Vol 15, Issue 2, (2025) E-ISSN: 2222-6990

# **Does the ESG Performance of Chinese Heavy Polluters have an Impact on Credit Decisions?**

# Chu Chen<sup>1</sup>, Hasri Mustafa<sup>2</sup>, Asna Abdullah Ataq<sup>1</sup>

<sup>1</sup>School of Business and Economics, Universiti Putra Malaysia, Kuala Lumpur 43400, Malaysia, <sup>2</sup>Yunus Social Business Centre, School of Business and Economics, Universiti Putra Malaysia, Kuala Lumpur 43400, Malaysia

**To Link this Article:** http://dx.doi.org/10.6007/IJARBSS/v15-i2/24709 DOI:10.6007/IJARBSS/v15-i2/24709

Published Date: 21 February 2025

### **Abstract**

Taking Chinese A-share heavy polluters as a research sample from 2009 to 2021, this paper investigates the impact of ESG performance on bank credit. It is found that high-quality ESG performance can significantly increase loan size and reduce firms' loan costs, and the Green Credit Guidelines issued in 2012 strengthen the impact of firms' ESG performance on bank credit. Meanwhile, mechanistic analyses show that good ESG performance influences bank credit decisions by reducing banks' expectations of corporate business risks. To advance the adoption of ESG principles by enterprises and banks, this study offers some recommendations for government, banks, and enterprises. These measures collectively promote a collaborative approach to embedding ESG principles in financial and corporate practices, driving progress toward sustainable development.

**Keywords:** ESG Performance, Bank Credit, Business Risks.

# Introduction

As China's economy continues to expand, the nation faces escalating environmental challenges. The overexploitation of natural resources has posed significant threats to regional economic stability and growth. In response, the Chinese government has introduced a series of policies aimed at achieving sustainable economic and environmental development, emphasizing high-quality growth within its administrative framework (Zhang et al., 2024). Green finance has emerged as a vital driver of this transition, playing a crucial role in fostering sustainable development through financial intermediation. Initially focused on instruments like green bonds and funds, the concept of green finance has evolved to encompass broader notions of corporate social responsibility and ethical business practices (Chen et al., 2023).

The concept of ESG (Environmental, Social, and Governance) aligns closely with China's green, low-carbon economic strategy and its commitment to reducing carbon emissions (Chen et al., 2023). Recognized as a priority by the Chinese government, ESG emphasizes the sustainable development of enterprises while highlighting their social responsibilities (Zeng et al., 2024).

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

ESG performance serves as a key indicator of a company's sustainability and social accountability. Stakeholders, including external information users, regard ESG metrics as essential criteria for evaluating a company's operational health and long-term viability ( Zhou et al., 2022). Enterprises with strong ESG performance demonstrate greater operational efficiency and resilience to risks, particularly business and informational risks (Chi & Li, 2017). Moreover, during crises such as the COVID-19 pandemic, high ESG performance has been shown to reduce financial risks, further underscoring its importance in enterprise evaluation and decision-making (Song et al., 2019).

The goals of enterprises have shifted from solely pursuing profits to embracing a broader focus on sustainable development across ESG dimensions (EIAlfy et al., 2020). As key participants in economic activities, enterprises play a pivotal role in driving economic growth, and the principles of green finance align closely with these evolving priorities (Al-Qudah et al., 2023). However, achieving strong ESG performance poses significant challenges for enterprises. Green credit, a vital instrument of green finance, has emerged as a critical driver of sustainable economic development. Recognizing its importance, China introduced the Green Credit Guidelines in 2012, mandating financial institutions to integrate environmental and social risk assessments into their credit systems and improve credit structures accordingly (Yin et al., 2021). This effort was further reinforced in 2014 with the development of the Key Evaluation Indicators for the Implementation of Green Credit, which provided detailed classifications of environmental and social risks by industry (Chi & Li, 2017). These policies aim to foster the coordinated development of the economy and the environment, encouraging enterprises to take responsibility for their environmental and social impacts. Banks, as implementers of these policies, are expected to promote sustainable development by embedding green credit practices into their internal controls and incentivizing businesses to adopt sustainable models (Zhang & Liu, 2022). From a theoretical perspective, examining whether green credit policies effectively enhance ESG performance is crucial (Lei et al., 2023). This question addresses the broader challenge of reconciling sustainable economic development with improving the ESG performance of enterprises (Lian et al., 2022).

