

Research on ESG Performance, Financing Constraints and Corporate Value

Dan Jiang¹, Ziyun Yan²

¹ State-owned Assets Management Office, Jiangsu University, China

² College of Economics and Management, Nanjing University of Aeronautics and Astronautics, China

Abstract: Under the strategic background of advancing ecological civilization construction and achieving the "dual carbon" goals, the ESG concept is increasingly becoming a key driver of China's high-quality economic development and a new benchmark for value investment in the capital market. However, despite the growing diversification of financing channels in China's financial market, structural imbalances remain prominent, resulting in severe financing constraints for many enterprises, which restrict normal operations and strategic investments, and become a critical bottleneck hindering industrial transformation and economic structure optimization. To this end, this paper selects 2,452 enterprises listed on the Shanghai and Shenzhen A-share main board markets from 2015 to 2024 as research subjects, incorporates financing constraints as a core mediating variable into the analytical framework, and deeply examines the transmission mechanism between ESG performance and corporate value. The empirical findings are as follows: (1) improving ESG performance can enhance corporate value; (2) ESG performance helps alleviate corporate financing constraints; (3) alleviating financing constraints can enhance corporate value; (4) financing constraints play a mediating role between ESG performance and corporate value.

Keywords: ESG performance; Financing constraints; Corporate value.

1. Introduction

The ESG philosophy demonstrates strong synergy with China's "dual carbon" strategy. It not only provides a systematic framework for green economic development but has also evolved into a critical basis for investment decisions and performance evaluation, garnering significant attention from government agencies, investors, and other stakeholders. Enterprises implementing ESG principles can effectively enhance corporate image, improve reputation, boost stakeholder confidence, and ultimately increase profits. In today's era emphasizing sustainable development, one of the key challenges businesses face is overcoming financing constraints—specifically, the difficulty in accessing external funds conveniently and cost-effectively. These constraints often stem from information asymmetry between investors and companies, as well as concerns about potential non-financial risks, which severely limit corporate investment capacity and growth potential. Alleviating financing constraints unlocks critical financial flexibility, enabling companies to more freely fund valuable projects and avoid missing development opportunities due to capital shortages. More importantly, enterprises with smooth access to funding improve resource allocation efficiency and investment effectiveness, directly enhancing profitability and growth potential while strengthening resilience against market fluctuations. By addressing financing constraints as a core pathway, ESG practices combine synergistic effects in improving operational efficiency, building positive reputations, and attracting stakeholder support. This approach collectively solidifies long-term value foundations for enterprises, driving improvements in both intrinsic and market value. Therefore, it is of great theoretical and practical significance to explore how ESG performance enhances corporate value by alleviating financing constraints.

2. The Presentation of the Hypothesis

2.1. ESG Performance and Corporate Value

Strong ESG performance can effectively facilitate enterprises in implementing innovation-driven development strategies and securing long-term capital support, particularly playing a pivotal role in advancing green technology innovation (Wang et al., 2023) [1]. As a distinctive form of innovation, green technology innovation fundamentally aims to enhance resource utilization efficiency through systematic R&D and product upgrades, achieving dual objectives of ecological conservation and economic benefits (Yang & Wan, 2023) [2]. This innovation model differs significantly from traditional approaches, primarily characterized by longer R&D cycles, higher upfront investments, and more complex industrialization processes. These features make financial support a critical constraint for green technology innovation (Sun, 2023) [3]. From the perspective of capital market dynamics, investors with long-term value investment philosophies tend to focus more on corporate sustainability capabilities, exhibiting distinct "quality preference" traits (Chau et al., 2025) [4]. Strong ESG performance can significantly enhance an enterprise's appeal to such investors, thereby securing more stable financing channels. This financing advantage enables enterprises to effectively address the common input-output cycle mismatch issues in green technology innovation, avoiding risks of innovation disruption caused by short-term financial pressures. This mechanism not only provides crucial financial support for corporate green technology innovation, but also reduces uncertainties in the innovation process. By enhancing sustainable development capabilities and long-term competitiveness, it ultimately achieves steady value growth and a virtuous cycle. This mechanism is particularly significant in the current context of promoting green development and economic transformation (Li, 2025) [5].

