

A Study on the Impact and Mechanism of ESG Performance on Corporate Value

--Based on the Empirical Analysis of A-share Listed Enterprises

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Abstract. With the improvement of the Chinese capital market in terms of regulation system and overall maturity, the significance of the ESG concept to the capital market has been rising accordingly, becoming an important source of corporate signals. In this context, ESG value investment has gradually received attention from academia and the market and a lot of discussions have been conducted on ESG and corporate value, but there are still many differences in the research on the relationship and mechanism of the two. The academic argument of ESG governance's function has been reflected in the capital market that most Chinese listed companies neglected ESG governance, and less than a quarter of them have made the disclosure on this basis. Hence, In context to this background, this paper explores the correlation between ESG performance and enterprise value as well as explains the mechanism of this effect by constructing a multiple linear regression model with sample companies from the A-share capital market. It is found that ESG performance is significantly and positively correlated with enterprise value, for every 1% increase in ESG performance, enterprise value will increase by 7.2% on average. This correlation also has been proved by this paper that can be explained by the contribution of better economic performance and a financing environment led by good ESG performance.

Keywords: ESG Performance, Corporate value, ESG Governance, Financing costs, Financial performance.

1. Introduction

Along with the inclusion of ESG indicators in long-term corporate value analysis by investment institutions such as MSCI and the era of carbon neutrality & economic development transformation, the importance of corporate ESG governance in value investment has been rising, while academics have gradually begun to pay attention to the study of the correlation between ESG performance and corporate value. With the number of companies disclosing ESG reports in the S&P 500 exceeding 90% of the total, The current attitude towards ESG disclosure in developed countries has already shifted to mandatory or semi-mandatory. In contrast, less than 23.56% of listed companies in China's A-share market choose to disclose ESG reports (see Figure 1). The core motivation for companies to disclose ESG information is based on the signaling theory, i.e. Issuing ESG reports would be regarded as positive signals for companies and will send effective messages to the market, boosting the market's expectation of corporate value and thus promoting corporate fundamentals. However, as the Chinese capital market is still immature, although mainstream theory reckon a positive correlation between Chinese capital market expectations and ESG performance, it is still debatable whether this signaling mechanism can work effectively. In addition, ESG governance and ESG performance enhancement will consume a lot of resources and incur higher transaction costs. This cost-benefit mismatch is an important reason why ESG corporate governance and corresponding information disclosure are still not widely available in China. Based on this, this paper will further investigate the

intrinsic relationship and mechanism between ESG performance and corporate value in the Chinese capital market, using A-share listed enterprises as the empirical sample and selecting the China Securities ESG Index from Huazheng to measure ESG performance, to provide an effective reference for Chinese enterprises in facing the cost-benefit decision problem of ESG governance.

The first part of the introduction reveals the importance of corporate ESG governance disclosure in today's Chinese capital market. Then the paper introduces the core motivation for corporate ESG disclosure and presents the research content of this paper, i.e. the intrinsic relationship and mechanism of action between corporate ESG performance and corporate value in the Chinese capital market. The third part of the paper provides an overview of the research findings both from domestic and international scholars on the motivation of ESG information disclosure, and the relationship between ESG performance & corporate value. Meanwhile, the experimental hypothesis would be proposed in this part based on this research literature. The fourth part mainly focuses on exhibiting empirical study of the paper, including the definition of core variables, sample selection, data sources and the construction of a linear regression model to test the above experimental hypotheses. Besides, the basic regression results with robustness tests (by replacing variables, changing ESG quantifying methods and changing the regression model) are also included in this part. In the fifth part, conclusions and recommendations are presented. Based on the results obtained from the empirical study, the paper gives recommendations in four aspects, namely environmental governance, social governance, corporate governance and value investment, to provide effective references for Chinese enterprises in facing the cost-benefit decision problem of ESG governance.

2. Literature References

There are two important motivations for companies to undertake ESG governance: firstly, improving ESG performance levels would be an opportunity for companies to change their governance, production and profitability structures for higher efficiency. For instance, improving environmental performance will also lead to green operational requirements, forcing companies to improve their green products and materials technology. The need to achieve carbon-neutral emissions will also drive companies to accelerate the use of new energy sources and improve production efficiency. The promotion of corporate social performance, including the construction of green supply chains and green regulation, will promote the integration of quality control & assurance systems and the ability to integrate the whole production chain. Finally, the effective improvement of corporate governance of enterprises will have a positive impact on their comprehensive development space, profitability, and sustainability. Secondly, advancing their ESG performance and disclosing ESG reports to the market may prompt the market's good expectation of enterprises and form a higher fundamental valuation of enterprises. For example, in terms of social responsibility(s), mainstream empirical studies in academia have confirmed that companies with good financial performance will follow the signaling theory in the face of non-financial information disclosure, i.e., proactively disclosing social responsibility information to society [1]. As for ESG synthesis, one argues that listed companies will actively disclose their ESG information to balance the relationship among stakeholders, stabilize share prices and enhance corporate value. However, academic attitudes towards the correlation between ESG performance and corporate value are still widely divergent[2].

