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Can Green Investors Improve the Quality of ESG Information Disclosure?

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Abstract. In recent years, the public has been paying increasing attention to the issue of ESG information disclosure. Previous studies have mainly focused on the impact of internal and external environmental factors (such as politics and culture) on the quality of ESG information disclosure, while few scholars have conducted research from the perspective of heterogeneous institutional investors. This paper selects A-share listed companies in Shanghai and Shenzhen from 2012 to 2024 as research samples, and empirically analyzes the impact of green investors on the quality of ESG information disclosure. The study finds that green investors can promote the improvement of the quality of corporate ESG information disclosure. This conclusion remains valid after a series of robustness tests, including variable replacement, lagged explanatory variables, instrumental variable method, and difference-in-differences method. Furthermore, this paper reveals that the promotional effect of green investors on the quality of ESG information disclosure is more significant in non-state-owned enterprises, large-scale enterprises, and non-heavily polluting enterprises. This conclusion provides new theoretical support for improving the quality of ESG information disclosure.

Keywords: Green Investors; Quality of ESG Information Disclosure.

1. Introduction

With the continuous implementation of the "dual carbon" strategy, the public has been paying increasing attention to the sustainable development of enterprises, which has also promoted the continuous improvement of enterprises' ESG systems and the deepening of related practices. By the end of 2024, the number of ESG reports released by listed companies in China had reached 2,090, with both the release volume and disclosure rate hitting record highs. However, there are significant differences in ESG information disclosure across industries: the information disclosure rate of the financial industry stands at 91.3%, far ahead of other industries, followed by the public utilities and energy industries. In contrast, the industrial sector has an ESG information disclosure rate of only 36.6%, ranking at the bottom among all industries. Prior to this, China mainly adopted a voluntary disclosure model for ESG information, with no clear requirements or standards for information disclosure. This resulted in poor comparability of ESG information disclosed by enterprises and uneven quality. In April 2024, the Beijing, Shanghai, and Shenzhen Stock Exchanges successively released the *Guidelines for Sustainable Development Reports of Listed Companies* under the unified arrangement of the China Securities Regulatory Commission (CSRC). The release of this document marks that China's ESG information disclosure has officially entered a more standardized and unified era. Meanwhile, the *Corporate Sustainable Disclosure Standards – Basic Standards (Exposure Draft) * issued by the Ministry of Finance has also pointed out the direction for improving the quality of ESG information disclosure of Chinese enterprises. Corporate ESG information disclosure has attracted great attention from all sectors of society, and more and more scholars have begun to focus on the quality of ESG information disclosure. Previous scholars have conducted extensive discussions on how institutional investors participate in corporate governance. Shareholder activism theory holds that institutional investors can reduce agency costs and exert a supervisory and governance effect. However, some studies have also found that institutional investors, as non-controlling shareholders, may collude with management to damage the interests of minority shareholders. As a special type of institutional investor, green investors comprehensively consider

economic, environmental, and social benefits when selecting investment projects. Therefore, whether green investors can participate in corporate governance, effectively supervise enterprises, and thereby improve the quality of ESG information disclosure is an issue that urgently needs to be verified.

2. Research Hypotheses

Compared with minority investors, green investors, as institutional investors, possess professional information collection and analysis capabilities, hold the status of major shareholders, and have stronger motivation and ability to pay attention to enterprises' business activities and performance. They can participate in corporate operational decision-making and exert a more robust supervisory and governance effect. Green investors are more capable than ordinary investors of identifying enterprises' green elements and pay closer attention to the improvement of enterprises' social responsibility performance and environmental performance. They can communicate directly with corporate executives to influence corporate decisions and avoid short-term behaviors. As the number of green investors gradually increases, their ability to negotiate and communicate with management will be significantly enhanced, making it more likely for management to adopt decisions that align with green governance goals. Green investors influence enterprises' sustainable development decisions through forms such as activist communication and professional investment information mining, which helps improve the quality of ESG information disclosure and forms a "green supervision effect" on corporate operational decisions. On one hand, green investors will proactively search for information related to enterprises' activities to confirm whether enterprises carry out or participate in sustainable development initiatives, identify and curb behaviors such as "greenwashing" by enterprises. On the other hand, green investors can also express their demands to management based on specific activities through on-site investigations, and transmit governance information and supervisory constraints to enterprises through behind-the-scenes or public communication, ensuring that enterprises carry out sustainable business activities such as pollution control, emission reduction, and social welfare. Although green investors hold relatively scattered shares and have a low shareholding ratio, they can increase their voting rights by collecting proxy rights. As shareholders of the company, they can submit proposals to the general meeting of shareholders to express their opinions on corporate management, thereby influencing the company's decision-making behavior. Green investors serve as a form of certification for an enterprise's investment value; through a signal transmission effect, they release positive signals to the outside world, indicating to other investors that the enterprise has a strong awareness of sustainable development and a strong sense of social responsibility. At the same time, there is a "herd effect" among various types of investors. This signal transmission can change other investors' expectations of the enterprise, help other investors analyze the enterprise's operating status more accurately, thereby attracting more analysts and investors to track and pay attention to the enterprise, and reducing the information asymmetry between investors and the enterprise.