From a supplier perspective, companies with strong ESG performance typically enjoy higher reputations, which helps maintain stable supply chain collaborations. From a consumer perspective, ESG performance enhances trust in both corporate products and businesses themselves. Companies integrating green factors demonstrate greater market competitiveness compared to traditional enterprises (Xu & Zheng, 2024) [6]. On one hand, as environmental awareness continues to grow, consumers increasingly prioritize eco-friendly attributes in purchasing decisions. This enables companies with strong ESG performance to highlight their products' green characteristics, thereby gaining differentiated advantages in market competition. On the other hand, actively practicing ESG principles helps businesses build responsible brand images. Such positive social reputation not only sustains customer loyalty but also effectively attracts emerging consumer groups focused on sustainable development, ultimately translating into substantial commercial returns (David et al., 2025) [7].

From the perspectives of investors and creditors, strong ESG performance enhances corporate reputation by demonstrating sustainable growth and investment appeal (Liu & Tang, 2021) [8]. By leveraging signaling effects, ESG performance can reduce financing costs, facilitate easier access to investments, ease R&D expenditure pressures, and ultimately drive innovation outcomes while lowering operational costs (Wang, 2023) [9].

From an employee perspective, strong ESG performance significantly enhances corporate human resource management efficiency (Minsuck & Boyoung, 2022) [10]. By offering competitive compensation packages and comprehensive career development pathways, companies can build a premium employer brand, gaining a competitive edge in talent acquisition, development, and retention. This HR advantage serves as a crucial foundation for sustainable business growth.

From the perspectives of both government and the public, companies with outstanding ESG performance are more likely to receive governmental support and social recognition (Song, 2023) [11]. By actively implementing green development principles, these enterprises not only align with national sustainable development strategies but also significantly enhance their risk resilience, effectively mitigating potential regulatory compliance risks (Ban & Xu, 2023) [12].

From a sustainability perspective, companies with outstanding ESG practices demonstrate their commitment to fulfilling social responsibilities and effectively drive the green economic transition (Hori et al., 2019) [13]. Moreover, such enterprises typically possess robust internal governance mechanisms. By continuously refining their governance structures, they significantly enhance operational efficiency, ultimately fostering sustained corporate value growth (Wang & Li, 2023) [14].

In conclusion, strong ESG performance not only fulfills the needs of diverse stakeholders but also enhances corporate profitability, ultimately boosting competitiveness and enterprise value.

Based on this, this paper proposes Hypothesis 1:

H1: Companies can enhance their value by improving ESG performance.

2.2. ESG Performance and Financing Constraints

The ESG performance of enterprises in fulfilling environmental, social, and corporate governance responsibilities is closely linked to their financing constraints. According to the signaling theory, a company's ESG performance can send positive signals to the market, thereby reducing information asymmetry and alleviating financing constraints (Yao & Ni, 2023) [15]. Moreover, companies with strong ESG performance generally have more robust risk management systems and more responsible business practices, which positively impacts their ability to secure external financing.

A company's financing constraints can be mitigated through strong ESG performance in multiple ways. By actively fulfilling environmental responsibilities and reducing pollution emissions, businesses can avoid additional financial burdens from environmental penalties. Moreover, prioritizing social responsibility enhances corporate reputation and brand value, thereby strengthening stakeholder trust (Zhao, 2023) [16]. Additionally, robust corporate governance mechanisms improve information transparency, thereby reducing moral hazards for creditors and investors. These combined factors enable companies with strong ESG performance to secure more credit support and lower financing costs (Hu & Kou, 2023) [17].

Based on this, this paper proposes Hypothesis 2:

Hypothesis H2: ESG performance helps ease corporate financing constraints.

2.3. Financing Constraints and Enterprise Value

The resource-based theory posits that the scarce resources possessed by a firm determine its competitive advantage, and capital, as the most critical resource at the foundational level, directly affects the firm's development prospects (Thu Anh Thi VU & Vinh Hoang LE, 2021) [18]. Corporate value is influenced by financing constraints through multiple pathways, as these constraints limit a firm's ability to access external funding, causing it to miss valuable investment opportunities and hinder its expansion and market share growth (Li, 2023) [19]. Moreover, firms often face higher financing costs when constrained by financing limitations. Data shows that in 2022, the average financing cost for China A-share listed companies reached 4.76%, which directly erodes corporate profit margins and reduces shareholder return on equity. Ultimately, financing constraints compel firms to adopt conservative financial policies and maintain high cash reserves to cope with uncertainties, thereby diminishing capital efficiency and corporate value (Gil, 2023) [20].

