

A Study of the Impact of ESG Performance on Corporate Value

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Abstract: In recent years, with the emergence of a series of phenomena such as world warming, the concepts of sustainable development and green development have gradually gained attention, and the performance of enterprises in terms of environmental, social and corporate governance (ESG) has received extensive attention from society. This study focuses on the issue of the impact of ESG performance on corporate value. This paper analyzes the relationship between ESG ratings and corporate value based on the data from Cathay Pacific and Dibbo databases, and the empirical results show that there is a positive contribution of corporate ESG performance to corporate value.

Keywords: Esg Performance; Esg Rating; Enterprise Value; Internal Control

1. Introduction

Nowadays, China's economic development has entered a brand new stage, and high-quality and sustainable development has become an important goal of development. 2024 July 1, Sun Yongcai, Secretary of the Party Committee and Chairman of the Board of Directors of CRRC Group, emphasized that CRRC is committed to creating value for the society, users, partners, shareholders, and employees, and is committed to promoting sustainable development by building "great power tools" and polishing "national cards"[1]. He emphasized that CSR is committed to creating value for society, users, partners, shareholders and employees, and to promoting sustainable development by building "Great Powerful Weapons" and polishing "National Business Cards". He proposed that CSR will accelerate the construction of Green CSR, People-oriented CSR, Win-win CSR and Value CSR, and strive to become a leader in practicing the ESG concept. In terms of concrete actions, CSR focuses on serving major national strategies, adhering to innovation-driven

development, enhancing value creation capability, strengthening green attributes, and giving new connotations to the brand.²⁰ The implementation of the "Self-Regulatory Guidelines for Listed Companies - Sustainability Reporting (for Trial Implementation)" of the Shanghai, Shenzhen, and North Stock Exchanges on May 1, 2024 once again emphasized that ESG disclosure has become a mandatory requirement for some listed companies, further advancing the in-depth popularization and practice of ESG concepts. In recent years, more and more enterprise managers have begun to realize the importance of ESG, but nowadays, due to the late start of ESG research in China, most of the research on ESG focuses on the macro level, and the micro level is relatively weak, and most of the researches on the performance of ESG on enterprise value focus on the relationship between a single ESG factor (environment, social responsibility, and corporate governance) and the value of enterprises, and the research on the impact of ESG on the value of enterprises. The impact of ESG on enterprise value is in a relatively shallow position, so this paper hopes to use the data of the more mainstream domestic research institutions, comprehensive and multi-faceted assessment of the impact of corporate ESG performance on enterprise value, in the hope of further enriching the impact of ESG performance and enriching the impact factors of enterprise value[2].

2. Literature Review

2.1 Research on the Economic Consequences of ESG

The impact of ESG on our society today is reflected in various aspects, among which in terms of information disclosure, (XI Longsheng and WANG Yan, 2022) take China's A-share listed companies in Shanghai and Shenzhen as the research samples from 2009 to 2020, and through empirical research found that corporate

ESG information disclosure can reduce the risk of stock price crash[3], which is a very good way to reduce the risk brought about by the information mismatch. In terms of financing cost, (Qiu Muyuan and Yin Hong, 2019) empirically examined through a panel data model to find that the financing cost of enterprises with better environmental and corporate governance performance will be significantly reduced, in which information disclosure also plays a significant role, this move enhances corporate information transparency and reduces investment risk through the ESG performance of each enterprise[4], (Qiu Dong, 2023) in the study of the relationship of corporate ESG performance to institutional investors' shareholding preference, found that corporate ESG disclosure can reduce the risk of stock price collapse, this move can well reduce the risk brought about by information inequality. (Qiu Dong, 2023)[5], in studying the relationship between corporate ESG performance and institutional investors' shareholding preferences, found that the higher the ESG performance of a company is, the more likely it is to receive the favor of institutional investors; in the evaluation of bank customers, (Cao Zeren and Wang Honggang, 2022)[6], in the evaluation of ESG based on big data for the customers of 28 industries as well as commercial banks, concluded that there is a big gap between the ESG scores of different industries, which provides a technical support for the risk control of commercial banks. technical support.

2.2 Research on Factors Affecting Enterprise Value

Evaluating the enterprise value of an enterprise needs to consider many aspects of the factors, and now there has been a considerable part of the scholars have made a study on this, (Li Xiaoxin, 2023) that the enterprise value is mainly affected by three aspects, namely, the macroeconomic environment, the development of the industry situation and the enterprise's own situation[7]; (Quan Zhongguang, et al., 2022) based on the Schwartz-Moon model to conclude that the enterprise value of the There are many influencing factors, but the overall can be summarized into three aspects: enterprise factors, industry factors, and market in valuation basis factors[8].