Based on stakeholder theory and signaling theory, stakeholders expect corporate sustainability and transparency of information and will provide effective market feedback on positive signals. The vast majority of academic studies suggest that good ESG performance enhances the corporate value and is manifested in a push-up of the firm's market capitalization, while one work find a significant positive correlation between the impact of ESG performance on corporate value, using Egyptian and Chinese firms as the subjects of their study respectively[3, 4]. Based on the above discussion, this paper makes the following hypotheses.

H1: Other things being equal, ESG performance is positively correlated with firm value.

Based on neoclassical economics, the core objective of a firm is to maximize the interests of equity holders, and corporate governance activities that are not related to this objective will affect the firm's ability to maximize profits and crowd out resources, driving up the cost of business. Companies with an ESG performance of BB level (the evaluation standard of the China Securities ESG Index) and above are part of larger listed companies with better financial performance. Their promotion of green governance, social responsibility, and strengthening of corporate governance in the context of scarce resources will crowd out profitable resources, which is detrimental to the enhancement of corporate value. For example, an empirical study by Wang Rong found that ESG performance was significantly negatively correlated with corporate value when ESG performance rating was below 6.358 (the evaluation criteria of the CSI ESG Index)[5]. One work argued that the core value of a company is to create benefits for shareholders, and corporate ESG governance will increase costs, consume resources and lead to a decrease in corporate value[6]. In addition, one paper found no significant effect of corporate ESG performance on corporate value. Based on the above discussion, this paper makes the following hypothesis[7].

H2: ESG performance is negatively related to firm value, all other things being equal.

The current academic research on the mechanism of ESG performance affecting enterprise value focuses on two types of hypotheses: First, an increase in ESG performance, whether through an ESG report issued by the company itself or an ESG rating issued by a third-party organization, will effectively increase the information about the company in the market, which will help to break information asymmetry and thus increase consumers' willingness to buy and investors' willingness to invest (H2). This will help to break down information asymmetry, thus increasing consumers' willingness to buy and investors' willingness to invest, increasing the firm's resilience to risk, which in turn will lead to a relative decrease in the cost of financing in the capital market and an increase in enterprise value[8, 9]; secondly, ESG performance will drive the economic performance of the firm, thus increasing its enterprise value. For example, one paper studied listed companies in 15 European countries from 2002 to 2011 and found that good ESG performance is an intangible asset that can lead to an increase in the economic performance of the company[10]; similarly, an article argued that ESG information disclosure can enhance consumers' understanding of the company and increase customer stickiness, thus enhancing business performance, while the improvement of business performance will help to increase the value of the firm[11]. Based on the above analysis, this paper makes the following hypothesis.

H3: Good ESG performance will reduce financing costs and thus increase firm value.

H4: Good ESG performance will enhance financial performance and hence corporate value.

3. Empirical analysis

3.1 Study design

3.1.1 Core variable definitions

Explanatory variables: ESG rating, this paper selects the China Securities ESG rating database, which is currently one of the most authoritative ESG rating standards in China and consists of 26 key indicators together to build its evaluation platform. This paper adopts a nine-level scoring mechanism, ranging from CCC to AAA, with scores from 1 to 9 respectively, with the corresponding scores from 1 to 9 representing the improvement of the ESG governance level of enterprises.

Explanatory variables: Tobin QC, the core explanatory variable chosen in this paper is Tobin Qc, which is equal to the ratio of market value to total assets at the end of the period, and here market value is the sum of the market value of equity and market value of net debt, whether remarket value of illiquid equity is calculated using the share price of outstanding shares instead.

Control variables: Based on the relevant literature, the following variables were selected to influence the value of the firm: company size (in size), shareholderpet, independent directors

(Inboard), the gearing ratio (Lev), current ratio (Liqu), firm growth (Growth), and nature of the company (SOE).

The core difference between the two is the difference in the market value of equity of non-liquid shares, where Tobin Q c is calculated using the liquid share price and Tobin Q a value is calculated using net assets.

Mediating variables: In this paper, to explore the specific mechanism of the impact of ESG relative to enterprise value, the cost of financing variable (Cost) and the earnings performance variable (ROA) were finally selected as mediating variables after literature research, both of which measure the combined difficulty of financing and profitability of enterprises in the capital market, respectively. The specific variable definition information is shown in Table 1.

