

# Does Business Ethics Disclosure Contribute to ESG Disclosure and ESG Performance on Firm Value?

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## Abstract

*This study investigates whether Business Ethics Disclosure (BED) contributes to Environmental, Social, and Governance (ESG) disclosure and ESG performance, and how these factors influence firm value. Using data from publicly traded companies listed on the Indonesia Stock Exchange (IDX), we employ multiple regression analysis to examine the relationships between BED, ESG disclosure, ESG performance, and firm value. Our results indicate that BED significantly moderates the relationship between ESG disclosure and firm value. While ESG disclosure alone does not consistently impact firm value, the inclusion of BED enhances the positive effects of ESG practices on firm valuation. This study contributes to the literature by highlighting the moderating role of business ethics in the ESG performance-firm value nexus, offering new insights into the interplay between ethical disclosures and ESG outcomes. The findings suggest that companies should integrate ethical disclosures into their ESG strategies to improve firm valuation. Policymakers and regulators are encouraged to establish comprehensive reporting standards that include ethical practices to enhance transparency and investor confidence.*

*Keywords: ESG Disclosure, ESG Performance, Business Ethics, Firm value*

## Introduction

The significance of Environmental, Social, and Governance (ESG) disclosure has experienced substantial growth in recent years, indicating a change in business practices towards sustainability and openness (Alkaraan et al. 2022). Companies are showcasing their dedication to sustainability by divulging details about their ESG policies, conforming to worldwide initiatives that prioritize climate change, circular economy, and biodiversity preservation. EU member states are choosing to implement a combination of voluntary and obligatory measures to enhance the disclosure of environmental, social, and governance (ESG) information within their own territories (Camilleri 2015). National governments can improve their regulatory framework and enforcement tools to help corporations perform better in terms of governance, which will increase involvement with sustainability (Mooneepen 2022). The COVID-19 epidemic has highlighted the importance of social aspects, such as the well-being of employees and support from the community, in maintaining company operations (Carnevale and Hatak 2020; García 2020). The heightened emphasis on ESG indicators is partially attributed to heightened investor consciousness and regulatory obligations, necessitating firms to assume greater responsibility for their environmental and social effects (Digby et al. 2021; Nofsinger, Sulaeman, and Varma 2019; Tsang, Frost, and Cao 2023). Studies have demonstrated a connection between the disclosure of environmental, social, and governance (ESG) information and financial outcomes (Li 2018; Mohammad and Wasiuzzaman 2021; Tsang et al. 2023). Companies that have strong ESG processes are often considered to be less risk, resulting in higher valuations and improved stock performance (Alkaraan et al. 2022). This shows that businesses who perform better in terms of environmental sustainability also typically disclose more information about CTTI4.0 and have higher financial results. Incorporating environmental, social, and governance (ESG) factors into company plans is now widely recognized as a crucial and necessary step for generating sustainable long-term value (Escrig-Olmedo et al. 2017). Contends that these misconceptions are founded on deceit, misinterpretation, and negligence towards scholarly investigation and the perspectives of sustainability experts (Adams and Abhayawansa 2022). As of 2022, publicly traded companies in Indonesia have increasingly included environmental, social, and governance (ESG) measures in their financial reports, reflecting a substantial rise in ESG reporting (Nareswari, Tarczyńska-Łuniewska, and Hashfi 2023). numerous aspects that affect businesses' decisions to disclose their environmentally friendly accounting procedures. The study focused on sustainability-related disclosures in Asian countries (Wahyuningrum et

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al. 2023). Nevertheless, there are still obstacles to overcome, such as discrepancies in the implementation of reporting criteria and the risk of deceptive environmental claims (van Amstel, Driessen, and Glasbergen 2008; Boiral and Heras-Saizarbitoria 2020). Establishing a uniform and open system for reporting on social, governance, and environmental concerns helps decrease the imbalance of information and enhance the trust of stakeholders.

ESG disclosure is an essential component of a company's worth, as research demonstrates a direct relationship between ESG performance and financial metrics such as stock returns and profitability (Chen, Kuo, and Chen 2022; Chen and Xie 2022). Nevertheless, studies conducted (Aydoğmuş, Gülay, and Ergun 2022; Chauhan and Kumar 2018; He et al. 2022; Khan 2022) have discovered no significant association between ESG disclosure and corporate value. This implies that the advantages of ESG practices may not be immediately apparent or universally applicable (Baldi and Pandimiglio 2022; Lee and Suh 2022). ESG variables, encompassing environmental, social, and governance issues, can either align, conflict, or vie with each other (Hehenberger and Andreoli 2024; Lee, Raschke, and Krishen 2023). Efficient governance is in accordance with moral principles and corporate accountability, facilitating long-lasting financial success (Claessens and Yurtoglu 2013; Joslin and Müller 2016). Nevertheless, giving priority to ESG investments may divert resources from crucial company activities, potentially leading to a detrimental impact on profitability (Liu and Zhang 2023). The corporate management is confronted with a quandary of reconciling environmental practices with the demands of financial success (Dubey, Gunasekaran, and Samar Ali 2015; Mazzi 2011). Furthermore, the presence of information asymmetry caused by varying ESG disclosure regulations and approaches can result in stakeholders interpreting ESG performance in different ways, which can weaken the reliability of ESG disclosures (Tsang et al. 2023). Hence, it is imperative to build robust and standardized ESG reporting systems that offer transparent, comparable, and reliable data to all stakeholders.

A number of theoretical frameworks, such as stakeholder theory, agency theory, and signaling theory, provide support for the investigation of ESG disclosure and its effect on business value. The Stakeholder Theory, as formulated by Edward Freeman (1990), asserts that organizations have the responsibility to generate value for all stakeholders rather than solely focusing on shareholders. This theory highlights the interdependence of business and society, proposing that ethical and responsible business behaviors are essential for creating long-term value (Hörisch, Schaltegger, and Freeman 2020). Companies can showcase their dedication to the concerns of stakeholders by participating in ESG disclosures, which promotes confidence and improves the organization's credibility.

Although there is a substantial amount of research on ESG disclosures, there is still a lack of understanding of how business ethics disclosure affects the connection between environmental, social, and governance (ESG) performance and firm value. Prior research has primarily concentrated on the immediate consequences of ESG practices, frequently neglecting the possible influence of ethical corporate behavior on augmenting or minimizing these consequences (Hübel and Scholz 2020). Some studies show that ESG performance is good for business value (Aydoğmuş et al. 2022; Li 2018; Zhou, Liu, and Luo 2022) while others don't always find the same results (Aouadi and Marsat 2018; Behl et al. 2022), indicates that the relationship is not bidirectional in overall and individual ESG elements to firm value. In this situation, disclosing business ethics, which refers to the transparency and integrity of a company's ethical procedures, can have a significant impact. Engaging in ethical business practices not only boosts a company's standing but also fortifies relationships with stakeholders, resulting in heightened trust and loyalty. By including ethical disclosures in their environmental, social, and governance (ESG) reporting, businesses can give a full picture of their commitment to sustainability, which could make the positive effects of ESG performance on the value of the business even stronger (Nugraheni & Hastuti, 2022). This study is innovative because it looks at corporate ethics disclosure as a moderating variable that closes the value gap between sustainability performance and firm value. This approach aims to resolve the discrepancies in prior research findings by taking into account the ethical aspect of business activities, which can either enhance or reduce the impact of ESG initiatives. The study aims to gain a deeper knowledge of how organizations might utilize ethical practices to improve their ESG performance and, as a result, their financial performance.

This study's main goal is to determine whether ESG performance and disclosure affect firm value, with the role of business ethics disclosure serving as a moderating element. With data from the Indonesia Stock

Exchange (IDX), the study will specifically concentrate on publicly traded companies in Indonesia, analyzing both financial and non-financial disclosures. By providing empirical data on the interconnections between ESG practices, ethical business conduct, and firm value, this research aims to enhance the existing literature. This study highlights the importance for companies to implement transparent and ethical procedures that surpass basic compliance requirements. Doing so will result in better-informed investment choices, less information imbalance, and increased trust among stakeholders. Moreover, the results can provide valuable insights to policymakers and regulatory agencies regarding the importance of implementing standardized ESG reporting standards, which can enhance corporate responsibility and sustainability. In summary, the goal of this research is to close the gap that exists between ESG performance and firm value by investigating the moderating effect of business ethics disclosure. This research can assist firms in incorporating ethical practices into their ESG strategies in order to create long-term value and gain stakeholder trust by providing a thorough analysis.

## Critical Review

### *Overview and Theoretical Foundation*

The objective of this study is to investigate the relationship between environmental, social, and governance (ESG) disclosure and firm value, specifically examining how business ethics disclosure influences this relationship. The research is based on three fundamental theoretical frameworks: stakeholder theory, agency theory, and signaling theory. Each of these frameworks provides a unique perspective on the dynamics of ESG practices and their impact on a company's value.

The Stakeholder Theory asserts that companies have a responsibility to provide value for all stakeholders rather than solely focusing on shareholders (Freeman, 1984). This viewpoint implies that providing comprehensive and transparent information on environmental, social, and governance (ESG) practices can strengthen the confidence of stakeholders and boost the reputation of a company, which in turn may result in a higher market valuation of the firm (Hörisch, Schaltegger, & Freeman, 2020). The thesis asserts that strong ESG standards are in line with ethical corporate behavior, promoting the production of lasting value. But it also calls into question how shareholders' value and stakeholder interests should be balanced, since the advantages of ESG practices may not always offset the costs (Rezaee, 2020). This creates confusion about the direct impact of ESG disclosures on a company's value. Agency Theory draws attention to the conflicts that may arise between managers and shareholders, especially when it comes to deciding how much money to devote to ESG activities (Jensen & Meckling, 1976). According to this hypothesis, if ESG expenditures are seen as taking cash away from activities that generate profit, they may not be in line with the interests of shareholders. However, by increasing transparency and decreasing information asymmetry, ESG disclosure can be used as a technique to lessen agency conflicts (Daugaard & Ding, 2022). This implies that although implementing ESG practices may incur expenses, they can also increase a company's value by improving corporate governance and mitigating agency issues.

