ESG and Corporate Valuation of Non-financial Listed Firms: Evidence from China

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ABSTRACT

ESG has become increasingly important for modern businesses seeking to drive growth while achieving sustainable development. Studies have found a significant positive relationship between a company's ESG performance and its market valuation, as measured by Tobin's Q. This paper evaluates the effect of ESG on the corporate valuation of Chinese non-financial listed firms during 2019 and 2024 by using multiple regression analysis and robust tests. The results indicate that corporate valuation is positively correlated with social factors, governance factors, and overall ESG score, while it is negatively correlated with environmental factors. This suggests firms should focus on enhancing their internal governance systems, including strengthening the board, ensuring transparency, and managing stakeholder relationships. Digitization can also improve ESG scores by reducing costs and improving communications. While environmental factors may initially reduce valuation, green marketing and promoting eco-friendly products can help offset this by attracting environmentally conscious consumers and investors.

1. Introduction

Nowadays, environmental protection and sustainable development have become the priorities of more and more modern businesses. With the purpose of driving business growth while achieving sustainable development goals, ESG was proposed by the United Nations in 2004, which stands for environment, society, and governance, showing a primary focus on social concerns, environmental protection, and governing efficiency. ESG shifts the traditional profit-centric mindset of most businesses to three aspects of responsibility to society and the world, which has a significant impact on corporate valuation. By implementing ESG, businesses can quantify and manage their risks associated with environmental damage, social inequality, and governance issues, thereby making more effective improvements that ultimately lead to better long-term financial performance. Moreover, incorporating ESG practices often leads to operational efficiencies, cost reductions, and enhanced brand reputation, all of which contribute to higher profitability and market competitiveness, consequently impacting corporate valuation positively. Additionally, investors are increasingly factoring in ESG performance when making

investment decisions, leading to greater demand for businesses demonstrating strong ESG credentials and potentially resulting in improved access to capital and higher valuation premiums for those businesses. Overall, as the significance of ESG factors continues to grow, their integration into corporate strategy can lead to tangible positive impacts on a company's valuation and market position.

2. Literature Review

Existing studies have generally discovered the relationship between corporate ESG performances and their valuations globally as it gradually becomes a popular issue for firms and investors. Notably, Aouadi and Marsat (2016) collected data from more than 4000 firms internationally during 2002 and 2011, generally discovering a significant positive relationship between ESG performance and firms' market valuation. Separately, regarding the environmental factor, Rassier and Earnhart (2010) found that a tightened environmental regulation, which mandatorily increased corporate environmental performance, would undermine firms' expected future financial performance, measured using Tobin's Q. Regarding the social factor, which covers public reputations and social responsibilities, Jo and Harjoto (2011) discovered that the engagement in social responsibilities was positively correlated with firm value, measured by industry-adjusted Tobin's Q. Regarding the governance factor, which encompasses shareholder protection and accountability, Kumalasari and Pratikto (2018) suggested that good corporate governance had a significant positive relationship with corporate valuation.

It is found that Tobin's Q has been profoundly harnessed, within a similar context, as an indicator of firms' managerial performance, such as scale efficiency and cost discipline, as well as firms' market valuation. Qin's (2023) investigation about the relationship between ESG performance and Chinese firms' valuation used Tobin's Q as the indicator of corporate valuation. A study done by Luu (2021) investigating the impact of capital structure on corporate value in Vietnam also utilized Tobin's Q to assess corporate valuation. Therefore, this paper uses Tobin's Q as an indicator of firms' market valuation, which is calculated by dividing the market value of the firm by the replacement cost of assets.

Notwithstanding, there are still several integral factors apart from ESG that may affect corporate valuation measured by Tobin's Q. Notably, an investigation done by Pindado et al. (2010) found that an increased size and growth of the company would regularly obtain an increased market valuation, evidenced from Eurozone countries. Singh and Bansal's (2016) study found that there was a significant positive relationship between a firm's leverage and its market valuations, which was also measured by Tobin's Q. In addition, Zhou (2021) found that there was a significant negative relationship between corporate ESG performance and its stock price volatility. Thus, this paper includes control variables such as size, growth, leverage, and volatility in the regression model.

