Article

Environmental, Social and Governance Performance: Analysis of CEO Power and Corporate Risk

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Abstract: This study explores the relationship between a company’s Environmental, Social, and Governance (ESG) performance, and corporate risk. Moreover, the study emphasizes how CEO power moderates this relationship. Using a sample of Chinese A-share listed enterprises from 2011 to 2018, it is found that better ESG performance can reduce firms’ risk. The negative relationship between ESG performance and corporate is stronger for the company with greater CEO power. This link is weaker for state-owned firms and stronger for firms with lower institutional investor holdings. Furthermore, ESG performance mainly affects enterprise risk through three channels: firm reputation, information transparency, and internal control. Generally, firms with better ESG performance are more likely to have sound risk management frameworks. Our findings provide empirical evidence for implementing an ESG information disclosure system and promoting responsible investment in the capital market.

Keywords: environmental performance; governance performance; corporate risk; CEO power; China

1. Introduction

Since the signing of the Paris Agreement, the concept of ESG (Environmental, Social, and Governance) has attracted the attention of academic circles and society alike [1]. First coined in 2005, ESG is a framework that helps stakeholders understand how an organization manages risks and opportunities according to environmental, social, and governance criteria. ESG takes the holistic view that sustainability extends beyond just environmental issues. ESG is expected to promote the sustainable development of enterprises, improve the efficiency of financial capital allocation, and promote the comprehensive transformation and upgrading of the economy.

ESG factors reflect business issues that can directly or indirectly impact a company’s balance sheet, income statement, risk profile, and cost of capital, despite not being inherently financial [2]. It is, therefore, important to understand the economic consequences of ESG. Prior research on this issue mainly examines the direct economic effects of corporate ESG performance, such as effects on financial performance or market value [3–5], but little is known about whether and how ESG performance affect the firm risk, while risk and reward are both important aspects in considering the economic effects. Therefore, our study investigates the impact of ESG performance on firm risk.

ESG is frequently seen as counter-to-shareholder value [6]. Shareholder value advocates that the company’s sole social responsibility is to make as much profit as possible for shareholders [7]. However, firms have experienced increased external pressure to allocate firm resources to ESG efforts in the last decade. On the other hand, stakeholder value advocates view ESG efforts as the right thing to do, and they call for firms to generate value for all stakeholders. These two streams of thought on firms’ ESG efforts lead to dramatically different normative views on whether firms should pursue these activities.
However, under the institutional background of China, the regulatory authorities have specific mandatory requirements on the ESG responsibility of enterprises, especially on environmental responsibility. This complex institutional context creates an environment where firms may view ESG activities as voluntary. A company’s standing with respect to ESG factors is increasingly a major consideration in its success. Therefore, under the guidance of government supervision and the incentive of market demand, enterprises need to perform ESG activities out of voluntary or mandatory willingness and must consider the impact of ESG on enterprise risks.

We hypothesize that firms that adopt more positive ESG activities make them receive higher ESG ratings, and firms with higher ESG ratings have lower firm risk. From a normative perspective, there are at least three mechanisms to compel ESG performance affects enterprise risk.

The first mechanism is the firm reputation. Firms’ ESG processes inevitably generate externalities [1]. Recent findings indicate ESG-related reputation crises and media attention are associated with decreases of market value and increases of credit risk, which have hurt many corporations’ revenues, brand value, customer confidence, and share price [8–10]. The second mechanism is information transparency. Prior studies show that the capital markets infer firm risk from the information disclosures [11,12]. The growing investors’ emphasis on ESG risk and ESG-related opportunities has motivated demand for ESG performance data. Therefore, ESG-related management disclosures can improve information transparency. Investors appear to value firms based on ESG-related disclosures more highly when public accounting firms provide third-party assurance because assurance services enhance the reliability of ESG-related information provided to investors and other stakeholders [13]. A primary benefit of high information transparency is to mitigate information asymmetries between the firm and its investors. More and better disclosure can lead to tangible capital-market benefits in improved liquidity, lower cost of capital, and higher firm value [14,15], effectively reducing corporate risks.

The third mechanism is internal control. We infer that firms with better ESG performance are more likely to have sound risk management frameworks [16] and improved risk avoidance capabilities. On the one hand, the term ESG indicates that corporate activities and policies that assess, manage, and govern a firm’s responsibilities for and its impacts on society and the environment [17], which imbeds in the internal control framework. On the other hand, recent survey evidence suggests that investors believe ESG has financial implications for their portfolios [18], and enterprises must improve their risk management and control capabilities in ESG dimensions.

Based on an empirical investigation on a sample of A-share listed companies in China from 2011 to 2018, we examined that how ESG performance affects firm risk. Specifically, we estimated the moderating effect of CEO power on the relationship at the individual level. ESG performance measures how a company performs as a steward of the environment and society through its governance, energy use, natural resource conservation, donation, etc. The use of green energy is important for the production system [19–21]. We used the ESG ratings from Sino-Securities Index Information Service Co. Ltd. (Shanghai, China) to identify ESG performance. Compared with the existing research, this study makes the following three contributions. Firstly, our research added to the literature on the economic consequences of ESG by considering the underlying logic of high-quality development about the effects of ESG on risk. The urgency of a low-carbon transition makes it very important to promote enterprise sustainability and high-quality economic development. By contrast, most studies concentrate on the economic impact of ESG from the perspective of financial performance. This study provides empirical evidence that improves the ability of stakeholders to judge the value of enterprises based on ESG. Secondly, this study responds to Aguinis and Glavas’s call for more research on corporate social responsibility (CSR) at the individual firm level [17]. As the core person in management, the CEO will influence the disclosure of corporate information to a certain extent. Therefore, it is important to study the influence of decision-making individuals. Specifically, we examined the moderating
effect of a CEO’s power on the relationship between ESG performance and enterprise risk. This study enriches the understanding of the relationship between ESG performance and firm risk by investigating the moderating effect of enterprise decision-makers at the individual level. Thirdly, this study contributed to the evolving literature on the green transformation of enterprises, which has recently become a focus in China. By providing extensive evidence on the effects of ESG performance on firm risk, this study provides empirical evidence for China’s green transition.

The remainder of the paper is organized as follows. Section 2 presents the literature review, theoretical analysis, and research hypotheses. The model and data are introduced in Section 3. In Section 4, empirical tests are performed, and the main practical and robustness test results are reported. The mechanisms behind the observed effects and heterogeneity test are also discussed in Section 4. Finally, conclusions are drawn in Section 5.

2. Literature Review and Development of Hypotheses

2.1. Literature Review

The ESG concept dates back to early religious funds and ethical investments. Environmental, social, and governance factors were integrated for the first time in the United Nations-led “Who Cares Wins” study of 2004. Goldman Sachs [22] then put forward an investment concept incorporating environmental, social, and corporate governance. The economic effect of ESG has been studied extensively by scholars in three areas.

