Research on the Impact of Corporate Environmental, Social, and Corporate Governance Scores on Cash Dividend Distribution

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Abstract. In recent years, environment, society, and governance (ESG) related research has covered hot areas such as social responsibility, investment, and corporate governance. Cash dividend distribution, as an important way of returning to investors, reflects the fulfillment of corporate ESG responsibilities to a certain extent and promotes the sound development of enterprises. This paper explores the impact of ESG scores of A-share listed companies in the passenger car industry on cash dividend distribution from 2020 to 2023. Companies with cash dividends of 0 are excluded, and Huazheng ESG rating is used. Profitability, growth ability, cash holdings, management shareholding ratio and independent director ratio are used as control variables. Finally, 20 samples are obtained. The data comes from the CNRDS platform and corporate financial reports. Due to the small sample size, short time span, industry selection bias, incomplete data disclosure and other reasons, only the management shareholding ratio has a significant impact on the cash dividend distribution, and other variables are not significant.

1 Introduction

The ESG concept is a corporate evaluation standard that focuses on non-financial indicators such as environmental, social, and governance performance. Against the backdrop of the dual carbon goals and the promotion of ecological civilization, China has increasingly attached importance to environment, society, and governance (ESG). In 2004, the United Nations Environment Programme first proposed the concept of ESG [1]. In recent years, the number of hot topics related to ESG has increased dramatically, covering Corporate Social Responsibility (CSR), ESG and investment, information disclosure and corporate governance [2]. Improving corporate ESG performance and improving corporate ESG scores have gradually become the key to their sustainable development. Companies with excellent ESG performance have shown stronger corporate resilience [3]. Cash dividend distribution is an important way for investors to obtain returns, which improves the transparency of listed companies' cash dividend policies. At the same time, a reasonable cash dividend distribution

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intensity reflects to a certain extent the company's fulfillment of its ESG responsibilities [4]. It promotes corporate development. In-depth research on the impact of corporate ESG scores on cash dividend distribution intensity has important theoretical and practical significance for standardizing the implementation of dividend policies of Chinese listed companies and preventing management from diverting profits for other purposes and damaging corporate value [4].

Existing literature has conducted preliminary research on the relationship between corporate social responsibility, dividend policy, and social trust on the willingness to distribute cash dividends and found that corporate social responsibility [5] and social trust [6] are positively correlated with cash dividend distribution. In recent years, with the continuous upgrading and optimization of corporate CSR, ESG has included CSR content and become a development goal pursued by enterprises [4]. Therefore, it is necessary to further explore the relationship between corporate ESG scores and cash dividend distribution. The possible marginal contribution of this paper is mainly reflected in: This paper examines the impact of corporate ESG scores on cash dividend distribution, making previous research more in-depth and specific, and keeping up with current hot topics.

2 Literature review and hypothesis formulation

As one of the three core contents of financial management of listed companies, dividend policy is related to the steady development of the company and the vital interests of investors. Cash dividend policy is affected by many factors such as debt repayment ability, equity concentration, equity nature, cash capacity, growth ability [7], thus revealing the company's financial and operating conditions. According to the information asymmetry theory and the separation of ownership theory, investors can learn about the performance and execution of managers through the intensity of cash dividend distribution. Lloyd et al. [8] pointed out that dividend payments and more additional disclosure of financial or non-financial information of enterprises can provide an effective solution to the agency problem. Therefore, corporate ESG disclosure behavior can at least enable investors to perceive the efforts of management to take positive actions and the effective protection of their own investment returns. Larger cash dividend distribution and higher ESG scores can enhance the reputation and social trust of enterprises [4]. Previous literature has focused more on the relationship between corporate social responsibility and cash dividend policy and between social trust and cash dividend distribution. He Limei et al. [5] found that corporate social responsibility significantly affects cash dividends, and the two are positively correlated; Tian Mafei et al. [6] pointed out that the lower the social trust in the region where the enterprise is located, the less willing the enterprise is to distribute cash dividends. This paper proposes the following hypothesis H:The higher the company's ESG score, the greater the cash dividend distribution.