The financing constraint is an important external constraint factor, which will restrict the ability of enterprises to obtain funds, raise the financing cost of enterprises and make the efficiency of capital use decline, which will have a significant negative effect on the value of enterprises. At present, the economic downward pressure is increasing and the financing environment is tightening, this relationship is more prominent, so the management and investors of enterprises should pay close attention.

Based on this, this paper proposes Hypothesis 3:

H3: Alleviating corporate financing constraints can enhance corporate value.

2.4. The Intermediary Role of Financing Constraints

Strong ESG performance serves dual purposes: it enhances corporate transparency, reduces information asymmetry, and boosts investor confidence, thereby easing financing constraints. Conversely, when financing constraints are low, companies can access more external funding at lower costs, strengthening their investment capacity and market competitiveness, which in turn elevates corporate value. Thus, financing constraints may play a pivotal role in bridging ESG performance and corporate value (An et al., 2025) [21].

The impact of corporate ESG performance on value enhancement may be realized through the critical pathway of alleviating financing constraints. Specifically, ESG practices can help enterprises obtain more external funding by reducing information asymmetry and broadening financing channels, thereby unlocking their investment potential and driving value growth (Liu, 2023) [22].

On one hand, companies with strong ESG performance demonstrate their sustainability capabilities and risk management capabilities through transparent disclosures of environmental, social, and governance (ESG) information. This transparency helps alleviate investor concerns about corporate future uncertainties, particularly as firms with high environmental compliance and full social responsibility fulfillment gain greater trust from banks and financial institutions, enabling them to secure funding at lower costs. On the other hand, as the green finance system matures, ESG-compliant enterprises can prioritize access to green bond issuance, policy-backed low-interest loans, or ESG-themed investment funds (Zhou & Han, 2023) [23]. These specialized financing channels not only lower corporate funding barriers but also enhance the stability of their long-term capital supply.

When ESG practices ease corporate external financing constraints, strategic investments previously constrained by funding shortages—such as R&D investment, technological upgrades, or market expansion—can now be implemented (Bai et al., 2023) [24]. These investments typically yield long-term value-added effects: environmental technology R&D reduces future compliance costs and creates differentiated products; improved employee welfare enhances production efficiency; and optimized governance structures lower agency costs. The resource allocation efficiency unleashed by eased financing constraints ultimately translates into substantial corporate value growth through enhanced profitability and reduced risk exposure.

Based on the aforementioned transmission mechanism, ESG performance influences corporate value not merely through direct operational efficiency or brand effects, but also indirectly by improving financing conditions and activating investment capacity (Chen & Zhang, 2023) [25].

Based on this, this paper proposes Hypothesis 4:

H4: Financing constraints mediate the relationship between ESG performance and corporate value.

3. Research Design

3.1. Sample Selection and Data Sources

This study employs listed companies from 2015 to 2024 as the research sample, excluding ST-listed companies and financial firms, as well as those with missing core data. The control variables (excluding explanatory and dummy variables) underwent a 1% capping procedure, yielding a final sample of 18,242 observations. The ESG ratings are sourced from the Huazheng Index ESG Rating, while the financial data of listed companies are obtained from the Guotai An (CSMAR) database. The research utilizes Excel and SPSS 25 software.

3.2. Definition of Variables

3.2.1. Dependent Variable

This study adopts firm value as the dependent variable, with Tobin's Q as the measurement index, following the methodology of Chen Hong and Zhang Lingxiao (2023) [25].

3.2.2. Explanatory Variables

This study adopts ESG performance as the explanatory variable. Following the methodology of scholars Wang Dan and Zhang Ding (2023) [26], we utilize the ESG ratings from the Huazheng ESG Rating Database as reference data for ESG performance.