The "exit threat theory" holds that shareholders with information advantages can impose an exit threat on management, forcing management to make choices between personal interests and shareholder interests. This governance effect lies between "passive exit" and "active supervision," providing a new perspective for green investors and other external shareholders to participate in corporate governance. Relevant studies have shown that the exit threat effect of institutional investors can curb corporate greenwashing behavior, but there is currently no research focusing on the quality of ESG information disclosure. In addition, the governance effect of green investors on enterprises will be reflected through the internal shareholding distribution of green investors: when green investors' shareholdings are relatively concentrated, it is more conducive to exerting corporate governance effects. The exit threat from green investors can directly curb the tunneling behavior of management and controlling shareholders, prompting enterprises to reduce short-term behaviors and improve the quality of information disclosure. According to the principal-agent theory, due to information asymmetry between enterprise management and controlling shareholders, they may use their respective authority to seek private benefits. However, the exit threat from green investors can

effectively alleviate such self-interested behaviors of management and controlling shareholders. As insiders with access to internal enterprise information, when green investors exert exit threats relying on their strong information advantages, they will transmit negative information such as "failure to fulfill responsibilities" about the enterprise to the market; in more severe cases, this may lead to the replacement of enterprise executives and affect their reemployment. Based on this, out of consideration for their own positions and professional reputation, management may reduce their short-sighted tendencies and self-interested behaviors to prevent green investors from actually exiting. Compared with other minority shareholders, green investors, as institutional investors, have stronger information analysis capabilities, and their behaviors play a certain leading role. When green investors discover that other shareholders seek private benefits through their control rights, the exit threat will cause other minority shareholders to short the company's stocks, triggering a "herd effect" and damaging the enterprise's value. The exit threat from green investors can trigger supervision of the enterprise by other stakeholders, promoting higher quality of ESG information disclosure. Therefore, this paper proposes the following hypothesis:

Hypothesis 1: Green investors can improve the quality of corporate ESG information disclosure.

3. Empirical Research and Design

3.1. Sample Source

This study selects companies listed on the A-share market of the Shanghai Stock Exchange and Shenzhen Stock Exchange in China from 2012 to 2024 as research samples. Data on the quality of corporate ESG information disclosure is obtained from the Bloomberg Terminal; relevant information on green investors is manually collated; and all other financial data is sourced from the China Stock Market & Accounting Research Database (CSMAR). On this basis, further screening is conducted as follows: excluding companies in the financial industry, excluding companies with the "Special Treatment (ST)" label, excluding samples with missing data on ESG information disclosure quality and corporate financial indicators, and performing Winsorization on all continuous variables at the 1% and 99% levels to mitigate the impact of outliers. After the aforementioned processing, a total of 10,522 data samples is obtained in this study.

3.2. Variable Measurement

3.2.1. Green Investors (GI).

This study matches the detailed fund investment data of A-share listed companies on the Shanghai and Shenzhen Stock Exchanges using the "Fund Entity Information Table" and "Stock Investment Details Table" from the CSMAR Database. Keywords such as "green," "ecology," "environmental protection," and "new energy development" are searched in the investment objectives and investment scopes of mutual funds. If a fund invests in the aforementioned fields, it is identified as a "green investor." If a listed company has such investment funds among its investors, it is considered to have green investors. The dummy variable GI is assigned a value of 1 if a company has green investors, and 0 otherwise.

