

ESG Rating Disagreements and Corporate Resilience

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Abstract. Against the backdrop of great uncertainties in the global economy and the growing attention to the concept of sustainable development, the ESG evaluation system, which integrates corporate social responsibility, environmental management, corporate governance structure and other factors, has gradually become an important criterion for investors to judge a company. Although scholars have conducted extensive research on the impact of ESG ratings on corporate profitability, few studies have explored their role in corporate resilience. Taking A-share listed companies trading on the Shanghai and Shenzhen stock exchanges from 2009 to 2023 as samples, this paper uses empirical analysis to examine the impact of divergent ESG ratings on corporate resilience and the underlying mechanism. The results show that greater discrepancies in ESG ratings are associated with weaker corporate ability to resist external adverse events and hinder corporate long-term development planning. Such negative effects are mainly reflected in higher financing costs, irrational resource allocation and inappropriate earnings management. Heterogeneity analysis indicates that the impact is more pronounced in small enterprises, firms audited by high-quality audit institutions, and companies with a high proportion of institutional investors with large shareholdings. This paper not only enriches the research on the economic consequences of ESG rating disagreements and their impact on corporate resilience, but also provides useful references for enterprises to enhance their own resilience and improve the ESG evaluation system.

Keywords: ESG rating disagreements, corporate resilience, financing constraints, resource misallocation, earnings management

1. Introduction

In recent years, frequent black swan and gray rhino events such as the global outbreak of COVID-19, constant Sino-US economic and trade frictions, and escalating geopolitical conflicts have dealt a severe blow to the Chinese economy and even the world economy. At a time when globalization around the world has suffered major setbacks, economic recovery is confronted with enormous uncertainties and deep-seated problems. Sustainable development has become an important consensus for all countries to alleviate the slowdown in economic growth and seek a path of long-term development. Against this background, China has taken "high-quality development" as its national development strategy and established a relatively complete mandatory information disclosure mechanism through the implementation of the "Dual Carbon" goals, which not only

reflects its obligations to global climate governance but also provides strong support for green development. The State-owned Assets Supervision and Administration Commission (SASAC) issued the *ESG Guidelines for Central Enterprises*, requiring central enterprises to achieve full coverage of the ESG management system and disclose ESG information as required. The Shanghai and Shenzhen Stock Exchanges have also revised and improved the self-regulatory rules for listed companies successively, putting forward higher requirements for the specific content and standards of ESG disclosure. Overall, in China, ESG has evolved from a concept to an institutional arrangement, shifting from voluntary disclosure to mandatory disclosure. Therefore, ESG performance serves as an important means for enterprises to fulfill social responsibilities and respond to the concerns of all parties, and is also a crucial factor affecting corporate financing capacity, brand image, risk management capability and long-term development potential.

As a way to measure corporate long-term performance, environmental, social and governance (ESG) ratings focus on green transformation, social responsibility and the improvement of corporate governance capacity, all of which are closely related to the long-term healthy operation of enterprises. It is a favorable approach to foster and enhance corporate resilience. ESG delivers sound social benefits, plays a vital role in maintaining the interests of various stakeholders and reflects enterprises' pursuit of long-term sustainable development.

However, due to the lack of unified rating standards, rating agencies adopt different indicators, evaluation methods and weight assignments, leading to divergent ESG ratings for the same company, which is known as ESG rating disagreement. Current research on the causes of ESG rating disagreements can be summarized in the following aspects: first, the sources of information for rating vary; second, the absence of a widely accepted ESG information disclosure standard results in different interpretations of public data by different rating agencies; and third, ESG rating disagreements arise from differences in the focus areas, measurement criteria and scoring methods adopted by rating agencies [1, 2]. Under the current environment of rising external uncertainty, corporate resilience is a critical capability for enterprises to withstand external shocks, cope with difficulties and sustain their development. It not only helps enterprises survive hardships and gain competitive advantages but also constitutes an important part of the macroeconomic resilience of a country. Enhancing corporate resilience has become a key task for enterprise development in the new era. Existing studies have shown that excellent ESG performance can strengthen corporate resilience, yet few studies have explored the impact of divergent ESG ratings on corporate resilience. Therefore, this paper takes the impact of ESG rating disagreements on corporate resilience and its transmission mechanism as the entry point, aiming to enrich the research on ESG and corporate resilience from the perspective of information asymmetry, and also put forward suggestions for enterprises to improve their resilience and promote long-term healthy development.

