of Corporate Accounting and Finance*, 1–12. https://doi.org/10.1002/jcaf.22761

Altman, E. I. (1984). A Further Empirical Investigation of the Bankruptcy Cost Question. *The Journal of Finance*, *39*(4), 1067–1089. https://doi.org/10.1111/j.1540-6261.1984.tb03893.x

Amir, A. Z., & Serafeim, G. (2018). Why and how investors use ESG information: Evidence from a global survey. *Financial Analysts Journal*, *74*(3), 87–103. https://doi.org/10.2469/faj.v74.n3.2

Amira, A., & Siswanto, S. (2022). Pengaruh Penerapan Akuntansi Lingkungan terhadap Nilai Perusahaan Consumer Non-Cyclicals yang Terdaftar di Bursa Efek Indonesia. *Jurnal Pajak Dan Keuangan Negara (PKN)*, *4*(1S), 200–210. https://doi.org/10.31092/jpkn.v4i1s.1764

Anita, Hernawati, E., & Rossa, V. D. (2025). Pengungkapan Environmental Social Governance (ESG) terhadap Nilai dan Kinerja Perusahaan di Indonesia. *Liabilitas: Jurnal Ilmiah Ekonomi Dan Akuntansi*, *10*(1), 20–30.

AntaraNews. (2024, January 13). OJK proyeksikan kredit di sektor manufaktur tumbuh drastis pada 2024. *AntaraNews*. https://www.antaranews.com/berita/3914352/ojk-proyeksikan-kredit-di-sektor-manufaktur-tumbuh-drastis-pada-2024#google_vignette

AntaraNews. (2025, April 28). OJK ungkap sektor yang masih prospektif untuk dibiayai perbankan. *AntaraNews*. https://www.antaranews.com/berita/4800565/ojk-ungkap-sektor-yang-masih-prospektif-untuk-dibiayai-perbankan

Antwi, S., Mills, E. F. E. A., & Zhao, X. (2012). Capital Structure and Firm Value: Empirical Evidence from Ghana. *International Journal of Business and Social Science*, *3*(22), 103–111.

Atan, R., Alam, M. M., Said, J., & Zamri, M. (2018). The impacts of environmental, social, and governance factors on firm performance: Panel study of Malaysian companies. *Management of Environmental Quality: An International Journal*, *29*(2), 182–194. https://doi.org/10.1108/MEQ-03-2017-0033

Aydoğmuş, M., Gülay, G., & Ergun, K. (2022). Impact of ESG performance on firm value and profitability. *Borsa Istanbul Review*,

22, S119–S127. https://doi.org/10.1016/j.bir.2022.11.006

Badan Pusat Statistik Indonesia. (2024). Pendapatan Nasional Indonesia 2019-2023. In *Badan Pusat Statistik*. https://www.bps.go.id/publication/download.html?nrbvfeve=MWJjNjZmMmE3YzJlOGZjY2JmYTE1ODBm&xzmn=aHR0cHM6Ly93d3cuYnBzLmdvLmlkL3B1YmxpY2F0aW9uLzIwMjIvMDYvMDkvMWJjNjZmMmE3YzJlOGZjY2JmYTE1ODBmL3BlbmRhcGF0YW4tbmFzaW9uYWwtaW5kb25lc2lhLTIwMTctMjAyMS5odG1s&twoadfn

Bank Indonesia. (2025). *Data Inflasi*. https://www.bi.go.id/id/statistik/indikator/data-inflasi.aspx

Barnett, M. L., & Salomon, R. M. (2006). Beyond dichotomy: The curvilinear relationship between social responsibility and financial performance. *Strategic Management Journal*, *27*(11), 1101–1122. https://doi.org/10.1002/smj.557

Bauckloh, T., Schaltegger, S., Utz, S., Zeile, S., & Zwergel, B. (2023). Active First Movers vs. Late Free-Riders? An Empirical Analysis of UN PRI Signatories' Commitment. In *Journal of Business Ethics* (Vol. 182, Issue 3). Springer Netherlands. https://doi.org/10.1007/s10551-021-04992-0

Bing, T., & Li, M. (2019). Does CSR signal the firm value? Evidence from China. *Sustainability (Switzerland)*, *11*(15), 1–22. https://doi.org/10.3390/su11154255

Bisnis Indonesia. (2025, January 12). Minat Investasi ESG Tumbuh, Dana Kelolaan Tembus Rp7,4 Triliun. *Bisnis Indonesia Premium*. https://hijau.bisnis.com/read/20250112/653/1830885/minat-investasi-esg-tumbuh-dana-kelolaan-tembus-rp74-triliun#:~:text="ESG merupakan aspek yang bukan,keputusan investasi oleh investor%2C" katanya

Bursa Efek Indonesia. (2023, April). *IDXBELL MONTHLY NEWSLETTER*. *6*.