Table 1. Variable definition information sheet

Variable type	Variable name	Explanation of variables
Explained variables	TobinQ	(Market value of outstanding share rights at end of period + Market value of non-marketable share rights at end of period + (Market value of net debt at end of period) / Total assets at end of the period, non-marketable shares measured by the share price
Explanatory variables	ESG	China Securities ESG Rating
	Lnize	Natural logarithm of assets at the end of the period
	Lev	Total liabilities / Total assets
	Liqu	Current ratio
Control variables	Indboard	Number of Independent Directors / Number of Board of Directors
	Holderpct	Shareholding of the largest shareholder as a percentage of total share capital
	SOE	Dummy variables, with state ownership assigned 1 and non-state ownership assigned 0
	Growth	Operating income growth rate
Robustness variables	TobinQA	(Market value of outstanding share rights at end of period + Market value of non-marketable share rights at end of period + (Market value of net debt at end of period) / Total assets at end of the period, non-marketable shares measured by net assets
	Cost	Finance costs/liabilities
	ROA	Ratio of net profit to average total assets

3.1.2 Sample selection and data sources

Given that the impact of the epidemic in 2020 and 2021 may have an impact on the validity of the experimental results, this paper selects all the companies listed on the A-share market with ratings from 2014 to 2019 by China Securities ESG as the research sample. And to further ensure the validity of the data, this paper eliminates the samples with abnormal or missing data of relevant variables and financial data and conducts the 1% and 99% quantile to Winsor shrink the tail, finally forming a total of 1,520 enterprises with 11,520 data samples. Among the above samples, the ESG performance (China Securities ESG Indicators) was obtained from the WIND database, while the rest of the financial information was obtained from the CSMAR database.

3.1.3 Model construction explained

To test Hypothesis 1 and Hypothesis 2, this paper draws on Xu Guanghua to ultimately construct a multiple linear regression model on Tobin's Q c-value and ESG[12], constructing the following Mode 1.

$$TobinQC_{it} = a_0 + a_1ESG_{it} + a_2Growth_{it} + a_3Size_{it} + a_4Levit + a_5Liquit + a_6Indboard_{it} + a_7Holderpetit + a_8SOE_{it} + \varepsilon_{it} \quad (1)$$

where i 、 t 、 ε_{it} represent the firm, year, and disturbance term respectively.

And for the study of the mechanism of the effect of ESG performance on firm performance, the following model is further constructed.

To test hypothesis 3, the following regression models 2 and 3 are constructed in this paper.

$$Cost_{it} = a_0 + a_1ESG_{it} + a_2Growth_{it} + a_3Size_{it} + a_4Levit + a_5Liquit + a_6Indboard_{it} + a_7Holderpetit + a_8SOE_{it} + \varepsilon_{it} \quad (2)$$

$$TobinQ_{it} = a_0 + a_1ESG_{it} + a_2Cost_{it} + a_3Growth_{it} + a_4Size_{it} + a_5Levit + a_6Liquit + a_7Indboard_{it} + a_8Holderpetit + a_9SOE_{it} + \varepsilon_{it} \quad (3)$$

To test hypothesis 4, the following regression models 4 and 5 are constructed in this paper.

$$ROA_{it} = a_0 + a_1ESG_{it} + a_2Growth_{it} + a_3Size_{it} + a_4Levit + a_5Liquit + a_6Indboard_{it} + a_7Holderpetit + a_8SOE_{it} + \varepsilon_{it} \quad (4)$$

$$TobinQ_{it} = a_0 + a_1ESG_{it} + a_2ROA_{it} + a_3Growth_{it} + a_4Size_{it} + a_5Levit + a_6Liquit + a_7Indboard_{it} + a_8Holderpetit + a_9SOE_{it} + \varepsilon_{it} \quad (5)$$

3.2 Descriptive statistical analysis and correlation coefficients

As shown in Table 2, this article involves a sample of 1920 A-share listed companies from 2014 to 2019, with 11520 cumulative variable data. The mean enterprise value of the interpreted variable *Tobin Q c* is 2.742, the median is 1.857, and the mean is greater than the median, indicating that the overall enterprise value of the sample stays at a high level, while the standard deviation is displayed as 13.180, indicating that there is a large difference in the value of the sample enterprise, which is derived from the various internal development levels. The average value of the *ESG* variable is 6.612, and since the paper adopts a nine-point system to quantify the score which means the theoretical average should be about 5 points, so it is obvious that the sample average is higher than the theoretical estimate, indicating that the selected enterprises in this sample have good ESG performance overall. The standard deviation of the *ESG* variable is 1.184, and there is a large difference between the individual samples, indicating that the ESG governance level of the enterprises in the sample is uneven. In addition, the average *SOE* of the enterprise is 0.456, which is less than the theoretical average of 0.500, indicating that in this sample, the number of non-state-owned enterprises is much larger compared to those owned by the state, and the further analysis of *SOE* classification will be carried out later. Among the other main control variables, the *growth*'s standard deviation is 17.790, which owns more difference in the sample structure compared to the rest of the variables. As shown in Table 2 variable *Tobin Q c* and the variable *ESG* pass the P-test, which preliminarily supports assumptions 1 and assumption 2 that the enterprise value will be affected by ESG performance. In this paper, the VIF collinearity test is less than 1, indicating that there is no intrinsic multicollinearity among explanatory variables (shown in table 4 collinearity test).