Based on empirical evidence, this paper discusses the impact of divergent environmental, social and governance (ESG) ratings on corporate resilience and the underlying transmission mechanism. The study finds that large discrepancies in ESG ratings undermine enterprises' ability to resist external shocks and reduce their own resilience. Further analysis shows that the negative impact of ESG rating disagreements on corporate resilience is mainly caused by aggravated financing constraints, lower resource allocation efficiency and inappropriate earnings management of enterprises. In addition, the degree of impact varies among enterprises of different natures. In the sample, small-scale enterprises, enterprises with high audit quality and those with high institutional investor attention are more affected. In contrast, state-owned enterprises are less affected due to their strong resource allocation capacity which provides a certain buffer effect.

The research contributions of this paper can be discussed from two aspects. First, in terms of corporate risk management, this paper supplements and improves existing research on the economic effects of ESG rating controversies. Previous studies mostly focused on the short-term impact on the capital market, while this paper pays attention to the impact of rating discrepancies on long-term corporate operating performance and extends the research scope to corporate strategic planning, which is a new exploration and to some extent makes up for the insufficient research on the effectiveness of ESG information disclosure in the high-quality development stage. Second, based on the background of information asymmetry and agency problems, this paper proposes a complete transmission mechanism to illustrate the impact of divergent ratings on enterprises. On the basis of analyzing the effects of increased financing difficulties, rising operating costs and declining brand image, it further demonstrates the importance of improving ESG ratings for promoting sustainable corporate development. This paper elaborates on the mechanism through which external credit ratings affect the resource allocation of enterprises, and further analyzes their impact on corporate earnings management and risk resistance capacity. Accordingly, a relatively complete analytical framework for the interference effect of external ratings is proposed, which is of great significance for improving existing relevant literature and opens a new avenue for understanding the formation of corporate resilience. From a micro perspective, the conclusions can provide references for enterprises in risk management, rational resource allocation and strategic development. From a macro perspective, they help the government strengthen the supervision of environmental protection, social responsibility and corporate governance information disclosure, encourage consistent evaluations from different stakeholders, and ultimately achieve better regulatory effects.

2. Research hypotheses

Compared with consistent ESG ratings, divergent opinions among different agencies exert a dual effect on corporate resilience. On the one hand, from the perspective of information governance and external supervision, appropriate disagreements can reflect the ESG performance of enterprises in various dimensions, encouraging enterprises to strengthen information disclosure, improve corporate governance and enhance awareness of potential issues, which helps improve enterprises' ability to withstand external pressure and accelerate recovery from difficulties. On the other hand, from the perspective of information asymmetry and stakeholders, large rating divergences convey vague and even contradictory information to the public, making it more difficult for all parties to judge the actual ESG status and risk exposure of the enterprise. Under such circumstances, capital shortages, irrational resource allocation and managerial earnings management behaviors are more likely to occur, which in turn undermines corporate resilience.

2.1. Theoretical logic of ESG rating disagreements enhancing corporate resilience

Although many scholars have focused on the negative "noise" caused by ESG rating disagreements, from the perspective of information governance and external supervision, moderate ESG rating divergences are not necessarily disruptive to the market. Instead, they can provide incremental information, prompting companies to disclose more authentic information and subject themselves to diverse forms of supervision, thereby helping improve corporate resilience. The new information and additional pressure brought by ESG rating disagreements help enterprises enhance risk management capabilities and long-term viability through improved internal management and stronger external constraints.

From the perspective of information governance, firstly, ESG rating disagreements exert a significant information-complementing effect, making up for the one-sidedness of a single rating and presenting a more comprehensive picture of corporate ESG practices for firms and investors. Different rating agencies adopt different indicator systems, evaluation perspectives and information sources [2], so their scores represent different dimensions of the firm's ESG performance. Large discrepancies among multiple agencies actually reflect uneven ESG performance in certain aspects of the enterprise, as well as hidden risks and deficiencies overlooked in a single rating. Multidimensional information flows enable managers to transcend traditional evaluation methods, better understand ESG-related issues, allocate resources rationally for risk management purposes, and thus improve risk perception and prevention capabilities. In addition, ESG rating disagreements encourage enterprises to improve their ESG disclosure and increase overall information transparency. Under a single rating system, enterprises tend to disclose only the content concerned by that particular agency, leading to one-sided and incomplete disclosure. When multiple agencies issue highly divergent ratings, enterprises will increase the quantity, enrich the content, and improve the timeliness and comparability of information disclosure to avoid market misunderstanding and uncertainty caused by conflicting ratings [3]. Finally, ESG rating disagreements can restrain "rating shopping" and "rating inflation", prompting companies to enhance the authenticity of their ESG practices.