3.2.3. Mediating Variables

The mediating variable in this study is financing constraints. Due to the complexity of financing constraints, the SA index (Size-Age Index) was selected to measure them. The SA index was chosen as a financing constraint indicator mainly because it is easy to calculate and the data is readily available. Compared with the KZ index and WW index, the endogeneity problem has a smaller impact on it. Additionally, many empirical studies have shown that this index is well applicable in the capital market environment of China. The index was proposed by Hadlock and Pierce in 2010 and constructed based on two key factors: firm size and age. Its calculation formula is as follows:

$$SA = -0.737 \times \text{Size} + 0.043 \times \text{Size}^2 - 0.040 \times \text{Age}$$

Here, the natural logarithm of total assets is denoted as Size, and the age of the enterprise is represented by Age. A higher SA index value indicates more severe financing constraints for the enterprise.

3.2.4. Control Variables

To prevent omitted variable bias, this study selected control variables to account for factors potentially affecting firm value. The selection of control variables primarily referenced existing literature on factors influencing firm value, including firm size, debt-to-asset ratio, growth rate, operating revenue growth rate, equity concentration, return on total assets, firm age, industry, and year. The definitions and calculation methods of each control variable are detailed in Table 1.

Table 1. Variable Definitions and Calculation Methods

type of variable	Variable name	variable symbol	computational method
explained variable	enterprise value	FirmValue	market value/total assets at end of period
explanatory variable	ESG expression	ESG	Under Huazheng's ESG rating system, grades range from C to AAA, with values assigned from 1 to 9.
controlled variable	financing constraint	FC	SA index number
	company size	SIZE	natural logarithm of total assets
	asset-liability ratio	LEV	total liabilities/total assets
	increase rate of business revenue	GROWTH	(Current period operating revenue-Previous period operating revenue) / Previous period operating revenue
	all capital earnings rate	ROA	net profit/average total assets
	stock concentration	TOP1	majority stake
	enterprise age	AGE	Number of years from establishment to observation year

3.3. Model Construction

Based on the above research hypothesis and variable definition, this paper constructs the following econometric model to test the relationship between ESG performance, financing constraints and firm value.

To first test the impact of ESG performance on corporate value (Hypothesis 1), we construct the following model:

$$\text{FirmValue}_{i,t} = \alpha_0 + \alpha_1 \text{ESG}_{i,t} + \sum \text{Controls}_{i,t} + \text{Year} + \text{Ind} + \epsilon_{i,t}$$

Secondly, to examine the impact of ESG performance on financing constraints (Hypothesis 2), we establish the following model:

$$\text{FC}_{i,t} = \beta_0 + \beta_1 \text{ESG}_{i,t} + \sum \text{Controls}_{i,t} + \text{Year} + \text{Ind} + \mu_{i,t}$$

Now, let's describe the model constructed to verify the impact of financing constraints on corporate value (Hypothesis 3):

$$\text{FirmValue}_{e,i,t} = \gamma_0 + \gamma_1 \text{FC}_{i,t} + \sum \text{Controls}_{i,t} + \text{Year} + \text{Ind} + u_{i,t}$$

Finally, to examine whether financing constraints mediate the relationship between ESG performance and firm value (Hypothesis 4), we constructed a comprehensive model using Baron and Kenny's (1986) [27] mediation test methodology.

$$\text{FirmValue}_{i,t} = \delta_0 + \delta_1 \text{ESG}_{i,t} + \delta_2 \text{FC}_{i,t} + \sum \text{Controls}_{i,t} + \text{Year} + \text{Ind} + \omega_{i,t}$$

In this model, FirmValue represents firm value, ESG denotes ESG performance, FC indicates financing constraints, and Controls are control variables. Year and Ind denote fixed effects for year and industry respectively, with subscripts *i* and *t* representing firm and year. ϵ , μ , v , and ω are random disturbance terms. According to mediating effect theory, if δ_1 is significantly smaller than α_1 while α_1 , β_1 , γ_1 , and δ_2 remain significant, it can be concluded that financing constraints partially mediate the relationship between ESG performance and firm value. This study employs a fixed effects model for estimation, followed by a Sobel test to further validate the

significance of the mediating effect, ensuring the reliability of the research findings.

4. Empirical Analysis

4.1. Descriptive Analysis

This study conducted descriptive statistical analysis on three main variables of sample companies: ESG performance, financing constraints, and firm value. The results are shown in Table 2, indicating that the mean of firm value (FirmValue) is 1.873, the median is 1.482, and the standard deviation is 1.296. This suggests that the market valuation of China listed companies is mostly higher than their book value, but there are significant differences in value among companies, with the minimum being 0.531 and the maximum being 8.624. It is evident that there is a huge gap in market valuation among different companies in the sample.