Table 2. Descriptive statistical analysis

Variable	N	Mean	p25	p50	p75	SD	Min	Max
TobinQC	11520	2.742	1.265	1.847	2.944	13.18	0.604	983.5
TobinQA	11520	2.193	1.143	1.549	2.336	7.295	0.692	729.6
ESG	11520	6.612	6	6	8	1.184	1	9
Cost	11520	0.008	-0.001	0.013	0.027	0.048	-1.573	0.947

Holderpet	11520	0.341	0.224	0.320	0.441	0.149	0.003	0.900
Indboard	11518	0.376	0.333	0.364	0.429	0.057	0.200	0.800
Lev	11520	0.448	0.278	0.439	0.603	0.214	0.008	2.290
Liqu	11520	2.278	1.073	1.555	2.460	3.201	0	80.66
Lnsiz	11520	22.60	21.61	22.35	23.33	1.524	14.94	31.04
Growth	11520	0.444	-0.031	0.090	0.242	17.79	-0.997	1878
SOE	11520	0.456	0	0	1	0.498	0	1

Table 3. correlation coefficients

Variable	TobinQC	ESG	Holder~t	Indboard	Lev	Liqu	Lnsiz	Growth	SOE
TobinQC	1								
ESG	-0.034***	1							
Holderpet	-0.031***	0.142***	1						
Indboard	0.016*	0.00700	0.039***	1					
Lev	-0.060***	0.122***	0.065***	0.003	1				
Liqu	0.089***	-0.060***	-0.035***	0.017*	-0.489***	1			
Lnsiz	-0.151***	0.377***	0.204***	0.022**	0.550***	-0.272***	1		
Growth	-0.001	-0.002	-0.002	-0.006	0.022**	-0.004	0.031***	1	
SOE	-0.020**	0.255***	0.214***	-0.029***	0.289***	-0.146***	0.300***	0.00800	1

Table 4. VIF test

Variable	VIF	1/VIF
Lev	1.820	0.549
Lnsiz	1.730	0.579
Liqu	1.310	0.761
ESG	1.220	0.818
SOE	1.200	0.834
Holderpet	1.080	0.923
Indboard	1.000	0.996
Growth	1.000	0.999
Mean	VIF	1.300

3.3 Regression analysis

3.3.1 Basic regression result

As shown in Table 5, all samples were regressed using a fixed-effects model, and the regression results in column (1) show that the enterprise value (*TobinQC*) is significantly positively correlated with the enterprise ESG performance (*ESG*), and for every 1.00% increase in the enterprise ESG performance, the enterprise value would be improved by an average of 7.20%, which means assumption 1 is verified and assumption 2 will be rejected accordingly.

In addition, Considering the influence created by the nature of the enterprise's property rights on the regression result, columns(2) and column (3) are therefore shown the regression result in the context of controlling the nature of the property rights, and it is found that non-state-owned enterprises also show a significant positive correlation relationship, and the impact is more obvious than the overall sample, and the ESG performance improvement of non-state-owned enterprises by 1.00% can bring about an average 10.00% increase in enterprise value. However, there is no strict linear correlation in the statistical sense of state-owned enterprises, which may mainly stem from the fact of their inherent stability, so when they release positive signals, their capital market's feedback is not as good as that of non-state-owned enterprises; Secondly, state-owned enterprises themselves have a strong binding with the concept of social responsibility, so high ESG performance cannot be an effective advantage for non-state-owned enterprises; Thirdly, it can be seen that the study of the mechanism in the following article found that due to the nature of state-owned enterprises, their financing costs are less related to the constraint and ESG performance, and it is easier to obtain market financial support than non-state-owned enterprises.

Table 5. Basic regression result and classification of S

	(1)	(2)	(3)
	ALL	SOE=0	SOE=1
VARIABLE	TobinQC (fe)	TobinQC	TobinQC
ESG	0.072*** (0.016)	0.100*** (0.023)	-0.002 (0.019)
Holderpet	0.830*** (0.214)	0.274 (0.329)	0.300 (0.248)
Indboard	0.358 (0.320)	0.437 (0.523)	0.154 (0.334)
Lev	-0.507*** (0.139)	-0.185 (0.200)	-0.509*** (0.169)
Liqu	0.040*** (0.010)	0.047*** (0.013)	0.009 (0.016)
Lnsize	-0.849*** (0.033)	-1.027*** (0.050)	-0.510*** (0.038)
Growth	0.220*** (0.024)	0.230*** (0.036)	0.119*** (0.028)
SOE	0.000 (.)		