Existing academic research largely focuses on evaluating policy effects (Wang et al., 2023), such as their influence on corporate financing behavior or technological innovation (Shen et al., 2023). However, the influence of policies on business ESG performance is still inadequately examined. Furthermore, there is also a lack of the mechanisms and internal logic behind this relationship. To address the gaps, this study employs a fixed-effects model to analyze the impact of corporate ESG performance on bank lending decisions as well as the mechanisms, using data from listed companies between 2009 and 2021.

The study makes three key contributions: First, given the critical role banks play in national economic growth, there is limited research on how ESG performance influences their credit decisions. This study addresses this gap by focusing on the banking perspective. Second, the efficient allocation of banking resources significantly affects the sustainable development of the national economy. By exploring the relationship between corporate ESG performance and bank credit decisions, this study enhances the understanding of how ESG factors influence lending practices and their broader economic implications. Third, the study uses a Difference-in-Differences (DID) model to examine the impact of the Green Credit Guidelines on bank

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

lending practices. It further investigates the transmission mechanisms through which ESG performance affects credit decisions, emphasizing the role of corporate business risk. The findings offer a theoretical basis for banks to formulate strategic decisions, optimize resource allocation, and promote green credit practices, ultimately advancing sustainable economic development.

# The Development of the Hypothesis

# ESG performance and bank credit decision

Banks need to reduce non-performing loans due to corporate defaults, fully consider potential risk factors, and then make decisions to grant or deny loans to firms (Zeng et al., 2024). Currently, scholars are mostly concerned with short-term financial performance and explore the economic consequences of ESG ratings from the perspective of short-term financial performance. For example, Duque-Grisales and Aguilera-Caracuel (2021) found a negative correlation between ESG performance and firms' financial performance in Latin American multinationals. Azmi et al. (2021) revealed a nonlinear relationship between ESG and firm value using the banking industry as a sample.

Despite the general recognition of the importance of ESG concepts by global corporations, academic research on the cost of debt remains controversial. On the one hand, several studies have provided evidence to support the inverse relationship between ESG performance and the cost of debt (Hasan et al., 2017). However, on the other hand, there are also studies that have found that the relationship between ESG performance and the cost of debt is not significant or shows a positive correlation (Hoepner et al., 2016).

Good ESG performance can guide banks to understand the future risks of the firms and thus influence their willingness to lend (Carnevale & Drago, 2024). Explored from stakeholder theory, enterprises with good ESG performance reflect better business conditions, investors are more willing to invest in such enterprises, and such enterprises are also more likely to gain support from stakeholders. Explored from reputation theory, good ESG performance can get more social attention, show investors a more positive corporate image, and also make it easy to establish a brand advantage. By showing good ESG performance, companies can get more social attention and financing. This leads to the hypothesis:

H1: Good ESG performance has a positive impact on bank credit decisions.

# Green credit policy and corporate ESG

Green credit policy leverages credit constraints to encourage enterprises to adopt sustainable development practices. The policy operates on two key fronts: first, it directs financial institutions to enhance lending methods, reduce non-performing loan ratios (Zhang & Liu, 2022), and improve their reputation (Wang et al., 2023). To achieve this, banks must evaluate various potential factors and costs to mitigate credit default risks and losses, ultimately influencing their lending decisions. From a business risk perspective, enterprises with strong ESG performance offer long-term advantages, shaping expectations about their future risk profiles and value. This, in turn, affects banks' willingness to extend credit (Zhou et al., 2024). Green credit policies also exert a financing disciplinary effect and an investment inhibition effect (Tang et al., 2024), compelling enterprises to enhance their ESG performance to secure

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

greater access to bank loans. By encouraging such improvements, green credit policies contribute to optimizing the structure of bank credit, increasing the efficiency of green credit, and lowering its associated costs (Song et al., 2019).

From an environmental perspective, green credit policies help enterprises minimize their negative environmental impact (Zhou et al., 2022). The philosophy of sustainable development underscores the necessity of safeguarding the environment in conjunction with economic performance; enterprises often lack sufficient incentives to address pollution without external monitoring. Green credit policies compel heavily polluting enterprises to adopt environmentally friendly practices by setting stricter credit thresholds. These policies not only limit credit access for polluting enterprises but also encourage them to align with environmental development goals, thereby sending positive signals to financial institutions (Luo et al., 2023).

At the level of social responsibility, green credit policies strengthen enterprises' commitment to societal obligations (Tang et al., 2024). Businesses must adhere to policies, laws, and regulations while ensuring their operations do not cause significant ecological harm. Green credit policies impose greater financial pressure on major polluters, requiring them to fulfill both social and environmental responsibilities (Dragomir & Dragomir, 2020). Additionally, these policies promote corporate governance improvements by encouraging enterprises to integrate social responsibility into their operations (Ding et al., 2023). As such, the next hypothesis is:

H2: Green credit policies positively impact corporate ESG performance.