2.3 Research on the Impact of ESG on

Corporate Value

There have been many studies on the impact of ESG on enterprise value. (Xue, Hongjun, 2024) takes A-share listed companies in Shanghai and Shenzhen from 2009 to 2022 as a sample, and adopts industry and time bidirectional fixed effect model ESG performance has an obvious positive effect on enterprise value, i.e., enterprises improve their own performance in terms of ESG, which can bring about an increase in enterprise value[9]; (Wang, Yifan. 2024) found that ESG indirectly enhances enterprise value by improving financial conditions, confirming that ESG not only directly affects the financial performance of enterprises, but also indirectly contributes to enterprise value by reducing financial risks; (Qin Ying and Li Shiyu, 2024) the impact of different combinations of the three elements of ESG on the financial performance of listed companies; (Wenxin Chen, 2024) there is a positive correlation between the performance of ESG and the level of internationalization and operation of manufacturing enterprises. operation level are positively correlated with each other[10].

Of course, some bad ESG performance will also have a bad impact on enterprise value, for example, a company under the banner of Lifa, Yangzhou Xinghua Dairy Co., Ltd. has been fined 643,500 yuan by Yangzhou Ecological and Environmental Protection Bureau because it did not accept the environmental protection facilities before it started to put them into use, together with some other problems. Although the stock price did not fall directly, this kind of bad deeds against environmental protection and social responsibility usually have a negative impact on the value of the enterprise, such as lowering the confidence of investors, creating a bad corporate image, and so on[11].

3. Research Design

3.1 Sample Selection and Data Sources

This paper takes the data of A-share listed companies from 2016-2022 as a sample, and collects a total of 5418 A-share listed companies for seven consecutive years, totaling 35,254 observations, and the data of each listed company come from the Cathay Pacific database, of which the internal control data come from the Dibble database, respectively, from 4,360, companies totaling 51,539 observations[12].

After the financial, insurance, real estate

industry in the sample and the sample device was ST, *ST listed companies, as well as in the current year to measure the listing year for the plural of the listed companies to be excluded, the use of vlookup function will be merged with the data, and ultimately obtained a total of 430 listed companies, 1640 valid observations. At the same time, in order to reduce the impact of each index outliers on the results, this paper will be all the variables in its 1% and 99% of the position to take the shrinking treatment. All the relevant data processing in this paper are realized by stata, excel software.

3.2 Variable Settings

3.2.1 Explained variables

The explanatory variables used in this paper are Tobin's coefficient (TobinQ) and the total assets of the enterprise (asset) to measure the value of the enterprise, based on the existing research, the measure of enterprise value is mostly used Tobin's coefficient, for example (Yu Ying et al., 2024) used Tobin's Q value as a variable describing the value of the enterprise.

3.2.2 Explanatory variables

The ESG performance of the companies is adopted from the ESG rating data of the Business Way Rong Green, a partner database of the Cathay Pacific database. The higher the score of the ESG rating, the higher the ESG performance of the companies.

3.2.3 Control variables

In order to ensure the reliability and validity of the results of this paper, eight control variables that may have an impact on the value of the firm are adopted, namely: internalcontrols (internalcontrols), age of the firm (AGE), bank borrowing (bankd), firm size (insale), operating income (SALE), total liabilities (TD), depreciation and amortization (depamo) and total assets (value). depamo) and total assets (value). The variables are defined in Table 1.

Table 1. Definition of Variables

variable name	Variable Connotation
TobinQ	Market capitalization/total assets
asset	Total current assets + total non-current assets
ESG	Environment, society and corporate governance
internalcontrols	Internal control index
AGE	Age of the company = Year - Year of listing

bankd	Bank borrowings/total liabilities
insale	ln (operating income)
SALE	revenues
TD	Total liabilities
depamo	Depreciation and amortization
value	total assets

3.3 Modeling

3.4 Basic Regression Model

In this paper, we use panel data regressions, while controlling for firm and and year, to build the following stationary regression model:

$$Tobin_{i,t+1} = \beta_0 + \beta_1 asset_{i,t} + \beta_2 ESG_{i,t} + \beta_3 internalcontrols_{i,t} + \beta_4 AGE_{i,t} + \beta_5 bankd_{i,t} + \beta_6 insale_{i,t} + \beta_7 SALE_{i,t} + \beta_8 TD_{i,t} + \beta_9 depamo_{i,t} + \beta_{10} value_{i,t} + \epsilon_{i,t}$$

where the coefficient of the key explanatory variable ESG score β_1 is the primary reference, followed by the coefficients β of each control variable, i denotes the year, t denotes the individual firm, and $\epsilon_{i,t}$ denotes the model error term.