2.1.1. Impact of ESG Performance on Financial Performance

On the one hand, according to neoclassical theory, ESG-related expenditures are not expected to bring financial benefits to an enterprise, and can cause creditors to believe that management is overly engaged in ESG practices to achieve goals such as personal reputations; such activities can consume significant resources, thereby negatively affecting financial performance [23]. On the other hand, Friede et al. [24], based on a meta-analysis of more than 2000 empirical studies, found that about 90% of the studies believe that ESG performance has a non-negative relationship with financial performance, and most of them show that there is a positive correlation. Better ESG performance improves corporate profitability [25] and financial version, such as return on capital, equity, and earnings per share [26].

2.1.2. Relationship between ESG Performance and Corporate Market Value

Early research associated better ESG performance with lower market value [27]. But recent empirical studies have reached different conclusions. Ionescu et al. [28] showed that ESG performance positively correlates with corporate value; better ESG performance can safeguard the positive relationship between enterprises and stakeholders. By gaining government support and social recognition, ESG can reduce the cost of financing and agency cost and can improve enterprise market value. Moreover, Li et al. [29] found a positive moderating role of general manager power over this relationship. However, some scholars believe ESG performance has no significant association with corporate value [30].

2.1.3. Impact of ESG Performance on Corporate Risk

Research mainly focuses on the influence of social responsibility factors on corporate risk, and the results suggest that social responsibility performance is negatively correlated with corporate risk [31]. For example, enterprises active in social responsibility may have less surplus management [32], which can reduce the degree of information asymmetry and gain support from stakeholders, thus reducing corporate risk by gaining scarce resources such as organizational capacity and human capital. In addition, better social responsibility performance can earn a good reputation, enhance the trust of stakeholders, improve resilience to risks, and reduce the impact of existing risks on enterprises [33]. However, some studies have found that corporate social responsibility performance may have a “concealment effect”. A positive relationship has been shown between corporate social
responsibility and stock price crash risk in the Chinese capital market [34]. There is less literature on the effect of ESG performance on corporate risk from the perspective of ESG, and no consistent conclusion has been obtained. Shakil [35] found that ESG performance had no significant impact on financial risk. Based on ESG investments, Cerqueti et al. [36] suggest that the higher the ESG performance, the lower the systemic and idiosyncratic risk of the enterprise.

In summary, the existing research focuses on theoretical analysis, variables measurement, and empirical models of the economic consequences of ESG performance. However, it is not clear that there are different views on whether ESG performance can reduce enterprise risk. Therefore, we try to explore the impact of ESG performance on enterprise risk. At the same time, it analyzes the role of CEO, an influential management role, and on the relationship between the two from a micro perspective.

2.2. Hypotheses Development

2.2.1. ESG Performance and Corporate Risk

Risk reduction hypothesis: ESG can help build relationships, strengthen firms’ reputation in the market, and improve their ability to handle and withstand risks. Based on signal theory, firms with better ESG performance can signal that they fulfill their social and environmental responsibility, which may reflect better corporate governance. Firms with better environmental performance have good sustainable development capabilities, which aligns with China’s high-quality development strategy [4]. This can enhance the reputation of enterprises and increase their risk resilience.

Meanwhile, firms with better ESG performance reflect sustainable development capabilities, strengthen linkages with stakeholders, may be more favorably treated by investors, and may have increased access to financial resources [37], all of which can reduce firm risk. During 2016 and 2020, the number of general ESG indexes increased by 34%, the number of available ESG public funds increased by 79%, and the quantity of assets increased by 109%. Data from “China Sustainable Investment Review 2020” by SynTao Green Finance and China Sustainable Investment Forum. In short, ESG investment has gone mainstream. Under the impetus of policies and markets, China’s listed companies gradually accepted the ESG concept, and ESG information disclosure increased by 23% from 2018 to 2020. Companies with better ESG performance are more likely to develop a relatively sound risk management framework to improve risk avoidance and thus reduce corporate risk. Therefore, based on the above analysis, we propose the hypothesis:

**Hypothesis 1 (H1). There is a negative association between actual ESG performance and enterprise risk, i.e., better ESG performance decreases corporate risk.**

2.2.2. Moderating Effect of CEO Power

According to the upper-echelon theory, the personal characteristics of the senior management team can affect the organization’s strategic decision-making and performance [38]. CEOs play an increasingly important role in business operations and enterprise development; they are key factors in corporate governance and influence organizational outcome variables. The greater the CEO’s power, the greater the control over the enterprise and the impact on corporate management, employee arrangements, etc. Further, greater CEO power in corporate strategic development and operational governance may generate greater efficiency and enterprise value. Therefore, based on the above analysis, CEOs can use their power to influence business decisions and information disclosure policies [22,39] and thus have a particular impact on corporate risk.

CEO authority may positively impact the relationship between ESG performance and corporate risk. First, according to housekeeping theory [40], CEOs are not opportunists; they will aim to maximize the interests of shareholders, strive to operate well, and abide by their duties because of their faith, job satisfaction, etc. At the same time, if an incentive package for executives is effective and the CEO has enough discretion to make operating
decisions, it can better motivate the CEO to serve the enterprise and consciously safeguard its interests. Second, based on imprint theory, CEO-related background, such as learning, work experience, and differences in cognition of ESG, can lead to differences; for instance, if a CEO recognizes that ESG reduces corporate risk and increases firm value (including economic, social, and environmental values), ESG practices will be used appropriately and more activities to enhance the performance of the enterprise [41]. Therefore, CEO power will positively affect the relationship between ESG performance and enterprise risk. We, therefore, propose the following assumptions:

**Hypothesis 2 (H2).** The negative relationship between the ESG performance and corporate risk is strengthened for firms in which CEOs have greater power.

3. Material and Methods

3.1. Data and Sample Selection

Our initial sample includes all firms publicly listed on the China A-share market between 2011 and 2018. The sample selection process is as follows. First, we exclude financial institutions because these firms’ operating, investing, financing activities, and disclosure requirements are distinct from others. Second, we eliminate firms labeled as ST or *ST, because their financial status and stock trading situation are abnormal. Third, we exclude firms with incomplete data. Finally, we winsorize all continuous variables at the 1st and 99th percentiles to mitigate the impact of outliers. The final sample consists of 13,791 firm-year observations. We collect data from the Wind database on ESG performance. These firms’ financial and stock market data come from the China Stock Markets and Accounting Research (CSMAR) database.

We count the number of firms with ESG practice in each industry according to the industry classification standard of China Securities Regulatory Commission. Table 1 presents the distribution of our sample by industry (i.e., observations with ESG performance). Here, 2321 firms from 18 industries are classified as conducting ESG performance ratings in our sample. Manufacturing, information transmission, software and information technology services, and wholesale and retail have more than 100 firms with data on ESG performance. Moreover, since manufacturing accounts for the largest proportion of the entire sample, we further subdivide the manufacturing industry. The results show that computer, communications, and other electronic equipment manufacturing had the most significant number of ESG-rated firms in the manufacturing industry.