# The impact effect of the release of Green Credit Guidelines

Advancing the green and sustainable transformation of enterprises relies heavily on financial support, which enhances the efficiency of such initiatives and facilitates the broader transition toward a sustainable economy. The Green Credit Guidelines issued by the China Banking Regulatory Commission (CBRC) in 2012 marked a significant step in this direction. These guidelines explicitly require the banking industry to strengthen credit management processes by incorporating ESG performance into credit approval and granting decisions (Xie, 2024). The issuance of the Green Credit Guidelines plays a vital role in reinforcing commitments to environmental protection, social responsibility, and corporate governance across both enterprises and the banking sector. By directing the allocation of financial resources, these guidelines encourage enterprises to prioritize ESG performance. Simultaneously, they heighten banks' awareness of the environmental and social risks associated with their clients. Enterprises with poor ESG performance face increased penalties for pollution-related issues, further incentivizing improvements (Zhou et al., 2021). The application of the Green Credit Guidelines reflects the direction of the Chinese government's adjustment of bank lending resources, and the introduction of this policy has made banks realize that they should strengthen the assessment of corporate environmental risks and carry out a more stringent loan approval system for more seriously polluting enterprises (Zhang et al., 2011), while they can increase the loan amount and reduce the loan restrictions for enterprises with better ESG performance. The next hypothesis is stated as:

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

H3: The issuance of the Green Credit Guidelines amplifies the influence of corporate ESG performance on banks' credit decisions.

# ESG performance and risk control

Business risk refers to the impact of uncertainty faced by a business in the course of its operations on the realization of its business objectives (Nocco & Stulz, 2006). Business risk is a matter of life and death and determines the future development of the enterprise (Cuşnir & Zugrav, 2021). Risks arising from the business process can increase business uncertainty and lead to business bankruptcy. In order to compete in the market, enterprises need to improve their comprehensive strength and carry out more product innovation and technological research and development, which requires great capital investment, but the acquisition of capital has a serious impact on the business risk of enterprises.

Good ESG performance of enterprises sends positive signals to investors, reduces information asymmetry between enterprises and investors, and mitigates business risks caused by asymmetry. At the same time, a company with good ESG performance can obtain a good reputation, which, as an intangible asset, can protect the company from more risks, divert investors' attention to the crisis events of the company, and reduce the uncertainty in the operation. Finally, ESG performance can also improve the legitimacy of corporate organizations, gain the trust and support of regulators, and banks are more willing to grant loans to companies with government credibility, which further reduces corporate risk. To summarize, the ESG performance of enterprises improves the ability of resource acquisition and resource reserve and mitigates the risk caused by information asymmetry to banks and enterprises.

The application of ESG principles holds significant value for both the internal management of enterprises and their external stakeholders (Tang et al., 2024). From an internal perspective, ESG performance increasingly serves as a cornerstone of enterprise operations and financing. Integrating ESG concepts into corporate strategies enhances attention to environmental issues and strengthens risk management systems. This integration helps reduce the likelihood of future operational defaults and improves overall business resilience. From the perspective of external stakeholders (Zor, 2023), ESG performance has emerged as a key metric for assessing an enterprise's value and risk profile (Umar et al., 2021). Companies with strong ESG performance not only exhibit superior management systems but are also more favorably evaluated by external stakeholders (Xie, 2024). These companies are perceived as lower-risk investments, further reinforcing their appeal. In summary, this leads to hypothesis 4: H4: Strong ESG performance reduces credit risk.

## ESG performance and the nature of the company

ESG performance has a limited impact on state-owned enterprises because state-owned enterprises are supported by the state, and banks prefer enterprises with state credit support and are more willing to provide more bank loans to such enterprises. Private enterprises do not have this advantage and hope to establish a positive corporate image by improving ESG performance, thereby obtaining more financing from investors. Hypothesis 5 is as follows: H5: Compared with state-owned enterprises, ESG performance has a more significant impact on private companies.