From the perspective of external supervision, first, ESG rating disagreements function as diversified external analysts, conducting comprehensive monitoring of corporate ESG performance. Different rating agencies carry out continuous evaluation of environmental performance, social responsibility and corporate governance based on their own unique criteria. Compared with supervision by a single entity, supervision by multiple rating agencies helps detect more potential ESG problems. Second, divergent ESG scores create a combined supervision effect involving public opinion, analysts and regulatory authorities. The considerable pressure from such external divergences discourages management from engaging in misconduct for personal gain. In addition, regulators can promptly identify and stop illegal corporate behaviors, reducing legal and reputational pressures and supporting stable operations. Third, ESG rating disagreements can stimulate the supervision enthusiasm of stakeholders and form a socialized supervision mechanism. Investors, consumers, employees and other stakeholders are either beneficiaries or victims of corporate ESG practices, and they are paying increasing attention to corporate ESG performance. Such socialized supervision encourages enterprises to prioritize the demands of stakeholders and build harmonious stakeholder relationships through coordinated efforts, which serves as an important guarantee for enterprises to seek support and recover quickly when facing difficulties.

In summary, from the perspective of information governance, ESG rating disagreements promote information complementarity, compel improved disclosure and restrain inflated ratings, thereby enhancing corporate information transparency and the authenticity of ESG practices. From the perspective of external supervision, such divergences facilitate multi-party supervision, produce superimposed monitoring effects and mobilize enthusiasm among various parties to strengthen external governance. These two mechanisms work together to encourage enterprises to improve internal management, enhance risk management and maintain stakeholder relations, thus strengthening their ability to cope with external adversities and recover from distress. Therefore, this paper proposes the following hypothesis:

H1a: *Ceteris paribus*, ESG rating disagreements can improve corporate resilience.

2.2. Theoretical logic of ESG rating disagreements inhibiting corporate resilience

Although ESG rating divergences can exert a certain external governance effect and promote corporate transparency and governance improvement, this effect is currently limited. Due to the lack of unified standards and large differences in investors' understanding of sustainable development, ESG rating divergences have generated a series of negative impacts. On the one hand, such divergences increase operational uncertainty and raise operational risks; on the other hand, they reduce stakeholders' confidence in the sustainable development prospects of enterprises, thereby weakening their risk resistance capacity. These problems arise from the interaction of multiple factors.

First, ESG rating disagreements increase financing difficulties and thus reduce corporate resilience. Financing capacity is crucial for enterprises to withstand risks, maintain operations and implement strategic transformation. As an important criterion for judging development prospects and long-term risk-bearing capacity, ESG evaluation has become a key reference for investors and financial institutions in investment decisions. When ESG scores for the same company differ significantly, capital providers cannot accurately grasp the actual conditions and risk levels of the investee. Therefore, out of prudence, they will raise risk premiums, tighten lending or reduce equity investment, leading to higher external financing costs, greater financing difficulties and weaker capital buffers. This not only impairs the ability to promptly address short-term issues such as rising raw material prices, changing market demand and supply chain disruptions, but also hinders effective investment in R&D, digital transformation and supply chain improvement, ultimately undermining corporate resilience.

Second, ESG rating disagreements may lead to resource misallocation and weaken corporate resilience. Improving corporate resilience requires concentrating resources on core businesses, R&D and risk management. Different evaluators emphasize different aspects of environment, society and governance, leaving enterprises in "standard confusion". In this context, to meet various ESG requirements and gain external reputation, enterprises may spread funds across numerous ESG topics rather than investing in areas truly critical to long-term development. Such accommodating arrangements crowd out capital needed for core business operations, R&D investment and risk management, while also occupying management's decision-making time, resulting in inefficient resource allocation. Consequently, enterprises cannot rapidly reallocate internal resources or respond appropriately, lacking adaptability and resilience in the face of external shocks.

Finally, ESG rating disagreements may trigger inappropriate earnings management and reduce corporate resilience. ESG ratings significantly influence corporate reputation and financing costs, and attract close attention from regulators and stakeholders. When ESG ratings from different agencies are highly divergent or contradictory, managers may engage in irrational earnings management behaviors such as targeted selective disclosure, profit manipulation or ESG information whitewashing to improve corporate image, dispel market doubts or meet the requirements of specific rating agencies. Such non-compliant earnings management exerts multiple negative effects on the future development and normal operations of enterprises. From the perspective of information transparency, such practices exacerbate information asymmetry between enterprises and investors or regulators, weakening external supervision and internal constraints, so that corporate risks and problems cannot be detected and resolved in a timely manner. In terms of strategic orientation, managers may abandon long-term plans to meet short-term quarterly or annual targets, increasing the likelihood of misjudgment and hindering flexible responses to market changes. Accordingly, Hypothesis 1 is proposed:

H1b: *Ceteris paribus*, ESG rating disagreements exert a negative impact on corporate resilience.