**Table 1.** Number of samples by industry.

<table>
<thead>
<tr>
<th>Industry Name</th>
<th>Number of Unique Firms</th>
<th>Number of Firm-Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>1459</td>
<td>8407</td>
</tr>
<tr>
<td>Information transmission, software, and information technology services</td>
<td>189</td>
<td>1007</td>
</tr>
<tr>
<td>Wholesale and retail</td>
<td>127</td>
<td>873</td>
</tr>
<tr>
<td>Real estate</td>
<td>95</td>
<td>718</td>
</tr>
<tr>
<td>Electricity, heat, gas and water production and supply industry</td>
<td>82</td>
<td>556</td>
</tr>
<tr>
<td>Transportation, Warehousing and Postal Industry</td>
<td>77</td>
<td>517</td>
</tr>
<tr>
<td>Construction industry</td>
<td>54</td>
<td>327</td>
</tr>
<tr>
<td>Mining industry</td>
<td>51</td>
<td>335</td>
</tr>
<tr>
<td>Water conservancy, environment, and public facilities management industry</td>
<td>39</td>
<td>215</td>
</tr>
<tr>
<td>Leasing and business services</td>
<td>37</td>
<td>205</td>
</tr>
<tr>
<td>Others This includes culture, sports, and entertainment; agriculture, forestry, animal husbandry; fishery; scientific research and technical services and other industries</td>
<td>111</td>
<td>631</td>
</tr>
<tr>
<td>Total</td>
<td>2321</td>
<td>13,791</td>
</tr>
</tbody>
</table>
3.2. Regression Function

To estimate the effect of ESG performance on corporate risk, we use the following regression model:

\[
\text{Risk}_{i,t} = \alpha_0 + \alpha_1 \text{ESG}_{i,t} + \phi \text{Controls}_{i,t} + \text{Year} + \text{Industry} + \epsilon
\]

where Risk is a corporate risk for firm \( i \) in year \( t \), ESG is the ESG performance. We use Control to control for variables that might explain ESG performance. We include the indicator variables Year and Industry to control for year and industry fixed effects, respectively. The given error term (\( \epsilon \)) is assumed to be normally distributed at zero mean value [42–44] and constant variance [45–47].

Meanwhile, to test how CEO power influences the relationship between ESG performance and corporate risk, we use the following model for further testing:

\[
\text{Risk}_{i,t} = \alpha_0 + \alpha_1 \text{ESG}_{i,t} + \alpha_2 \text{Power}_{i,t} + \alpha_2 \text{ESG}_{i,t} \times \text{Power}_{i,t} + \phi \text{Controls}_{i,t} + \text{Year} + \text{Industry} + \epsilon
\]

where Power is the CEO’s power. Other variables have the same meaning as in model (1).

3.3. Measurement of Variables

3.3.1. Corporate Risk

Prior research is divided into two categories according to different methods for measuring corporate risk. The first is to measure according to capital market data. Usually, the volatility of stock returns is used to measure the enterprise’s overall risk, and the \( \beta \) coefficient and residual item in the asset pricing model are used to measure the enterprise’s systematic risk and idiosyncratic risk. The second is to measure according to corporate accounting information. Corporate risk is usually measured by earnings volatility in financial metrics. Since measuring enterprise risk based on capital market data may have measurement bias caused by information asymmetry, measuring enterprise risk according to enterprise accounting information can avoid this problem to a certain extent [48]. At the same time, the measurement method can reflect the changes in the enterprise’s business and financial risks. Therefore, we refer to the previous literature and use corporate earnings volatility to measure corporate risk [49]. The first measure is the volatility of the firms’ return on total assets adjusted by the industry average during the observation period (Risk1). The second is the return on total assets adjusted by the industry average during the observation period (Risk2) (the difference between the maximum and minimum values). We estimate corporate risk using the following model:

\[
\text{Risk1}_{i,t} = \sqrt{\frac{1}{T-1} \sum_{r=0}^{T-1} \left( \text{adjROA}_{i,t+r} - \frac{1}{T} \sum_{r=0}^{T-1} \text{adjROA}_{i,t+r} \right)^2}; \ T = 3
\]

\[
\text{Risk2}_{i,t} = \max(\text{adjROA}_{i,t}, \text{adjROA}_{i,t+1}, \text{adjROA}_{i,t+T-1}) - \min(\text{adjROA}_{i,t}, \text{adjROA}_{i,t+1}, \text{adjROA}_{i,t+T-1}); \ T = 3
\]

\[
\text{adjROA}_{i,j,t} = \frac{\text{EBIT}_{i,t}}{\text{avgAsset}_{i,t}} - \frac{1}{n_{ij}} \left( \sum_{k=1}^{n_{ij}} \frac{\text{EBIT}_{i,t}}{\text{avgAsset}_{jkt}} \right)
\]

where for firm \( k \) in industry \( j \), adjROA is the return on total assets adjusted by the industry average, EBIT is the profit before interest and tax, and avgAsset is the average assets (that is, the average of the total assets at the beginning and end of the period). The term \( n \) indicates the number of firms. \( T \) is the observation period. Because corporate managers generally focus on the firms’ development during their tenure, the observation period’s length strongly influences the observed investment decisions. The tenure of senior executives in Chinese listed firms is generally three years, so we take the observation period as three years.
3.3.2. ESG Performance

We use the Sino-Securities Index Information Service Co. Ltd. (Shanghai, China) ESG ratings of all A-share listed companies as the proxy variable for ESG performance [50–52]. Based on the core and evaluation experience of ESG, combined with the actual situation of China’s capital market, the ESG evaluation system of China Securities Index is constructed based on the three dimensions: environment, society, and corporate governance. It includes three first-level indicators, 16 second-level indicators, 44 third-level indicators, more than 70 fourth-level indicators, and more than 300 basic indicators. The nine “AAA-C” rating indications range from 9 to 1, from high to low. A higher score indicates a better ESG performance, while a lower score indicates a problem with ESG performance.

3.3.3. CEO Power

The CEO is the key executive responsible for the operation and management of the company. Their influence is often unnoticed and challenging to quantify. The position of leadership in Chinese firm management practice significantly influences the CEO’s power. Combining the positions of CEO and chairman can give the CEO more authority because the CEO is chosen by and answers to the board of directors. The influence of the CEO is also significantly impacted by equity dispersion. The more decentralized the firm is, the more freedom the CEO will have in making decisions. As a result, the degree of equity dispersion and whether the CEO also serves as chairman simultaneously are the two factors, we use to determine the CEO’s power.