The signaling theory examines the unequal distribution of information between companies and individuals or groups with an interest in those companies (Spence, 1973). ESG disclosures serve as indicators of a company's dedication to sustainability and ethical conduct, therefore impacting how stakeholders perceive the company and make investment choices (Bergh et al., 2014). Nevertheless, the extent to which ESG disclosures might reduce information asymmetry may differ depending on stakeholders' interpretations of the information (Huang, 2022). The hypothesis posits that the disclosure of environmental, social, and governance (ESG) information can augment the worth of a company by bolstering the trust of stakeholders and diminishing perceived dangers.

### *Model of Research Framework*

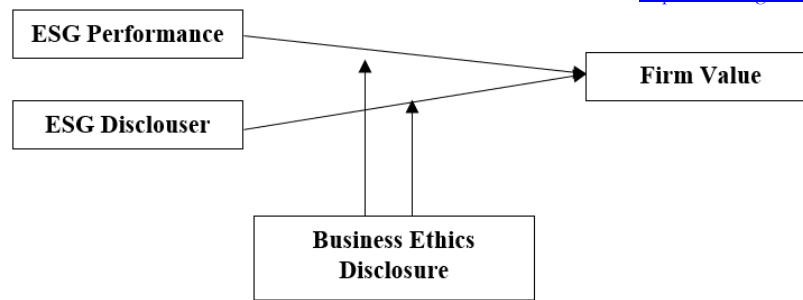


Figure 1. Model of Research framework.

### *Hypotheses and Empirical Evidence*

This hypothesis aligns with Stakeholder Theory, which suggests that effective ESG disclosure enhances corporate reputation and stakeholder trust, potentially leading to increased firm value. Empirical evidence supporting this hypothesis includes research by Chen, Kuo, and Chen (2022) and Chen and Xie (2022), which demonstrates a positive relationship between ESG performance and financial metrics such as stock returns and profitability. However, this positive relationship is not universally consistent, as other studies (Aydoğmuş et al., 2022; Chauhan & Kumar, 2018) found no significant association between ESG disclosure and firm value, indicating that the benefits of ESG practices may not always be immediately apparent or applicable across all contexts (Baldi & Pandimiglio, 2022).

This hypothesis suggests that firms with strong ESG performance are likely to experience enhanced firm value. Research by Aydoğmuş et al. (2022) and Li (2018) supports this view, showing that improved ESG performance can lead to better financial outcomes. However, conflicting results from studies such as Aouadi and Marsat (2018) and Behl et al. (2022) indicate that the relationship between ESG performance and firm value is not always straightforward, highlighting the need to consider moderating factors.

This hypothesis explores the moderating role of business ethics disclosure. Incorporating business ethics disclosures into ESG reporting can provide a more comprehensive view of a firm's commitment to sustainability, potentially enhancing the positive effects of ESG practices on firm value (Nugraheni & Hastuti, 2022). This hypothesis is innovative as it addresses the gap in existing research by examining how ethical business conduct can amplify or mitigate the effects of ESG disclosures on firm value.

This hypothesis suggests that ethical practices may enhance the benefits of strong ESG performance on firm value. Ethical business conduct can improve a firm's reputation, strengthen stakeholder relationships, and lead to greater trust and loyalty, thereby reinforcing the positive impact of ESG performance on firm value (Alkhadra et al., 2023). This hypothesis is supported by findings from Suandi et al. (2023), indicating that ethical behavior contributes to long-term value creation and sustainability.

*H1: ESG Disclosure positively affects Firm Value. This hypothesis is based on the premise that transparent ESG practices can enhance firm reputation and stakeholder trust, potentially increasing firm value.*

*H2: ESG Performance positively affects Firm Value. This hypothesis is grounded in the notion that strong ESG performance can improve financial metrics and market competitiveness.*

*H3: Business Ethics Disclosure strengthens the relationship between ESG Disclosure and Firm Value. This hypothesis posits that ethical business conduct can amplify the positive effects of ESG disclosure on firm value.*

*H4: Business Ethics Disclosure strengthens the relationship between ESG Performance and Firm Value. This suggests that incorporating ethical practices can enhance the positive impact of ESG performance on firm value.*

## **Method**

### *Sample Selection and Study Period*

Population, as defined by Handayani (2020), includes any entities that share similar features and will be the focus of research, such as persons, groups, events, or phenomena. Companies that are publicly listed on the Indonesia Stock Exchange (IDX) make up the population chosen for this study. A sample is a smaller fraction of the population that is selected based on particular criteria in order to accurately represent the

total population. Sekaran (2003) states that the researcher use purposive sampling to establish appropriate criteria. Businesses listed on the IDX between 2017 and 2021, businesses rated with an ESG Score by Bloomberg during this time, businesses not in the financial services industry, and businesses with complete financial data for operational variables devoid of outliers are among the criteria used to choose the research sample from the population. For the purpose of analysis, this study used secondary data sources that were obtained from the IDX website, official corporate websites, Bloomberg database, ESG Scores, annual reports from businesses listed on the IDX from 2017 to 2021, and S&P Capital IQ financial data. This study used the documentation method as its data collection strategy, which entails obtaining, compiling, and evaluating the annual reports of businesses listed on the IDX for the years 2017–2021. Time-series data are the kind of data that this study investigated (Chandrarin, 2018).

### *Operational Variable Definitions*

To analyze how different factors affect company value and comprehend how corporate ethics disclosure functions as a moderating variable, it is imperative that the operational definitions and measurements of the variables in this study be understood. The variable being measured, firm value, is evaluated using two indicators: Price to Book Value (PBV) and Tobin's q. According to Bougie and Sekaran (2019), Tobin's q is computed by summing the market value of all equity and debt, and then dividing the result by the total assets. PBV is produced by dividing the price of the stock by the book value per share. The variables that are not influenced by other factors are ESG disclosure and ESG performance. ESG disclosure is assessed using the ESG Disclosure Score offered by Bloomberg. This score ranges from 0 (indicating no disclosure) to 100 (indicating full disclosure), and it reflects the extent to which a company provides comprehensive ESG information (Alareeni & Hamdan, 2020). The evaluation of ESG performance is conducted using the company's ESG performance metrics, however the particular criteria may differ. The moderating variable, corporate ethics disclosure, is measured using an index created by Waweru (2020). This index consists of 58 items that cover many categories including environmental preservation, labor rights, community involvement, consumer interactions, and investor concerns. This index facilitates the evaluation of the level of transparency in business ethics procedures reported by corporations. The existence or absence of corporate ethics disclosure is quantified using a binary variable, with a value of 1 indicating its presence and 0 indicating its absence.

The Return on Assets (ROA), Leverage, and Current Ratio (CR) are examples of control variables. The current ratio (CR) is calculated by dividing a company's current assets by its current liabilities. This ratio provides valuable information on the company's liquidity (Amihud 2008; Murni et al. 2023; Wang 2002). The Debt to Equity Ratio (DER) is a measure of leverage, calculated by dividing the total debt by the total equity (Dwianto et al. 2024; Ibhagui and Olokoyo 2018; Moradi and Paulet 2019). It provides an indication of the company's debt level in relation to its equity (Alfaro et al. 2019; Ibhagui and Olokoyo 2018). Return on assets (ROA) is determined by dividing the net income of a firm by its total assets (Bunea, Corbos, and Popescu 2019; Dwianto et al. 2024). This metric measures the company's effectiveness in generating profit from its assets (Coluccia et al. 2020). A more precise understanding of how institutional ownership and business ethics affect firm value is made possible by these control variables, which make sure that outside influences do not distort the relationship between the dependent and independent variables (Buchanan, Cao, and Chen 2018; Rahmawati et al. 2024).

$$\text{ESG Score} = w_1 \cdot \text{Env Score} + w_2 \cdot \text{Soc Score} + w_3 \cdot \text{Gov Score} \quad (1)$$

Where:

$w_1, w_2, w_3$  = weights assigned to Environmental, Social, and Governance scores respectively.

$\text{Env Score}$  = Environmental performance score

$\text{Soc Score}$  = Social performance score

$\text{Gov Score}$  = Governance performance score

ESG Disclosure refers to the extent and quality of information a company provides about its ESG practices. This disclosure can impact investor perceptions and regulatory compliance. The ESG disclosure index is often calculated by summing the number of ESG-related disclosures and dividing by the total number of



possible disclosures. Business Ethics Disclosure pertains to the information provided by a company regarding its ethical practices and policies. It is a measure of transparency and commitment to ethical standards.