Bursa Efek Indonesia. (2025). *ESG Star Listed Companies*. ESG IDX. https://esg.idx.co.id/

Chanry, K., Damayanti, S. M., & Siahaan, U. M. (2023). Corporate Governance and Company Value: An Investigation Into the Role Of ACSG Score. *JABI (Jurnal Akuntansi Berkelanjutan Indonesia)*, *6*(3), 247–267. https://doi.org/10.32493/jabi.v6i3.y2023.p247-267

Chen, Z., Sugiyama, K., Tasaka, K., Kito, T., & Yasuda, Y. (2024). Impact of environmental, social and governance initiatives on firm value: Analysis using AI-based ESG scores for Japanese listed firms. *Research in International Business and Finance*, *70*(PA), 102303. https://doi.org/10.1016/j.ribaf.2024.102303

Cho, C. H., Laine, M., Roberts, R. W., & Rodrigue, M. (2015). Organized hypocrisy, organizational façades, and sustainability reporting. *Accounting, Organizations and Society*, *40*, 78–94. https://doi.org/10.1016/j.aos.2014.12.003

Chung, K. H., & Pruitt, S. W. (1994). A Simple Approximation of Tobin's Q. *Financial Management*, *23*(3), 70–74.

Climate Watch. (2024). *Historical GHG Emissions*. https://www.climatewatchdata.org/ghg-emissions?breakBy=sector&chartType=area&end_year=2021&sectors=total-including-lucf&source=Climate Watch&start_year=1990

Dang, H. N., Vu, V. T. T., Ngo, X. T., & Hoang, H. T. V. (2019). Study the Impact of Growth, Firm Size, Capital Structure, and Profitability on Enterprise Value: Evidence of Enterprises in Vietnam. *The Journal of Corporate Accounting & Finance*, *30*(1), 144–160. https://doi.org/10.1002/jcaf

Deegan, C. (2002). Introduction: The legitimising effect of social and environmental disclosures – a theoretical foundation. *Accounting, Auditing & Accountability Journal*, *15*(3), 282–311. https://doi.org/10.1108/09513570210435852

Deegan, C. (2023). *An Introduction to Accounting: Accountability in Organisations and Society* (S. Marson (ed.); 2nd ed.). Cengage Learning Australia Pty Limited Copyright.

Dowling, J., & Pfeffer, J. (1975). Organizational Legitimacy: Social Values and Organizational Behavior. *Pacific Sociological Review*, *18*(1), 122–136.

Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate

sustainability on organizational processes and performance. *Management Science*, *60*(11), 2835–2857. https://doi.org/10.1287/mnsc.2014.1984

Ergene, S. B., & Karadeniz, E. (2021). Corporate governance and firm value: Evidence from lodging companies. *Journal of Global Business Insights*, *6*(1), 74–91. https://doi.org/10.5038/2640-6489.6.1.1165

Ernst & Young. (2017). *Ernst and Young 2017 ESG Report*. 1–32. https://www.ey.com/Publication/vwLUAssets/EY_-_Nonfinancial_performance_may_influence_investors/$FILE/ey-nonfinancial-performance-may-influence-investors.pdf

Evianti, D., Pangaribuan, L., Suratminingsih, Lisdawati, & Yusuf, M. (2024). The Relationship Between Financial Leverage and Firm Value in Emerging Markets. *Jurnal Astina Mandiri*, *3*(2), 388–395.

Fahad, P., & Busru, S. A. (2020). CSR disclosure and firm performance: evidence from an emerging market. *Corporate Governance (Bingley)*, *21*(4), 553–568. https://doi.org/10.1108/CG-05-2020-0201

Fatemi, A., Glaum, M., & Kaiser, S. (2018). ESG performance and firm value: The moderating role of disclosure. *Global Finance Journal*, *38*, 45–64. https://doi.org/10.1016/j.gfj.2017.03.001

Firmansyah, A., Husna, M. C., & Putri, M. A. (2021). Corporate Social Responsibility Disclosure, Corporate Governance Disclosures, and Firm Value In Indonesia Chemical, Plastic, and Packaging Sub-Sector Companies. *Accounting Analysis Journal*, *10*(1), 9–17. https://doi.org/10.15294/aaj.v10i1.42102

Fransisca, L., Malini, H., Azazi, A., & Syahputri, A. (2025). Dampak CSR dan ESG terhadap Kinerja Keuangan dan Keberlanjutan Perusahaan Dimediasi oleh Green Finance. *JAMEK (JURNAL AKUTANSI MANAJEMEN EKONOMI DAN KEWIRAUSAHAAN)*, *05*(01), 115–124.

Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Cambridge University Press.

Gillan, S. L., Koch, A., & Starks, L. T. (2021). Firms and social responsibility: A review of ESG and CSR research in corporate finance. *Journal of Corporate Finance*, *66*(January), 101889. https://doi.org/10.1016/j.jcorpfin.2021.101889

Hadianto, B., Hendrik, H., & Yuwana, T. (2021). Does The Efficient Market Theory In The Weak Form Exist? Evidence From Indonesia. *Jurnal Manajemen Indonesia*, *21*(2), 183–190. https://doi.org/10.25124/jmi.v21i2.2703

Handayani, A. (2023). *Analisis Minat Investor Individu Terhadap Investasi Berkelanjutan di Indonesia* [Universitas Indonesia]. https://lib.ui.ac.id/detail?id=9999920528055&lokasi=lokal

Handoyo, S., & Anas, S. (2024). The effect of environmental, social, and governance (ESG) on firm performance: the moderating role of country regulatory quality and government effectiveness in ASEAN. *Cogent Business and Management*, *11*(1). https://doi.org/10.1080/23311975.2024.2371071

IDNFinancials. (2025, February 19). *WIKA gagal bayar 2 surat utang jatuh tempo, ini nilai totalnya!* https://www.idnfinancials.com/id/news/52565/wika-gagal-bayar-2-surat-utang-jatuh-tempo-ini-nilai-totalnya

Karoui, A., Zerter, L., Podgorny, P., Alloiteau, S., Louka, E., & Gausseron, M. (2023). ESG Risk Ratings: A 360° Review. *Quantitative Investment Approaches for ESG Risk*, *1*, 1–18.

Katadata. (2024). *97% Perusahaan di Bursa Lakukan Pelaporan Berkelanjutan*. https://katadata.co.id/ekonomi-hijau/investasi-hijau/669e3732b06b1/97-perusahaan-di-bursa-lakukan-pelaporan-berkelanjutan

Khoiroh, I. U., Puspitasari, I., & Utomo, A. S. (2024). Pengaruh Kinerja Keuangan Terhadap Nilai Perusahaan Dengan Kebijakan Dividen Sebagai Variabel Moderasi (Studi Pada Saham Indeks LQ45 Periode 2018-2022). *Jurnal Akuntansi Bisnis*, *22*(2), 274–286.

Kim, W. S., Park, K., & Lee, S. H. (2018). Corporate social responsibility, ownership structure, and firm value: Evidence from Korea. *Sustainability (Switzerland)*, *10*(7). https://doi.org/10.3390/su10072497

Kompas.id. (2024, June 26). Peluang Investasi Besar, Laporan ESG Harus Lebih Terstandar. *Kompas*. https://www.kompas.id/baca/ekonomi/2024/06/21/peluang-investasi-besar-laporan-esg-harus-lebih-terstandar

Korwatanasakul, U., & Majoe, A. (2021). Environmental, Social, and Governance Investment in Emerging Markets: A Case Study of Firms in ASEAN. *Wimaya*, *2*(01), 8–16. https://doi.org/10.33005/wimaya.v2i01.43

Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *The Journal of Finance*, *28*(4), 911–922. https://www.jstor.org/stable/2978343?seq=1

Kusno, J. I., Hartanto, F. T., & Trilaksono, T. (2024). ESG Scores' Impact on Portfolio Performance, An Evidence from Indonesia. *International Research Journal of Business Studies*, *17*(2), 199–212.

Luu, D. H. (2021). The Impact of Capital Structure on Firm Value: A Case Study in Vietnam. *Journal of Asian Finance, Economics and Business*, *8*(5), 287–292. https://doi.org/10.17654/as069020115

Madhani, P. M. (2015). A Study on the Corporate Governance and Disclosure Practices of Tangible Assets- and Intangible Assets-Dominated Firms and Their Relationship. *The IUP Journal of Corporate Governance*, *14*(2), 7–30.