3.3.4. Control Variables

Following prior literature [53,54], we included the following set of variables that might explain ESG performance: corporate age (Firmage), corporate size (Size), corporate growth (Growth), corporate profitability (ROA), return on equity (ROE), asset-liability ratio (Lev), capital expenditure level (Cap), board size (Board), and CEO age (Age). Table 2 defines the variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk1</td>
<td>The volatility of the company’s return on total assets adjusted by the industry average during the observation period calculated from models (3)</td>
</tr>
<tr>
<td>Risk2</td>
<td>The difference in the return on total assets adjusted by the industry average during the observation period calculated by model (4)</td>
</tr>
<tr>
<td>ESG</td>
<td>According to the “AAAC” nine-point rating, from high to low, the assignment is 9 to 1</td>
</tr>
<tr>
<td>Dual</td>
<td>If the CEO is two-in-one, it is recorded as 1, otherwise it is recorded as 0</td>
</tr>
<tr>
<td>Disp</td>
<td>If the sum of the shareholding ratio of the largest shareholder divided by the shareholding ratio of the second to tenth shareholders is less than 1, it is recorded as 1, otherwise it is recorded as 0</td>
</tr>
<tr>
<td>Power</td>
<td>If the sum of Dual and Disp is greater than or equal to 1, it is recorded as 1, otherwise it is recorded as 0</td>
</tr>
<tr>
<td>Firmage</td>
<td>the difference between the year of observation and the year of establishment</td>
</tr>
<tr>
<td>Size</td>
<td>natural logarithm of the total assets</td>
</tr>
<tr>
<td>Lev</td>
<td>total debt divided by total assets</td>
</tr>
<tr>
<td>ROA</td>
<td>return on assets, calculated as net income divided by total assets</td>
</tr>
<tr>
<td>Cap</td>
<td>ratio of capital expenditure to total assets at the end of the period</td>
</tr>
<tr>
<td>ROE</td>
<td>ratio of the net profit at the end of the period to the shareholders’ equity at the end of the period</td>
</tr>
<tr>
<td>Board</td>
<td>the natural logarithm of board number</td>
</tr>
<tr>
<td>Growth</td>
<td>calculated as the difference between the operating revenue of this year and last year divided by the total operating revenue of this year</td>
</tr>
<tr>
<td>Age</td>
<td>the age of CEO</td>
</tr>
</tbody>
</table>

3.4. Descriptive Statistics

Table 3 shows the descriptive statistics of the main variables. The mean of Risk1 is 0.032, the standard deviation is 0.047, the mean of Risk2 is 0.060, and the standard deviation is 0.088. This indicates that enterprises tend to face certain risks. The mean of ESG performance is 6.660, and the median is 6. This means that most firms are in the upper-middle level of ESG performance.
Table 3. Descriptive statistics of variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Std. DEV</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk1</td>
<td>13,791</td>
<td>0.032</td>
<td>0.017</td>
<td>0.047</td>
<td>0</td>
<td>0.459</td>
</tr>
<tr>
<td>Risk2</td>
<td>13,791</td>
<td>0.060</td>
<td>0.033</td>
<td>0.088</td>
<td>0</td>
<td>0.906</td>
</tr>
<tr>
<td>ESG</td>
<td>13,791</td>
<td>6.660</td>
<td>6</td>
<td>1.106</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Power</td>
<td>13,791</td>
<td>0.467</td>
<td>0</td>
<td>0.499</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Firmage</td>
<td>13,791</td>
<td>17.66</td>
<td>18</td>
<td>5.353</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>Size</td>
<td>13,791</td>
<td>22.37</td>
<td>22.19</td>
<td>1.248</td>
<td>19.84</td>
<td>26.05</td>
</tr>
<tr>
<td>Lev</td>
<td>13,791</td>
<td>0.443</td>
<td>0.442</td>
<td>0.200</td>
<td>0.051</td>
<td>0.888</td>
</tr>
<tr>
<td>ROA</td>
<td>13,791</td>
<td>0.037</td>
<td>0.033</td>
<td>0.050</td>
<td>−0.183</td>
<td>0.191</td>
</tr>
<tr>
<td>Cap</td>
<td>13,791</td>
<td>0.046</td>
<td>0.033</td>
<td>0.044</td>
<td>0</td>
<td>0.228</td>
</tr>
<tr>
<td>Board</td>
<td>13,791</td>
<td>2.147</td>
<td>2.197</td>
<td>0.201</td>
<td>1.386</td>
<td>2.890</td>
</tr>
<tr>
<td>Growth</td>
<td>13,791</td>
<td>0.411</td>
<td>0.140</td>
<td>1.044</td>
<td>−0.714</td>
<td>6.830</td>
</tr>
<tr>
<td>Age</td>
<td>13,791</td>
<td>49.72</td>
<td>50</td>
<td>6.363</td>
<td>27</td>
<td>81</td>
</tr>
<tr>
<td>ROE</td>
<td>13,791</td>
<td>0.063</td>
<td>0.064</td>
<td>0.105</td>
<td>−0.630</td>
<td>0.321</td>
</tr>
</tbody>
</table>

Table 4 compares the mean and median of the main variables by group by whether the ESG performance is higher than the median. The mean and median of Risk1 and Risk2 are smaller and significantly different in the groups with high ESG performance than in those with low ESG performance, which preliminarily validates hypothesis H1. Moreover, compared with the group with low ESG performance, the mean and median ROA and ROE of the group with high ESG performance are larger, and there is a significant difference between the two groups, which supports the conclusion of the existing research that ESG performance can improve financial performance [55].

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Mean</th>
<th>Median</th>
<th>t-Value</th>
<th>z-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk1</td>
<td>0.026</td>
<td>0.015</td>
<td>0.036</td>
<td>0.019</td>
<td>14.753 ***</td>
<td>12.466 ***</td>
</tr>
<tr>
<td>Risk2</td>
<td>0.049</td>
<td>0.029</td>
<td>0.068</td>
<td>0.036</td>
<td>14.824 ***</td>
<td>12.453 ***</td>
</tr>
<tr>
<td>Firmage</td>
<td>18.43</td>
<td>18.706</td>
<td>17.06</td>
<td>17.06</td>
<td>−12.289 ***</td>
<td>−15.487 ***</td>
</tr>
<tr>
<td>Size</td>
<td>22.88</td>
<td>22.73</td>
<td>21.98</td>
<td>21.89</td>
<td>−40.972 ***</td>
<td>−40.155 ***</td>
</tr>
<tr>
<td>ROA</td>
<td>0.043</td>
<td>0.036</td>
<td>0.033</td>
<td>0.031</td>
<td>−12.563 ***</td>
<td>−10.413 ***</td>
</tr>
<tr>
<td>ROE</td>
<td>0.077</td>
<td>0.076</td>
<td>0.052</td>
<td>0.056</td>
<td>−15.094 ***</td>
<td>−17.533 ***</td>
</tr>
</tbody>
</table>

*** represent level of significance of all parameters at 1%.

4. Results and Discussion

4.1. Benchmark Regression

Columns 1–2 of Table 5 test the effect of ESG performance on corporate risk. The coefficients of ESG are all significantly negative at the 1% significance level. The significant negative coefficients of ESG performance indicate that better ESG performance can reduce corporate risk, supporting Hypothesis H1. First, better ESG performance can improve corporate reputation, improve investor trust, and thus improve risk management capabilities. Second, better ESG performance can improve information transparency, strengthen relationships with stakeholders, be regarded favorably by investors, obtain scarce resources, form resource guarantees, and reduce corporate risks. Third, firms with better ESG performance pay more attention to risk management and control and improve their risk management capabilities, thereby reducing corporate risks.
Table 5. The effect of enterprise digital transformation on annual report readability.