### Data Analysis

In this study, quantitative data analysis will be conducted using multiple linear regression models, with STATA 17 software employed for analysis. Descriptive statistical analysis will provide an overview of the dataset, including mean, standard deviation, minimum and maximum values, range, kurtosis, and skewness, as outlined by Ghozali (2018). The correlation test, specifically Pearson Pairwise Correlation, will assess the linear relationship and strength between variables (Ghozali, 2021). Classical assumption tests normality, multicollinearity, and heteroskedasticity will be performed to ensure the regression model's validity. Normality will be evaluated using Shapiro-Wilk, Shapiro-Francia, and Skewness-Kurtosis tests, based on the Central Limit Theorem (Lind et al., 2017; Stock & Watson, 2020). Multicollinearity will be tested using the Variance Inflation Factor (VIF), with significant multicollinearity indicated by VIF values less than 0.1 or greater than 10 (Gujarati & Porter, 2009). Heteroskedasticity will be assessed through the Breusch-Pagan test, with corrective measures including variable transformation or Generalized Least Squares (Gujarati & Porter, 2009). The model specification test will verify the adequacy of the research model, followed by the F-test to determine the collective influence of independent variables on the dependent variable (Ghozali, 2021; Gujarati & Porter, 2009). The R-squared test will measure how well the independent variables explain the variation in the dependent variable (Gujarati & Porter, 2009). Hypothesis testing will be performed using the t-test to evaluate the significance of each independent variable's effect on the dependent variable, with significance determined by p-values relative to confidence levels of 90%, 95%, and 99% (Gujarati & Porter, 2009).

**Table 1.**

<b>Definisi variabel:</b>	
FV =	<i>Firm Value</i> , measured using Tobin's Q
ESGPerf =	<i>ESG Performance</i> , measured by
ESGDisc =	<i>ESG Disclosure</i> , measured by
BEthics =	Business Ethics Disclosure, measured by
PCGoveOwn =	_____
PCBoard =	_____
Age =	Company Age, the difference between the year of observation and
Size =	the year of company establishment
Prof =	Company size, measured by Ln (total assets)
Lev =	Profitabilitas, diukur dengan ROA (Return on Assets)
Covid =	Leverage, measured by Debt/Equity ratio
	Covid period, using dummy variable, 1=Covid, 0=Non Covid
*	Signifikan pada $\alpha=10\%$ (secara <i>one-tail</i> )
**	Signifikan pada $\alpha=5\%$ (secara <i>one-tail</i> )
***	Signifikan pada $\alpha=1\%$ (secara <i>one-tail</i> )

## Result and Discussion

The study's primary variables are outlined in the table of descriptive statistics. The Price-Earnings Ratio (PER) has a mean of 30.53 and a high standard variation of 90.50, indicating a substantial amount of variability among companies. The values range from -138.80 to 1223.85. The Price-to-Book Value (PBV) has an average of 2.48 and a standard deviation of 2.36, suggesting a modest level of variability. The mean of the Business ethical Disclosure (BED) score is 0.75, indicating that the majority of organizations reveal a substantial amount of their business ethical procedures. The average Corporate Social Responsibility (CSR) score is 2.46, with a standard deviation of 1.23. Their distinct variances in company disclosures are reflected in the means of the Environmental (Env), Social (Soc), and Governance (Gov) scores, which are 1.80, 2.55, and 4.06, respectively. The ESG Disclosure (ESG\_Disc) has an average score of 40.42, with values ranging from 16.55 to 73.87. The government ownership percentage (PCGovOwn) and board

independence (PCBoard) have mean values of 0.29 and 0.79, respectively. This suggests that there are different levels of governance systems among enterprises. The companies have mean ages of 3.63 and 15.40, respectively, and their corresponding standard deviations illustrate variations in the maturity and magnitude of the businesses. The mean Return on Assets (ROA) is 0.06, demonstrating the overall profitability. The mean leverage (Lev) is 1.50, representing the debt levels in comparison to equity. The Covid variable, which represents the extent of the pandemic's influence, has an average value of 0.40, showing the time period in the sample that was affected by COVID-19.

**Table 1.** Descriptive Statistics of the Variables.

Variable	Obs	Mean	Std. Dev.	Min	Max
PER	224	3.052.878	9.049.502	-1.387.954	1.223.848
PBV	224	2.480.354	2.359.966	0	161.283
BED	224	0.7486915	0.097222	0.5	0.9310345
CSR	224	2.455.893	1.231.181	0.69	6.24
Env	224	1.797.812	192.473	0	7.23
Soc	224	2.550.402	2.000.912	0	7.22
Gov	224	4.063.304	0.7929164	2.36	5.92
ESG_Disc	224	4.042.435	1.216.005	165.476	738.658
PCGovOwn	224	0.2901786	0.4548611	0	1
PCBoard	224	0.7857143	0.4112449	0	1
Age	224	3.631.802	0.6100285	1.609.438	5.087.596
Size	224	1.539.927	3.748.753	5.915.856	1.944.019
ROA	224	0.0603942	0.0744185	-0.1714262	0.3513778
Lev	224	1.498.824	1.507.447	0.1336441	9.873.995
Covid	224	0.4017857	0.4913571	0	1

**Source:** Observation processed by the author in 2024.

By minimizing the influence of outliers, the Price-Earnings Ratio (PER) and Price-to-Book Value (PBV) variables are winsorized to create a descriptive statistics table that offers a more comprehensive picture of the data. The mean value of PER (PER\_w) has been modified to 22.93, while the standard deviation has been reduced to 23.54, indicating a decrease in variability compared to the original data. The range of values for PER\_w is from -10.88 to 86.76. A more steady distribution is indicated by the winsorized PBV (PBV\_w), which has a mean of 2.36 and a standard deviation of 1.90. The lower and upper bounds for PBV\_w are 0.44 and 6.78, respectively. The other factors stay constant, with Business Ethics Disclosure (BED) having an average of 0.75, Corporate Social Responsibility (CSR) at 2.46, and Environmental (Env), Social (Soc), and Governance (Gov) scores having averages of 1.80, 2.55, and 4.06, respectively. The ESG Disclosure (ESG\_Disc) maintains an average of 40.42. With means of 0.29 and 0.79, respectively, governance variables including board independence (PCBoard) and percentage of ownership by the government (PCGovOwn) are well-represented. The average age of the companies is 3.63, and the average size is 15.40. The Return on Assets (ROA) has an average of 0.06, and the leverage (Lev) has an average of 1.50. The Covid variable exhibits a consistent mean value of 0.40.

**Table 2.** Descriptive Statistics After Winsorizing PER and PBV.

Variable	Obs	Mean	Std. Dev.	Min	Max
PER_w	224	229.276	2.354.131	-1.087.945	8.675.637
PBV_w	224	2.360.128	1.899.583	0.442763	6.778.093
BED	224	0.7486915	0.097222	0.5	0.9310345
CSR	224	2.455.893	1.231.181	0.69	6.24
Env	224	1.797.812	192.473	0	7.23
Soc	224	2.550.402	2.000.912	0	7.22
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Covid	224	0.4017857	0.4913571	0	1

Source: Observation processed by the author in 2024.

Table 3 displays a concise overview of the statistical properties of the regression model, encompassing different aspects of variance such as Model, Remaining, and Total. When a dependent variable (PER\_w) is fully explained by a model (Model SS) and not by a model (Residual SS), it is represented by the Sum of Squares (SS). The Degrees of Freedom (df) indicate the quantity of independent variables that can fluctuate in the investigation. The Mean Square (MS) is computed by dividing the Sum of Squares (SS) by the degrees of freedom (df). The dataset contains a total of 224 observations. The F-statistic is employed to ascertain the statistical significance of the overall regression model, with the Prob > F denoting the p-value associated with the F-statistic. If the p-value is less than 0.05, it shows that the model is statistically significant. The R-squared value quantifies the amount of variation in the dependent variable that can be accounted for by the model, whereas the Adjusted R-squared modifies the R-squared value to account for the number of variables in the model. The Root Mean Square Error (Root MSE) is a statistical measure that quantifies the standard deviation of the residuals, which represents the level of error in the model's predictions.

**Table 3.** Summary of Regression Model Statistics.

Source	SS	df	MS	Number of obs = 224
Model	67.018.988	13	515.530.677	F(13, 210) = 0.93 Prob > F = 0.5267
Residual	116.883.195	210	556.586.644	
Total	123.585.094	223	554.193.247	R-squared = 0.0542 Adj R-squared = -0.0043 Root MSE = 23.592

Source: Observation processed by the author in 2024.

The results of the regression analysis in Table 4 illustrate the link between several predictors and the dependent variable PER\_w. The coefficients for Gov (-2533.114), Soc (-2485.976), BED (-7440.822), CSR (1384.835), Env (-5065.716), Age (-4860.533), ROA (-2606.097), Lev (-1930.387), and Gov (-2533.114) show an inverse association with PER\_w. This implies that as these variables grow, PER\_w tends to decrease. PER\_w increases in proportion to increases in ESG\_Disc (0.285), PCGovOwn (7345.928), Size (0.549), and Covid (456.477), on the other hand, all of which have positive coefficients. The coefficients exhibit a wide range of standard errors. Certain variables, such as PCBoard (450.026) and ESG\_Disc (0.289), have relatively tiny standard errors. Conversely, variables like PCGovOwn (5020.497) and CSR (5279.774) display significantly larger standard errors. This fluctuation signifies varying degrees of variability and accuracy in the coefficient estimates. The link between the majority of predictors and PER\_w is not statistically significant at the conventional levels, as indicated by P-values greater than 0.05 in terms of statistical significance. The P-values for Soc (0.145) and PCGovOwn (0.145) are in close proximity to the 0.05 threshold, indicating a marginal level of significance. The constant term (cons) has a P-value of 0.067, indicating a potential marginal significance. This suggests the presence of omitted variables or the necessity for a more intricate model. The 95% confidence intervals establish a range in which the true coefficients are likely to be found. For example, the range of values for ESG\_Disc spans from -0.285 to 0.855, suggesting a significant level of uncertainty over the estimate. Moreover, the large ranges of values for variables such as CSR (-9023.314 to 1179.298) and PCGovOwn (-2551.102 to 1724.296) emphasize the significant uncertainty and imprecise estimation in these interactions. In summary, the findings indicate that although certain predictors may have a significant influence on PER\_w, the statistical support is not strong for the majority of variables in this model. To make these associations clearer, more research using more data or different modeling techniques may be required.