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

# **Research Design**

# Sample selection and data sources

This study uses a sample of A-share listed companies from 2009 to 2021. To ensure data quality, companies categorized as ST (special treatment), as well as those in the financial and insurance sectors, are excluded, along with companies with missing data. To mitigate the influence of outliers, all continuous variables undergo a 1% shrinkage treatment. After these adjustments, the final sample consists of 7,901 observations from heavy-polluting companies. Financial and debt default risk data are sourced from the Cathay Pacific database (CSMAR), while ESG performance data are obtained from the Wind (Wind) database.

$$Loan_{i,t} = \theta_0 + \theta_1 ESG_{i,t} + \gamma Controls_{i,t} + \sum FES + \varepsilon_{i,t}$$

# Definition of variables

Dependent Variable: The size of a company's loan is used to reflect its credit decision. However, since the loan balance is the result of past borrowing, it is not an ideal measure of the bank's current credit decision. Therefore, this study uses the ratio of a company's new bank loan balance to its total assets for the current year as the measure of the bank's credit decision.

Independent Variables: The ESG performance of enterprises is measured using the CSI ESG rating system. This system integrates internationally recognized evaluation standards with the specific context of the domestic market. It comprises three primary indicators, fourteen secondary indicators, twenty-six tertiary indicators, and over 130 detailed indicators. The basic framework of these indicators is provided in Table 1.

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

Table 1
Sino-Securities ESG Evaluation System

First-level	Secondary indicators	Tertiary indicators			
indicators					
	Internal Management System Business objective	Low-carbon goals and an eco-friendly company strategy Low-carbon targets and a green business plan			
	Green product	Carbon footprint and eco-friendly products and services			
Environments	External Certification	Environmental certification of the product or company			
	Non-compliance	Environmental and legal violations			
Social	Institutional system Operation	The norm for social responsibility reporting Strategies or objectives to reduce operational incident trends, unfavorable operational events, and safety incidents			
Jocial	Social contribution	Contributions Linked to Poverty Reduction, Employee Growth Rate, and Social Responsibility			
	External Certification	Quality certification for a product or business			
	Institutional system	ESG Self-Observation for Businesses			
	Governance structure	Connected transactions and an independent board Tax transparency			
	Operation	Transparency in taxes			
Governance	Operational risk	Risks associated with equity pledges, short-term debt service, general financial credibility, asset quality, and disclosure quality			
	External sanctions	Executives, shareholders, subsidiaries, and public traded firms' noncompliance			

Control Variables. Based on the existing studies, the factors selected in this paper to influence the credit decision of banks include firm size (SIZE), net profit margin on total assets (ROA), book-to-market ratio (BM), gearing ratio (LEV), age of the firm (AGE), percentage of shareholding of the first largest shareholder (Top), total remuneration of top management (Salary), and percentage of shareholding of institutional investors (Ins). In addition, the study controls for year and industry fixed effects.

# Modelling

## Descriptive statistical analysis

Descriptive statistics for the variables are presented in Table 2. For the dependent variables, the overall ESG performance of the sample is at a lower-middle level, with considerable variation in how different firms implement their ESG responsibilities. The mean ratio of new loans to total assets for Chinese listed companies is 1.43%, with a standard deviation of 7.78%. The mean ESG performance score is 4.0113, with a median of 4.0000 and a standard deviation

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

of 1.0068. The descriptive statistics for the control variables align closely with findings from previous research.

Table 2

Descriptive Statistics

VarName	Obs	Mean	SD	Min	P25	Median	P75	Max
Loan	6999	0.0143	0.0778	-0.2373	-0.0245	0.0078	0.0532	0.2438
ESG	6999	4.0113	1.0068	1.0000	3.5000	4.0000	4.7500	7.2500
SIZE	6999	22.4401	1.2657	19.1910	21.5274	22.2552	23.2166	25.9568
ROA	6999	0.0343	0.0618	-0.3459	0.0098	0.0326	0.0641	0.2074
BM	6999	0.3306	0.1553	0.0032	0.2216	0.3102	0.4226	0.7801
LEV	6999	17.5673	25.9260	0.0000	0.0000	0.0000	39.6000	88.5300
AGE	6999	2.4281	0.6618	0.0000	2.0794	2.6391	2.9444	3.2958
Тор	6999	34.9683	14.6571	9.4200	23.5900	33.1700	45.0000	74.8200
Salary	6999	14.3521	0.9241	0.0000	13.8961	14.3649	14.8164	16.4119
Ins	6999	46.2743	23.2100	0.0995	29.7723	48.1401	64.0571	92.0471

The impact of corporate ESG performance on bank credit decisions

The baseline regression results, presented in Table 3, illustrate the impact of ESG performance on banks' credit decisions. Companies with strong ESG performance tend to receive more credit from banks. This relationship is evident when the dependent variable is loan size. In the first column, where no control variables are included, the estimated coefficient for ESG performance is positive and significant at the 1% level. Even after controlling for industry and year fixed effects in the third column, the coefficient remains positive at 0.0033 and statistically significant at the 1% level. These findings strongly support Hypothesis 1.