3. Research design

3.1. Sample selection and data sources

This paper takes relevant data of all Chinese A-share listed companies on the Shanghai and Shenzhen stock exchanges from 2009 to 2023 as samples, on the basis of which data cleaning is conducted to ensure data quality. In the preliminary screening process, ST, *ST and PT companies are excluded, as their operating conditions may lead to biased results. In addition, samples of financial and insurance companies are eliminated due to their unique business models and accounting practices, which are not suitable for comparative analysis with other industries such as general manufacturing. Before that, enterprises lacking core financial indicators and thus unable to enter further research are also removed. After the above steps, an unbalanced panel dataset of 19,208 firm-year observations is obtained. This paper adopts the Winsorization method to preprocess continuous variables to reduce the impact of extreme values on subsequent statistical results. The independent variable, namely the discrepancy in corporate environmental, social and governance (ESG) performance, is calculated based on the original scores released by six authoritative third-party rating agencies, including SynTao Green Finance, Menglang Technology, FTSE Russell, China Securities Index (CSI), Wind Information and CNRDS. Financial data and corporate governance data involved in the dependent variable and related control variables are derived from the CSMAR database and Wind financial information platform. Furthermore, provincial-level moderating variables are added, with relevant data obtained from the website of the National Bureau of Statistics.

3.2. Model specification and variable selection

3.2.1. Model specification

To examine the impact of ESG rating disagreements on corporate resilience, the following model is constructed:

$$\text{Resilience}_{i,t} = \alpha_0 + \alpha_1 \text{ESGdis}_{i,t} + \gamma X'_{i,t} + \text{Year} + \text{ID} + \varepsilon \quad (1)$$

where *Resilience* denotes corporate resilience, *ESGdis* denotes ESG rating disagreements, *X* represents a series of control variables mentioned above, *Year* and *ID* represent year fixed effects and firm fixed effects respectively, ε is the random error term. To address heterogeneity and autocorrelation at the firm level, this paper also uses robust standard errors clustered at the firm level.

3.2.2. Dependent variable

Corporate resilience (*Resilience*) is a dynamic capability for enterprises to resist risks, recover from adversity and achieve long-term development in the face of external uncertain shocks. It is a highly comprehensive concept with path-dependent characteristics. Given its unobservable nature, referring to the research methods adopted by most scholars, this paper selects two quantifiable dimensions, namely corporate financial stability and growth, to measure resilience. The comprehensive score of

corporate resilience for each firm is calculated using the entropy weight method. In terms of financial stability, it is measured by the standard deviation of monthly stock returns within a year. A larger value indicates higher uncertainty faced by the enterprise, greater stock price volatility when the external environment changes, weaker ability to respond timely and allocate resources rationally to cope with risks, thus reflecting poorer financial stability and insufficient market confidence. In terms of sustainable growth, it is represented by the total increase in sales revenue over the past three years. This dimension mainly examines market development and recovery capacity. An increase in sales revenue not only shows that the enterprise's products or services are well received by the market, but also reflects strong adaptability to external environmental changes. Higher sustained growth indicates that the enterprise can quickly reallocate resources, enter new markets or improve its product mix after shocks to achieve resilient growth.

3.2.3. Core independent variable

The core independent variable of this study, ESG rating disagreement (ESGdis), is synthesized based on multi-source data. According to existing research [4], this paper evaluates sample enterprises using ESG ratings issued by six agencies, including SynTao Green Finance, Menglang, FTSE Russell, CSI, Wind Information and China Securities Index. To comprehensively investigate the evaluation discrepancies among rating agencies, the original scores of each agency are first standardized, and then the mean value of standard deviations between any two rating criteria is calculated to measure the divergence among different rating agencies. Based on ESG score data publicly released by six authoritative evaluation institutions, this paper establishes a systematic methodology for quantitative analysis of ESG rating discrepancies. Specifically, enterprises are sorted chronologically, and range standardization is applied to eliminate inconsistency among data from different agencies. Second, for each company in each year, the standard deviation of scores given by various rating agencies is calculated to represent the dispersion of scores by different evaluators. Finally, the average value of pairwise standard deviations of all companies in each year is taken as the overall ESG rating disagreement index. A larger value indicates a greater cognitive gap among stakeholders.

3.2.4. Control variables

This study selects the following control variables: firm size (Size), profitability (Roa), asset-liability ratio (Lev), growth capacity (Growth), listing age (Age), proportion of independent directors (Indep), ownership nature (Owner), duality of chairman and CEO (Dual), shareholding ratio of the largest shareholder (Top1), institutional investor shareholding ratio (Inst), and operating cash flow (Cash). Meanwhile, the effects of year fixed effects (Year) and industry fixed effects (Industry) are considered, as shown in Table 1.