**Table 4.** Regression Results for PER\_w with Various Predictors.



PER_w	Coefficient	Std. err.	t	P>t	95%	conf. interval
BED	-7.440.822	2.193.837	-0.34	0.735	-5.068.848	3.580.683
CSR	1.384.835	5.279.774	0.26	0.793	-9.023.314	1.179.298
Env	-5065716	2.410.754	-0.21	0.834	-5.258.951	4.245.808
Soc	-2.485.976	1.700.738	-1.46	0.145	-5.838.682	.8667307
Gov	-2.533.114	2.615.085	-1.0	0.923	-5.408.493	490.187
ESG_Disc	.2847559	.2891776	0.98	0.326	-.285307	.8548189
PCGovOwn	7.345.928	5.020.497	1.46	0.145	-2.551.102	1.724.296
PCBoard	-1.744.111	450.026	-0.39	0.699	-1.061.558	7.127.362
Age	-4.860.533	3.537.322	-1.37	0.171	-1.183.374	2.112.677
Size	.5489238	.4846099	1.13	0.259	-.4063998	1.504.247
ROA	-2.606.097	2.467.457	-1.06	0.292	-7.470.257	2.258.063
Lev	-1.930.387	1.222.564	-1.58	0.116	-4.340.457	.4796828
Covid	456.477	3.684.475	1.24	0.217	-2.698.527	1.182.807
cons	3.293.802	1.792.111	1.84	0.067	-2.390.297	6.826.635

Source: Observation processed by the author in 2024.

**Table 5.** Use of PER as Dependent Variable.

Source	SS	df	MS	Number of obs = 224
Model	291.677.949	13	224.367.653	F(13, 210) = 9.18
Residual	512.998.323	210	244.284.916	Prob > F = 0.0000
Total	804.676.272	223	360.841.378	R-squared = 0.3625
				Adj R-squared = 0.3230
				Root MSE = 1.563

Source: Observation processed by the author in 2024.

This table 6. presents the regression results with PBV as the dependent variable. The results show that ROA, Size, Lev, and Covid variables have a significant influence on PBV at the 0.05 significance level. The overall regression model is significant with a very low Prob > F value

**Table 6.** Regression Results with PBV as Dependent Variable.

PBV_w	Coefficient	Std. err.	t	P > t	95%	conf. interval
BED	1.821183	1.453404	1.25	0.212	-1.043948	4.686314
CSR	-.5616093	.3497818	-1.61	0.110	-1.251143	.1279243
Env	.2345689	.159711	1.47	0.143	-.0802734	.5494112
Soc	-.1169856	.1126728	-1.04	0.300	-.3391004	.1051292
Gov	.1423503	.1732478	0.82	0.412	-.1991773	.483878
ESG_Disc	.0269814	.0191578	1.41	0.160	-.0107849	.0647477
PCGovOwn	-.2351305	.3326049	-0.71	0.480	-.8908028	.4205418
PCBoard	-.5833173	.2981395	1.96	0.052	-1.171047	.0044125
Age	-.7579507	.2343454	-3.23	0.001	-1.219922	-.2959797
Size	.0893323	.0321051	2.78	0.006	.0260427	.1526219
ROA	11.50579	1.634676	7.04	0.000	8.283309	14.72826
Lev	.2060018	.0809941	2.54	0.012	.0463362	.3656675
Covid	-.6100417	.2440942	2.50	0.013	-1.091231	-.1288527
Cons	1.728495	1.187263	1.46	0.147	-.6119854	4.068975

Source: Observation processed by the author in 2024.

The regression results in Table 7 include the variable CSR as one of the variables that is independent. The model exhibits an F-statistic of 11.70 and a p-value of 0.0000, which implies that the regression model is statistically significant. The coefficient of determination (R-squared) is 0.3298, indicating that around 32.98% of the variation in the dependent variable can be accounted for by the independent variables incorporated in the model. The adjusted R-squared score of 0.3016 offers a more precise assessment of how well the model fits the data, taking into account the number of predictors. The root mean square error (RMSE) is 15.875, which is the measure of the standard deviation of the residuals. The regression model has a sum of squares (SS) of 265.364.243 and 9 degrees of freedom, leading to a mean square (MS) of

29.484.915. An MS of 2.520.150 results from the residual sum of squares, which is 539.312.029 with 214 degrees of freedom. The entire sum of squares is 804,676,272, with 223 degrees of freedom, resulting in a mean square value of 3,608,414. These figures collectively imply that there is still a significant amount of variability in the dependent variable that cannot be explained, even though the model is statistically significant and accounts for some of the variability.

**Table 7.** Regression Results with CSR as Independent Variable.

umber	SS	df	MS	F	Prob > F	R-squared	Adj R-squared	Root MSE
Model	265.364.243	9	294.849.159	11.70	0.0000	0.3298	0.3016	15.875
Residual	539.312.029	214	252.014.967					
Total	804.676.272	223	360.841.378					

Source: Observation processed by the author in 2024.

**Table 7b.**

PBV_w	Coefficient	Std. err.	t	P> t	95%	conf. interval
BED	3.102289	1.414164	2.19	0.029	.3148142	5.889765
CSR	-.148425	.1114656	-1.33	0.184	-.368136	.0712861
PCGovOwn	-.5141894	.3245533	-1.58	0.115	-1.15392	.1255413
PCBoard	-.6077383	.2855051	-2.13	0.034	-1.170501	-.0449759
Age	-.7378492	.2042325	-3.61	0.000	-1.140414	-.3352843
Size	.0807822	.03098	2.61	0.010	.0197173	.1418472
ROA	12.69014	1.597919	7.94	0.000	9.540466	15.83982
Lev	.2016767	.0809264	2.49	0.013	.0421617	.3611917
Covid	-.6942929	.2426598	-2.86	0.005	-1.172602	-.2159834
cons	1.674704	1.152658	1.45	0.148	-.5973127	3.946722

Source: Observation processed by the author in 2024.

Table 8 presents a concise overview of the outcomes of the regression study, where Env, Soc, and Gov are utilized as independent variables. The model demonstrates statistical significance, as evidenced by an F-statistic of 10.45 and a p-value of 0.0000. This suggests that the independent factors together account for a substantial amount of the variation in the dependent variable, PBV\_w. The R-squared score of 0.3516 indicates that around 35.16% of the variation in the dependent variable can be explained by the model. A more precise measure of fit is provided by the adjusted R-squared value of 0.3180, which accounts for the number of predictors in the model. The root mean square error (RMSE) is 1.5688, which is the average difference between the observed values and the projected values. The regression model has a sum of squares (SS) of 282.928.227 and 11 degrees of freedom, yielding a mean square (MS) of 25.720.747. The residual sum of squares is 521.748.045, calculated using 212 degrees of freedom, resulting in a mean square value of 2.461.076. The entire sum of squares is 804,676,272 with 223 degrees of freedom, resulting in a mean square (MS) of 3,608,414. These findings imply that although the model explains a significant amount of the variability, some volatility in PBV\_w is still unaccounted for.

**Table 8.** Regression Results with Env, Soc, and Gov as Independent Variables.

Number	SS	df	MS	F	Prob > F	R-squared	Adj R-squared	Root MSE
Model	282.928.227	11	25.720.748	10.45	0.0000	0.3516	0.3180	1.5688
Residual	521.748.045	212	2.461.076					
Total	804.676.272	223	3.608.414					

Source: Observation processed by the author in 2024.

The regression analysis results, with ESG\_Disc as the primary independent variable, are shown in Table 9. With a p-value of 0.0000 and an F-statistic of 11.43, the model exhibits statistical significance, suggesting that the independent factors influence the dependent variable, PBV\_w, significantly as a whole. The R-squared value of 0.3247 indicates that around 32.47% of the variability in PBV\_w can be accounted for by

the model. The adjusted R-squared score of 0.2963, which accounts for the number of predictors, offers a more accurate indication of how well the model fits the data. The root mean square error (RMSE) is 1.5935, indicating the average deviation between the predicted values and the actual values. With nine degrees of freedom and a sum of squares (SS) of 261.253.260, the regression model yields a mean square (MS) of 29.028.140. An MS of 2.539.360 results from the residual sum of squares, which is 543.423.012 with 214 degrees of freedom. The entire sum of squares is 804,676,272 with 223 degrees of freedom, resulting in a mean square (MS) of 3,608,414. Although the model has a statistically significant impact, it only explains less than one-third of the variation in PBV\_w. This suggests that there may be other crucial factors at play.

**Table 9.** Regression Results with ESG\_Disc as Independent Variable.

Number	SS	df	MS	F	Prob > F	R-squared	Adj R-squared	Root MSE
Model	261.253.260	9	29.028.140	11.43	0.0000	0.3247	0.2963	1.5935
Residual	543.423.012	214	2.539.360					
Total	804.676.272	223	3.608.414					

Source: Observation processed by the author in 2024.