Year/Industry	Yes	Yes	Yes
_cons	20.659*** (0.732)	24.289*** (1.093)	13.850*** (0.865)
N	11518	6269	5249
r2	0.399	0.480	0.291
r2_a	0.278	0.375	0.147

3.4 Robustness test

3.4.1 Different regression models

Although the fixed effects framework is finally adopted based on the result of the Hausmann test (p-value is zero, the null hypothesis is strongly rejected, and the fixed effect is selected), the regression results under mixed and random effects (as shown in Table 6) will also be presented here, and a significant positive correlation between ESG performance and enterprise value has been proved by both three models. Among them, column (1), column (2), and column (3) show the regression results under mixed regression, fixed effect, and random effect, respectively.

3.4.2. Variance alternation

As shown in Column (4) of table 6, the main regression in this paper selects Tobin Q c as the explained variable, and it is replaced by The Tobin Q a. The results show that ESG performance is still positively correlated with the enterprise value at

3.4.3 Dif fe rent Quantifying methods for ESG

As shown in column (5) of Table 6, the method quantifying ESG scores in the main regression is adopting a nine-point system, while here, a three-point system replaces will be replaced to replace it, that is, all C-level scores are 1, all B-level scores are 2, and all A-grade scores are 3, and the regression results are significantly positively correlated in the sense of 1.00%.

Table 6. Robustness test

	(1)	(2)	(3)	(4)	(5)
	TobinQC (ols)	TobinQC (fe)	TobinQC (re)	TobinQA	TobinQC
ESG	0.054*** (0.013)	0.072*** (0.016)	0.070*** (0.014)	0.030** (0.012)	0.135*** (0.031)
Holderpet	0.129 (0.095)	0.830*** (0.214)	0.444*** (0.142)	-0.291* (0.166)	0.834*** (0.214)
Indboard	2.105*** (0.248)	0.358 (0.320)	1.076*** (0.278)	0.089 (0.248)	0.351 (0.320)
Lev	-0.262*** (0.095)	-0.507*** (0.139)	-0.431*** (0.114)	0.022 (0.107)	-0.517*** (0.138)
Liqu	0.143*** (0.008)	0.040*** (0.010)	0.073*** (0.009)	-0.003 (0.008)	0.040*** (0.010)
Lnsiz	-0.532*** (0.013)	-0.849*** (0.033)	-0.624*** (0.019)	-0.453*** (0.025)	-0.846*** (0.033)

Growth	0.461*** (0.032)	0.220*** (0.024)	0.246*** (0.024)	0.022 (0.019)	0.219*** (0.024)
SOE	-0.165*** (0.030)	0.000 (.)	-0.171*** (0.054)	0.000 (.)	0.000 (.)
year/Industry	Yes	Yes	Yes	Yes	Yes
_cons	13.008*** (0.259)	20.659*** (0.732)	15.488*** (0.398)	11.468*** (0.568)	20.721*** (0.731)
N	11518	11518	11518	11518	11518
r2	0.406	0.399		0.381	0.399
r2_a	0.405	0.278		0.256	0.278
Hausman		372.6			
p-value		0			
		Prob > F = 0.0000			

3.5 Mechanism Research

3.5.1 Research cost perspective

To test assumption 3, based on relevant literature research, the paper selects the ratio of financial expenses to liabilities to depict the financing cost of enterprises, indicating the financing difficulty of enterprises in the capital market. As shows the regression results of the financing cost mechanism in Table 7, column (1) shows that the estimated coefficient between ESG performance and enterprise value is 0.072, indicating that ESG performance will effectively promote the improvement of enterprise value; column (2) shows that the estimated coefficient between ESG performance and financing cost is -0.002, and it is significant at the level of 1%, indicating that the improvement of ESG performance will effectively improve the financing environment of enterprises and assist enterprises to raise funds in the capital market at a lower cost; Column (3) shows that the estimated coefficient of ESG performance is 0.065 and the estimated coefficient of financing cost is -4.584, both of which are statistically significant, indicating that financing costs play a part of the intermediary role between ESG performance enterprise value. Assumption 3 then would be proved as good ESG performance indeed can improve the valuation of the company by the capital market and stakeholders, for high ESG performance's function of reducing its financing constraints.