Table 1. Variable definitions

Variable	Symbol	Definition
Corporate Resilience	<i>Resilience</i>	Composite score measuring corporate resilience based on financial stability and sustainable development capability, calculated using the entropy weighting method.
ESG Rating Disagreement	<i>ESGdis</i>	Mean pairwise standard deviation of the standardized rankings assigned by six major ESG rating agencies. A larger value indicates a greater degree of disagreement among ESG ratings.

Table 1. (continued)

Firm Size	<i>Size</i>	Natural logarithm of total assets.
Profitability	<i>Roa</i>	Ratio of net profit at year-end to total assets (Return on Assets, ROA).
Leverage	<i>Lev</i>	Ratio of total liabilities to total assets.
Growth Capability	<i>Growth</i>	(Current year's operating revenue – Previous year's operating revenue) / Previous year's operating revenue, i.e., the operating revenue growth rate.
Firm Age	<i>Age</i>	Natural logarithm of (<i>sample year</i> – <i>year of listing</i> + 1).
Board Independence	<i>Indep</i>	Ratio of independent directors to the total number of board directors.
Ownership Type	<i>Owner</i>	Dummy variable equal to 1 if the firm's ultimate controlling shareholder is state-owned, and 0 otherwise.
CEO Duality	<i>Dual</i>	Dummy variable equal to 1 if the Chairman of the Board and the CEO are the same person, and 0 otherwise.
Ownership Concentration	<i>Top1</i>	Ratio of shares held by the largest shareholder to the company's total share capital.
Institutional Ownership	<i>Inst</i>	Ratio of shares held by institutional investors to the company's total share capital.
Operating Cash Flow	<i>Cash</i>	Ratio of net cash flow from operating activities to total assets.

4. Empirical results and analysis

4.1. Descriptive statistics

Table 2 presents the basic statistics of the main variables. The dependent variable *Resilience* has a mean value of 0.887, a median of 0.9, a standard deviation of 0.057, a minimum of 0.43 and a maximum of 0.989, indicating that the resilience of sample enterprises is generally relatively even, yet risk resistance capacity varies considerably across firms. The mean is slightly lower than the median, showing a mild left-skewed distribution, meaning that most enterprises have resilience above the average level. For the independent variable *ESGdis*, the mean is 0.363, the median is 0, the standard deviation is 0.604, the minimum is 0 and the maximum is 3.536. This suggests that ESG rating disagreements are widespread among China's A-share listed companies with substantial differences in degree. The distribution is slightly right-skewed as the mean is higher than the median, and high divergence in some firms raises the overall average level. In addition, the descriptive statistics of other control variables are generally consistent with those in other studies. Correlation analysis among the main variables shows that ESG rating disagreements are significantly negatively correlated with corporate resilience, which is basically in line with Hypothesis H1b. Meanwhile, the multicollinearity test indicates that the maximum variance inflation factor (VIF) of all variables is 2.08 and the average is 1.45, suggesting no severe multicollinearity problem, which will not be elaborated further here.

Table 2. Descriptive statistics of main variables

Variable	Observations	Mean	Standard Deviation	Minimum	Median	Maximum
<i>Resilience</i>	19208	0.887	0.057	0.43	0.9	0.989
<i>ESGdis</i>	19208	0.363	0.604	0	0	3.536

Table 2. (continued)

<i>Size</i>	19208	22.321	1.309	18.927	22.111	28.697
<i>Roa</i>	19208	0.04	0.069	-1.648	0.039	0.786
<i>Lev</i>	19208	0.426	0.203	0.008	0.419	0.998
<i>Growth</i>	19208	0.302	8.083	-0.915	0.109	944.1
<i>Age</i>	19208	2.141	0.791	0.693	2.197	3.526
<i>Top1</i>	19208	0.348	0.148	0.022	0.328	0.9
<i>Cash</i>	19208	0.481	2.874	-46.746	0.041	102.621
<i>Indep</i>	19208	0.376	0.055	0	0.364	0.8

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

4.2. Baseline regression analysis

To investigate the impact of ESG rating disagreements on corporate resilience, this paper adopts a two-way fixed effects model for baseline regression, as shown in Table 3. Column (1) reports the univariate regression including only the core independent variable ESGdis, where the estimated coefficient of ESGdis is significantly negative at the 1% level. After introducing firm-level control variables in Column (2), the coefficient of ESGdis remains significantly negative at the 1% level. When industry and year fixed effects are further added in Column (3), the coefficient of ESGdis is still significantly negative at the 1% level. This indicates that ESG rating disagreements are significantly negatively correlated with corporate resilience, supporting Hypothesis H1b of this paper. In economic terms, according to Column (3), a one-unit increase in ESG rating disagreements reduces corporate resilience by approximately 0.09 percentage points. Therefore, the baseline regression results confirm that ESG rating disagreements exert a negative impact on corporate resilience.