3. Hypothesis

Existing literature has profoundly discovered the basic relationship between a company's ESG score and its valuation in certain regions under specific circumstances. Therefore, the following hypotheses are proposed for further testing.

Hypothesis 1: There is a significantly positive relationship between a company's ESG score and its valuation ($\alpha_1 \neq 0$).

Hypothesis 2: There is a significantly negative relationship between a company's environmental score (E) and its valuation ($\beta_1 \neq 0$).

Hypothesis 3: There is a significantly positive relationship between a company's social score (S) and its valuation ($\beta_2 \neq 0$).

Hypothesis 4: There is a significantly positive relationship between a company's governance score (G) and its valuation ($\beta_3 \neq 0$).

4. Methods

The research model is established using two regression equations below, where corporate valuation (Tobin's Q ratio) is regressed on ESG factors (E, S, G), control variables (size, profitability, leverage, growth, volatility, age), and stochastic disturbance. The data were collected from the ESG ratings of CHIndices and the CSMAR database for the period 2019-2024, covering non-financial firms listed on the Chinese A-share market, which excludes those classified as "ST" or "*ST".

$$Y_{it} = \alpha_0 + \alpha_1 ESG_{it} + \sum \alpha_i Control_{it} + \varepsilon_{it}$$

$$Y_{it} = \beta_0 + \beta_1 E_{it} + \beta_2 S_{it} + \beta_3 G_{it} + \sum \beta_i Control_{it} + \varepsilon_{it}$$

In the above models, i represents the number of companies, t represents the year, α_0 and β_0 are constants, α_i and β_i (i=1,2,…10) represent the coefficients of each independent variable, ϵ_{it} represents stochastic disturbance, Y_{it} represents corporate valuation measured by Tobin's Q ratio, E represents the environmental factor, S represents the social factor, G represents the governance factor, and Control represents variables including size measured by the natural logarithm of total assets, profitability measured by the return on assets, leverage measured by the ratio of total debt to total assets, growth measured by the firm's market-to-book ratio, firm's volatility measured by beta, and firm's age.

5. Results

5.1. Sample Regression Results

Following benchmark regression analysis on the sample, the following results were obtained. As shown in the table above, ESG performance is significantly positively correlated with corporate valuation at the 1% confidence level, with a correlation coefficient of 0.012. This indicates that ESG performance can enhance corporate valuation, validating Hypothesis 1. Environmental performance is significantly negatively correlated with corporate valuation at the 1% confidence level, with a correlation coefficient of -0.001. This suggests that environmental performance can weaken corporate valuation, validating Hypothesis 2. Additionally, social performance is significantly positively correlated with corporate valuation at the 1% confidence level, with a correlation coefficient of 0.005. This indicates that social performance can enhance corporate valuation, validating Hypothesis 3. Lastly, governance performance is significantly positively correlated with corporate valuation at the 1% confidence level, with a correlation coefficient of 0.016. This suggests that governance performance can enhance corporate valuation, validating Hypothesis 4.

Table 1. Sample Regression Results

Variable	Q
ESG	0.012***
	(26.78)
E	-0.001***
	(-5.64)
S	0.005***
	(11.27)
G	0.016***
	(32.49)
Size	0.008***
	(16.48)
ROA	0.074
	(0.052)
Leverage	-0.008
	(-0.009)
Growth	0.059***
	(37.81)
Beta	-0.002
	(-0.86)
Age	0.000***
	(2.97)
Adjusted R^2	0.28
Obs	24540