Mahajan, R., Lim, W. M., Sareen, M., Kumar, S., & Panwar, R. (2023). Stakeholder theory. *Journal of Business Research*, *166*(December 2022), 114104. https://doi.org/10.1016/j.jbusres.2023.114104

Mahjabeen, Shah, S. Z. A., Chughtai, S., & Simonetti, B. (2020). Renewable energy, institutional stability, environment and economic growth nexus of D-8 countries. *Energy Strategy Reviews*, *29*, 100484. https://doi.org/10.1016/j.esr.2020.100484

Makridou, G., Doumpos, M., & Lemonakis, C. (2024). Relationship between ESG and corporate financial performance in the energy sector: empirical evidence from European companies. *International Journal of Energy Sector Management*, *18*(4), 873–895. https://doi.org/10.1108/IJESM-01-2023-0012

Modigliani, F., & Miller, M. H. (1963). Corporate Income Taxes and the Cost of Capital: A Correction. *The American Economic Review*, *53*(3), 433–443. http://books.google.com/books?hl=en&lr=&id=CIni3oHnprEC&oi=fnd&pg=PA73&dq=Corporate+income+taxes+and+the+cost+of+capital:+a+correction.&ots=yshEqnotBe&sig=1DqjIwN5BMLbgGr_hWfrrdWhKSA

Möller, V., Koehler, D. A., & Stubenrauch, I. (2015). Finding the Value in Environmental, Social and Governance Performance. In L. O'Riordan, P. Zmuda, & S. Heinemann (Eds.), *New Perspectives on Corporate Social Responsibility* (pp. 275–283). Springer Gabler.

Murni, S., Sabijono, H., Trang, I., & Mangantar, M. (2022). Capital Structure and Firm Value Manufacturing at the Indonesian Stock Exchange. *Archives of Business Research*, *10*(5), 153–169. https://doi.org/10.14738/abr.105.12345

Myers, S. C. (1984). The Capital Structure Puzzle. *The Journal of Finance*, *39*(3), 574–592. https://doi.org/10.1111/j.1540-6261.1984.tb03646.x

Narulita, F. D., Soraya, B., Baderi, R. N., & Pandin, M. Y. R. (2025). Pengaruh Tren Environmental, Social, dan Governance (ESG) terhadap Strategi Portofolio di Pasar Modal Indonesia. *JAMEK (JURNAL AKUNTANSI, MANAJEMEN, EKONOMI, DAN KEWIRAUSAHAAN)*, *05*(01), 1–9.

Ni'mah, R., & Kusumaningtias, R. (2025). Pengaruh Good Corporate Governance dan Environmental, Social, Governance Terhadap Nilai Perusahaan (Studi Empiris pada Perusahaan Manufaktur yang Terdaftar di BEI Periode Tahun 2020-2023). *Jurnal Mutiara Ilmu Akuntansi*, *3*(1), 341–357.

Oduro, S., Adhal Nguar, K. D., De Nisco, A., Alharthi, R. H. E., Maccario, G., & Bruno, L. (2022). Corporate social responsibility and SME performance: a meta-analysis. *Marketing Intelligence and Planning*, *40*(2), 184–204. https://doi.org/10.1108/MIP-05-2021-0145

OJK Institute. (2022). *Pengaruh ESG terhadap Kinerja Saham pada Bursa Efek*

Indonesia.

Oktaviani, M., Rosmaniar, A., & Hadi, S. (2019). Pengaruh Ukuran Perusahaan (Size) dan Struktur Modal terhadap Nilai Perusahaan. *BALANCE: Economic, Business, Management and Accounting Journal*, *16*(102–111). https://doi.org/10.30651/blc.v16i1.2457

Oktrima, B. (2017). PENGARUH PROFITABILITAS, LIKUIDITAS, DAN STRUKTUR MODAL TERHADAP NILAI PERUSAHAAN (Studi Empiris: PT. Mayora Indah, Tbk. Tahun 2011 – 2015). *Jurnal SEKURITAS (Saham, Ekonomi, Keuangan Dan Investasi)*, *1*(1), 98–107.

Pineiro-Chousa, J., Vizcaíno-González, M., López-Cabarcos, M. ángeles, & Romero-Castro, N. (2017). Managing reputational risk through environmental management and reporting: An options theory approach. *Sustainability (Switzerland)*, *9*(3). https://doi.org/10.3390/su9030376

Prabawati, P. I., & Rahmawati, I. P. (2022). The effects of Environmental, Social, and Governance (ESG) scores on firm values in ASEAN member countries. *Jurnal Akuntansi & Auditing Indonesia*, *26*(2), 119–129. https://doi.org/10.20885/jaai.vol26.iss2.art2