Table 3. Baseline regression results

<i>Variables</i>	(1)	(2)	(3)
<i>ESGdis</i>	-0.0041*** (-6.0440)	-0.0088*** (-11.7876)	-0.0009*** (-2.8468)
<i>Size</i>		0.0042*** (8.7892)	0.0038*** (18.1008)
<i>Roa</i>		0.0212*** (2.6236)	0.0061* (1.7991)
<i>Lev</i>		-0.0074*** (-2.9091)	-0.0117*** (-10.2877)
<i>Growth</i>		0.0082*** (6.9229)	-0.0065*** (-13.1013)

Table 3. (continued)

<i>Age</i>		0.0061*** (9.5100)	0.0021*** (7.5963)
<i>Indep</i>		-0.0155** (-2.0395)	-0.0042 (-1.3245)
<i>Owner</i>		0.0019* (1.7796)	0.0011** (2.4492)
<i>Dual</i>		-0.0026*** (-2.7927)	-0.0007* (-1.7754)
<i>Top1</i>		0.0042 (1.3214)	0.0068*** (5.0040)
<i>Inst</i>		-0.0024 (-1.1148)	-0.0033*** (-3.7637)
<i>Cash</i>		-0.0002 (-0.5237)	0.0005*** (3.4632)
Constant	0.8885*** (1,906.1852)	0.7894*** (79.1323)	0.8547*** (172.1989)
Year Fixed Effects	No	No	Yes
Industry Fixed Effects	No	No	Yes
Observations	19,208	19,208	19,208
Adjusted R ²	0.002	0.027	0.838

Notes: Robust *t*-statistics based on heteroskedasticity-consistent standard errors are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

4.3. Robustness tests

4.3.1. Variable substitution

In this section, the standard deviation of standardized ratings from six agencies (SynTao Green Finance, Menglang, FTSE Russell, China Securities Index, Wind and CNRDS) is used to replace the independent variable for robustness testing, with other control variables, firm fixed effects and year fixed effects unchanged. To measure corporate growth capability, this paper adopts three indicators: year-on-year growth rate of total assets, year-on-year growth rate of operating revenue and year-on-year growth rate of net profit. After standardization, the average value of these indicators is calculated as a comprehensive measure of organizational resilience to replace the dependent variable for robustness testing, while keeping other control variables, firm fixed effects and year fixed effects constant. As shown in Columns (1) and (2) of Table 4, the results are consistent with the baseline regression.

Table 4. Robustness test results

Variables	Alternative Measure		Decomposition of the Dependent Variable		Adjusted Sample	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>ESGdis</i>	-0.0005** (-2.4106)	-0.0087** (-2.4841)	-0.0221*** (-3.2816)	11.1463 (1.2747)	-0.0012*** (-2.9746)	-0.0009** (-2.4087)
Constant	0.8543*** (169.2956)	0.0679*** (2.7012)	0.3318*** (5.5062)	-1,142.2121*** (-14.5927)	0.8596*** (141.4310)	0.8566*** (168.5673)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry/Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19,208	19,208	19,208	19,208	14,038	16,386
Adjusted R ²	0.838	0.430	0.280	0.304	0.839	0.856

Notes: Robust *t*-statistics based on heteroskedasticity-consistent standard errors are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

4.3.2. Dependent variable decomposition test

The baseline regression measures corporate resilience from two dimensions: financial stability and sustainable growth. According to organizational resilience theory, financial stability provides a buffer when enterprises face shocks, while sustainable growth reflects the ability to expand scale through internal adjustments to better adapt to environmental changes, which correspond to two core requirements of corporate resilience. Therefore, this paper further decomposes these two dimensions and re-runs the regression using financial volatility (Volatility) and performance growth rate (Growth) as dependent variables. The results are reported in Columns (3) and (4) of Table 4, which verify the validity of the baseline regression.

4.3.3. Sample adjustment

(1) Excluding samples from municipalities directly under the Central Government and autonomous regions. Due to their special political status and economic development models, municipalities and autonomous regions usually enjoy more policy support and fiscal subsidies, which may bias the estimated effects. This paper therefore re-estimates the model after excluding enterprises located in these regions. (2) Excluding abnormal years. Considering the severe stock market crash in China in 2015 and the huge impact of the COVID-19 pandemic in 2020, observations from 2015 and 2020 are dropped. The results are shown in Columns (5) and (6) of Table 4, which are consistent with the baseline findings.