Legend: * p<0.1, ** p<0.05, *** p<0.01

5.2. Regression Results of Robust Test

Considering that ESG performance is evaluated post facto and exhibits lagged effects, this study conducts robustness tests using lagged one-period and two-period ESG performances to verify the reliability of empirical results. As shown in the table above, the lagged one-period and two-period ESG performances are significantly positively correlated with corporate valuation at the 1% confidence level, with correlation coefficients of 0.011 and 0.009, respectively. This indicates that both lagged one-period and two-period ESG performances can enhance corporate valuation, demonstrating a certain degree of stability and validating Hypothesis 1. Furthermore, the lagged one-period and two-period environmental performances are significantly negatively correlated with corporate valuation at the 1% confidence level, with correlation coefficients of -0.002 and -0.001, respectively. This suggests that both lagged one-period and two-period environmental performances can weaken corporate valuation, also showing a certain degree of stability and validating Hypothesis 2. Additionally, the lagged one-period and two-period social performances are significantly positively correlated with corporate valuation at the 1% confidence level, with correlation coefficients of 0.007 and 0.007, respectively. This indicates that both lagged one-period and two-period social performances can enhance corporate valuation, demonstrating a certain degree of stability and validating Hypothesis 3. Lastly, the lagged one-period and two-period governance performances are significantly positively correlated with corporate valuation at the 1% confidence level, with correlation coefficients of 0.016 and 0.014, respectively. This suggests that both lagged one-period and two-period governance performances can enhance corporate valuation, demonstrating a certain degree of stability and validating Hypothesis 4. Moreover, the adjusted R-squared values are 0.81 and 0.69, respectively, indicating substantial explanatory power of the independent variables on the dependent variable within the model.

Table 2. Robust Test Results

Variable	Lag1	Lag2
ESG	0.011***	0.009***
	(39.41)	(28.09)
E	-0.002***	-0.001***
	(-8.92)	(-5.27)
S	0.007***	0.007***
	(18.41)	(16.65)
G	0.016***	0.014***
	(48.93)	(26.37)
Size	0.004***	0.006***
	(19.75)	(22.46)
ROA	0.098	0.101
	(0.082)	(0.073)
Leverage	-0.009	-0.010
	(-0.010)	(-0.010)
Growth	0.018***	0.013***
	(39.62)	(18.79)
Beta	-0.008	-0.005
	(-1.74)	(-1.19)
Age	0.000***	0.001***
	(0.84)	(8.92)
Adjusted R^2	0.81	0.69
Obs	24540	24540

Legend: * $p<0.1$, ** $p<0.05$, *** $p<0.01$

6. Discussion

Based on the results, implications and suggestions are provided for firms to promote ESG performance and market valuation.

The factor of "governance" is most significantly positively correlated with corporate valuation. Thus, the main focus for a firm to enhance its market value is to concentrate on its internal governance system. This includes enhancing the power of the board of directors and maintaining information transparency to protect shareholders' rights. Additionally, it is crucial to manage relationships with employees, suppliers, customers, stakeholders, and other key entities so that a successful and ordered business operation can be guaranteed.

Digitization is a mainstream method to improve ESG performance, demonstrating a significantly positive correlation with ESG scores by reducing operational costs and enhancing communications in the company (Yang & Santos, 2023). Moreover, setting up goals to achieve a higher ESG score and maintaining a sustainable strategy to run the business are feasible and efficient for firms to gain a higher ESG score.

Despite the fact that environmental performance diminishes a company's market value to a certain extent, various methods can potentially address the issue. One of these is green marketing. Implementing green marketing is increasingly essential in a company's sustainable market strategy, improving the firm's profitability by attracting eco-conscious investors and customers. It has been proven by Zhang and Berhe (2022) that sales and market shares increase by applying a green-based strategy. Moreover, green consumption has significantly improved over the past several years; researchers discovered that the increasing availability and promotion of environmentally friendly products encourage people to behave responsibly for the environment (Alhamad et al., 2023). It can be expected that producing environmentally friendly products is not only a great method to alleviate the negative impact of addressing environmental problems but also enhances people's consciousness to protect the environment.

7. Conclusions

This paper systematically and completely analyzes the effect of ESG on firms' valuation. The authors use Tobin's Q to represent corporate valuation and apply multiple regression analysis to analyze the data. They explore the relationship between corporate value and ESG, as well as the degree of influence. ESG is a vital criterion for the evaluation of a firm's intrinsic value. Better ESG performance contributes to a relatively higher corporate value. The act of protecting the environment has a negative impact on corporate valuation in the short run and the long run; however, the negative impact in the long run is not as significant as that in the short run. As for the social perspective, the positive impact is obvious either in the short run or in the long run. Governance of the firm is positively correlated with corporate value, and it is the most influential factor among the three criteria. Moving forward, the research will be further expanded by including ESG data over a longer time period and other factors such as a firm's research and development spending into the regression model.

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