Rahman, D. F. (2022, June 7). Survei KIC: Banyak Warga Berinvestasi di Perusahaan yang Terapkan ESG. *Katadata Insight Center (KIC)*. https://databoks.katadata.co.id/keuangan/statistik/03c7a851797f50d/survei-kic-banyak-warga-berinvestasi-di-perusahaan-yang-terapkan-esg

Rajan, R. G., & Zingales, L. (1995). What Do We Know about Capital Structure? Some Evidence from International Data. *The Journal of Finance*, *50*(5), 1421–1460. https://doi.org/10.1111/j.1540-6261.1995.tb05184.x

Rasyad, R. K., Afgani, K. F., & Ali, Q. (2024). Effects of ESG on Firm Performance and Firm Value: A Study of Indonesian and Malaysian Listed Companies. *Journal Integration of Management Studies*, *2*(1), 1–17. https://doi.org/10.58229/jims.v1i2.118

Ristiyana, R., Maresti, A., Taufik, R., & Yetmi, Y. S. (2024). The Effect of Capital Structure, Good Corporate Governance and Company Size on Firm Value. *Governors*, *3*(1), 34–45. https://doi.org/10.47709/governors.v3i1.3819

Rohendi, H., Ghozali, I., & Ratmono, D. (2024). Environmental, social, and governance (ESG) disclosure and firm value: the role of competitive advantage as a mediator. *Cogent Business and Management*, *11*(1). https://doi.org/10.1080/23311975.2023.2297446

Shahrun, N. S. B., Ramasamy, S., & Yen, Y. Y. (2024). Effect on Environmental, Social and Governance (ESG) Criteria on the Firm Profitability of Listed Companies in Malaysia. *WSEAS Transactions on Business and Economics*, *21*, 239–247. https://doi.org/10.37394/23207.2024.21.22

Suchman, M. C. (1995). Managing Legitimacy: Strategic and Institutional Approaches. *The Academy of Management Review*, *20*(3), 571. https://doi.org/10.2307/258788

Tamara, D., & Budiman, F. (2022). New Index ESG Leaders & Investment Decisions in Indonesia Relating to ESG Principles. *Journal of Management and Sustainability*, *12*(1), 64. https://doi.org/10.5539/jms.v12n1p64

Tambuwun, C. E., Mangantar, M., & Rumokoy, L. J. (2024). Pengaruh Debt To Equity Ratio, Earning Per Share, dan Return on Asset Ratio terhadap Nilai Perusahaan Sub Sektor Jasa Kesehatan yang Terdaftar di BEI. *Jurnal EMBA*, *12*(01), 107–115. www.idx.co.id.

Tempo.co. (2025, March 3). *Kisah PT Sritex yang Pailit Dililit Utang Setelah 58 Tahun Berjaya*. https://www.tempo.co/ekonomi/kisah-pt-sritex-yang-pailit-dililit-utang-setelah-58-tahun-berjaya-1214544

TradingView. (2025). *Grafik Harga Saham*. TradingView. https://id.tradingview.com/symbols/IDX-UNVR/?timeframe=60M

Uzliawati, L., Yuliana, A., Januarsi, Y., & Santoso, M. I. (2018). Optimisation of Capital Structure and Firm Value. *European Research Studies Journal*, *21*(2), 705–713. https://doi.org/10.35808/ersj/1034

Wahyuni, P. D., Utami, S. W., & Tanjung, J.

(2024). The Impact of ESG Disclosure on Firm Value Relevance: Moderating Effect of Competitive Advantage. *European Journal of Accounting, Auditing and Finance Research*, *12*(8), 19–33. https://doi.org/10.37745/ejaafr.2013/vol12n81933

Wangi, T. G., & Aziz, A. (2023). Analisis Pengaruh ESG Disclosure, Likuiditas, dan Profitabilitas terhadap Nilai Perusahaan pada Perusahaan yang Terdaftar di Indeks ESG Leaders. *Ikraith-Ekonomika*, *6*(3), 44–53. https://doi.org/10.37817/ikraith-ekonomika.v7i2.3351

Xaviera, A., & Rahman, A. (2023). Pengaruh Kinerja Esg Terhadap Nilai Perusahaan Dengan Siklus Hidup Perusahaan Sebagai Moderasi : Bukti Dari Indonesia. *Jurnal Akuntansi Bisnis*, *16*(2), 226. https://doi.org/10.30813/jab.v16i2.4382

Yanti, I. G. A. D. N., & Darmayanti, N. P. A. (2019). Pengaruh Profitabilitas , Ukuran Perusahaan , Struktur Makanan Dan Minuman. *E-Jurnal Manajemen*, *8*(4), 2297–2324.