

The Impact of ESG Rating Divergence on Corporate Performance: The Mediating Role of Innovation Capacity

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Abstract. Against the backdrop of the global transformation of Environmental, Social, and Governance (ESG) policies and the advancement of China's "dual carbon" goals, ESG rating divergence has become a key barrier restricting the sustainable development of enterprises. This study adopts empirical methods such as fixed effects model and mediating effect model to systematically explore the impact and mechanism of ESG rating divergence on corporate performance, and conducts heterogeneity analysis from three dimensions: geographical location, industrial technological characteristics, and pollution intensity. The results show that: ESG rating divergence significantly inhibits corporate performance, and this conclusion remains valid after robustness tests such as lagged term test and variable replacement; corporate innovation capability plays a partial mediating role between ESG rating divergence and corporate performance; heterogeneity analysis indicates that the inhibitory effect of ESG rating divergence on performance is more significant for enterprises in southern China, high-tech enterprises, and low-pollution enterprises. The conclusions of this study enrich the theoretical research on the economic consequences of ESG ratings, and provide practical implications for regulators to improve the ESG standard system, enterprises to optimize ESG practices and innovation resource allocation, and rating agencies to standardize rating processes.

Keywords: ESG Rating Divergence; Corporate Performance; Innovation Capability; Mediating Effect; Heterogeneity Analysis.

1. Introduction

The global landscape of ESG policies is undergoing a comprehensive transformation. Increasing regulatory enforcement, expanding coverage, and more granular disclosure requirements are compelling a growing number of firms to confront the challenges of transparent ESG management. The shift from "doing something" to "doing it right" and ultimately "doing it well"—from passive compliance to proactive management—has become a key factor in restructuring corporate competitiveness. The Report to the 20th National Congress of the Communist Party of China explicitly emphasized the need to "improve the foundational systems for ecological civilization, strengthen the environmental governance framework, and establish mechanisms for green and low-carbon development." In recent years, a series of green development policies and institutional arrangements have been introduced, integrating the ESG into the core framework used to evaluate high-quality corporate development. This has laid a crucial theoretical and policy foundation for the advancement of ESG practices in China.

With the progress of the "dual carbon" goals and the deepening of the green finance system, ESG has become a "weathervane" for the sustainable development of Chinese enterprises, and ESG ratings have emerged as a key reference for capital markets in assessing firms' sustainability. In response to the increasingly detailed requirements of ISSB sustainability disclosure standards, the full implementation of the EU's CSRD, and the dual-track "mandatory + targeted" approach in China, the external pressure for ESG disclosure has intensified. As of May 8, 2025, a total of 2,458 A-share listed companies in China had released their 2024 ESG reports, accounting for a disclosure rate of 45.43%. Among them, 1,759 firms have disclosed ESG reports for three consecutive years.

However, due to the large number of ESG rating agencies and the absence of unified evaluation methodologies and standards, these agencies differ significantly in their selection of material topics, measurement indicators, evaluation models, weighting approaches, scoring standards, and data

sources and capabilities. As a result, they often assign different ESG ratings to the same company—this phenomenon is referred to as “ESG rating divergence” or “ESG rating imbalance.” In China’s capital market, many domestic rating agencies have emerged, such as the International Institute of Green Finance (IIGF) at CUF, SynTao Green Finance, and Minglang, among others. Although these agencies have yet to develop strong international influence, severe rating discrepancies similarly exist. The negative impact of ESG rating divergence on corporate performance is particularly pronounced and has become a key barrier to firms’ sustainable development. On one hand, such divergence exacerbates information asymmetry, generates cognitive confusion between firms and investors, raises financing costs, and directly crowds out resources that could otherwise be used for core business operations such as production and R&D. On the other hand, rating divergence creates opportunities for managerial manipulation of ESG information. Firms may allocate resources toward superficial “rating compliance” rather than substantive value creation, resulting in resource misallocation and declining operational efficiency. Firm-specific characteristics may also intensify or mitigate these adverse effects: companies with high-quality disclosure can reduce the impact of divergence by transmitting more transparent ESG information, whereas state-owned enterprises may be less sensitive to rating differences due to their resource advantages and policy support. However, much of the existing literature focuses on capital market outcomes such as financing costs, while direct analyses of how ESG rating divergence affects firms’ operational performance remain insufficient. A deeper examination of the mechanisms through which ESG rating imbalance impacts corporate performance is of theoretical and practical importance for improving the ESG ecosystem and guiding firms toward performance enhancement.