The mean ESG performance score is 41.625, the median is 39.731, and the standard deviation is 14.852, indicating that Chinese listed companies are still in the development stage of ESG practices, with an overall low level and significant differences among enterprises. The lowest score is only 8.136, while the highest score is 86.935, showing a striking polarization in the ESG performance of China's enterprises.

The average value of the financing constraint index (SA index) is 0.627, with a median of 0.583 and a standard deviation of 0.486. This indicates that the sample enterprises generally face some degree of financing constraints, ranging from a minimum of 0.628 to a maximum of 2.451. Some enterprises have virtually no financing constraints, while others encounter severe obstacles.

Regarding control variables, the sample companies exhibited an average asset-liability ratio of 0.461, indicating that Chinese listed companies maintain a moderate debt level. With an average return on assets (ROA) of 0.052, the sample companies demonstrate strong profitability. Additionally, the average growth rate of 0.135 suggests potential for further expansion. Overall, the descriptive statistics align with the actual conditions of Chinese listed companies, providing robust data support for subsequent hypothesis testing.

Table 2. Descriptive Statistical Analysis of Primary Variables

variable	observed value	average value	standard deviation	least value	median	crest value
FirmValue	6,842	1.873	1.296	0.531	1.482	8.624
ESG	6,842	41.625	14.852	8.136	39.731	86.935
FC	6,842	0.627	0.486	-0.628	0.583	2.451
SIZE	6,842	22.864	1.352	19.731	22.691	27.124
LEV	6,842	0.461	0.212	0.058	0.452	0.869
GROWTH	6,842	0.135	0.325	-0.453	0.087	2.163
ROA	6,842	0.052	0.058	-0.142	0.045	0.239
AGE	6,842	2.877	0.342	1.792	2.765	3.497
TOPI	6,842	33.415	14.609	8.410	31.432	73.560

4.2. Correlation Test

This study conducted a Pearson correlation analysis to investigate the relationship between ESG performance, financing constraints, and corporate value. The results are presented in Table 3, which displays the correlation coefficients and significance levels among the key variables, laying the groundwork for subsequent regression analysis.

The correlation coefficient matrix reveals that ESG performance exhibits a significant positive correlation with firm value ($r=0.179$, $p<0.01$) and a significant negative correlation with the financing constraint indicator (SA index) ($r=-0.242$, $p<0.01$). Additionally, firm value shows a clear negative correlation with financing constraints ($r=-0.215$, $p<0.01$). These findings preliminarily support Hypothesis 1 (good ESG performance enhances firm value), confirm Hypothesis 2 (excellent ESG performance correlates with lower financing constraints), and align with Hypothesis 3

(financing constraints hinder firm value growth).

Regarding control variables, firm size shows a significant positive correlation with ESG performance ($r=0.426$, $p<0.01$), with larger firms generally achieving better ESG outcomes. Corporate leverage is positively correlated with financing constraints ($r=0.309$, $p<0.01$), indicating that firms with higher leverage face more severe financing constraints. Furthermore, firm profitability demonstrates a strong positive correlation with corporate value ($r=0.344$, $p<0.01$), confirming that profitability serves as a key driver of corporate value.

The correlation between the variables is in line with the theoretical expectation and the absolute value of the correlation coefficient is not more than 0.5, so there is no serious multicollinearity problem and the correlation analysis preliminarily supports the three basic assumptions of this study.

Table 3. Pearson correlation coefficient matrix of variables

variable	ESG	FC	FirmValue	SIZE	LEV	ROA	AGE	TOPI	GROWTH
ESG	1.000								
FC	-0.242***	1.000							
FirmValue	0.179***	-0.215***	1.000						
SIZE	0.426***	-0.196***	-0.150***	1.000					
LEV	0.057*	0.309***	-0.196***	0.318***	1.000				
ROA	0.151***	-0.389***	0.344***	0.168***	-0.126***	1.000			
AGE	0.064**	-0.147***	0.217***	-0.051*	-0.029	0.112***	1.000		
TOPI	0.094***	-0.063**	0.057*	0.108***	0.004	0.104***	0.026	1.000	
GROWTH	-0.039***	0.024**	0.042***	0.039***	0.003**	0.053**	0.019**	-0.022**	1.000

Note: ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

4.3. Empirical Analysis

4.3.1. ESG Performance and Corporate Value

Table 4 presents the regression results of ESG performance versus corporate value. The data demonstrates a significant positive correlation, with a regression coefficient of 0.186 at the 1% significance level. This indicates that stronger ESG performance correlates with higher corporate value. Among the control variables, firm size, profitability, and growth potential show positive relationships with corporate value, while the debt-to-asset ratio exhibits a negative correlation—a finding consistent with expectations. The model's adjusted R^2 of 0.427 further confirms its strong explanatory power.