4. Empirical Analysis

4.1 Descriptive Analysis

In order to understand the characteristics of the sample data in general, the first step in this paper is to conduct a descriptive analysis of the main variables in the sample data. The results are shown in Table 2.

Table 2. Descriptive Analysis

	(1)	(2)	(3)	(4)	(5)
VARIABLES	N	mean	sd	min	max
TobinQ	2,989	1.679	1.087	0.773	7.471
asset	3,017	270.2	483.2	7.073	3,196
ESG	3,007	4.345	1.076	1.500	7
internalcontrols	3,009	605.0	183.8	0	823.8
AGE	3,017	21.88	3.768	14	30
bankd	2,029	0.357	0.1900	0.00421	0.767
insale	3,012	22.62	1.396	19.46	25.96
SALE	3,017	172.1	304.2	2.665	1,890
TD	3,017	147.2	287.6	1.176	1,825
depamo	3,017	7.680	16.33	0.0933	120.6
value	2,420	32.29	1.369	29.71	36.21

From the table 2, It can be seen that the mean, variance, minimum and maximum of the explanatory variable Tobin's coefficient (TobinQ) are 1.679, 1.087, 0.733 and 7.471, respectively, and we can see that the difference between the maximum and minimum is up to 10 times or so,

but the gap between the maximum and minimum of the enterprise's total assets is even bigger, and the combination of the average value and the variance can be seen that China's There is a certain gap between the enterprise value of different A-share listed companies in 2016-2022, and the level of most enterprises is low.

The explanatory variable ESG is adopted from the ESG rating data of Business Way Rong Green, and the average value is 4.345, indicating that the ESG performance of China's A-share listed companies in 2016-2022 is generally medium to low, and the gap between the maximum and minimum values is 5.5, reflecting the existence of certain enterprises in the sample with a large overall smooth gap.

From the control variables

The variance of the internal control index is 183.8, and there is a maximum minimum value of 823.8 and 0 can be seen in the sample of enterprises for the importance of internal control has a great deal of difference; the age of the enterprise is also there is a certain difference, the overall tendency to be stable; from the mean value, the overall gap in terms of bank borrowing is relatively small, and the number of borrowing is higher; the overall performance of the company's size is more excellent but in terms of operating income, from the From the point of view of variance, there is a big gap between different enterprises; from the point of view of the maximum and minimum values, the maximum value of the total liabilities of the enterprises in the sample is about 1,559 times of

the minimum value, which is a big difference; depreciation and amortization from the point of view of the average value is still in a relatively healthy value, but there are still some enterprises whose values are too high or low, and there are differences between different enterprises in the overall observation; the value of the enterprise's assets is relatively stable and developing healthily in terms of the whole put surface. The value of business assets is relatively stable and healthy.

4.2 Correlation Analysis

The correlation analysis between each variable is shown in Table 3, in which we can clearly see that the relationship between the explanatory variable ESG and the explanatory variable Tobin Q is a significant negative correlation with the expectations of this paper has a certain deviation, but the coefficient is smaller, which may be due to should be for the neglect of the impact of other control variables, resulting in a certain degree of error and one-sidedness of the results. In terms of control variables, we can clearly see that all the control variables are significantly correlated with Tobin Q when only a single factor is considered, so it can be determined that the control variables chosen in this paper are appropriate.

The table also shows that most of the correlation coefficients between the control variables are less than 0.5, which can prove that there is no serious linear correlation between the variables chosen for this thesis.

Table 3. Correlation Analysis

	TobinQ	asset	ESG	intern~s	AGE	bankd	insale
TobinQ	1						
asset	-0.188***	1					
ESG	-0.039**	0.271***	1				
internalco~s	-0.049***	-0.057***	-0.0280	1			
AGE	-0.132***	-0.00300	-0.0170	0.0160	1		
bankd	-0.126***	-0.052**	-0.088***	0.00500	-0.039*	1	
insale	-0.293***	0.630***	0.330***	-0.073***	0.071***	-0.129***	1
yysr1	-0.179***	0.829***	0.247***	-0.076***	0.051***	-0.137***	0.740***
fzhj1	-0.210***	0.973***	0.239***	-0.055***	0.00900	-0.0180	0.619***
zjtx1	-0.197***	0.922***	0.228***	-0.040**	-0.0270	-0.00500	0.549***
value	-0.037*	-0.051**	-0.00300	0.0160	0.0190	0.052**	-0.039*
	SALE	TD	depamo	value1			
SALE	1						
TD	0.817***	1					
depamo	0.729***	0.899***	1				
value	-0.044**	-0.039*	-0.049**	1			

4.3 Regression Analysis

Table 4. Regression Analysis

VARIABLES	(1) TobinQ
ESG	0.04** (2.477)
internalcontrols	-0.00*** (-2.959)
AGE	-0.03*** (-6.578)
bankd	-0.52*** (-5.691)
insale	-0.22*** (-10.914)
SALE	0.00*** (5.231)
TD	-0.00** (-2.332)
depamo	-0.00 (-1.173)
value	0.00 (0.372)
Constant	7.24*** (11.847)
Observations	1,640
R-squared	0.156

t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Based on the previous setup, this paper decided to use a stationary model for the regression analysis of the variables. Table 4 reports the results of the regression of each variable, which includes the direction of the influence of each variable on with the explanatory variables and the corresponding level of influence (significance).