<table>
<thead>
<tr>
<th></th>
<th>(1) Risk1</th>
<th>(2) Risk2</th>
<th>(3) Risk1</th>
<th>(4) Risk2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESG</td>
<td>-0.003 ***</td>
<td>-0.005 ***</td>
<td>-0.002 *</td>
<td>-0.003 *</td>
</tr>
<tr>
<td></td>
<td>(-3.26)</td>
<td>(-3.26)</td>
<td>(-1.84)</td>
<td>(-1.87)</td>
</tr>
<tr>
<td>Power</td>
<td>0.015 *</td>
<td>0.026 *</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.94)</td>
<td>(1.88)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESG × Power</td>
<td></td>
<td></td>
<td>-0.002 **</td>
<td>-0.004 *</td>
</tr>
<tr>
<td></td>
<td>(-1.96)</td>
<td>(-1.91)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firmage</td>
<td>0.001 ***</td>
<td>0.003 ***</td>
<td>0.001 ***</td>
<td>0.003 ***</td>
</tr>
<tr>
<td></td>
<td>(4.42)</td>
<td>(4.61)</td>
<td>(4.40)</td>
<td>(4.59)</td>
</tr>
<tr>
<td>Size</td>
<td>0.008 ***</td>
<td>0.015 ***</td>
<td>0.008 ***</td>
<td>0.014 ***</td>
</tr>
<tr>
<td></td>
<td>(3.79)</td>
<td>(3.67)</td>
<td>(3.70)</td>
<td>(3.59)</td>
</tr>
<tr>
<td>Lev</td>
<td>0.011</td>
<td>0.021</td>
<td>0.011</td>
<td>0.022</td>
</tr>
<tr>
<td></td>
<td>(1.38)</td>
<td>(1.49)</td>
<td>(1.44)</td>
<td>(1.55)</td>
</tr>
<tr>
<td>ROA</td>
<td>0.056</td>
<td>0.094</td>
<td>0.055</td>
<td>0.092</td>
</tr>
<tr>
<td></td>
<td>(1.20)</td>
<td>(1.07)</td>
<td>(1.18)</td>
<td>(1.05)</td>
</tr>
<tr>
<td>Cap</td>
<td>-0.039 ***</td>
<td>-0.069 **</td>
<td>-0.039 ***</td>
<td>-0.069 **</td>
</tr>
<tr>
<td></td>
<td>(-2.68)</td>
<td>(-2.56)</td>
<td>(-2.68)</td>
<td>(-2.57)</td>
</tr>
<tr>
<td>Board</td>
<td>-0.001</td>
<td>-0.002</td>
<td>-0.001</td>
<td>-0.002</td>
</tr>
<tr>
<td></td>
<td>(-0.19)</td>
<td>(-0.18)</td>
<td>(-0.19)</td>
<td>(-0.18)</td>
</tr>
<tr>
<td>Growth</td>
<td>-0.001</td>
<td>-0.001</td>
<td>-0.001</td>
<td>-0.001</td>
</tr>
<tr>
<td></td>
<td>(-1.08)</td>
<td>(-1.08)</td>
<td>(-1.07)</td>
<td>(-1.08)</td>
</tr>
<tr>
<td>Age</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>(0.57)</td>
<td>(0.58)</td>
<td>(0.47)</td>
<td>(0.49)</td>
</tr>
<tr>
<td>ROE</td>
<td>-0.104 ***</td>
<td>-0.193 ***</td>
<td>-0.193 ***</td>
<td>-0.192 ***</td>
</tr>
<tr>
<td></td>
<td>(-5.09)</td>
<td>(-4.98)</td>
<td>(-5.04)</td>
<td>(-4.94)</td>
</tr>
<tr>
<td>_cons</td>
<td>-0.154 ***</td>
<td>-0.274 ***</td>
<td>-0.157 ***</td>
<td>-0.280 ***</td>
</tr>
<tr>
<td></td>
<td>(-3.50)</td>
<td>(-3.38)</td>
<td>(-3.55)</td>
<td>(-3.43)</td>
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<tr>
<td>Year</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Industry</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>13,791</td>
<td>13,791</td>
<td>13,791</td>
<td>13,791</td>
</tr>
<tr>
<td>Adj-R²</td>
<td>0.133</td>
<td>0.137</td>
<td>0.133</td>
<td>0.137</td>
</tr>
</tbody>
</table>

*, ** and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

We find that the coefficients of ESG × Power are significantly negative. This means that, when the CEO has more power, the negative effect of ESG performance on corporate risk is enhanced. Hypothesis H2 is verified. First, the CEO can work hard to run the business well and abide by his responsibilities due to his beliefs and job satisfaction. Enough power given to the CEO can better motivate the CEO to serve the enterprise and consciously safeguard the interests of the enterprise. Second, if CEOs believe ESG has value, they will be more active in ESG practices. Thus, when better ESG performance reduces corporate risk, CEO power positively moderates the relationship between the two.

It is challenging to distinguish clearly between confusing effects and actual impacts. Noise is probably impacting the empirical findings about the risk impact of ESG performance. Therefore, we used a differences-in-differences model and, sensitivity analyses in the robustness tests to rule out alternative hypotheses.

4.2. Robustness Test
4.2.1. Sample Selection Bias

Most of the listed firms participating in ESG performance ratings are in good financial condition and have relatively low corporate risks. In contrast, listed firms that do not participate in ESG performance ratings may have relatively high corporate risks. The part of the sample that does not participate in the rating system is not included in this study. As a result, the randomness of the sample is lost, and there may be sample selection bias. To avoid the influence of sample selection on the conclusions, we use the Heckman test to analyze the problem of sample selection bias [56]. To prove the reliability of the findings, the regression results are given in Table A1.
4.2.2. Endogeneity Test

To avoid endogeneity problems, we use a differences-in-differences model for testing and China SynTao Green Finance’s ESG rating index to replace ESG performance [57–59]. First, set the dummy variable time, assigned a value of 1 from the beginning of the ESG information disclosure year to 2018, and 0 otherwise. Set the dummy variable treated; if the company has disclosed ESG information, it is assigned a value of 1. Otherwise, it is 0. Then, set the intersection of time and treated to did. The test results in Table A2 showed that the conclusion that better ESG performance can reduce corporate risks still holds, proving our findings’ reliability.

Meanwhile, to avoid the problem of missing variables and reverse causality, we construct instrumental variables for testing. Overall ESG performance affects individual firm risk, but the individual firm risk is unlikely to affect overall ESG performance. Therefore, we construct instrumental variables by whether ESG performance is higher than the population and assign a value of 1 if it is higher and 0 otherwise. The given results in Table A3 found that better ESG performance reduces corporate risk, and the results are robust and reliable.