Table 10 presents the results of the regression analysis, including all independent variables and their interaction terms. PBV\_w, the dependent variable, is significantly impacted by the collection of variables that are independent and their interactions taken together, according to the model, which shows statistically significant effects with an F-statistic of 7.20 with a p-value of 0.0000. The R-squared value of 0.3874 indicates that around 38.74% of the variation in PBV\_w can be accounted for by the model. The adjusted R-squared value of 0.3336, which takes into account the number of predictors, indicates that the model explains a substantial percentage of the variability, but there is still potential for enhancement. The root mean square error (RMSE) is 1.5507, indicating the average deviation between the predicted values and the actual values. The regression model has a sum of squares (SS) of 311.717.108 and 18 degrees of freedom, which gives a mean square (MS) of 17.317.617. An MS of 2.404.679 results from the residual sum of squares, which is 492.959.164 with 205 degrees of freedom. With two hundred and twenty-three degrees of freedom, the total sum of squares is 804.676.272, and the MS is 3.608.414. This comprehensive model, which considers both individual and interaction effects, offers a more detailed perspective on the relationships that influence PBV\_w.

**Table 10.** Regression Results with All Independent Variables and Interaction Terms.

Number	SS	df	MS	F	Prob > F	R-squared	Adj R-squared	Root MSE
Model	311.717.108	18	17.317.617	7.20	0.0000	0.3874	0.3336	15.507
Residual	492.959.164	205	2.404.679					
Total	804.676.272	223	3.608.414					

Source: Observation processed by the author in 2024.

The findings of the regression analysis are shown in Table 11, where the independent variables are CSR and its interaction term BED\_CSR. The model exhibits a substantial overall fit, as evidenced by an F-statistic of 10.48 and a p-value of 0.0000. This indicates that the independent variables and their interaction jointly exert a considerable influence on the dependent variable, PBV\_w. The R-squared value of 0.3298 indicates that around 32.98% of the variation in PBV\_w can be accounted for by the model. The corrected R-squared value of 0.2983, which considers the number of predictors, indicates a comparable explanation of the variance but is significantly lower, suggesting a potential modest overfitting of the model. The root mean square error (RMSE) is 1.5912, representing the average magnitude of the forecast mistakes. The model of regression has a mean squared (MS) of 26.538.272 and a sum of squares (SS) of 265.382.716 with 10 degrees of freedom. The remainder of the number of squares is 539.293.557, calculated using 213 degrees of freedom, resulting in a mean square value of 2.531.895. The entire sum of squares is 804,676,272 with 223 degrees of freedom, resulting in a mean square (MS) value of 3,608,414. Understanding the precise

effects of CSR-related factors and their interactions with PBV\_w is possible thanks to this analysis using CSR and BED\_CSR.

**Table 11.** Regression Results with CSR and BED\_CSR as Independent Variables.

Number	SS	df	MS	F	Prob > F	R-squared	Adj R-squared	Root MSE
Model	265.382.716	10	26.538.272	10.48	0.0000	0.3298	0.2983	15.912
Residual	539.293.557	213	2.531.895					
Total	804.676.272	223	3.608.414					

Source: Observation processed by the author in 2024.

The findings of a regression analysis using the variables of the environment, society, and government as well as their interaction terms as independent variables are shown in Table 12. The model's overall fit is statistically significant, as evidenced by the F-statistic of 8.52 and a p-value of 0.0000. This indicates that the predictors together have a substantial impact on the dependent variable, PBV\_w. The R-squared value of 0.3632 indicates that around 36.32% of the variability in PBV\_w can be accounted for by the model. The adjusted R-squared value of 0.3206, which accounts for the number of predictors, indicates a significantly lower proportion of explained variance. This suggests that the fit of the model may be affected by some level of model complexity. The root mean square error (RMSE) is 1.5658, which indicates the average discrepancy between the predicted values and the actual values. The regression model has a sum of squares (SS) of 292.280.017 and 14 degrees of freedom, which gives a mean square (MS) of 20.877.144. An MS of 2.451.657 results from the residual sum of squares, which is 512.396.256 with 209 degrees of freedom. The entire sum of squares is 804,676,272 with 223 degrees of freedom, resulting in a mean square (MS) value of 3,608,414. This research explores the influence of social, governance, and environmental factors, as well as their interconnections, on PBV\_w. It aims to provide insights into how these variables collectively affect the dependent variable.

**Table 12.** Regression Results with Env, Soc, Gov, and Their Interaction Terms as Independent Variables.

Number	SS	df	MS	F	Prob > F	R-squared	Adj R-squared	Root MSE
Model	292.280.017	14	20.877.144	8.52	0.0000	0.3632	0.3206	15.658
Residual	512.396.256	209	2.451.657					
Total	804.676.272	223	3.608.414					

Source: Observation processed by the author in 2024.

Table 13 presents the regression results with ESG\_Disc and BED\_ESGDisc as the primary independent variables, along with other control variables. The model is statistically significant, with an F-statistic of 10.28 and a p-value of 0.0000, suggesting that the predictors significantly influence the dependent variable, PBV\_w. The R-squared value of 0.3255 indicates that approximately 32.55% of the variance in PBV\_w is explained by the model. The adjusted R-squared value of 0.2938 accounts for the number of predictors and indicates a slightly lower proportion of explained variance, reflecting the complexity and fit of the model. The root mean square error (RMSE) is 1.5963, which represents the average deviation of the predicted values from the actual values. The sum of squares (SS) for the model is 261.891.692 with 10 degrees of freedom, resulting in a mean square (MS) of 26.189.169. The residual sum of squares is 542.784.581 with 213 degrees of freedom, giving an MS of 2.548.284. The total sum of squares is 804.676.272 with 223 degrees of freedom, leading to an MS of 3.608.414. This regression analysis evaluates the impact of ESG\_Disc and its interaction with BED\_ESGDisc on PBV\_w, providing insights into how these variables, along with other control variables, affect the dependent variable.

**Table 13.** Regression Results with ESG\_Disc and BED\_ESGDisc as Independent Variables.

Number	SS	df	MS	F	Prob > F	R-squared	Adj R-squared	Root MSE
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Model	261.891.692	10	26.189.169	10.28	0.0000	0.3255	0.2938	15.963
Residual	542.784.581	213	2.548.284					
Total	804.676.272	223	3.608.414					

Source: Observation processed by the author in 2024.

The regression analysis provides a nuanced view of the factors influencing the Price-Earnings Ratio (PER\_w), highlighting the intricate interplay between various predictors and firm valuations. This discussion contextualizes the findings within existing literature and theoretical frameworks to offer a comprehensive understanding of the results.

#### *Governance and Board Independence*

An analysis of Board Independence (PCBoard) and Governance (Gov) provides important insights into how these factors affect business valuations, specifically as determined by the Price-to-Earnings Ratio (PER\_w). The strong correlation between governance systems and firm valuations highlights the crucial impact governance has on corporate performance. The relationship is strongly supported by Agency Theory, which suggests that having efficient governance procedures is essential for reducing agency costs and assuring improved supervision and administration of the organization (Jensen and Meckling 2019).

Agency Theory, as proposed by Jensen and Meckling (1976), highlights the inherent conflicts of interest that arise between managers (agents) and stockholders (principals). Strong governance systems, such as efficient boards of directors, are essential to ensure that the goals of management are in line with those of shareholders. This alignment is accomplished by implementing rigorous supervision, clear and open disclosure of information, and measures of responsibility that decrease the likelihood of managerial self-interest. The study found a strong correlation between governance and PER\_w, supporting the idea that companies with robust governance structures are viewed as trustworthy and low-risk by investors, leading to higher market valuations. The finding is supported by empirical evidence from prior investigations. Research conducted by Andreou et al. (2019), Wang et al. (2018) has shown that companies with strong governance systems generally get better financial results and are more highly valued by investors. The research suggest that implementing excellent governance practices, such as strong board monitoring and open management systems, can lower the likelihood of financial mismanagement and increase investor trust. Consequently, these companies are seen as more favorable investments, resulting in increased market values.

The correlation between Board Independence (PCBoard) and PER\_w provides additional evidence for the significance of governance in determining firm valuation. Independent boards, comprised of directors who are not affiliated with the company's leadership team, have a vital function in improving decision-making processes and provide impartial supervision. Studies conducted by Bhagat and Bolton (2008) and Adams and Ferreira (2007) have demonstrated that boards that operate independently are more inclined to question and scrutinize management actions, resulting in improved governance results. This autonomy decreases the expenses associated with managing a company by guaranteeing that the decisions made by managers are in line with the interests of shareholders. As a result, it enhances the trust of investors and the overall value of the firm. Furthermore, a larger body of research emphasizes how important board independence and governance are in determining the performance and worth of a company. Research regularly demonstrates that organizations with autonomous boards and robust governance structures are more adept at navigating intricate business landscapes, mitigating risks, and seizing opportunities. These qualities improve the standing of the company and draw in investment, resulting in increased valuations (Hermalin & Weisbach, 2003; Fama & Jensen, 1983).

To summarize, the analysis highlights the crucial importance of governance and board independence in improving corporate valuation. The strong positive correlation between Governance (Gov) and PER\_w provides evidence in favor of the Agency Theory's claim that effective governance systems reduce agency expenses and promote improved supervision and management. The presence of Board Independence (PCBoard) has a beneficial effect on decision-making and reduces agency costs. This, in turn, increases investor trust and improves the value of the organization. These findings are in line with the wider body of literature, which constantly highlights that robust governance and autonomous boards are crucial factors in determining a company's performance and value. Further investigation is needed to examine the dynamic



relationships among governance frameworks, board independence, and corporate performance in order to gain a more comprehensive understanding of how these aspects contribute to long-term business success.