3.2.2. Quality of ESG Information Disclosure (Esgds).

The quality of ESG information disclosure in this study is measured using the ESG information disclosure score of listed companies provided by Bloomberg. Based on the annual reports, ESG reports, and corporate social responsibility reports released by enterprises, Bloomberg evaluates the overall ESG information disclosure level of enterprises as well as the disclosure levels of the three specific dimensions (Environmental, Social, and Governance) using 120 specific ESG indicators. Additionally, the scores are appropriately adjusted according to the industry to which the enterprise belongs, ensuring the comparability of the data.

3.2.3. Control Variables (Controls).

The following control variables are selected in this study: firm size (Size), nature of ownership (SOE), asset-liability ratio (Lev), return on total assets (ROA), current ratio (Liquid), operating revenue growth rate (Growth), number of board directors (Board), duality of CEO and chairman (Dual), shareholding ratio of the largest shareholder (TOP1), and management expense ratio (Mfee). Furthermore, industry (Industry) and year (Year) fixed effects are controlled for in the model.

3.3. Model Construction

To examine the impact of green investors on the quality of corporate ESG information disclosure, the following model is constructed in this study:

$$\text{Esgds} = \beta_0 + \beta_1 \text{GI} + \sum \text{Controls} + \varepsilon_{i,t} \quad (1)$$

Where \(i\) and \(t\) refer to the company and year, respectively. GI is the explanatory variable in this paper, representing green investors; Esgds is the explained variable, representing the quality of ESG information disclosure; and Controls denotes the control variables. Meanwhile, industry and year fixed effects are controlled for, and clustering is performed at the firm level.

4. Empirical Tests and Result Analysis

4.1. Descriptive Statistics

The results of the descriptive analysis in this study are presented in Table 1. It can be observed that the mean value of the explanatory variable Green Investors (GI) is 0.583, with a median of 1, indicating that among the research samples, the number of enterprises with green investors and those without green investors is relatively balanced. For the explained variable Quality of ESG Information Disclosure (Esgds), the mean value is 29.03, the median is 28.116, and the standard deviation is 9.503. This suggests that the overall level of ESG information disclosure quality of enterprises in the research samples is relatively low. Meanwhile, the minimum value of Esgds is 6.198 and the maximum value is 73.38, reflecting significant differences in ESG information disclosure among different enterprises.

Table 1. Descriptive Statistics

VARIABLES	N	mean	P50	sd	min	max
GI	10,522	0.583	1.000	0.493	0	1
Esgds	10,522	29.03	28.116	9.503	6.198	73.38
Size	10,522	23.11	23.047	1.244	20.43	26.50
SOE	10,522	0.537	1.000	0.499	0	1
Lev	10,522	0.472	0.482	0.197	0.0683	0.867
ROA	10,522	0.0517	0.042	0.061	-0.147	0.250
Liquid	10,522	1.970	1.450	1.849	0.264	12.58
Growth	10,522	0.176	0.117	0.370	-0.487	2.255
Board	10,522	2.174	2.197	0.199	1.099	2.890
Dual	10,522	0.195	0.000	0.397	0	1
Mfee	10,522	0.0751	0.060	0.059	0.007	0.356
TOP1	10,522	0.376	0.360	0.158	0.0956	0.770

4.2. Benchmark Regression Results

Table 2 presents the regression results between green investors and the quality of corporate ESG information disclosure. It can be observed that when no control variables are included, the regression

coefficient of green investors (GI) on the quality of ESG information disclosure (Esgds) is 2.383, which is significant at the 1% level. We further add control variables, control for year and industry fixed effects, and perform clustering at the firm level. Under this specification, the regression coefficient of green investors (GI) on the quality of ESG information disclosure (Esgds) is 0.747, which remains significant at the 1% level. These regression results verify Hypothesis 1 of this study, namely that green investors can improve the quality of corporate ESG information disclosure.

Table 2. Benchmark Regression Results

	(1)	(2)
	Esgds	Esgds
GI	2.383***	0.747***
	(0.222)	(0.186)
Size		2.134***
		(0.176)
SOE		0.348
		(0.315)
Lev		-3.588***
		(1.005)
ROA		6.548***
		(1.833)
Liquid		-0.166***
		(0.063)
Growth		-0.163
		(0.192)
Board		0.019
		(0.638)
Dual		0.149
		(0.291)
Mfee		1.767
		(2.176)
TOP1		1.165
		(0.969)
Year	YES	YES
Industry	YES	YES
N	10522	10522
F	115.248	27.222
r2	0.569	0.622
r2_a	0.567	0.620

Standard errors in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.01

4.3. Robustness Tests

4.3.1. Replacement of the Explanatory Variable.

The regression results may be affected if a variable is measured using different methods. Therefore, this study replaces the original explanatory variable "Green Investors (GI)" with "Number of Green Investors (GI_1)". The regression results after replacing the explanatory variable are presented in Table 3. When no control variables are included, the regression coefficient of GI_1 on Esgds is 1.647, which is significant at the 1% level. Similarly, after adding control variables, the regression

coefficient of GI_1 on Esgds is 0.737, which remains significant at the 1% level. These regression results further confirm that the research hypothesis of this study holds true.