4.2.3. Sensitivity Analysis

To address the possible difference between the ESG rating and the firm’s actual ESG situation, which may be due to unobservable factors affecting the conclusion, we further verify the reliability of the conclusion by adding noise to the explanatory variable ESG performance. Noise is a normally distributed variable with zero mean. Adding noise to explanatory variables often biases the correlation coefficient towards zero. To quantify this effect, we sequentially increase the standard deviation from 0% to 50%, examining the relationship between ESG performance and corporate risk after adding noise [60]. The results in Tables A4 and A5 showed that, as the noise increases, the coefficient of ESG_Noise increases gradually. This means that the noisier target variable attenuates the adjustment of ESG performance to reduce corporate risk. But the negative relationship between ESG performance and corporate risk still holds, and the reinforcing effect of CEO power on the relationship between ESG performance and corporate risk still holds. This indicates that the conclusions of this study are reliable.

4.3. Mechanism Identification

This section discusses the mechanisms through which ESG performance affects corporate risk. With the intermediary variables of firm reputation, information transparency, and internal control, models (6) and (7) are constructed to study the mechanisms.

\[
\text{Mediator}_{i,t} = \alpha_0 + \alpha_1 \text{ESG}_{i,t} + \phi \text{Controls}_{i,t} + \text{Year} + \text{Industry} + \epsilon \tag{6}
\]

\[
\text{Risk}_{i,t} = \alpha_0 + \beta_1 \text{ESG}_{i,t} + \beta_2 \text{Mediator}_{i,t} + \phi \text{Controls}_{i,t} + \text{Year} + \text{Industry} + \epsilon \tag{7}
\]

where Mediator denotes mediating variables, including corporate reputation (Reputation), information transparency (AbsDA), and internal control (Intercon). If the firm appears in the “Most Admired Chinese Firms” All-Star List of Fortune, the Reputation is 1, otherwise, it is 0 [61]. The Jones model modifies information transparency (AbsDA) [62]. The smaller the value, the higher the information transparency, which tests the influence mechanism of information transparency (AbsDA). For internal control (Intercon), we adopt the internal control index of the DIO (Dibo) internal control and risk management database [63]. The internal control level is obtained after logarithmic processing. The larger the value, the better the enterprise’s internal control, which tests the mechanism path of internal control. Other settings in the model are consistent with the previous model (1).

The channel analyses in Tables 6–8 show that ESG performance can affect corporate risk through corporate reputation, information transparency, and internal control. First, better ESG performance can improve corporate reputation, strengthen investor trust, and improve risk resistance. Second, firms with better ESG performance can improve
information transparency, enhance relationships with stakeholders, and obtain resource support, effectively reducing corporate risks. Finally, firms with better ESG performance are more likely to have sound risk management frameworks and improved risk avoidance capabilities.

Table 6. ESG performance, corporate reputation, and corporate risk.

<table>
<thead>
<tr>
<th></th>
<th>(1) Reputation</th>
<th>(2) Risk1</th>
<th>(3) Risk2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESG</td>
<td>0.003 ** (2.20)</td>
<td>−0.003 *** (−3.24)</td>
<td>−0.005 *** (−3.25)</td>
</tr>
<tr>
<td>Reputation</td>
<td>−0.005 * (−1.82)</td>
<td>−0.009 * (−1.74)</td>
<td></td>
</tr>
<tr>
<td>Controls</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Industry</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>13,791</td>
<td>13,791</td>
<td>13,791</td>
</tr>
<tr>
<td>Adj-R²</td>
<td>0.007</td>
<td>0.133</td>
<td>0.137</td>
</tr>
</tbody>
</table>

*, ** and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table 7. ESG performance, information transparency and corporate risk.

<table>
<thead>
<tr>
<th></th>
<th>(1) AbsDA</th>
<th>(2) Risk1</th>
<th>(3) Risk2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESG</td>
<td>−0.002 *** (−2.80)</td>
<td>−0.002 *** (−3.45)</td>
<td>−0.004 *** (−3.46)</td>
</tr>
<tr>
<td>AbsDA</td>
<td>0.052 *** (5.71)</td>
<td>0.100 *** (6.02)</td>
<td></td>
</tr>
<tr>
<td>Controls</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Industry</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>13,460</td>
<td>13,460</td>
<td>13,460</td>
</tr>
<tr>
<td>Adj-R²</td>
<td>0.035</td>
<td>0.137</td>
<td>0.142</td>
</tr>
</tbody>
</table>

*** represents significance level of parameters at the 1%.

Table 8. ESG performance, internal control and corporate risk.

<table>
<thead>
<tr>
<th></th>
<th>(1) Intercon</th>
<th>(2) Risk1</th>
<th>(3) Risk2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESG</td>
<td>0.013 *** (5.92)</td>
<td>−0.002 *** (−3.17)</td>
<td>−0.004 *** (−3.18)</td>
</tr>
<tr>
<td>Intercon</td>
<td>−0.008 *** (−2.88)</td>
<td>−0.015 *** (−2.83)</td>
<td></td>
</tr>
<tr>
<td>Controls</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Industry</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>13,598</td>
<td>13,598</td>
<td>13,598</td>
</tr>
<tr>
<td>Adj-R²</td>
<td>0.097</td>
<td>0.003</td>
<td>0.004</td>
</tr>
</tbody>
</table>

*** indicates significance level of parameters at the 1%.

4.4. Heterogeneity Test

Differences in corporate property rights and the institutional investors’ shareholdings will lead to differences in the economic consequences of ESG performance for companies. The impact of CEO power on the relationship between ESG performance and corporate risk may also be heterogeneous. Therefore, the impact of CEO power on the relationship between them is discussed from two aspects: enterprise property rights and institutional investors’ shareholdings.
4.4.1. Heterogeneity Group Test of Enterprise Property Rights Attributes

There are significant differences in the corporate property rights of Chinese listed firms. According to the theory of strategic motivation, the improvement of the ESG performance of enterprises is a manifestation of economic rationality. The purpose is to enhance the competitiveness and sustainable development capabilities of enterprises. Compared with state-owned enterprises, non-state-owned enterprises are more profitable and pay more attention to the positive impact of improving ESG performance to carry out ESG practice. Moreover, compared with non-state-owned enterprises, state-owned enterprises do not have a clear owner. They have a more complex ownership hierarchy, resulting in a more serious principal-agent problem [64]. However, the ownership structure of non-state-owned enterprises is relatively clear, and the supervision and management system for enterprise management is relatively more complete [65]. So, non-state-owned enterprises have fewer principal-agent problems. Managers are more likely to appropriately improve ESG performance according to the company’s actual situation.

To examine the effect of CEO power on the relationship between ESG performance and corporate risk under different enterprise property rights, we construct SOE as a variable to measure the nature of property rights for group testing. If it is a state-owned enterprise, the SOE value is 1; otherwise, it is 0. The regression results in Table 9 show that, compared with state-owned enterprises, the ESG performance of non-state-owned enterprises significantly reduces corporate risk, and CEO power plays a promoting role. The test results show that the ownership structure of non-state-owned enterprises is relatively clear, and enterprises are more likely to moderately improve ESG performance according to the actual situation and give full play to the positive role of ESG performance in the sustainable development of enterprises, thereby reducing enterprise risk. In addition, non-state-owned enterprise CEOs pay more attention to the positive economic impact of ESG performance.