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

Table 3

Basis Regressions

	(1)	(2)	(3)
	Loan		
ESG	0.0050***	0.0030***	0.0030***
SIZE	(5.4262)	(2.9123)	(2.9404)
ROA		0.0109***	0.0117***
BM		(9.6339)	(10.0708)
LEV		-0.0270	-0.0382*
AGE		(-1.2502)	(-1.7190)
Тор		-0.0600***	-0.0661***
Salary		(-9.9041)	(-9.9928)
Ins		0.0000	-0.0000
ESG		(0.6771)	(-0.6731)
SIZE		-0.0262***	-0.0255***
ROA		(-14.9719)	(-14.4031)
BM		-0.0000	-0.0000
LEV		(-0.2397)	(-0.0037)
AGE		-0.0015	-0.0008
Тор		(-1.2679)	(-0.6486)
Salary		-0.0000	-0.0001
		(-0.3610)	(-1.0069)
_cons	-0.0058	-0.1337***	-0.1597***
	(-1.5157)	(-5.6503)	(-6.2606)
Ind_FE	N	Υ	Υ
Year	N	N	Υ
N	6999	6999	6999
Adj. R <sup>2</sup>	0.0040	0.0544	0.0641

<sup>\*</sup> p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

As can be seen in Table 4, ESG shows strong correlation with bank credit size, with a correlation coefficient of 0.0647. In addition, it can be seen from Table 4 that ESG shows strong correlation with all other control variables.

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

Table 4

Correlation coefficients of main variables

	Loan	ESG	SIZE	ROA	ВМ	LEV	AGE	Тор	Salary	ln s
Loan	1									
ESG	0.0647* **	1								
SIZE	0.0692* **	0.2297* **	1							
ROA	-0.0057	0.1967* **	0.0531* **	1						
ВМ	- 0.0767* **	0.1900* **	0.1454* **	0.1418* **	1					
LEV	0.0566*	0.0668* **	0.3330* **	- 0.0874* **	- 0.0732* **	1				
AGE	- 0.1398* **	- 0.0713* **	0.4269* **	- 0.0975* **	- 0.0735* **	0.1035* **	1			
Тор	0.0431* **	0.1171* **	0.3086* **	0.0695* **	0.0779* **	0.0973* **	0.0133	1		
Salar y	-0.0079	0.1647* **	0.2842* **	0.2309* **	0.1442* **	0.0667* **	0.1074* **	- 0.0691* **	1	
Ins	0.0169	0.1095* **	0.4816* **	0.0807* **	-0.0167	0.1591* **	0.3075* **	0.5600* **	0.0578* **	1

<sup>\*\*\*</sup> p<0.001 \*\* p<0.05 \* p<0.1

The impact effects of the issuance of the Green Credit Guidelines

Figure 1 illustrates the parallel trend of ESG performance's impact on bank credit decisions from 2009 to 2021. The horizontal axis represents the years, while the vertical axis shows the estimated coefficients of ESG performance on bank credit for each year. Using 2012 as a benchmark (Li et al., 2024), the results reveal that prior to the introduction of the Green Credit Guidelines, the impact of ESG performance on bank credit decisions was insignificant. However, following the policy's implementation, ESG performance began to significantly influence bank credit decisions. These findings confirm that the parallel trend assumption holds, validating the use of a difference-in-differences approach for this analysis.

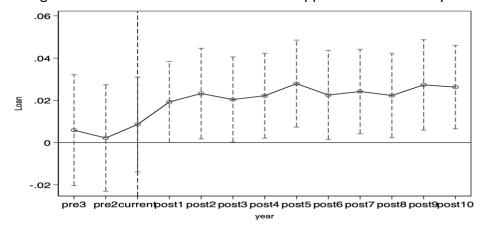


Figure 1 parallel trend test

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

# Analysis of DID regression results.

Table 5 presents the regression results examining the relationship between corporate ESG performance and bank credit in the policy year following the implementation of the Green Credit Guidelines. The coefficients for the interaction terms between firms' ESG performance and the policy dummy variables show increased magnitude and significance. This indicates that the introduction of the Green Credit Guidelines amplifies the influence of ESG performance on banks' credit decisions. These findings provide strong support for Hypothesis 2.