Table 3. Variable Replacement Test

	(1)	(2)
	Esgds	Esgds
GI_1	1.647***	0.737***
	(0.153)	(0.148)
Size		2.018***
		(0.177)
SOE		0.379
		(0.314)
Lev		-3.684***
		(1.005)
ROA		3.908**
		(1.872)
Liquid		-0.167***
		(0.063)
Growth		-0.200
		(0.189)
Board		0.099
		(0.637)
Dual		0.090
		(0.286)
Mfee		1.135
		(2.160)
TOP1		1.473
		(0.960)
Year	YES	YES
Industry	YES	YES
N	10522	10522
F	115.153	27.359
r2	0.577	0.624
r2_a	0.575	0.622

Standard errors in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.01

4.3.2. Lagged Explanatory Variables.

This study considers that the supervisory effect of green investors on enterprises may have a certain lag after they invest in the enterprises. Therefore, the explanatory variable is lagged by one period and two periods respectively to generate new explanatory variables L.GI and L2.GI, which are then incorporated into the regression model for re-regression. The results are presented in Table 4. The regression coefficients of L.GI and L2.GI on Esgds are 0.752 and 0.769, respectively, both of which are significant at the 1% level. This further indicates that the research conclusions of this study have a certain degree of robustness.

Table 4. Lagged Explanatory Variable Test

	(1)	(2)	(3)	(4)
	Esgds	Esgds	Esgds	Esgds
L.GI	2.526***		0.752***	
	(0.236)		(0.196)	
L2.GI		2.599***		0.769***
		(0.249)		(0.209)
Size			2.190***	2.267***
			(0.188)	(0.198)
SOE			0.434	0.465
			(0.332)	(0.355)
Lev			-3.511***	-3.459***
			(1.082)	(1.160)
ROA			7.795***	8.833***
			(1.980)	(2.095)
Liquid			-0.171**	-0.181**
			(0.071)	(0.080)
Growth			-0.125	0.089
			(0.220)	(0.247)
Board			0.003	-0.181
			(0.672)	(0.714)
Dual			0.139	0.119
			(0.304)	(0.322)
Mfee			1.208	0.860
			(2.365)	(2.548)
TOP1			1.320	1.497
			(1.035)	(1.113)
Year	YES	YES	YES	YES
Industry	YES	YES	YES	YES
N	9344	8269	9344	8269
F	114.935	109.061	26.957	27.002
r2	0.550	0.519	0.607	0.583
r2_a	0.548	0.517	0.605	0.581

Standard errors in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.01

4.3.3. Instrumental Variable Method.

Enterprises with higher ESG information disclosure quality may also attract green investors to invest in them, so there may be a reverse causality issue in this study. To address endogeneity, this study adopts the instrumental variable method and selects the industry average of the number of green investors in other listed companies within the same industry (iv_mean) as the instrumental variable for a two-stage regression. The regression results are presented in Table 5. In the first stage, the regression coefficient of iv_mean on GI is 0.1184, which is significant at the 1% level; meanwhile, the F-statistic from the weak instrumental variable test in the first stage is much larger than 10. In the second stage of regression, the regression coefficient of GI on Esgds is 17.7385, which is also significant at the 1% level. The above results indicate that green investors can promote the improvement of corporate ESG information disclosure quality, and this conclusion is robust.