4.3.4. Endogeneity treatment

Although the baseline regression has controlled for firm fixed effects, year fixed effects and various firm-level control variables, the estimation results may still be affected by sample self-selection bias and reverse causality. For example, firms with larger ESG rating divergences may inherently have weaker governance and lower information transparency, thus exhibiting lower resilience;

meanwhile, firms with poor resilience are more likely to trigger divergent evaluations among rating agencies. To address these issues, this paper employs propensity score matching (PSM) and two-stage least squares (2SLS) for further robustness checks, as presented in Table 5.

Table 5. Endogeneity treatment results

Variables	Propensity Score Matching (PSM)	Instrumental Variable (IV) Approach	
		First Stage	Second Stage
	(1)	(2)	(3)
<i>ESGdis</i>	-0.0015*** (-2.9838)		-0.019*** (-3.177)
Control Variables	Yes	Yes	Yes
Industry/Year Fixed Effects	Yes	Yes	Yes
Observations	6,426	18,045	18,045
Adjusted R ²	0.803	0.330	0.811

Notes: Robust *t*-statistics based on heteroskedasticity-consistent standard errors are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

5. Mechanism analysis

As implied by the above analysis, ESG rating disagreements exert a negative impact on corporate resilience, mainly through three channels: the financing constraint effect, the resource misallocation effect and the earnings management effect. Specifically, the financing constraint effect means that ESG rating disagreements intensify information asymmetry in the capital market, making it difficult for capital providers to accurately assess a firm's actual conditions and potential risks. Out of prudence, investors and creditors tend to raise risk premiums, reduce loan scale or cut equity investment, thereby lowering the capital reserves necessary for enterprises to withstand external shocks. The resource misallocation effect arises from divergent evaluation perspectives, indicator selections and weight assignments across rating agencies, leaving enterprises in "standard confusion". To meet various rating requirements, firms allocate limited capital to less critical ESG dimensions instead of core businesses, R&D investment or risk management, leading to insufficient input in key areas. The earnings management effect indicates that divergent ESG ratings create confusion and adverse expectations among investors, placing heavy performance and stock price pressure on managers. This incentivizes them to conduct selective information disclosure and profit manipulation, distorting real financial information and accumulating potential risks. Accordingly, this paper uses financing constraints, resource misallocation and earnings management as proxy variables for the three corresponding effects.

Given the overuse of the traditional stepwise mediating effect method and its limitations in addressing causality and endogeneity issues of intermediate variables, this paper focuses on verifying the causal relationship between the independent variable and mediating variables to accurately identify the transmission channels. The examination centers on whether ESG rating disagreements aggravate financing constraints, cause irrational resource allocation and induce inappropriate earnings management. Specifically, the KZ index is adopted to measure the degree of financing constraints, with a higher value indicating tighter financing constraints. For resource misallocation, this paper follows the method of Hsieh and Klenow [5] and uses the Fd index as a positive indicator, where a larger value signifies more severe resource misallocation. For earnings

management, the absolute value of discretionary accruals (AbsDA) estimated from the modified Jones model is employed, also a positive indicator—greater absolute values represent more aggressive earnings management. The results are reported in Table 6.

The results show that in Column (1), the coefficient of ESGdis is significantly positive, confirming that ESG rating disagreements indeed impose stronger financing constraints on enterprises, weakening their ability to adapt to external changes and operational autonomy. In Column (2), the coefficient of ESGdis is also significantly positive, indicating that ESG rating disagreements lead to serious resource misallocation, preventing resources from being efficiently channeled to core businesses or long-term capability building. In Column (3), the coefficient of ESGdis remains significantly positive, suggesting that ESG rating disagreements drive enterprises to engage in inappropriate earnings management, misleading stakeholders about the firm's actual status and accumulating hidden risks. In conclusion, the negative impact of ESG rating divergences on corporate resilience is realized through the combined effects of financing constraints, resource misallocation and opportunistic earnings management.