Table 5
ESG performance and bank credit decisions: the role of the Green Credit Guidelines Release

Variables	Loan	
DID	0.0202***	
	(2.9824)	
SIZE	0.0011	
ROA	(0.6978)	
BM	0.1346***	
LEV	(5.2727)	
AGE	0.0173***	
Тор	(2.7749)	
Salary	0.1095***	
Ins	(12.0379)	
SIZE	0.0002*	
ROA	(1.7359)	
BM	0.0027	
LEV	(1.4573)	
AGE	-0.0002**	
Тор	(-2.3783)	
Salary	-0.0246***	
	(-4.9575)	
_cons	-0.0440	
	(-1.3442)	
Ind_FE	Υ	
Year	Υ	
N	5995	
Adj. R <sup>2</sup>	0.0798	

<sup>\*</sup> p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

## Mechanical testing

This study employs Baron and Kenny's (1986) mediation effects model to conduct the analysis. Following their framework, we first exclude Model (1) and subsequently estimate Models (2) and (3) (Zor, 2023). The mediating variable analyzed in this paper is the Z-value.

$$Mediator_{i,t} = \beta_0 + \beta_1 ESG_{i,t} + \gamma Controls_{i,t} + \sum_{i,t} FEs + \varepsilon_{i,t}$$

$$Loan_{i,t} = \beta_0 + \beta_1 ESG_{i,t} + \beta_2 Mediator_{i,t} + \gamma Controls_{i,t} + \sum_{i,t} FEs + \varepsilon_{i,t}$$

Stakeholder support and reputation theory suggest that robust ESG performance reduces business risk, mitigates uncertainties about a company's future prospects, and attracts higher-quality clients for banks. To evaluate this influence mechanism, this study uses the Z index as a measure of a company's operational risk and incorporates it into the regression

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

model. The results, presented in Table 6, show that the operational risk coefficient is -0.0022, which is statistically significant at the 1% level. Additionally, the ESG performance coefficient is 0.0033, also significant at the 1% level, underscoring the positive impact of strong ESG performance on reducing business risks and enhancing creditworthiness.

Table 6
ESG Performance and Corporate Risk Control

	(1)	(2)	(3)
	(1)	(1)	(1)
ESG	0.0030***	0.4290***	0.0039***
	(2.9404)	(6.2148)	(3.8039)
ZScore			-0.0021***
			(-6.1251)
_cons	-0.1597***	25.7316***	-0.1063***
	(-6.2606)	(13.3410)	(-3.9055)
Ind_FE	N	Υ	Υ
Year	N	N	Υ
N	6999	6999	6999
Adj. R <sup>2</sup>	0.0641	0.3198	0.0720

#### Robustness test

This study chose the median ESG for our analysis and the results obtained were significant, as can be seen in Table 7, after replacing the ESG variable, Loan size is still significantly associated with the median ESG at the 1% level, with a coefficient of 0.0031.

Table 7
Replacement of variable

rieprice est content		
	(1)	
	Loan	
ESGmedian	0.0031***	
	(3.1285)	
_cons	-0.1595***	
	(-6.2578)	
Ind_FE	Υ	
Year	Υ	
N	6999	
Adj. R <sup>2</sup>	0.0643	

# Heterogeneity analysis

Heterogeneity analysis is conducted next, we believe that there is a significant difference between private and state-owned enterprises in their attitudes towards ESG, this is due to the fact that state-owned enterprises are more likely to be supported by the government, and banks are more willing to lend to enterprises with government credit support, while private enterprises need to rely on their ESG performance to enhance their corporate reputation and build up their corporate image, so the private sector pays more attention to the disclosure of their ESG performance. In Table 8, we replace state-owned enterprises with state=1 and private enterprises with state=0. The results obtained are significantly positive at 1%, and its

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

correlation coefficient is 0.0030, which indicates that private enterprises pay more attention to ESG performance.

Table 8

Ownership Types

(1)	(2)
stata=1	stata=0
0.0015	0.0030***
(0.4597)	(2.8641)
0.0107***	0.0112***
(3.9460)	(8.6562)
-0.0973	-0.0324
(-1.3914)	(-1.3859)
-0.1082***	-0.0615***
(-4.7853)	(-9.1629)
-0.0001	-0.0000
(-1.0540)	(-0.2639)
-0.0068	-0.0267***
(-1.2027)	(-14.8768)
-0.0003	0.0000
(-1.0097)	(0.1138)
-0.0017	0.0000
(-0.8406)	(0.0040)
0.0004	-0.0001
(1.4968)	(-1.2242)
-0.1662***	-0.1617***
(-2.7379)	(-5.6088)
Υ	Υ
Υ	Υ
6999	6999
0.0602	0.0659
	stata=1 0.0015 (0.4597) 0.0107*** (3.9460) -0.0973 (-1.3914) -0.1082*** (-4.7853) -0.0001 (-1.0540) -0.0068 (-1.2027) -0.0003 (-1.0097) -0.0017 (-0.8406) 0.0004 (1.4968) -0.1662*** (-2.7379) Y Y 6999

# Conclusion

This study investigates the impact of corporate ESG (Environmental, Social, and Governance) performance on bank lending decisions, using data from publicly traded companies listed on China's Shanghai and Shenzhen stock exchanges between 2009 and 2021. The findings show that strong ESG performance is associated with a lower ratio of non-performing loans, facilitates access to more bank loans, and extends loan guarantee periods.