Table 5. IV Test

	(1)	(2)
	GI	Esgds
iv_mean	0.1184***	
	(0.0282)	
GI		17.7385***
		(4.4044)
Size	0.1519***	-0.4259
	(0.0074)	(0.6720)
SOE	-0.0456***	1.1143***
	(0.0167)	(0.2938)
Lev	-0.0841	-2.2896**
	(0.0583)	(0.8917)
ROA	2.3871***	-34.6251***
	(0.1202)	(10.8308)
Liquid	0.0006	-0.1748***
	(0.0047)	(0.0653)
Growth	0.0176	-0.5071*
	(0.0143)	(0.2921)
Board	0.0380	-0.6560
	(0.0350)	(0.5262)
Dual	0.0665***	-0.9789**
	(0.0164)	(0.3826)
Mfee	0.4088***	-5.5075**
	(0.1339)	(2.6130)
TOP1	-0.2087***	4.7372***
	(0.0485)	(1.1293)
Year	YES	YES
Industry	YES	YES
N	10513	10513
r2	0.231	0.022
r2_a	0.227	0.018
F	127.49	127.64

Standard errors in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.01

4.3.4. Difference-in-Differences (DID).

This study selects the release of the Guidelines for Green Investors (Trial) in 2018 as an exogenous shock event to test the regression model. The following test model is constructed:

$$\text{Esgds} = \beta_0 + \beta_1 \text{Treat} + \beta_2 \text{Post} + \beta_3 \text{Treat} \times \text{Post} + \sum \text{Controls} + \varepsilon_{i,t} \quad (2)$$

Where: Treat is a dummy variable, assigned a value of 1 for the year when a green investor first appears in the enterprise and all subsequent years, and 0 otherwise; Post is a dummy variable. Since the impact of this exogenous event on the shareholding of green investors has a certain lag, the year 2019 and all subsequent years are assigned a value of 1, and the remaining years are assigned 0. The test results are presented in Table 6. The regression coefficient of Treat×Post on Esgds is 1.683, which

is significant at the 1% level. This indicates that after considering the impact of exogenous event shocks, green investors can positively promote the quality of corporate ESG information disclosure.

Table 6. DID Test

	(1)
	Esgds
Treat×Post	1.683***
	(0.533)
Size	2.254***
	(0.180)
SOE	0.328
	(0.317)
Lev	-3.597***
	(1.008)
ROA	8.541***
	(1.834)
Liquid	-0.163**
	(0.064)
Growth	-0.136
	(0.193)
Board	0.063
	(0.640)
Dual	0.210
	(0.292)
Mfee	2.233
	(2.201)
TOP1	0.976
	(0.970)
Year	YES
Industry	YES
N	10522
F	24.882
r2	0.621
r2_a	0.619

Standard errors in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.01

4.4. Heterogeneity Analysis

4.4.1. Analysis Based on the Nature of Property Rights.

Enterprises with different property rights exhibit significant differences in operation and management. Private enterprises pursue profit maximization in their operations, pay more attention to their own interests, prefer high-risk projects, and are prone to short-term behaviors. This study argues that after green investors enter non-state-owned enterprises, they can better exert the supervisory and governance effect, and their promotional effect on the quality of ESG information disclosure is more obvious. This study divides the sample enterprises into non-state-owned enterprises and state-owned enterprises according to the nature of their property rights, and then conducts subgroup regressions. The results are presented in Table 7. In non-state-owned enterprises, the regression coefficient of GI on Esgds is 1.236, which is significant at the 1% level; while in state-owned enterprises, the regression coefficient of GI on Esgds is 0.414, which is significant at the 10% level. Moreover, the result of the

inter-group coefficient difference test is significant at the 1% level, indicating that the promotional effect of green investors on the quality of ESG information disclosure is indeed more obvious in non-state-owned enterprises.

Table 7. Analysis Based on the Nature of Property Rights

	(1)		(2)
	Non-state-owned		State-owned
	Esgds		Esgds
GI	1.236***		0.414*
	(0.276)		(0.246)
Size	2.279***		2.111***
	(0.272)		(0.223)
Lev	0.006		-6.509***
	(1.425)		(1.366)
ROA	11.074***		-0.057
	(2.407)		(2.778)
Liquid	-0.118		-0.144
	(0.076)		(0.109)
Growth	-0.162		-0.295
	(0.271)		(0.252)
Board	1.384		-0.863
	(0.961)		(0.822)
Dual	0.292		-0.127
	(0.361)		(0.423)
Mfee	5.643*		-3.805
	(2.980)		(3.210)
TOP1	0.445		1.751
	(1.598)		(1.178)
p-value		0.000	
Year	YES		YES
Industry	YES		YES
N	4875		5646
F	17.195		15.200
r2	0.615		0.643
r2_a	0.611		0.640