Due to differences in evaluation systems, indicator weights, and data sources, different rating agencies frequently issue inconsistent assessments of the same firm’s ESG performance. Such divergence not only intensifies information asymmetry between firms and external stakeholders but also distorts corporate resource allocation. Ultimately, it affects corporate performance through innovation capacity as a key mediating channel. Mechanistically, ESG divergence suppresses corporate innovation through two core pathways. First, inconsistent rating results create confusion among investors regarding firms’ sustainable development potential, thereby increasing equity financing costs and hindering access to debt financing. Innovation activities—especially in long-cycle and high-risk fields such as green innovation—require stable and long-term financing. Rising financing costs directly constrain R&D investment and weaken firms’ motivation and capacity for technological breakthroughs. Second, in an attempt to reconcile different rating standards, firms may excessively allocate resources to superficial ESG practices instead of substantive technological innovation, causing resource misallocation. The weakening of firms’ innovation capacity then negatively affects performance in multiple dimensions. Products lacking differentiated innovation face disadvantages in market competition, leading to declines in market share and subdued valuations. More importantly, firms with weak innovation capacity struggle to adapt to policy changes and market shifts, making them more vulnerable to performance volatility under risk shocks. Nonetheless, existing studies offer limited analysis of how ESG rating divergence influences corporate performance through innovation capacity, and they lack systematic discussion of heterogeneous effects across different types of innovation and firm characteristics. Therefore, an in-depth exploration of the transmission chain linking ESG divergence, innovation capacity, and corporate performance is crucial for understanding the economic consequences of the ESG ecosystem and for helping firms balance ESG practices with innovation investment.

Based on the above analysis, examining how ESG rating imbalance affects corporate performance through internal governance and innovation capacity, as well as its underlying transmission mechanisms, holds substantial practical significance for improving the ESG ecosystem and guiding high-quality corporate development.

2. Literature Review

Extant research has confirmed that ESG rating divergence is a global phenomenon. Berg et al. [1,2] found the correlation between different agencies' ESG ratings for the same firm only ranges from 0.38 to 0.71, consistent with Chatterji et al.'s earlier finding of significant inter-institutional rating discrepancies [5]. Key drivers of divergence include the lack of a unified ESG indicator framework, inter-agency differences in conceptual understanding, indicator systems and data processing, as well as variations in firms' ESG disclosure quantity, quality, transparency and linguistic features [2,5]. Cheng et al. [4] noted industry variations in divergence, with the highest in renewable resources/alternative energy and the lowest in finance. Liu [6] further indicated that quantitative ESG disclosure has a more pronounced impact on rating divergence for single-business firms than diversified ones and weakly performing ESG firms are more affected. ESG reporting divergence is also associated with firm size and performance, with similar firms showing smaller gaps [4].

Existing literature mainly focuses on ESG rating divergence's impact on capital market outcomes, with few direct studies on corporate performance. Empirical evidence shows divergence significantly inhibits performance, and some studies have explored moderating factors. Gibson Brandon et al. [8] pointed out that information disclosure quality, market position and ownership structure modulate this effect—high-quality disclosure mitigates negative impacts, while state-owned enterprises are less sensitive due to resource and policy advantages [12]. On one hand, divergence may increase information opacity, exacerbate asymmetry, enable managerial manipulation, and strengthen the negative ESG-performance relationship [7,1,9]. On the other hand, it may reflect inter-agency professional differences, facilitate third-party supervision, and weaken this negative relationship [6]. Based on this, Hypothesis 1 is proposed:

H1: The higher the degree of ESG rating divergence, the worse the corporate performance.

Existing studies have not comprehensively analyzed how ESG divergence affects corporate innovation capacity and subsequent performance. Regarding ESG divergence and innovation, evaluation system differences influence innovation via two channels: information asymmetry and resource allocation. Divergence intensifies asymmetry, raising investor uncertainty and financing costs [12], which suppresses R&D investment and innovation capacity (critical for green innovation). Additionally, firms may overinvest in superficial ESG practices to meet diverse rating standards instead of substantive innovation, leading to resource misallocation and reduced innovation quality [10].