#### *Corporate Social Responsibility (CSR) and Business Ethics Disclosure (BED)*

Considering the increasing emphasis on ethical behaviors and corporate social responsibility, it may seem paradoxical at first that CSR and BED have little effect on PER\_w. Nevertheless, this discovery aligns with the Stakeholder Theory, which posits that although corporate social responsibility (CSR) programs are crucial for maintaining good relationships with stakeholders, their direct influence on market valuations can be influenced by other financial and operational factors (Freeman, 1990; Margolis & Walsh, 2003). Studies suggest that although corporate social responsibility (CSR) initiatives improve the reputation of companies, their immediate impact on valuations may be less significant when compared to governance criteria (McWilliams & Siegel, 2001). Similarly, the lack of importance of BED scores suggests that although ethical disclosures are important for a company's reputation, their impact on market value may be less significant compared to criteria like financial performance and governance indicators (Cohen, Holder-Webb, & Zamora, 2011).

#### *Environmental (Env) and Social (Soc) Scores*

Recent research has focused a great deal of discussion on the impact of Environmental (Env) and Social (Soc) scores on business performance indicators, particularly Price-to-Earnings Ratio (PER\_w). The minimal influence of these scores on market value indicates that environmental and social disclosures alone may not be significant factors in determining market pricing. This result is consistent with the Legitimacy Theory, which holds that businesses report on social and environmental issues mainly to gain social and political legitimacy rather than to directly affect their market value (Craig Deegan 2012; Czinkota, Kaufmann, and Basile 2014; Michael Czinkota a, Hans Ruediger Kaufmann b 2014). The concept of Legitimacy Theory, as explained by Suchman (1995), emphasizes that firms strive to conform their actions to the expectations and standards of society in order to establish credibility and acceptance. This method entails the disclosure of environmental and social performance to showcase the company's adherence to recognized standards of corporate responsibility (Ortas et al. 2015). Nevertheless, conforming to society norms does not automatically result in immediate financial gains or advances in market worth. Instead, it functions to uphold the company's social authorization to function, guaranteeing enduring viability and mitigating possible regulatory or reputational hazards.

According to the study's findings, investors may place more weight on environmental and social disclosures' relevance and significance than just their availability. This aligns with the findings of Rahmawati et al. (2024), who contend that investors are becoming more selective when it comes to the significance of ESG aspects. They prioritize disclosures that directly affect financial performance and long-term strategic goals. This suggests that environmental and social disclosures play a crucial role in preserving societal acceptance, but their influence on market value depends on how relevant and significant they are judged to be in relation to the company's overall performance. Porter et al. (2012) contend in their Creating Shared Value (CSV) framework that in order for environmental and social activities to have a significant effect, they must be included into the fundamental company strategy. The process of integrating can generate mutual benefits for both the organization and society, resulting in a long-term competitive advantage that can be maintained throughout time. Nevertheless, if these disclosures are seen as shallow or unrelated to the company's main commercial activities, they might not appeal to investors and so have a little effect on market price.

Moreover, Elkington and Fennell (1998) highlights the necessity for companies to strike a balance between social, environmental, and economic success in his Triple Bottom Line idea. This comprehensive approach to corporate sustainability posits that environmental and social disclosures are crucial for showcasing corporate accountability, but they must be integrated into a wider plan that also prioritizes financial performance. The study's findings suggest that the Env and Soc scores have a minimal effect on PER\_w. This supports the idea that investors see these disclosures as supplementary to, rather than replacements for, financial performance criteria. Ultimately, the study's results suggest that environmental and social ratings, although crucial for upholding credibility and showcasing corporate accountability, may not have a substantial impact on market value when evaluated independently. This statement provides evidence for the assumption made by the Legitimacy Theory that these disclosures are primarily intended to acquire

societal acceptance rather than immediate financial benefits. Further investigation is needed to examine the circumstances in which environmental and social disclosures can improve market value, especially when they are included into a company's central business plan and connected with financial performance goals.

#### *ESG Disclosure (ESG\_Disc) and COVID-19 Impact*

The global outbreak of COVID-19 has had a substantial effect on enterprises across the globe, resulting in substantial financial disturbances and operational difficulties. When evaluating ESG disclosures in the current era, the limited importance of the ESG Disclosure (ESG\_Disc) and COVID-19 Impact variables indicates that these aspects, although relevant, have a minor impact on setting corporation valuations. This discovery is consistent with Signaling Theory, which suggests that when there is not strong financial performance or effective governance frameworks, disclosing information about environmental, social, and governance (ESG) factors may not always result in increased valuations (Chris Brooks 2018; Friede, Busch, and Bassen 2015). Signaling Theory, as postulated by Michael Spence (1973), highlights the significance of signals actions undertaken by a firm to convey its quality or goals to stakeholders. Within the realm of ESG disclosures, firms that exhibit robust financial performance or possess firmly established governance systems can utilize ESG reporting as an indication of their enduring sustainability and ethical principles. Nevertheless, organizations that do not possess these fundamental qualities may find that ESG disclosures alone are inadequate for improving market attitudes or prices. Empirical research shows that when making investment decisions, investors frequently give financial stability and governance a higher priority than ESG criteria (Friede et al. 2015). This finding lends support to the hypothesis.

The COVID-19 pandemic has added complexity to the relationship between ESG disclosures and corporate valuations. The epidemic has resulted in unparalleled disruptions across multiple businesses, resulting in acute financial pressures and requiring long-term strategy adaptations (Donthu and Gustafsson 2020). As per Baker (2015), the market conditions during the COVID-19 pandemic have been extremely unstable. Various factors such as disruptions in supply chains, changes in consumer behavior, and alterations in regulatory settings have significantly impacted corporation valuations. The influence of ESG disclosures on valuations during this period may differ greatly depending on the individual circumstances of each company. The need for a more sophisticated understanding of the interactions between these factors and company performance is shown by the ESG\_Disc and COVID-19 Impact variables' marginal importance. ESG disclosures are gaining recognition for their capacity to promote openness and accountability. However, their impact on valuations may depend on the financial health and governance procedures of the organization. This finding aligns with the wider body of research on ESG investment, indicating that the influence of ESG characteristics on financial success can vary and is influenced by specific circumstances (Eccles, Ioannou, & Serafeim, 2014). To summarize, this study emphasizes the modest yet significant impact of ESG disclosures and the COVID-19 epidemic on firm valuations. According to Signaling Theory, ESG disclosures are most impactful when they are supported by robust financial performance and governance frameworks (Chen, Song, and Gao 2023). Subsequent studies should investigate the lasting consequences of ESG (Environmental, Social, and Governance) policies in the period following the pandemic, taking into account how persistent environmental and social issues may influence the actions of investors and the strategies of corporations (Amihud and Mendelson 2008).

#### *Size and PER\_w*

The robust positive correlation between Size and PER\_w underscores the importance of business size in setting market valuations. Big corporations are frequently assigned higher worth because of their market sway, ability to achieve cost advantages through increased production, and potential for generating more money (Titman & Wessels, 1988). This outcome aligns with the Theory of Firm Size, which posits that larger companies enjoy advantages such as enhanced access to financial markets, ample resources, and decreased exposure to risk (Fama & French, 1992). The results emphasize the significance of size as a factor that determines the value of a company, which is consistent with existing research on the economic benefits of larger enterprises. The same results have also been discussed in several research instruments related to Size and PER (Dang, 2018; Lacey et al. 2017; Shen et al. 2017).

#### *Theoretical Implications*

The results offer backing to multiple theoretical models. The significance of stakeholder participation and governance in impacting corporate valuations is underscored by the Agency Theory and Stakeholder Theory. The findings also align with Legitimacy Theory, which posits that environmental and social disclosures primarily aim to uphold social legitimacy rather than directly influence valuations. Furthermore, the Signaling Theory sheds light on why pandemic-related effects and ESG disclosures might not have a significant direct influence on valuations.

Although the study offers valuable insights, it also emphasizes the necessity for additional research. Further investigation is necessary to understand the intricate relationship between ethical behaviors, governance structures, ESG performance, and their impact on business value. Future study should investigate how various sectors and geographical settings impact these correlations, as well as the possible moderating role of certain governance and ethical standards on ESG performance.

## Conclusion

In summary, the regression analysis reveals that governance and company size are critical determinants of PER\_w. The positive effects of Governance and Board Independence suggest that strong governance structures and independent boards are valued by the market. However, the limited impact of CSR, BED, Env, and Soc scores indicates that while these factors are important, their direct influence on valuations might be overshadowed by other variables. The marginal significance of ESG\_Disc and COVID-19 impact variables points to the need for further exploration of their roles in specific contexts. The strong positive relationship with Size emphasizes the importance of firm size in shaping market valuations. Future research should consider refining the model and incorporating additional variables to capture the nuances of market valuations better. Exploring industry-specific contexts and investor behavior may provide deeper insights into how various factors influence firm valuations.