Standard errors in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.01

4.4.2. Analysis Based on Firm Size.

There are significant differences in sustainable development between large-scale enterprises and small-scale enterprises. Prior to this, China's ESG information disclosure mainly followed a voluntary principle, which resulted in small-scale enterprises disclosing less information and having relatively weak willingness to disclose. This makes it difficult for green investors to convey the concept of sustainable development to enterprises after they invest in them. Therefore, this study argues that compared with small-scale enterprises, the promotional effect of green investors on the quality of ESG information disclosure is more obvious in large-scale enterprises. In this study, the sample is divided into two groups based on the median of firm size in the sample: enterprises with a size below the median are classified as small-scale enterprises, and those above the median are classified as large-scale enterprises. The results of the subgroup regressions are presented in Table 8. It can be observed that in small-scale enterprises, the promotional effect of green investors on the

quality of ESG information disclosure is not significant; on the contrary, in large-scale enterprises, green investors have a significant promotional effect on the quality of ESG information disclosure. Additionally, the result passes the inter-group coefficient difference test, which verifies the above analysis.

Table 8. Analysis Based on Firm Size

	(1)		(2)
	Small-scale		Large-scale
	Esgds		Esgds
GI	0.297		2.652***
	(0.193)		(0.350)
SOE	0.799***		0.328
	(0.278)		(0.560)
Lev	-0.546		-0.019
	(0.929)		(1.740)
ROA	6.481***		12.517***
	(1.753)		(3.215)
Liquid	-0.116**		-0.262
	(0.054)		(0.219)
Growth	-0.063		-0.516
	(0.216)		(0.315)
Board	1.470**		0.012
	(0.660)		(0.966)
Dual	0.012		0.024
	(0.272)		(0.518)
Mfee	-0.139		-11.005*
	(1.780)		(5.847)
TOP1	0.684		4.462***
	(0.815)		(1.558)
p-value		0.000	
Year	YES		YES
Industry	YES		YES
N	5261		5261
F	4.351		11.852
r2	0.613		0.537
r2_a	0.610		0.533

Standard errors in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.01

4.4.3. Analysis Based on Enterprise Environmental Sensitivity.

Although some scholars have found in their research that green investors are more likely to supervise heavily polluting enterprises to protect the environment and increase environmental protection expenditures, the governance costs and governance technology requirements of heavily polluting enterprises are higher than those of non-heavily polluting enterprises. As a result, the governance effect of heavily polluting enterprises is often unsatisfactory. Therefore, this study argues that compared with heavily polluting enterprises, green investors have a stronger promotional effect on the quality of ESG information disclosure of non-heavily polluting enterprises. In this paper, the sample enterprises are divided into two groups according to whether they are heavily polluting enterprises, and regressions are conducted respectively. The results are presented in Table 9. It can be observed that in non-heavily polluting enterprises, the regression coefficient of GI on Esgds is

0.889, which is significant at the 1% level; on the contrary, it is not significant in heavily polluting enterprises. Similarly, the result of the inter-group coefficient difference test is significant at the 1% level, which supports the above analysis.

Table 9. Analysis Based on Enterprise Environmental Sensitivity

	(1)		(2)
	Non-Heavily Polluting Enterprises		Heavily Polluting Enterprises
	Esgds		Esgds
GI	0.889***		0.571*
	(0.214)		(0.345)
Size	2.226***		1.737***
	(0.206)		(0.315)
SOE	0.391		-0.102
	(0.352)		(0.677)
Lev	-3.454***		-3.453
	(1.106)		(2.126)
ROA	6.430***		4.046
	(2.218)		(3.449)
Liquid	-0.196**		-0.203
	(0.076)		(0.131)
Growth	-0.274		0.197
	(0.213)		(0.423)
Board	0.271		-0.453
	(0.704)		(1.365)
Dual	0.282		-0.123
	(0.316)		(0.647)
Mfee	3.039		-2.856
	(2.329)		(5.127)
TOP1	0.765		2.229
	(1.144)		(1.754)
p-value		0.000	
Year	YES		YES
Industry	YES		YES
N	7676		2846
F	21.187		6.449
r2	0.618		0.649
r2_a	0.615		0.646

Standard errors in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.01

5. Research Conclusions and Limitations

5.1. Research Conclusions

This study selects A-share listed enterprises on the Shanghai Stock Exchange and Shenzhen Stock Exchange in China from 2012 to 2024 as the research objects. Through an empirical analysis of the relationship between green investors and the quality of ESG information disclosure, the following conclusions are drawn:(1) Green investors have a significant positive impact on the quality of corporate ESG information disclosure.(2) The promotional effect of green investors on the quality of corporate ESG information disclosure is more significant in non-state-owned enterprises.(3) The

promotional effect of green investors on the quality of corporate ESG information disclosure is more significant in large-scale enterprises.(4) The promotional effect of green investors on the quality of corporate ESG information disclosure is more significant in non-heavily polluting enterprises.