Table 9. Cross-sectional analyses: Ownership structure.

<table>
<thead>
<tr>
<th></th>
<th>(1) SOE = 1</th>
<th>(2) SOE = 0</th>
<th>(3) SOE = 1</th>
<th>(4) SOE = 0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Risk1</td>
<td>Risk1</td>
<td>Risk2</td>
<td>Risk2</td>
</tr>
<tr>
<td>ESG</td>
<td>0.001</td>
<td>−0.002 *</td>
<td>0.002</td>
<td>−0.003 *</td>
</tr>
<tr>
<td></td>
<td>(1.23)</td>
<td>(−1.87)</td>
<td>(1.27)</td>
<td>(−1.90)</td>
</tr>
<tr>
<td>Power</td>
<td>−0.008</td>
<td>0.014 *</td>
<td>−0.017</td>
<td>0.025 *</td>
</tr>
<tr>
<td></td>
<td>(−0.54)</td>
<td>(1.73)</td>
<td>(−0.58)</td>
<td>(1.69)</td>
</tr>
<tr>
<td>ESG × Power</td>
<td>0.002</td>
<td>−0.002 *</td>
<td>0.004</td>
<td>−0.003 *</td>
</tr>
<tr>
<td></td>
<td>(0.86)</td>
<td>(−1.71)</td>
<td>(0.91)</td>
<td>(−1.68)</td>
</tr>
<tr>
<td>Controls</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Industry</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>1722</td>
<td>12,069</td>
<td>1722</td>
<td>12,069</td>
</tr>
<tr>
<td>Adj-R²</td>
<td>0.059</td>
<td>0.144</td>
<td>0.061</td>
<td>0.148</td>
</tr>
</tbody>
</table>

* represents significance level of the parameters at the 10%.

4.4.2. Heterogeneity Group Test of Institutional Investor Shareholding

Since investors refer to financial and non-financial information when making investment decisions; ESG performance, as an important part of non-financial information, has become an important basis for investors to make decisions. Therefore, we further explore whether differences in institutional investors’ shareholdings impact the effect of CEO power on ESG performance and corporate risk. We conduct group tests by institutional investor shareholding (INVH). If the shareholding ratio of institutional investors is greater than the industry median, INVH is recorded as 1; otherwise, it is 0. As shown in Table 10, compared with the group with a high shareholding ratio of institutional investors, the coefficient of ESG × Power is more significant in the group with a low shareholding ratio.
of institutional investors. This means that when the shareholding ratio of institutional investors is low, CEO power impacts ESG performance. The moderating effect on the impact of enterprise risk is more significant. When the shareholding ratio of institutional investors is low, the CEO has greater discretion, and the CEO can play a greater role in the company’s business decision-making. Since the CEO puts the company’s interests first, this promotes the company’s ESG practice [66]. This reduces corporate risk. Therefore, we believe that when the shareholding ratio of institutional investors is low, the negative effect of CEO power’s enhancing ESG performance on corporate risk will be more significant.

Table 10. Cross-sectional analyses: Institutional investor shareholding.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th></th>
<th>(2)</th>
<th></th>
<th>(3)</th>
<th></th>
<th>(4)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>INVH = 1</td>
<td></td>
<td>INVH = 0</td>
<td></td>
<td>INVH = 1</td>
<td></td>
<td>INVH = 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk1</td>
<td></td>
<td>Risk1</td>
<td></td>
<td>Risk2</td>
<td></td>
<td>Risk2</td>
<td></td>
</tr>
<tr>
<td>ESG</td>
<td>-0.002 *</td>
<td>0.00</td>
<td>-0.003 *</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.84)</td>
<td>(0.19)</td>
<td>(-1.86)</td>
<td>(0.18)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>0.001</td>
<td>0.021 *</td>
<td>0.002</td>
<td>0.037 *</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.33)</td>
<td>(1.87)</td>
<td>(0.12)</td>
<td>(1.79)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESG × Power</td>
<td>-0.000</td>
<td>-0.003 *</td>
<td>-0.001</td>
<td>-0.005 *</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-0.27)</td>
<td>(-1.77)</td>
<td>(-0.27)</td>
<td>(-1.69)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Year</td>
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<td></td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Industry</td>
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<td></td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
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<td></td>
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<tr>
<td>Adj-R²</td>
<td>0.072</td>
<td>0.182</td>
<td>0.074</td>
<td>0.187</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

* indicate significance at the 10% levels, respectively.

5. Conclusions and Policy Implications

Most previous studies have explored the question of “whether corporate social responsibility is opposed to the pursuit of profit.” While both risk and reward are important aspects in considering the economic effects. However, few studies have attempted to analyze the underlying logic of the risk effect of corporate social and environmental responsibility. We find evidence that certain ESG efforts have the potential risk effect, and we highlight the role of CEO power. Using a sample of A-share listed companies in China from 2011 to 2018, we explore the influence of ESG performance on corporate risk and the moderating effect of CEO power. We find that better ESG performance can reduce the risk. ESG performance mainly affects enterprise risk through three channels: firm reputation, information transparency, and internal control. When CEOs have greater power, the risk-reducing effect of ESG performance is enhanced. Compared with state-owned enterprises, CEO power has a more significant effect on the risk-reducing effect of ESG performance for non-state-owned enterprises. The risk-reducing effect of ESG performance is strengthened when the institutional investor shareholding ratio is low. Our research enriches previous research by showing that companies with better ESG performance are seen as less risky. This can increase the company’s financial performance, providing a possible explanation for the widely discussed relationship between social responsibility and financial performance. We also analyze the effect of CEO power on the risk reduction effect of ESG, thus confirming the importance of individual factors in the impact of ESG performance on enterprise risk.

The study’s findings are similar to Matsumura et al. [67]. They discovered that the relationship between disclosing ESG-related information (climate risk) and firm risk varied with market expectations of the materiality of climate risk. We discovered another situation (the presence of ESG performance) in which improved ESG performance could reduce firm risk. Previous research has shown the importance of firm managers in creating value for shareholders (e.g., Hambrick and Mason [38]; Bertrand and Schoar [68]). The current study also discovered that managers’ power is important in improving risk avoidance capabilities. The study expanded on the findings of Welch and Yoon [66], who demonstrated that high-ability managers allocating resources to ESG improve shareholder value. Our findings imply that senior managers’ power is an important feature of firm managers.
Our findings should be of practical use to stakeholders interested in firms’ ESG efforts. First, although the ESG concept and evaluation system are not yet fully implemented in China, enterprises should give full play to ESG practices to enhance their sustainability. Second, researchers should emphasize the CEO power role based on the incentive compatibility principle. Giving the CEO relatively great power and incorporating ESG into a performance appraisal for a CEO, will promote ESG practice, reduce corporate risk, and realize the improvement of corporate performance and social performance. To achieve these goals, companies such as Apple and Volkswagen have announced the addition of “ESG bonus adjustment” metrics to their executive pay incentive plans. Meanwhile, for China, the ESG concept aligns with the national sustainable development, carbon peaking, and neutrality goals. The policy remains the main driver, but ESG lacks a unified evaluation system and disclosure standards. High-quality ESG data is an important basis for responsible investment and environmental regulation. In the more developed major economies and markets, ESG disclosures vary from “encouraging voluntary disclosure by enterprises” to semi-mandatory disclosure of “interpretation without compliance”, or even full mandatory disclosure. Therefore, Chinese policymakers should increase their advocacy of the ESG concept and participate actively in constructing the Global Sustainable Development Disclosure Standards of the ISSB, to expedite the development of ESG disclosure standards applicable to Chinese enterprises. China also should make an ESG evaluation system with local characteristics and form a virtuous circle of green investment and enterprise ESG management. The policy’s logic drives the market’s logic, and the market’s impetus is boosting the implementation of the carbon peaking and carbon neutrality goals and promoting high-quality macroeconomic development.