Table 7. Financing cost perspective

	(1) TobinQC	(2) Cost	(3) TobinQC
ESG	0.072*** (0.016)	-0.002*** (0.000)	0.065*** (0.016)
Holderpet	0.830*** (0.214)	-0.007* (0.004)	0.799*** (0.214)
Indboard	0.358 (0.320)	0.002 (0.006)	0.369 (0.319)

Lev	-0.507*** (0.139)	0.017*** (0.002)	-0.431*** (0.138)
Liqu	0.040*** (0.010)	-0.007*** (0.000)	0.006 (0.011)
Lnsize	-0.849*** (0.033)	-0.002*** (0.001)	-0.856*** (0.033)
Growth	0.220*** (0.024)	-0.001* (0.000)	0.216*** (0.024)
SOE	0.000 (.)	0.000 (.)	0.000 (.)
Year/Industry	Yes	Yes	Yes
Cost			-4.584*** (0.567)
_cons	20.659*** (0.732)	0.064*** (0.013)	20.950*** (0.730)
N	11518.000	11518.000	11518.000
r2	0.399	0.242	0.403
r2_a	0.278	0.089	0.283

3.5.2 Financial performance perspective

In order to test assumption 4, the paper selects ROA as a measure of the financial performance of the enterprise, ROA mainly represents the comprehensive ability of the enterprise to use the relevant assets to make a profit, and as shown in the regression results of the financial performance mechanism in Table 8, column (1) indicates that the estimated coefficient of ESG performance is 0.072; column (2) indicates that the estimation coefficient of ESG performance on the ROA variable is 0.004, and is positively correlated at the 1% level, which means that the improvement of enterprise ESG performance can indeed promote the comprehensive profitability of enterprises; Column (3) further shows that ROA and ESG performance show a significant positive correlation between the estimated coefficients of enterprise value, while the estimated coefficient of ESG performance decreased from 0.072 to 0.065, indicating that financial performance plays a part of the mediating role between ESG performance and corporate value, assumption 4 is then be proved.

Table 8. Regression results for financial performance mechanism of action

	(1) TobinQC	(2) ROA	(3) TobinQC
ESG	0.072*** (0.016)	0.004*** (0.001)	0.060*** (0.015)
Holderpet	0.830*** (0.214)	0.069*** (0.009)	0.606*** (0.213)
Indboard	0.358	-0.006	0.377

	(0.320)	(0.014)	(0.316)
Lev	-0.507***	-0.204***	0.162
	(0.139)	(0.006)	(0.145)
Liqu	0.040***	-0.003***	0.048***
	(0.010)	(0.000)	(0.010)
Lnsiz	-0.849***	0.018***	-0.908***
	(0.033)	(0.001)	(0.033)
Growth	0.220***	0.025***	0.137***
	(0.024)	(0.001)	(0.025)
SOE	0.000	0.000	0.000
	(.)	(.)	(.)
ROA			3.271***
Year/Industry	Yes	Yes	Yes
_cons	20.659***	-0.312***	21.679***
	(0.732)	(0.032)	(0.728)
N	11518.000	11518.000	11518.000
r ²	0.399	0.184	0.412
r ² _a	0.278	0.019	0.293

4. Conclusions and recommendations

4.1 Conclusion

The study found that the impact of ESG performance on enterprise value was positively correlated and that this path of influence was more significant in non-state-owned firms than in state-owned firms, where there was no statistically significant correlation between ESG performance and enterprise value. In addition, the mediating effect found that through ESG governance, ESG performance was improved which can effectively reduce the cost of financing and improve the overall profitability of the enterprise, thus increasing the value of the enterprise.

In the environmental perspective, ESG governance includes green product upgrading and green integrated business production; in the social perspective, it includes corporate social contribution and health and safety compliance governance; and in the corporate governance perspective, it includes system building, governance structure, and operational risk control. For companies, ESG governance can therefore undoubtedly consume a significant amount of resources.

However, it should be clear that although ESG governance will have an impact on enterprise performance in the short term, in the long term, ESG performance will become an important part of enterprise value investment, becoming an invisible code in the valuation of companies by institutions and the market, and ultimately driving up enterprise value. At a time when China's capital market is gradually improving, the maturation of carbon neutrality and carbon trading represents a sustainable transformation of enterprises, the revitalization of the countryside heralds a greater social commitment of enterprises, and the increasing improvement of the regulatory system also places higher demands on corporate governance. From a cost-benefit perspective, the long-term value of

ESG governance and disclosure of relevant information will far outweigh the short-term cost of governance.

4.2 Recommendations

The core problem that listed companies face in ESG governance is the lack of focus on governance the contradiction between the limited resources of the company and the quantitative diversity of agency ratings. Nissan Motor Co., Ltd, for example, has received very different ratings from several rating agencies, including MSCI and RobecoSAM, due to the different rating indicators and quantification methods of different rating agencies, and this phenomenon also exists in China's localized ESG. Therefore, for A-share listed companies, how to maximize the effectiveness of corporate governance with limited resources and obtain higher market ratings and expectations while empowering the overall profitability of the company has become an important issue for listed companies to address. In this paper, we combine the ESG reports of 12 A-share listed companies with high ESG ratings in China, and finally analyze and collate the following key areas of ESG governance that need attention.