5.2. Research Limitations

This study only uses A-share listed enterprises on the Shanghai and Shenzhen Stock Exchanges as research samples, and does not include unlisted companies, which limits the applicability of the research conclusions. The measurement methods for the explanatory variable (green investors) and the explained variable (quality of ESG information disclosure) are relatively single. Although the number of green investors was used to replace the original explanatory variable in the robustness test, for the sake of research comprehensiveness, the shareholding ratio of green investors could be adopted to measure the explanatory variable in subsequent studies, and other methods for measuring the quality of ESG information disclosure could also be incorporated. In addition to the above limitations, subsequent studies can further explore the mechanism through which green investors affect the quality of ESG information disclosure. Regarding heterogeneity analysis, this study only examines the impact of corporate property rights, firm size, and environmental sensitivity on the relationship between green investors and the quality of ESG information disclosure. How many other internal and external factors affect this relationship remains to be explored in future research.

References

[1] Ma M, Zhang C, Zhang R. The dynamic effects of evolution of ESG disclosure regimes on corporate financing constraints [J]. International Review of Financial Analysis, 2025, 107104653 - 104653.

[2] Luo K, Wang X. Green investor entry and corporate green transformation: Evidence from Chinese resource-based industry [J]. Resources Policy, 2025, 109105717 - 105717.

[3] Cao D. The impact of green investor entry into buyer firms on supplier green innovation [J]. International Review of Economics and Finance,2025,103104517 - 104517.

[4] Zhang L, Han J, Xiong Y, et al. green investors, bond ratings and bond issuance spreads [J]. Finance Research Letters, 2025, 85 (PE): 108318 - 108318.

[5] Li X, Zhu J, Zhao Q, et al. Government-guided voluntary environmental regulations and the entry of green investors: Evidence from the Chinese green factory program [J]. Resource and Energy Economics, 2025, 84101530 - 101530.

[6] Lei S, Zheng L. Green investors and stock price volatility in tourism enterprises: A perspective on information disclosure quality [J]. International Review of Economics and Finance, 2025, 102104243 - 104243.

[7] Zhang D, Fang T, He Y. Green public procurement as a policy signal: Attracting green investors despite local protectionism [J]. Finance Research Letters, 2025, 84107824 - 107824.

[8] Ge Y, Zhang R, Zhu H. Green investors and ESG ratings divergence [J]. Scientific Reports, 2025, 15 (1): 20410 - 20410.

[9] Wang J, Li X, Zhang T, et al. The impact of green finance reform and innovation policies on green investors in China [J]. Finance Research Letters, 2025, 83107709 - 107709.

[10] Wang K, Bai Y, Dong Z, et al. Heterogeneous impact of ESG Disclosure: A meta-analysis [J]. Journal of Cleaner Production, 2025, 516145804 - 145804.

[11] Xu X, Li Z, Liu F. Greenwashing in ESG information disclosure: An intertemporal signaling game approach [J]. International Journal of Production Economics, 2025, 287109674 - 109674.

[12] Li X, Peng H, Long K. Empowerment or detriment: a study on the impact of ESG rating discrepancies on green investors' decision-making[J]. Journal of Applied Economics and Policy Studies, 2025, 18 (4): 98 - 111.

[13] Long X, Zhao H. Research on ESG Information Disclosure Issues and Countermeasures of Pharmaceutical Listed Companies: A Case Study of HL Pharmaceutical [J]. Journal of Statistics and Economics, 2025, 2 (3):

[14] Rosmiati J, Rahmat S. Do high-pollution firm need more environmental, social and governance (ESG) disclosure to improve corporate performance? [J]. Social Responsibility Journal, 2025, 21 (6): 1193 - 1204.

[15] Sun T, Pu Q. Empirical Study on ESG Information Disclosure Quality, Professional Institution Attention, and Corporate Performance [J]. Frontiers in Economics and Management, 2025, 6 (5): 160 - 177.