Banks, as key lending institutions, play a critical role in influencing corporate ESG practices through their credit decisions. The study further reveals that the introduction of the Green Credit Guidelines in 2012 enhanced the impact of ESG performance on bank lending decisions. Additionally, strong ESG performance significantly reduces business risks for enterprises. The results emphasize that ESG performance is an essential criterion for banks in identifying high-quality borrowers. Integrating ESG indicators into bank credit evaluation systems aligns with both market demands and regulatory objectives, providing a meaningful pathway toward achieving sustainable development.

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

To promote the adoption of ESG principles by both enterprises and banks, this study offers three key recommendations. First, government action: Authorities should provide clear guidance on ESG disclosure to accelerate the development of a standardized ESG reporting framework. This includes promoting research by domestic ESG-related institutions and ensuring the quality of disclosed ESG information through stringent oversight. Second, banking industry initiatives: Banks should integrate ESG principles into their credit evaluation systems by incorporating environmental, social, and governance factors. Enterprises with poor ESG performance should face penalties or warnings to incentivize improvement and accountability. Third, enterprise responsibility and reputation: As the concept of sustainable development becomes increasingly important, ESG performance is vital in assessing corporate value. Strong ESG performance not only attracts more bank loans but also enhances relationships with stakeholders, helping companies build a positive reputation and achieve long-term sustainability goals.

Together, these measures foster a collaborative approach to embedding ESG principles in both financial and corporate practices, thereby driving progress toward sustainable development.

## References

- Al-Qudah, A. A., Hamdan, A., Al-Okaily, M., & Alhaddad, L. (2023). The impact of green lending on credit risk: Evidence from UAE's banks. *Environmental Science and Pollution Research*, 30(22), 61381-61393.
- Azmi, W., Hassan, M. K., Houston, R., & Karim, M. S. (2021). ESG activities and banking performance: International evidence from emerging economies. *Journal of International Financial Markets, Institutions and Money, 70*, 101277.
- Carnevale, C., & Drago, D. (2024). Do banks price ESG risks? A critical review of empirical research. *Research in International Business and Finance*, 102227.
- Chen, Y., Li, T., Zeng, Q., & Zhu, B. (2023). Effect of ESG performance on the cost of equity capital: Evidence from China. *International Review of Economics & Finance*, 83, 348-364.
- Chi, Q., & Li, W. (2017). Economic policy uncertainty, credit risks and banks' lending decisions: Evidence from Chinese commercial banks. *China Journal of Accounting Research*, 10(1), 33-50.
- Cuşnir, C., & Zugrav, I. (2021). The impact of uncertainty and risk on the managerial decisions of commercial enterprises. *Journal of Research on Trade, Management and Economic Development*, 16(2), 34-45.
- Ding, X., Ren, Y., Tan, W., & Wu, H. (2023). Does carbon emission of firms matter for Bank loans decision? Evidence from China. *International Review of Financial Analysis*, 86, 102556.
- Dragomir, V. D., & Dragomir, V. D. (2020). Ethical aspects of environmental strategy. *Corporate Environmental Strategy: Theoretical, Practical, and Ethical Aspects*, 75-113.
- Duque-Grisales, E., & Aguilera-Caracuel, J. (2021). Environmental, social and governance (ESG) scores and financial performance of multilatinas: Moderating effects of geographic international diversification and financial slack. *Journal of business ethics*, 168(2), 315-334.
- ElAlfy, A., Palaschuk, N., El-Bassiouny, D., Wilson, J., & Weber, O. (2020). Scoping the evolution of corporate social responsibility (CSR) research in the sustainable development goals (SDGs) era. *Sustainability*, *12*(14), 5544.