## References

- Adams, Carol A., and Subhash Abhayawansa. 2022. "Connecting the COVID-19 Pandemic, Environmental, Social and Governance (ESG) Investing and Calls for 'Harmonisation' of Sustainability Reporting." *Critical Perspectives on Accounting* 82:102309. doi: <https://doi.org/10.1016/j.cpa.2021.102309>.
- Alfaro, Laura, Gonzalo Asis, Anusha Chari, and Ugo Panizza. 2019. "Corporate Debt, Firm Size and Financial Fragility in Emerging Markets." *Journal of International Economics* 118:1–19. doi: <https://doi.org/10.1016/j.jinteco.2019.01.002>.
- Alkaraan, Fadi, Khaldoun Albitar, Khaled Hussainey, and V. G. Venkatesh. 2022. "Corporate Transformation toward Industry 4.0 and Financial Performance: The Influence of Environmental, Social, and Governance (ESG)." *Technological Forecasting and Social Change* 175:121423. doi: <https://doi.org/10.1016/j.techfore.2021.121423>.
- Amihud, Yakov, and Haim Mendelson. 2008. "Liquidity, the Value of the Firm, and Corporate Finance." *Journal of Applied Corporate Finance* 20(2):32–45. doi: <https://doi.org/10.1111/j.1745-6622.2008.00179.x>.
- van Amstel, Mariëtte, Peter Driessen, and Pieter Glasbergen. 2008. "Eco-Labeling and Information Asymmetry: A Comparison of Five Eco-Labels in the Netherlands." *Journal of Cleaner Production* 16(3):263–76. doi: <https://doi.org/10.1016/j.jclepro.2006.07.039>.
- Andreou, Panayiotis C., John A. Doukas, Demetris Koursaros, and Christodoulos Louca. 2019. "Valuation Effects of Overconfident CEOs on Corporate Diversification and Refocusing Decisions." *Journal of Banking & Finance* 100:182–204. doi: <https://doi.org/10.1016/j.jbankfin.2019.01.009>.
- Aouadi, Amal, and Sylvain Marsat. 2018. "Do ESG Controversies Matter for Firm Value? Evidence from International Data." *Journal of Business Ethics* 151(4):1027–47. doi: [10.1007/s10551-016-3213-8](https://doi.org/10.1007/s10551-016-3213-8).
- Aydoğmuş, Mahmut, Güzhan Gülay, and Korkmaz Ergun. 2022. "Impact of ESG Performance on Firm Value and Profitability." *Borsa Istanbul Review* 22:S119–27. doi: <https://doi.org/10.1016/j.bir.2022.11.006>.
- Baker, Scott R. 2015. "COVID-INDUCED ECONOMIC UNCERTAINTY." *Angewandte Chemie International Edition*, 6(11), 951–952. 1(April).
- Baldi, Francesco, and Alessandro Pandimiglio. 2022. "The Role of ESG Scoring and Greenwashing Risk in Explaining the Yields of Green Bonds: A Conceptual Framework and an Econometric Analysis." *Global Finance Journal* 52:100711. doi: <https://doi.org/10.1016/j.gfj.2022.100711>.
- Behl, Abhishek, P. S. Raghu Kumari, Harnesh Makhija, and Dipasha Sharma. 2022. "Exploring the Relationship of ESG Score and Firm Value Using Cross-Lagged Panel Analyses: Case of the Indian Energy Sector." *Annals of Operations Research* 313(1):231–56. doi: [10.1007/s10479-021-04189-8](https://doi.org/10.1007/s10479-021-04189-8).
- Boiral, Olivier, and Iñaki Heras-Saizarbitoria. 2020. "Sustainability Reporting Assurance: Creating Stakeholder Accountability through Hyperreality?" *Journal of Cleaner Production* 243:118596. doi: <https://doi.org/10.1016/j.jclepro.2019.118596>.
- Buchanan, Bonnie, Cathy Xuying Cao, and Chongyang Chen. 2018. "Corporate Social Responsibility, Firm Value, and Influential Institutional Ownership." *Journal of Corporate Finance* 52:73–95. doi: <https://doi.org/10.1016/j.jcorpfin.2018.07.004>.
- Bunea, Ovidiu-Iulian, Razvan-Andrei Corbos, and Ruxandra-Irina Popescu. 2019. "Influence of Some Financial Indicators on Return on Equity Ratio in the Romanian Energy Sector - A Competitive Approach Using a DuPont-Based Analysis." *Energy* 189:116251. doi: <https://doi.org/10.1016/j.energy.2019.116251>.

- Camilleri, Mark Anthony. 2015. "Environmental, Social and Governance Disclosures in Europe." *Sustainability Accounting, Management and Policy Journal* 6(2):224–42. doi: 10.1108/SAMPJ-10-2014-0065.
- Carnevale, Joel B., and Isabella Hatak. 2020. "Employee Adjustment and Well-Being in the Era of COVID-19: Implications for Human Resource Management." *Journal of Business Research* 116:183–87. doi: <https://doi.org/10.1016/j.jbusres.2020.05.037>.
- Chauhan, Yogesh, and Surya B. Kumar. 2018. "Do Investors Value the Nonfinancial Disclosure in Emerging Markets?" *Emerging Markets Review* 37:32–46. doi: <https://doi.org/10.1016/j.ememar.2018.05.001>.
- Chen, Hsiao-Min, Tsai-Chi Kuo, and Ju-Long Chen. 2022. "Impacts on the ESG and Financial Performances of Companies in the Manufacturing Industry Based on the Climate Change Related Risks." *Journal of Cleaner Production* 380:134951. doi: <https://doi.org/10.1016/j.jclepro.2022.134951>.
- Chen, Simin, Yu Song, and Peng Gao. 2023. "Environmental, Social, and Governance (ESG) Performance and Financial Outcomes: Analyzing the Impact of ESG on Financial Performance." *Journal of Environmental Management* 345:118829. doi: <https://doi.org/10.1016/j.jenvman.2023.118829>.
- Chen, Zhongfei, and Guanxia Xie. 2022. "ESG Disclosure and Financial Performance: Moderating Role of ESG Investors." *International Review of Financial Analysis* 83:102291. doi: <https://doi.org/10.1016/j.irfa.2022.102291>.
- Chris Brooks, Ioannis Oikonomou. 2018. "The Effects of Environmental, Social and Governance Disclosures and Performance on Firm Value: A Review of the Literature in Accounting and Finance." *The British Accounting Review*. doi: <https://doi.org/10.1016/j.bar.2017.11.005>.
- Claessens, Stijn, and B. Burcin Yurtoglu. 2013. "Corporate Governance in Emerging Markets: A Survey." *Emerging Markets Review* 15:1–33. doi: <https://doi.org/10.1016/j.ememar.2012.03.002>.
- Coluccia, Daniela, Marina Dabić, Manlio Del Giudice, Stefano Fontana, and Silvia Solimene. 2020. "R&D Innovation Indicator and Its Effects on the Market. An Empirical Assessment from a Financial Perspective." *Journal of Business Research* 119:259–71. doi: <https://doi.org/10.1016/j.jbusres.2019.04.015>.
- Craig Deegan, Ben Gordon. 2012. "A Study of the Environmental Disclosure Practices of Australian Corporations." *Accounting and Business Research*. doi: <https://doi.org/10.1080/00014788.1996.9729510>.
- Czinkota, Michael, Hans Ruediger Kaufmann, and Gianpaolo Basile. 2014. "The Relationship between Legitimacy, Reputation, Sustainability and Branding for Companies and Their Supply Chains." *Industrial Marketing Management* 43(1):91–101. doi: <https://doi.org/10.1016/j.indmarman.2013.10.005>.
- Dang, Chongyu, Zhichuan (Frank) Li, and Chen Yang. 2018. "Measuring Firm Size in Empirical Corporate Finance." *Journal of Banking & Finance* 86:159–76. doi: <https://doi.org/10.1016/j.jbankfin.2017.09.006>.
- Digby, Robin, Toby Winton-Brown, Felicity Finlayson, Hannah Dobson, and Tracey Bucknall. 2021. "Hospital Staff Well-Being during the First Wave of COVID-19: Staff Perspectives." *International Journal of Mental Health Nursing* 30(2):440–50. doi: <https://doi.org/10.1111/inm.12804>.
- Donthu, Naveen, and Anders Gustafsson. 2020. "Effects of COVID-19 on Business and Research." *Journal of Business Research* 117:284–89. doi: <https://doi.org/10.1016/j.jbusres.2020.06.008>.
- Dubey, Rameshwar, Angappa Gunasekaran, and Sadia Samar Ali. 2015. "Exploring the Relationship between Leadership, Operational Practices, Institutional Pressures and Environmental Performance: A Framework for Green Supply Chain." *International Journal of Production Economics* 160:120–32. doi: <https://doi.org/10.1016/j.ijpe.2014.10.001>.
- Dwianto, Agus, Diana Puspitasari, Annisa Qurrota A, Ardiani Ika Sulistyawati, and Ade Pugara. 2024. "Sustainability Environmental Performance Future Investment for Company Value." 6798(March):233–50.
- Elkington, John, and Shelly Fennell. 1998. "Partners for Sustainability." *Greener Management International* (24):48.
- Escrig-Olmedo, Elena, Juana María Rivera-Lirio, María Jesús Muñoz-Torres, and María Ángeles Fernández-Izquierdo. 2017. "Integrating Multiple ESG Investors' Preferences into Sustainable Investment: A Fuzzy Multicriteria Methodological Approach." *Journal of Cleaner Production* 162:1334–45. doi: <https://doi.org/10.1016/j.jclepro.2017.06.143>.
- Friede, Gunnar, Timo Busch, and Alexander Bassen. 2015. "ESG and Financial Performance: Aggregated Evidence from More than 2000 Empirical Studies." *Journal of Sustainable Finance and Investment* 5(4):210–33. doi: 10.1080/20430795.2015.1118917.
- García-Sánchez, Isabel-María, and Alejandra García-Sánchez. 2020. "Corporate Social Responsibility during COVID-19 Pandemic." *Journal of Open Innovation: Technology, Market, and Complexity* 6(4):126. doi: <https://doi.org/10.3390/joitmc6040126>.
- He, Feng, Shuqi Qin, Yuanyuan Liu, and Ji (George) Wu. 2022. "CSR and Idiosyncratic Risk: Evidence from ESG Information Disclosure." *Finance Research Letters* 49:102936. doi: <https://doi.org/10.1016/j.frl.2022.102936>.
- Hehenberger, Lisa, and Chiara Andreoli. 2024. "Impact Measurement and the Conflicted Nature of Materiality Decisions." *Current Opinion in Environmental Sustainability* 68:101436. doi: <https://doi.org/10.1016/j.cosust.2024.101436>.
- Hörisch, Jacob, Stefan Schaltegger, and R. Edward Freeman. 2020. "Integrating Stakeholder Theory and Sustainability Accounting: A Conceptual Synthesis." *Journal of Cleaner Production* 275. doi: 10.1016/j.jclepro.2020.124097.
- Hübel, Benjamin, and Hendrik Scholz. 2020. "Integrating Sustainability Risks in Asset Management: The Role of ESG Exposures and ESG Ratings." *Journal of Asset Management* 21(1):52–69. doi: 10.1057/s41260-019-00139-z.
- Ibhagui, Oyakhilome W., and Felicia O. Olokoyo. 2018. "Leverage and Firm Performance: New Evidence on the Role of Firm Size." *The North American Journal of Economics and Finance* 45:57–82. doi: <https://doi.org/10.1016/j.najef.2018.02.002>.
- Jensen, Michael C., and William H. Meckling. 2019. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure." *Corporate Governance: Values, Ethics and Leadership* 77–132. doi: 10.4159/9780674274051-006.
- Joslin, Robert, and Ralf Müller. 2016. "The Relationship between Project Governance and Project Success." *International Journal of Project Management* 34(4):613–26. doi: <https://doi.org/10.1016/j.ijproman.2016.01.008>.
- Khan, Muhammad Arif. 2022. "ESG Disclosure and Firm Performance: A Bibliometric and Meta Analysis." *Research in International Business and Finance* 61:101668. doi: <https://doi.org/10.1016/j.ribaf.2022.101668>.
- Lacey, J. Patrick, Olivier Evrard, Hugh G. Smith, Will H. Blake, Jon M. Olley, Jean P. G. Minella, and Philip N. Owens. 2017.