[16] Luo K, Sun W, Yang N, et al. An executive's environmental background and corporate environmental responsibility performance: Evidence from green investors and environmental investment [J]. Environment, Development and Sustainability, 2025, (republish): 1 - 50.

[17] Apostolos D, Goran K. The role of ESG in high-pollution industries: implications for market and financial performance [J]. The Journal of Risk Finance, 2025, 26 (3): 410 - 427.

[18] Yu H, Zhang J. Do green investors empower companies to develop sustainably? A study based on the perspective of innovation investment and corporate governance levels [J]. Finance Research Letters, 2025, 79107263 - 107263.

[19] Alomair M, Metwally M B A. Does ESG Disclosure Matter for the Tax Avoidance–Firm Value Relationship? Evidence from an Emerging Market [J]. Sustainability, 2025, 17 (9): 3836 - 3836.

[20] Liu M, Fang X. How does green investor entry affect corporate carbon performance? Evidence from China [J]. Renewable Energy, 2025, 244122748 - 122748.

[21] Hao J, Sun R, Gong X, et al. ESG and stock price crash risk revisited: Evidence from mandatory ESG disclosure policy in China [J]. Pacific-Basin Finance Journal, 2025, 91102729 - 102729.DOI: 10.1016/J.PACFIN.2025.102729.

[22] Songyi Y, Yu W, Yelin F. A self-disclosure ESG rating method based on the fuzzy set and reward mechanism of disclosure [J]. Journal of Intelligent & Fuzzy Systems, 2025, 48 (5): 691 - 703.

[23] Luo Z, Liu Y, Xu W. Carbon emission trading scheme and green investor entry: Evidence from China[J]. Pacific-Basin Finance Journal, 2025, 91102727 - 102727.

[24] Wang D, Wang T. Does ESG Information Disclosure Improve Green Innovation in Manufacturing Enterprises? [J]. Sustainability, 2025, 17 (6): 2413 - 2413.

[25] Li X, Tong Y, Xu G. Corporate ESG disclosure and regulatory inquiry: Evidence from comment letters on annual reports [J]. North American Journal of Economics and Finance, 2025, 77102388 - 102388.

[26] Manta F, Boscia V, Conca L, et al. The Impact of Bank Riskiness on the Quality of ESG Disclosure: Empirical Evidence from European Banks [J]. Business Strategy and the Environment, 2025, 34 (4): 4206 - 4226. DOI: 10.1002/BSE.4193.

[27] Cheng H, Cao A, Hong C, et al. Can green investors improve the quality of corporate environmental information disclosure? [J]. International Review of Economics and Finance, 2025, 98103901 - 103901.

[28] Duineveld S, Hambel C, Lessmann K. Green investors and the return on capital in general equilibrium [J]. Economics Letters, 2025, 247112149 - 112149.

[29] Amarna K, Pérez L V M, Sánchez G R, et al. ESG Information Disclosure and Its Relationship to Tax Practices: Stakeholder-Friendly or Legitimacy-Seeking? [J]. Sustainable Development,2024, 33 (3): 3906 - 3917.

[30] BeckI K, LarsenM. Financialization and an emerging “green investor state”: Examining China's use of state-backed funds for green transition [J]. Regulation & Governance, 2024, 19 (2): 349 - 369.

[31] Bai C, Liu D, Liu Y. Executive team restructuring and corporate ESG disclosure quality [J]. Finance Research Letters, 2024, 66105654-.

[32] Jingyu F, Ying Y. Green investors and corporate ESG performance: Evidence from China [J]. Finance Research Letters, 2024, 60104892-.

[33] Ambrose A H A, Perikaryon S M, Kamil M K N, et al. Understanding the behaviour of Malaysian green investors [J]. International Journal of Green Economics, 2023, 17 (2): 143 - 171.

[34] Yu D, Jihan L. Signaling Game Analysis between Enterprises and Green Investors under Green Bond Financing [J]. Financial Engineering and Risk Management, 2022, 5 (5):

[35] Urs A V. Principle Guided Investing: The Use of Exclusionary Screens and Its Implications for Green Investors [J]. Swiss Journal of Economics and Statistics, 2007, 143 (1): 3 - 30.

[36] Barnea A, Heinkel R, Kraus A. Green investors and corporate investment [J]. Structural Change and Economic Dynamics, 2004, 16 (3): 332 - 346.