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

- Hasan, I., Hoi, C. K., Wu, Q., & Zhang, H. (2017). Social capital and debt contracting: Evidence from bank loans and public bonds. *Journal of Financial and Quantitative Analysis*, *52*(3), 1017-1047.
- Hoepner, A., Oikonomou, I., Scholtens, B., & Schröder, M. (2016). The effects of corporate and country sustainability characteristics on the cost of debt: An international investigation. *Journal of Business Finance & Accounting*, 43(1-2), 158-190.
- Lei, N., Miao, Q., & Yao, X. (2023). Does the implementation of green credit policy improve the ESG performance of enterprises? Evidence from a quasi-natural experiment in China. *Economic Modelling*, *127*, 106478.
- Li, C., Liu, Z., Song, R., & Zhang, Y.-J. (2024). The impact of green credit guidelines on environmental performance: Firm-level evidence from China. *Technological Forecasting and Social Change*, 205, 123524.
- Lian, Y., Gao, J., & Ye, T. (2022). How does green credit affect the financial performance of commercial banks?——evidence from China. *Journal of Cleaner Production*, *344*, 131069.
- Luo, C., Wei, D., & He, F. (2023). Corporate ESG performance and trade credit financing—Evidence from China. *International Review of Economics & Finance*, *85*, 337-351.
- Nocco, B. W., & Stulz, R. M. (2006). Enterprise risk management: Theory and practice. *Journal of applied corporate finance*, 18(4), 8-20.
- Shen, H., Lin, H., Han, W., & Wu, H. (2023). ESG in China: A review of practice and research, and future research avenues. *China Journal of Accounting Research*, 100325.
- Song, X., Deng, X., & Wu, R. (2019). Comparing the influence of green credit on commercial bank profitability in China and abroad: empirical test based on a dynamic panel system using GMM. *International Journal of Financial Studies*, 7(4), 64.
- Tang, H., Xiong, L., & Peng, R. (2024). The mediating role of investor confidence on ESG performance and firm value: Evidence from Chinese listed firms. *Finance Research Letters*, *61*, 104988.
- Umar, M., Ji, X., Mirza, N., & Naqvi, B. (2021). Carbon neutrality, bank lending, and credit risk: Evidence from the Eurozone. *Journal of Environmental Management*, *296*, 113156.
- Wang, K., Chen, X., & Wang, C. (2023). The impact of sustainable development planning in resource-based cities on corporate ESG–Evidence from China. *Energy Economics*, 127, 107087.
- Xie, Y. (2024). The interactive impact of green finance, ESG performance, and carbon neutrality. *Journal of Cleaner Production*, 456, 142269.
- Yin, W., Zhu, Z., Kirkulak-Uludag, B., & Zhu, Y. (2021). The determinants of green credit and its impact on the performance of Chinese banks. *Journal of Cleaner Production*, 286, 124991.
- Zeng, L., Li, H., Lin, L., Hu, D. J. J., & Liu, H. (2024). ESG standards in China: Bibliometric analysis, development status research, and future research directions. *Sustainability*, *16*(16), 7134.
- Zhang, B., Yang, Y., & Bi, J. (2011). Tracking the implementation of green credit policy in China: Top-down perspective and bottom-up reform. *Journal of Environmental Management*, 92(4), 1321-1327.
- Zhang, D., & Liu, L. (2022). Does ESG performance enhance financial flexibility? Evidence from China. *Sustainability*, *14*(18), 11324.

Vol. 15, No. 2, 2025, E-ISSN: 2222-6990 © 2025

- Zhang, Y., Wang, X., Guo, W., Guo, X., Wang, Q., & Tan, X. (2024). Does ESG performance affect the enterprise value of China's heavily polluting listed companies? *Sustainability*, 16(7), 2826.
- Zhou, G., Sun, Y., Luo, S., & Liao, J. (2021). Corporate social responsibility and bank financial performance in China: The moderating role of green credit. *Energy Economics*, *97*, 105190.
- Zhou, M., Huang, Z., & Jiang, K. (2024). Environmental, social, and governance performance and corporate debt maturity in China. *International Review of Financial Analysis*, 95, 103349.
- Zhou, W., Huang, X., Dai, H., Xi, Y., Wang, Z., & Chen, L. (2022). Research on the impact of economic policy uncertainty on enterprises' green innovation—based on the perspective of corporate investment and financing decisions. *Sustainability*, *14*(5), 2627.
- Zhou, X., Caldecott, B., Hoepner, A. G., & Wang, Y. (2022). Bank green lending and credit risk: an empirical analysis of China's green credit policy. *Business Strategy and the Environment*, *31*(4), 1623-1640. https://doi.org/10.1002/bse.2973
- Zor, S. (2023). A neural network-based measurement of corporate environmental attention and its impact on green open innovation: Evidence from heavily polluting listed companies in China. *Journal of Cleaner Production*, 432, 139815.