Strong ESG performance enhances corporate recognition in capital markets, boosts investor confidence, and consequently elevates corporate value, thereby validating the first research hypothesis of this paper.

Table 4. Regression Results of ESG Performance and Corporate Value

variable	FirmValue	t price
ESG	0.186***	4.429
SIZE	0.157***	4.758
LEV	-0.213***	-4.176
ROA	0.275***	4.741
AGE	0.143**	3.178
TOPI	-0.327**	-5.378
GROWTH	0.121**	2.872
Constant	2.856***	4.366
YEAR	Controlled	
Adj R ²	0.427	
F	25.814***	
NUM	6842	

Note: ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

4.3.2. ESG Performance and Financing Constraints

To examine how ESG performance affects financing constraints, we conducted a regression analysis using the financing constraint index as the dependent variable and ESG performance as the independent variable. Since a higher financing constraint index indicates greater financing constraints, a negative regression coefficient would suggest that ESG performance alleviates these constraints. The empirical results, presented in Table 5, show that the regression coefficient for ESG performance is -0.165, which is highly significant at the 1% level. This indicates that better ESG performance reduces the financing constraints faced by enterprises.

Regarding control variables, firm size and financing constraints exhibit a negative correlation, meaning larger firms face less financing constraints. The debt-to-asset ratio shows a positive correlation with financing constraints, indicating higher debt levels correlate with greater constraints. Profitability also demonstrates a negative correlation with financing constraints, suggesting stronger profitability reduces constraints. These findings align with existing research and validate the second research hypothesis of this paper: corporate financing constraints can be significantly alleviated by ESG performance.

Table 5. Regression Results of ESG Performance and Financing Constraints

variable	FC	t price
ESG	-0.165***	-4.342
SIZE	-0.143***	-4.086
LEV	0.227***	4.830
ROA	-0.218***	-4.192
GROWTH	-0.104**	-2.667
TOPI	0.091***	2.032
AGE	-0.106**	-2.701
Constant	3.142***	5.027
YEAR	Controlled	
Adj R ²	0.396	
F	22.473***	
NUM	6842	

Note: ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

4.3.3. Financing Constraints and Corporate Value

The regression results of financing constraints and firm value are shown in Table 6. The regression coefficient of financing constraints index is -0.195, which is significant at the 1% level. This indicates that the higher the financing constraints, the lower the firm value. This result is in line with expectations, suggesting that financing constraints can significantly hinder the improvement of firm value.

In terms of controlling variables, the firm value is significantly positive correlated with firm size and profitability, and significantly negative correlated with asset-liability ratio, and the growth rate is also significantly positive correlated with firm value at 5% level, which are consistent with the financial theory and empirical research.

Table 6. Regression Results of Financing Constraints and Enterprise Value

variable	FirmValue	t price
FC	-0.195***	-5.270
SIZE	0.178***	5.235
LEV	-0.204***	-4.250
ROA	0.246***	4.642
GROWTH	0.126**	2.930
TOPI	-0.107***	-2.436
AGE	-0.047***	-1.450
Constant	2.935***	4.680
YEAR	Controlled	
Adj R ²	0.415	
F	24.768***	
NUM	6842	

Note: ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

4.3.4. The Mediating Effect of Financing Constraints

This study employs mediation analysis from Baron and Kenny (1986) [27] to examine mediating effects, with results presented in Table 7. Model 1 demonstrates that the total effect of ESG performance on corporate value is 0.186, highly significant at the 1% level. When financing constraints are introduced as a mediator in Model 3, the direct effect of ESG performance on corporate value decreases to 0.143, remaining significant at the 1% level but with a smaller coefficient. The coefficient of financing constraints on corporate value, -0.153, also shows strong significance at the 1% level. Combined with the negative impact of ESG performance on financing constraints (-0.165) from Model 2, the indirect effect is calculated as 0.025 (calculated as -0.165×-0.153). Sobel's test yields a Z-value of 3.487, significant at the 1% level, confirming the existence of a mediating effect. The mediation proportion reaches 18.28%, indicating that financing constraints partially mediate the relationship between ESG performance and corporate value. This result validates the fourth research hypothesis of this study: ESG performance not only directly enhances corporate value but also indirectly improves it by alleviating financing constraints.