4.2.1 Environmental Governance (E)

The environmental governance of listed companies shows different levels of importance distribution in different industries, for example, the impact of environmental performance on the overall ESG rating is more significant in life sciences and manufacturing. Combining the ESG reports of listed companies with the mainstream ESG rating agencies (MSCI, FTSE Russell, Sino-Securities, and SynTao Green Finance are the reference agencies for indicators in this paper), this paper finally summarizes the environmental dimension of governance into four segments: green management, environmental disclosures, negative event manage management and environmental opportunity grasp.

Green management requires a company to truly establish its effective and complete environmental control system, with the overall orientation of the objectives and strategies at the core, including comprehensive control of energy consumption and green technology penetration at the production end, green procurement policies at the supply end, environmental awareness cultivation at the staff end and green product development at the research and development end. The essence of the green management system is that the company truly integrates environmental governance into the company's internal control system and formally legitimizes all relevant environmental matters in its overall control activities.

Environmental disclosures are mainly about energy consumption, water efficiency, and greenhouse gas emissions, which are easily quantifiable and therefore account for a high proportion of ESG evaluations and should be of particular concern to companies. The disclosure of environmental information should first and foremost focus on the completeness of the information disclosed. It is recommended that non-financial information on the environment be integrated into the financial disclosure system, which will reduce the cost of disclosure and help to break down information asymmetries. And the impact of environmental disclosures on the company's business situation should also be disclosed at the same time. The further development of such integrated disclosure can adopt a variety of ways to disclose corporate environmental accounting information, such as in annual reports and board reports, to meet the needs of multiple information users and improve the quality of information disclosure.

Negative event management is essentially how enterprises deal with and reduce negative externalities, which tests whether listed companies can build a good pollution control system to reduce negative externalities from the root of water pollution, air pollution, and solid waste pollution, and weather and they can improve the compensation mechanism to minimize the impact of externalities and whether they can build a comprehensive disclosure system to truly report the occurrence of relevant pollution events.

Environmental opportunity grasp was first introduced by MSCI and is no longer simply about environmental management but is now integrated into the development and capacity upgrade of enterprises. How to grasp the policy context of environmental protection and the macro-consumer

market of environmental protection, to see the green technology upgrade and sustainable energy upgrade in environmental management and then upgrade corporate industry, will gradually become an integral part of corporate strategy and higher-order evolution in ESG governance of listed companies.

4.2.2 Social Governance (S)

The essence of social governance is the assumption of corporate social responsibility, which on the one hand affects a company's overall reputation, but more importantly in an effective marketplace in China, this reputation creation will have a direct impact on business operations. This paper is summarized here in three dimensions: talent management, supplier management, and s, and social welfare.

Talent management focuses on staff development and training as well as occupational health and safety. Enterprises should pay attention to the growth and development of their employees, cherish their contribution and dedication, promote their ability to improve, motivate them to innovate and, help improve their knowledge structure through training, to provide a strong driving force for the development and growth of the enterprise. The company should integrate occupational health and safety management requirements into every aspect of its operations and management, attach great importance to occupational health and safety management for employees, and help them grow and develop together with the company while improving work efficiency.

To standardize the selection, evaluation, and management of suppliers and improve the quality and efficiency of procurement, enterprises can implement dynamic management of suppliers. Dynamic management of all supplier information and performance assessment, and promote supplier improvement; authorize some departments to have procurement functions of the tender procurement department. All-round cooperation and optimization of supplier management, to ensure that the company's procurement matters are scientific and efficient, to create a responsible supply chain system, and to improve product quality from the source.

Social welfare participation should grasp the current situation of the times and adhere to the equal importance of rural revitalization and warm public welfare. Enterprises should consolidate and expand the results of poverty eradication in conjunction with their business characteristics, while actively serving the overall situation of social and economic development. In addition, by actively carrying out a series of social welfare undertakings, accurately helping regional industries, helping youth development, providing disaster relief and fighting epidemics, etc., the company can make positive energy for public welfare a corporate culture, always keeping social responsibility in mind.

4.2.3 Corporate Governance (G)

Corporate governance is essentially the construction of a macro-management framework for enterprises, and compared to the well-established corporate governance systems in Europe and the United States, the relevant concepts of corporate governance in China are not yet fully popular, and corporate governance in China also has unique cultural and value characteristics. Therefore, corporate governance in enterprises needs to focus on the integration of the scientific aspects of corporate governance with socialism of Chinese characteristics. This paper summarizes the following: standardization of the establishment of the board of directors, scientific setting of senior management, and rationalization of the shareholding structure.