Although the study provided empirical support for the moderating role of ESG performance on corporate risk and CEO power, due to the limited availability of research data, we did not discuss whether there are distinct effects of the three specific dimensions, such as environment, society, and governance performance. Therefore, future study should continue to explore this subject, we conclude.

Author Contributions: Conceptualization, Y.Z., X.S. and E.E.; methodology, Y.Z.; software, X.S.; validation, X.S.; formal analysis, X.S. and Z.K.; investigation, Y.Z. and E.E.; resources, Y.Z. and Z.K.; data curation, Y.Z. and X.S.; writing—original draft preparation, Y.Z., X.S. and F.S.; writing—review and editing, Y.Z., X.S. and F.S.; supervision, F.S.; project administration, Y.Z. and E.E.; funding acquisition, Y.Z., F.S. and E.E. All authors have read and agreed to the published version of the manuscript.

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Data Availability Statement: The data will be available from the corresponding author(s) on a reasonable request.

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Conflicts of Interest: The authors declare no conflict of interest.
Appendix A

Table A1. Heckman test.

<table>
<thead>
<tr>
<th></th>
<th>(1) Risk1</th>
<th>(2) Risk2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESG</td>
<td>−0.003 ***</td>
<td>−0.005 ***</td>
</tr>
<tr>
<td>imr</td>
<td>(−8.16)</td>
<td>(−8.09)</td>
</tr>
<tr>
<td></td>
<td>−0.283 ***</td>
<td>0.545 ***</td>
</tr>
<tr>
<td>Controls</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Industry</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>18,104</td>
<td>18,104</td>
</tr>
<tr>
<td>Adj-R²</td>
<td>0.119</td>
<td>0.121</td>
</tr>
</tbody>
</table>

*** indicate significance at the 1% levels, respectively.

Table A2. Differences-in-Differences.

<table>
<thead>
<tr>
<th></th>
<th>(1) Risk1</th>
<th>(2) Risk2</th>
</tr>
</thead>
<tbody>
<tr>
<td>did</td>
<td>−0.012 ***</td>
<td>−0.021 ***</td>
</tr>
<tr>
<td></td>
<td>(−7.11)</td>
<td>(−7.07)</td>
</tr>
<tr>
<td>_cons</td>
<td>−0.246 ***</td>
<td>−0.443 ***</td>
</tr>
<tr>
<td></td>
<td>(−5.98)</td>
<td>(−5.86)</td>
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<td>Yes</td>
</tr>
<tr>
<td>Year</td>
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<td>18,104</td>
</tr>
<tr>
<td>Adj-R²</td>
<td>0.165</td>
<td>0.169</td>
</tr>
</tbody>
</table>

*** indicate significance at the 1% levels, respectively.

Table A3. Instrumental variable estimation.

<table>
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</tr>
</thead>
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<td>ESG</td>
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<td>−0.006 ***</td>
</tr>
<tr>
<td></td>
<td>(−7.01)</td>
<td>(−6.97)</td>
</tr>
<tr>
<td>_cons</td>
<td>0.128 ***</td>
<td>0.239 ***</td>
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<tr>
<td></td>
<td>(12.80)</td>
<td>(12.94)</td>
</tr>
<tr>
<td>Controls</td>
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<td>Yes</td>
</tr>
<tr>
<td>Year</td>
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<td>Yes</td>
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<tr>
<td>N</td>
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<td>13,791</td>
</tr>
<tr>
<td>Adj-R²</td>
<td>0.182</td>
<td>0.185</td>
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</tbody>
</table>

*** indicate significance at the 1% levels, respectively.

Table A4. Sensitivity analysis: ESG performance and corporate risk.

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<th>(1) Risk1</th>
<th>(2) Risk1</th>
<th>(3) Risk1</th>
<th>(4) Risk2</th>
<th>(5) Risk2</th>
<th>(6) Risk2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESG_Noise</td>
<td>−0.003 ***</td>
<td>−0.003 ***</td>
<td>−0.002 ***</td>
<td>−0.005 ***</td>
<td>−0.005 ***</td>
<td>−0.004 ***</td>
</tr>
<tr>
<td></td>
<td>(−3.26)</td>
<td>(−3.30)</td>
<td>(−3.10)</td>
<td>(−3.26)</td>
<td>(−3.33)</td>
<td>(−3.23)</td>
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<td>Controls</td>
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<td>Yes</td>
<td>Yes</td>
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<td>N</td>
<td>13,791</td>
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<td>13,791</td>
<td>13,791</td>
<td>13,791</td>
<td>13,791</td>
</tr>
<tr>
<td>Adj-R²</td>
<td>0.133</td>
<td>0.133</td>
<td>0.133</td>
<td>0.137</td>
<td>0.137</td>
<td>0.136</td>
</tr>
</tbody>
</table>

*** indicate significance at the 1% levels, respectively.
**Table A5. Sensitivity analysis: ESG performance, CEO power and corporate risk.**

<table>
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<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
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<td>Risk</td>
<td>Risk</td>
<td>Risk</td>
<td>Risk</td>
<td>Risk</td>
</tr>
<tr>
<td>ESG_Noise</td>
<td>$-0.002^* \ (-1.84)$</td>
<td>$-0.001^* \ (-1.75)$</td>
<td>$-0.001 \ (-1.42)$</td>
<td>$-0.003^* \ (-1.87)$</td>
<td>$-0.003^* \ (-1.84)$</td>
</tr>
<tr>
<td>Power</td>
<td>$0.015^* \ (1.94)$</td>
<td>$0.014^* \ (1.92)$</td>
<td>$0.012^* \ (1.70)$</td>
<td>$0.026^* \ (1.88)$</td>
<td>$0.025^* \ (1.81)$</td>
</tr>
<tr>
<td>ESG_Noise×Power</td>
<td>$-0.002^* \ (-1.96)$</td>
<td>$-0.002^* \ (-1.94)$</td>
<td>$-0.002^* \ (-1.68)$</td>
<td>$-0.004^* \ (-1.91)$</td>
<td>$-0.003^* \ (-1.83)$</td>
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<tr>
<td>Adj-R²</td>
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<td>0.133</td>
<td>0.137</td>
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