3 Study design

3.1 Sample selection and data sources

This article selects the data of A-share listed companies in the passenger car industry from 2020 to 2023 as samples, and performs the following processing: companies with cash dividends of 0 are excluded. After the above processing, 20 samples are finally obtained. The research data mainly comes from the China Research Data Service Platform (CNRDS) and the company's financial reports.

3.2 Variable definition

(1) Explained variable (cash dividend distribution intensity). Drawing on the approach of Wei Feng, div is used to measure the cash dividend distribution intensity, calculated as dividend per share/(net profit/paid-in capital) [9].

(2) Explanatory variables (ESG scores). At present, there are many ESG rating systems at home and abroad, with different evaluation standards, reference indicators and coverage. However, compared with other ESG rating systems, the Huazheng ESG rating has a wider coverage and a faster update frequency. This paper refers to the research of Gao Jieying et al. and uses the Huazheng ESG rating system to measure the ESG performance of enterprises, dividing them into nine grades from C to AAA, and assigning them scores of 1 to 9 respectively [10].

(3) Control variables. This paper selects profitability (ROA), growth capacity (Growth), cash holdings (CFO), management shareholding ratio (MShare), and independent director ratio (INDIR) as control variables. The variable definitions are shown in Table 1.

Table 1. Main variables and their definitions

Variable Types	Variable Name	Symbolic representation	Meaning and calculation method
Explained variable	Cash dividend distribution strength	div	Dividend per share/(net profit/paid-in capital)
Explanatory variables	ESG Scores	ESG	Huazheng ESG rating, C~AAA is assigned values of 1~9 respectively
Control variables	Profitability	roa	Net profit/total assets
	Growth Capacity	growth	(Operating income t-Operating income t-1)/Operating income t-1
	Cash holdings	cfo	Net cash flow from operating activities/total assets
	Management shareholding ratio	mshare	Number of shares held by management/total number of shares
	Ratio of independent directors	indir	Number of independent directors/number of directors

3.3 Model construction

In order to test the impact of corporate ESG scores on cash dividend distribution, this paper constructs the following regression model:

$$div_{it} = \alpha_0 + \alpha_1 ESG_{it} + \alpha_c controls_{it} + \varepsilon_{it} \quad (1)$$

In formula (1), i and t represent listed companies and years respectively, controls are control variables, and ε is a random error term. α 1 is the estimated coefficient of interest in this paper. If it is significantly positive, it means that the corporate ESG score can increase the cash dividend distribution.

4 Analysis of empirical results

4.1 Descriptive statistics

The descriptive statistics are shown in Table 2. The mean of the ESG score of the enterprise is 5.350, the maximum is 6.750, and the minimum is 4.250, indicating that there are differences in the ESG scores of different enterprises. The mean of the cash dividend distribution intensity is 0.300, and the maximum and minimum values are 0.794 and 0.017 respectively, indicating that the cash dividend distribution intensity varies greatly among different enterprises.

Table 2. Descriptive statistics

Stock Code	Statistical date	Profitability	Growth Capacity	Cash holdings	Management shareholding ratio	Ratio of independent directors	ESG Scores	Cash dividend distribution strength
000625	2020	2.72	19.789	8.829	0.000	0.471	4.75	0.506
000625	2021	2.66	24.332	16.965	0.001	0.500	5	0.462
000625	2022	5.3	15.323	3.880	0.000	0.600	5	0.230
000625	2023	5	24.779	10.444	0.001	0.400	5.75	0.246
002594	2020	2.99	22.592	22.582	0.370	0.667	5.5	0.027
002594	2021	1.34	38.024	22.134	0.297	0.500	5.5	0.107
002594	2022	3.59	96.195	28.518	0.297	0.429	6	0.017
002594	2023	4.61	42.035	24.976	0.297	0.571	5.25	0.106
600104	2020	3.17	-12.521	4.081	0.000	0.500	4.5	0.352
600104	2021	3.7	5.100	2.357	0.000	0.500	4.25	0.211
600104	2022	2.31	-5.123	0.960	0.000	0.500	4.75	0.344
600104	2023	1.99	0.723	4.206	0.000	0.333	5	0.193
601238	2020	4.24	5.881	-2.022	0.001	0.533	5	0.305
601238	2021	4.79	19.760	-3.625	0.000	0.471	5.5	0.280
601238	2022	4.21	45.566	-2.815	0.000	0.364	6	0.301
601238	2023	1.71	17.479	3.081	0.000	0.308	5.25	0.645
601633	2020	3.48	8.621	3.364	0.000	0.571	5.5	0.428
601633	2021	3.83	32.037	20.133	0.000	0.333	6	0.794
601633	2022	4.45	0.686	6.642	0.000	0.333	6.75	0.078
601633	2023	3.49	26.119	8.821	0.000	0.556	5.75	0.361