We can learn from the table that the regression coefficient of the explanatory variable ESG on the explanatory variable TobinQ is 0.04, which is significant at 5%, which shows that there is a positive correlation between the two, i.e., it is proved that the ESG score of a company is a positive contributor to the value of the company. This result is consistent with the findings of (2024, Song Yuxuan and You Wen). The internal control index and firm value are significantly negatively correlated, which may be due to the fact that the level of internal control in today's firms is still not high enough, and may even lead to the poor functioning of the firms, which further has a negative effect on firm value. Generally speaking the longer a company is listed, the more mature and valuable it is, but it fails the significance test. The rational

use of bank borrowing is a good contribution to the cozy value, but bank borrowing still fails the significance test. Higher revenue is good for the growth of firm value, but firm size is significantly negatively related to firm value. Total liabilities and depreciation and amortization are good ways to increase the value of the firm, but these two variables can have a negative impact on the operation of the firm if they are not properly manipulated. The total assets of the firm, although it is in a positive direction with the To bin Q value, but it can not present a significant.

4.4 Robustness Testing

In order to further prove the stability of the impact of each explanatory variable on enterprise value, this paper adopts the asset total data of each listed A-share company in the GuotaiAn database instead of the TobinQ value to measure the enterprise value, which also takes into account the fact that the value of the asset total is very large, and it cannot form a good comparability with the other variables, so it expands the unit of the asset total, as shown in the table is the results of the regression analysis after the treatment of the asset total. The table shows the results of the regression analysis after the treatment of the total assets.

Table 5. Robustness Test

VARIABLES	(1) asset
ESG	12.34*** (4.787)
internalcontrols	-0.01 (-0.828)
AGE	-1.53** (-2.150)
bankd	-7 0.76*** (-5.097)
insale	-4.01 (-1.291)
SALE	0.12*** (7.527)
TD	1.16*** (54.768)
depamo	7.01*** (22.649)
value	-1.97 (-1.048)
Constant	187.72** (2.034)
Observations	1,650

R-squared	0.966
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t-statistics in parentheses

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

By looking at Table 5, we can clearly see that ESG still has a very significant positive effect on enterprise value, indicating that good ESG performance plays a positive role in promoting enterprise value. Although internal control and company size are still negatively correlated, they are no longer significant, total liabilities are negatively significant to positively significant, depreciation and amortization are positively significant, and the other variables are basically the same, which should be caused by the slight difference between the two explanatory variables.

5. Conclusion

Based on the data from 2016-2022, this paper empirically tests the relationship between enterprise value and corporate ESG scores of China's listed A-share enterprises, with several control variables added to it. The results of the experiment show that there is a significant positive correlation between enterprise value and enterprise ESG score, and enterprises can improve their own value by improving their own ESG score.

Therefore, based on the above empirical results, this paper puts forward the following suggestions: (1) Enterprises should pay attention to ESG ratings, take up environmental responsibility, social responsibility and improve the enterprise management system, actively and proactively disclose ESG-related information, and find out their own shortcomings through ESG ratings, and then correct them. (ii) ESG rating agencies should continuously optimize the rating mechanism to ensure that the ratings are more reasonable and realistic, making the ratings more accurate, establish and improve a set of ESG rating indicators and standards, strengthen the audit of corporate ESG reports, and enhance the credibility and transparency of the reports, as well as strengthen the ties between the rating agencies, continuously compete for progress, and achieve mutual promotion between the rating agencies. (ii) The government should strengthen the cooperation and exchange with international advanced rating agencies to promote the domestic rating system to the international level. (iii) The government should encourage the further popularization and development of ESG ratings, increase the

supervision of ESG rating agencies, and set strict standards. Meanwhile, for enterprises with good ESG performance, the government should provide corresponding subsidies and incentives to encourage enterprises to develop in a better direction, for example, by introducing relevant regulations, requiring enterprises to improve ESG management, and including ESG ratings in the comprehensive assessment of enterprises. ESG score into the comprehensive assessment of enterprises.

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