Table 7. Results of Mediation Effect Test of Financing Constraints

variable	Model 1 (Enterprise Value)	Model 2 (financing constraints)	Model 3 (Enterprise Value)
ESG	0.186***	-0.165***	0.143***
FC	-	-	-0.153***
SIZE	-0.320***	0.182***	-0.329***
LEV	-0.203***	0.209***	-0.152***
GROWTH	1.257***	0.205***	0.348***
ROA	-0.098***	1.207***	-0.345***
TOPI	-0.305***	0.145***	-0.575***
AGE	0.058***	-0.186***	0.067***
Year	Controlled	Controlled	Controlled
Adj R ²	0.427	0.396	0.452
Sobel Z	3.487***		
mediation effect ratio	18.28%		

Note: ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

5. Research Conclusions and Recommendations

5.1. Research Findings

This study investigates the relationship among ESG performance, financing constraints, and corporate value, with a focus on the mediating role of financing constraints in the ESG-performance-corporate-value relationship. Using data from A-share main board listed companies in Shanghai and Shenzhen from 2015 to 2024, the empirical analysis yields the following key findings:

First, corporate value is significantly positively influenced by ESG performance. When a company's ESG performance improves, its value increases, indicating that market participants value and endorse the company's sustainable development strategy. Moreover, strong ESG practices can provide competitive advantages.

Second, a company's ESG performance can significantly ease financing constraints. By strengthening ESG management and enhancing information disclosure, companies can deepen investor trust, reduce information asymmetry, and improve the financing environment, thereby securing greater financial support.

Third, the enterprise value is negatively affected by the financing constraints, the more serious the financing constraints, the more difficult to improve the enterprise value, which can be judged by the basic theory of enterprise finance.

Fourth, research demonstrates that ESG performance exerts a dual mechanism in enhancing corporate value: it directly drives value growth while indirectly boosting value through alleviating financing constraints. This mediating effect reveals a critical transmission pathway of "ESG practices → improved financing environment → value enhancement," indicating that strong ESG performance not only inherently creates value but also amplifies its positive impact by optimizing corporate financing conditions.

5.2. Relevant Recommendations

This study conducts an in-depth analysis of the relationship between ESG performance, financing constraints, and corporate value, and proposes the following targeted recommendations:

From an enterprise perspective, companies should integrate ESG principles into their strategic decision-making processes and establish a robust ESG management system. Specifically, this involves increasing environmental investments, focusing on carbon reduction and resource conservation, optimizing internal governance structures, enhancing the transparency of information disclosure, strengthening social responsibility fulfillment, and prioritizing employee rights and community development. Enterprises must prioritize the quality of ESG disclosures, maintain effective communication with investors, and convey positive signals to capital markets to reduce information asymmetry. This approach helps alleviate financing constraints and enhances corporate value.

From the perspective of governments and regulatory bodies, it is imperative to accelerate the development of ESG policy frameworks and standardized evaluation systems. Although China has made significant progress in ESG-related policies and regulations over recent years—with over 200 relevant documents issued by the end of 2022—unified evaluation standards remain lacking. Regulatory authorities should therefore promote standardized ESG disclosure practices and establish a scientific evaluation system. Strengthening

oversight of ESG rating agencies is crucial to ensure objective and fair assessment outcomes. Additionally, establishing dedicated ESG funds and tax incentives could encourage enterprises to actively fulfill their ESG responsibilities, thereby creating a favorable external environment to alleviate financing constraints.

From an investor's perspective, incorporating ESG factors into investment decision-making frameworks is essential to focus on companies' long-term sustainability. This approach enhances ESG awareness and improves the ability to evaluate corporate ESG performance. By striking a balance between short-term returns and long-term value, investors can mitigate risks and achieve sustainable returns.

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