4.2 Regression results analysis

The benchmark regression results based on formula (1) are shown in Table 3. From column (4), can see that the p-value is greater than 0.1 and the regression coefficient is not significant, indicating that the ESG score has no significant impact on the intensity of cash dividend distribution. The reasons for the analysis are as follows:

First, the sample data is small and limited in scope, which may lead to industry selection bias; second, the time span is short, which may not reflect the positive correlation between ESG scores and cash dividend distribution; at the same time, the ESG concept has not yet formed a complete system in China, so the linear relationship between ESG scores and cash dividend distribution and the effectiveness of this Ordinary Least Square (OLS) regression model in practical application are unknown; accordingly, the ESG data disclosure of some companies may not be complete, which actually affects the benchmark regression analysis. The future directions are as follows:

First, to expand sample coverage, you can choose an industry with a larger data sample size for research to reduce bias; at the same time, you can optimize and refine the measurement and use more targeted ESG scoring indicators that can be more closely related to the actual operating conditions of the company, thereby continuing to explore the linear relationship between ESG scores and cash dividend distribution intensity.

Table 3. Benchmark regression results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variable	Coefficient	Std. Err.	t-Statistic	P-value	Lower95%	Upper95%	VIF	Std. Coeff.
Constant	0.435	0.527	0.826	0.424	-0.703	1.573	0.000	0.000
ESG Scores	-0.008	0.081	-0.100	0.922	-0.184	0.168	1.885	-0.024
Growth Capacity	0.00 2	0.002	0.737	0.474	-0.003	0.006	2.360	0.200
Ratio of independent directors	0.215	0.522	0.412	0.687	-0.913	1.343	2.194	0.108
Management shareholding ratio	-1.878	0.542	-3.464	0.004	-3.049	-0.707	3.965	-1.221
Cash holdings	0.011	0.006	1.649	0.123	-0.003	0.024	3.160	0.519
Profitability	-0.060	0.040	-1.482	0.162	-0.146	0.027	1.609	-0.333

5 Conclusion

This paper focuses on A-share listed companies in the passenger car industry and explores the impact of corporate ESG scores on cash dividend distribution from 2020 to 2023. After constructing an OLS regression model and conducting empirical analysis, it is found that the impact of management shareholding ratio on cash dividend distribution is more significant, while the impact of corporate ESG scores, profitability, growth ability, cash holdings, and the proportion of independent directors on cash dividend distribution is not significant. On the one hand, this paper provides a new research direction, that is, the impact of management shareholding ratio on cash dividend distribution can be further studied in the future, enriching the influencing factors of cash dividend distribution; on the other hand, the linear regression analysis of other variables is not significant, which may be due to the small sample size, bias in industry selection, short time span, and the fact that China's ESG system has not yet been perfected and some companies have incomplete ESG data disclosure .

Future research can be improved by expanding the sample coverage, considering the moderating effects and mediating mechanisms between variables, conducting cross-industry analysis, optimizing ESG score measurement indicators, etc., to further explore the linear relationship between corporate ESG scores and cash dividend distribution intensity, and provide more valuable conclusions for standardizing the dividend policies of listed companies and promoting the sustainable development of enterprises.

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