Table 6. Mechanism analysis results

	Financing Constraint Effect	Resource Misallocation Effect	Earnings Management Effect
Variables	(1)	(2)	(3)
	KZ	Fd	AbsDA
<i>ESGdis</i>	0.0716*** (3.9204)	0.0342*** (3.1266)	0.0020*** (2.7297)
Constant	3.4047*** (12.5066)	-0.3672** (-2.2499)	0.1262*** (11.7708)
Control Variables	Yes	Yes	Yes
Industry/Year Fixed Effects	Yes	Yes	Yes
Observations	19,208	19,208	19,208
Adjusted R ²	0.663	0.180	0.088

Notes: Robust *t*-statistics based on heteroskedasticity-consistent standard errors are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

6. Research findings and implications

This paper comprehensively investigates the impact, influencing channels and heterogeneous effects of ESG rating disagreements on corporate resilience. The empirical results reveal that ESG rating disagreements exert a significant negative effect on corporate resilience, weakening enterprises' capacity to resist external disturbances, maintain normal operations and recover from operational dilemmas. This finding not only enriches the research on the economic consequences of ESG governance and the determinants of corporate resilience, but also provides practical references for government authorities, rating agencies and listed companies to jointly enhance the resilience of China's real economy. Further mechanism analysis demonstrates that the adverse impact of ESG rating disagreements operates through three core channels: aggravated financing constraints, distorted resource allocation and opportunistic earnings management, all of which are verified by mediating effect tests. In addition, such negative impacts present obvious heterogeneity. Specifically, small-scale enterprises, firms with high-quality audit services and enterprises with high institutional investor attention are more vulnerable to ESG rating divergences. By contrast, large and medium-

sized enterprises, especially state-owned enterprises, can effectively hedge the negative shocks caused by rating disagreements benefiting from their abundant resource endowments, high information transparency, government support and superior resource allocation capabilities.

Based on the above research findings, this paper puts forward targeted suggestions for regulatory authorities, ESG rating agencies and listed companies to mitigate the adverse effects of ESG rating disagreements, improve corporate risk resistance capacity and promote high-quality economic development in China.

First, regulatory authorities should accelerate the improvement of ESG-related laws and regulations to eliminate rating disputes at the source. First and foremost, unified, comparable and mandatory ESG information disclosure standards should be issued as soon as possible to clarify the specific content and standardized methods of ESG disclosure, so as to resolve rating divergences caused by insufficient information disclosure and inconsistent information interpretation. Second, strict industry supervision and standardized management should be implemented for the ESG rating industry. Rating agencies shall be required to publicly disclose their evaluation methodologies, indicator weights and data sources, so as to improve the overall credibility of the ESG rating industry. Third, differentiated supportive policies should be introduced for micro, small and medium-sized enterprises as well as private enterprises that suffer from financing difficulties and capital shortages due to ESG rating discrepancies. Preferential measures such as loan interest subsidies, financing guarantee services and professional information consulting services can be provided to help these enterprises resolve operational dilemmas and strengthen their risk prevention capabilities. Fourth, the external governance mechanism should be optimized. Audit institutions are encouraged to incorporate ESG information into the scope of external audits to enhance the reliability of ESG information, and guide institutional investors to adhere to value investment rather than overreacting to ESG rating differences.

Second, ESG rating agencies should strengthen industrial cooperation, optimize rating systems and reduce market information noise. All rating agencies ought to formulate unified basic evaluation criteria for environmental, social and governance dimensions to avoid structural rating discrepancies stemming from divergent evaluation standards, coverage scopes and indicator weight settings. Industry-specific ESG risk assessment standards should be established in accordance with operational characteristics of different sectors to improve the pertinence and comparability of ESG ratings. Furthermore, rating agencies need to enhance the explanatory power and risk early-warning function of rating results. Detailed explanations for rating divergences should be released together with official ratings to guide rational investment judgments and avoid absolute valuation judgments relying on a single rating result. Only in this way can the ESG rating industry give full play to its information signaling function, and lay a solid foundation for the stable operation of enterprises and efficient pricing in the capital market.

Third, listed companies should proactively improve internal ESG management capabilities and treat ESG rating disputes rationally. Enterprises should integrate ESG concepts into long-term development strategies and daily operational management, and establish a sound and long-term mechanism for environmental protection, social responsibility fulfillment and corporate governance. Substantial operational improvements should replace superficial ESG behaviors to fundamentally reduce ESG rating divergences. Meanwhile, enterprises need to elevate their information disclosure quality by releasing true, comprehensive and timely ESG information, so as to mitigate rating discrepancies caused by information asymmetry. In the face of ESG rating disputes, enterprises should focus on solving core operational problems and promoting sustainable development, instead of consuming substantial financial and human resources to cater to diverse rating standards, and

completely eliminate opportunistic earnings management behaviors. In addition, enterprises shall strengthen communication and interaction with investors, financial institutions and suppliers to stabilize market expectations, expand financing channels, and accumulate sufficient capital buffers to cope with potential external adverse shocks. Against the backdrop of slowing global economic growth and China's transition to high-quality development, improving the construction of the ESG system, narrowing ESG rating discrepancies among different institutions, and enhancing corporate risk resilience are of great significance. These efforts not only guarantee the stable operation of individual enterprises, but also strengthen the macroeconomic resilience of China and support its long-term sustainable development.

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