- “The Challenges and Opportunities of Addressing Particle Size Effects in Sediment Source Fingerprinting: A Review.” *Earth-Science Reviews* 169:85–103. doi: <https://doi.org/10.1016/j.earscirev.2017.04.009>.
- Lee, Michael T., Robyn L. Raschke, and Anjala S. Krishen. 2023. “Understanding ESG Scores and Firm Performance: Are High-Performing Firms E, S, and G-Balanced?” *Technological Forecasting and Social Change* 195:122779. doi: <https://doi.org/10.1016/j.techfore.2023.122779>.
- Lee, Michael T., and Ikseon Suh. 2022. “Understanding the Effects of Environment, Social, and Governance Conduct on Financial Performance: Arguments for a Process and Integrated Modelling Approach.” *Sustainable Technology and Entrepreneurship* 1(1):100004. doi: <https://doi.org/10.1016/j.stae.2022.100004>.
- Li, Yiwei. 2018. “The Impact of Environmental, Social, and Governance Disclosure on Firm Value: The Role of CEO Power.” *The British Accounting Review*.
- Liu, Hongxun, and Zihan Zhang. 2023. “The Impact of Managerial Myopia on Environmental, Social and Governance (ESG) Engagement: Evidence from Chinese Firms.” *Energy Economics* 122:106705. doi: <https://doi.org/10.1016/j.eneco.2023.106705>.
- Mazzi, Chiara. 2011. “Family Business and Financial Performance: Current State of Knowledge and Future Research Challenges.” *Journal of Family Business Strategy* 2(3):166–81. doi: <https://doi.org/10.1016/j.jfbs.2011.07.001>.
- Michael Czinkota a, Hans Ruediger Kaufmann b, Gianpaolo Basile. 2014. “The Relationship between Legitimacy, Reputation, Sustainability and Branding for Companies and Their Supply Chains.” *Industrial Marketing Management*.
- Michael Spence. 1973. “Job Market Signaling Author ( s ): Michael Spence Published by : Oxford University Press Stable URL : <https://www.jstor.org/stable/1882010>.” *The Quarterly Journal of Economics* 87(3):355–74.
- Mohammad, Wan Masliza Wan, and Shaista Wasiuzzaman. 2021. “Environmental, Social and Governance (ESG) Disclosure, Competitive Advantage and Performance of Firms in Malaysia.” *Cleaner Environmental Systems* 2:100015. doi: <https://doi.org/10.1016/j.cesys.2021.100015>.
- Moonecapen, Oren, Subhash Abhayawansa, and Naushad Mamode Khan. 2022. “The Influence of the Country Governance Environment on Corporate Environmental, Social and Governance (ESG) Performance.” *Sustainability Accounting, Management and Policy Journal* 13(4):953–85. doi: 10.1108/SAMPJ-07-2021-0298.
- Moradi, Amir, and Elisabeth Paulet. 2019. “The Firm-Specific Determinants of Capital Structure – An Empirical Analysis of Firms before and during the Euro Crisis.” *Research in International Business and Finance* 47:150–61. doi: <https://doi.org/10.1016/j.ribaf.2018.07.007>.
- Murni, Sri, Rahmawati Rahmawati, Ari Kuncara Widagdo, Eko Arief Sudaryono, and Doddy Setiawan. 2023. “Effect of Family Control on Earnings Management: The Role of Leverage.” *Risks* 11(2). doi: 10.3390/risks11020028.
- Nareswari, Ninditya, Małgorzata Tarczyńska-Luniewska, and Rizqi Umar Al Hashfi. 2023. “Analysis of Environmental, Social, and Governance Performance in Indonesia: Role of ESG on Corporate Performance.” *Procedia Computer Science* 225:1748–56. doi: <https://doi.org/10.1016/j.procs.2023.10.164>.
- Nofsinger, John R., Johan Sulaeman, and Abhishek Varma. 2019. “Institutional Investors and Corporate Social Responsibility.” *Journal of Corporate Finance* 58:700–725. doi: <https://doi.org/10.1016/j.jcorpfin.2019.07.012>.
- Ortas, Eduardo, Igor Álvarez, Jacques Jaussaud, and Ainhua Garayar. 2015. “The Impact of Institutional and Social Context on Corporate Environmental, Social and Governance Performance of Companies Committed to Voluntary Corporate Social Responsibility Initiatives.” *Journal of Cleaner Production* 108:673–84. doi: <https://doi.org/10.1016/j.jclepro.2015.06.089>.
- Porter, Me, Greg Hills, Marc Pfitzer, Sonja Patscheke, and Elizabeth Hawkins. 2012. “Measuring Shared Value: How to Unlock Value by Linking Social and Business Results.” *Conference Report Available ...* 1–24.
- R. Edward Freeman, William M. Evan. 1990. “Corporate Governance: A Stakeholder Interpretation.” *Journal of Behavioral Economics*.
- Rahmawati, Rahmawati, Doddy Setiawan, Y. Anni Aryani, and Kiswanto Kiswanto. 2024. “Role Environmental Performance on Effect Financial Performance to Carbon Emission Disclosure.” *International Journal of Energy Economics and Policy* 14(1):196–204. doi: 10.32479/ijcep.15031.
- Shen, Xue, Tianqi Fang, Feng Gao, and Mingrui Guo. 2017. “Effects of Ultrasound Treatment on Physicochemical and Emulsifying Properties of Whey Proteins Pre- and Post-Thermal Aggregation.” *Food Hydrocolloids* 63:668–76. doi: <https://doi.org/10.1016/j.foodhyd.2016.10.003>.
- Tsang, Albert, Tracie Frost, and Huijuan Cao. 2023. “Environmental, Social, and Governance (ESG) Disclosure: A Literature Review.” *The British Accounting Review* 55(1):101149. doi: <https://doi.org/10.1016/j.bar.2022.101149>.
- Wahyuningrum, Indah Fajarini Sri, Natasya Ghinna Humaira, Mochamad Arief Budihardjo, Indah Sekar Arumdani, Annisa Sila Puspita, Adranandini Noor Annisa, Annisa Mayang Sari, and Hadrian Geri Djajadikerta. 2023. “Environmental Sustainability Disclosure in Asian Countries: Bibliometric and Content Analysis.” *Journal of Cleaner Production* 411:137195. doi: <https://doi.org/10.1016/j.jclepro.2023.137195>.
- Wang, Delu, Dylan Sutherland, Lutao Ning, Yuandi Wang, and Xin Pan. 2018. “Exploring the Influence of Political Connections and Managerial Overconfidence on R&D Intensity in China’s Large-Scale Private Sector Firms.” *Technovation* 69:40–53. doi: <https://doi.org/10.1016/j.technovation.2017.10.007>.
- Wang, Yung-Jang. 2002. “Liquidity Management, Operating Performance, and Corporate Value: Evidence from Japan and Taiwan.” *Journal of Multinational Financial Management* 12(2):159–69. doi: [https://doi.org/10.1016/S1042-444X\(01\)00047-0](https://doi.org/10.1016/S1042-444X(01)00047-0).
- Zhou, Guangyou, Lian Liu, and Sumei Luo. 2022. “Sustainable Development, ESG Performance and Company Market Value: Mediating Effect of Financial Performance.” *Business Strategy and the Environment* 31(7):3371–87. doi: <https://doi.org/10.1002/bse.3089>.