The board of directors, as the core decision-making level of the company, is the core of the overall corporate governance framework. Listed companies should pay attention to the following points: the importance of independent directors, whether the number of independent directors reaches the majority of the company as a whole; whether the selection mechanism of independent directors is open, transparent and reasonable, in line with corporate interests and objectivity; whether the competence and objectivity of the directors are regularly and publicly examined, with emphasis on industry, financial and legal knowledge structure.

As the organizational and coordination center of the company's overall management level, executives have a crucial influence on the implementation of overall corporate governance decisions,

so listed companies should pay attention to the following points: clarify the reasonableness and transparency of management remuneration, pay attention to the regular disclosure of relevant remuneration details; the lock-up mechanism of executives' shareholdings, currently China's Company Law follows the lock-up requirements of 12 months after listing, 6 months after leaving and up to 25% per year of employment for the shareholdings of company executives, listed companies should pay attention to the establishment of regulatory mechanisms for company executives at the above-mentioned nodes.

There are currently three types of shareholding structures in major companies: decentralized, centralized and balanced, each with its advantages and disadvantages. Concerning the evaluation of equity concentration by ESG rating agencies, they do not prefer which concentration state the company is in and do not discriminate against any kind of equity concentration structure, therefore, listed companies need not pay too much attention to the issue of equity concentration, but should pay attention to the following points: design of the monitoring mechanism for the related transactions of controlling shareholders; design and disclosure of the company's acquisition policy; and the sound protection mechanism for the interests of small and medium shareholders.

4.2.4 ESG integration into value investing

In addition to the above comments on ESG governance, for investors, ESG performance has been validated based on empirical studies on its impact on enterprise value, and investors should combine the concept of "long-term holding + ESG assessment" with good corporate financial performance in selecting investment targets. For institutional investors and relevant investment banks, the current enterprise valuation models are mainly SOTP models, absolute value models, and relative valuation models. Therefore, it is suggested that the relevant institutional investors can appropriately incorporate ESG scores into the valuation models of listed companies, to better serve as an effective reference for all investors and improve the information asymmetry in the capital market.

References

- [1] FENG Liyan, XIAO Xiang, ZHAO Tianjiao. The impact of economic performance on corporate social responsibility disclosure[J]. Chinese Journal of Management, 2016, 13(07): 1060-1069.
- [2] MA Xianfeng, WANG Junxian, QIN Erwa. ESG disclosure systems for listed companies[J]. China Finance, 2016, (16): 33-34.
- [3] Gunnar F, Busch T, Bassen A., ESG and Financial Performance Aggregated Evidence from more than 2000 Empirical Studies [J]. Journal of Sustainable Finance & Investment, 2015,5(4) :210-233.
- [4] Aboud A, Diab A. The Impact of Social, Environmental and Corporate Governance Disclosures on Firm Value [J]. Journal of Accounting in Emerging Economies, 2018,8(4):442-458.
- [5] WANG Rong. The relationship between ESG disclosure and corporate value from a cost-benefit perspective. Journal of SUIBE. 2022, 29(4): 74-86.
- [6] Garcia, A., S anddd R. J. Orsato, "Testing the Institutional Difference Hypothesis: A Study about Environmental, SociGovernanceance, and FinancPerformanceance Business Strategy and the Environment 2020, 29 (8): 3261-3272.
- [7] Atan. R. M. M. Alam and J. Said. The Impacts of Environmental, Social, and Governance Factors on Firm Performance: Panel Study of Malaysian Companies, Management of Environmental Quality: An International Journal. 2018.
- [8] Nollet, J., Filis, G., & Mitrokostas, E. (2016). Corporate social responsibility and financial performance: A non-linear and disaggregated approach. Economic Modelling, 52, 400-407.
- [9] Lins, K. V., Servaes, H., & Tamayo, A. N. E. (2017). Social Capital, Trust, and Firm Performance: The Value of Corporate Social Responsibility during the Financial Crisis. The Journal of Finance, 72(4), 1785-1824.
- [10] Ferrero-Ferrero, I., Fernández-Izquierdo, M., & Muñoz-Torres, M. (2016). The Effect of Environmental, Social and Governance Consistency on Economic Results. Sustainability, 8(10).

- [11] Clemons, E K... R. M. Dewan and R. I. Kauffman. "Understanding the Information-based Transformation of Strategy and Soci ty" Journal of Management Information Systems. 2017, 34(2): 425-4.56.
- [12] XV Guang Hua, ZH UO Ya you, ZHANG Yimeng, ZHANG Jiayi. Does information disclosure increase the value of a business?[J].Communication of Finance and Accounting,2022(04):33-37.