Corporate innovation capacity positively impacts performance through multiple mechanisms. Technological innovation optimizes processes and reduces resource consumption, improving operational efficiency—Zheng et al. [12] showed green innovation increases return on assets by enhancing energy efficiency and reducing emissions. Innovation-driven product differentiation boosts market share and competitiveness, elevating valuation; both innovation quantity and quality correlate positively with Tobin's Q, with quality having a more prominent effect [10]. Stronger innovation capacity also enhances adaptability to market and policy changes, e.g., green technology investment mitigates environmental risks and maintains stable growth [11]. Thus, Hypothesis 2 is proposed:

H2: Corporate innovation capacity plays a partial mediating role between ESG rating divergence and firm performance.

In summary, while existing studies clarify ESG rating divergence's causes, gaps remain regarding its relationship with innovation capacity and the transmission mechanism to corporate performance. Further research is needed to deepen the theoretical framework of ESG divergence's economic consequences and support corporate practice.

3. Research Design

3.1. Variable Definitions

1. Dependent Variable: Corporate Performance (TobinQ)

This study measures corporate performance using Tobin's Q, a market-based indicator that reflects both short-term financial outcomes and long-term value. Tobin's Q captures firms' growth opportunities and potential, representing their future development trends in the economic market and providing strong comprehensiveness. It is widely regarded by scholars as a reliable measure of overall corporate performance. Generally, when Tobin's Q > 1, the firm is considered to have strong market value development and a certain degree of recognition in the economic market.

2. Core Independent Variable: ESG Rating Divergence(ESG_diff)

Drawing on the approach of Christensen et al. (2022), this study measures ESG rating divergence using the standard deviation of ESG scores assigned by different rating agencies to the same firm. The calculation process is as follows: First, ESG data are obtained from five agencies—China Securities Index (CSI), Wind, SynTao Green Finance, CNDCRS, and Bloomberg. To ensure comparability across rating agencies, all original ESG scores or ratings are standardized and converted into a unified nine-point scale. Specifically, ratings from C to AAA are mapped to numerical values from 1 to 9 in ascending order: C, CC, CCC, B, BB, BBB, A, AA, AAA. Second, to maintain sample completeness, listed companies that receive only a single ESG rating are assigned a divergence value of zero. Finally, after converting the ESG ratings from the five agencies into comparable numerical scales, the value ranges become aligned, ensuring that each agency's rating contributes equally to the calculation of ESG rating divergence. Based on the processed data from these agencies, the standard deviation of the ESG scores is calculated and used as a proxy variable for ESG rating divergence.

3. Mediator Variable: Firm Innovation Level(RD_intensity)

In this study, the level of firm innovation is measured by the ratio of total R&D expenditure to operating revenue. This ratio reflects the extent to which a firm allocates its operating income to research and development activities over a certain period. It provides a direct indication of the intensity and continuity of the firm's resource investment in innovation and is a classical metric for assessing the "input side" of innovation, thereby representing the firm's emphasis on innovation and the magnitude of resources devoted to it.

4. Other Control Variables

This study includes the following control variables: the proportion of R&D personnel [%] (R&D_rate), number of employees (Employee), firm size (Size), ownership concentration—shareholding ratio of the top ten shareholders (Top10), firm age (FirmAge), leverage ratio (Lev), equity multiplier (EM), quick ratio (Quick), net profit margin (Net Profit), accounts receivable ratio (Rec), inventory ratio (Inv), capital intensity (CAP), and a dummy variable indicating whether the audit is conducted by a Big Four firm (Big4), coded as 1 if audited by a Big Four firm and 0 otherwise.

3.2. Model Construction

3.2.1. Construction of the Baseline Model

$$TobinQ_{i,t} = \beta_1 + \beta_{11} \cdot ESG_diff_{i,t} + \sum_{k=2}^n \beta_{k1} \cdot Control_{k,i,t} + \alpha_i + \gamma_t + \epsilon_{1,i,t} \quad (1)$$

$$RD_intensity_{i,t} = \beta_2 + \beta_{12} \cdot ESG_diff_{i,t} + \sum_{k=2}^n \beta_{k2} \cdot Control_{k,i,t} + \alpha_i + \gamma_t + \epsilon_{2,i,t} \quad (2)$$

$$TobinQ_{i,t} = \beta_3 + \beta_{13} \cdot ESG_diff_{i,t} + \beta_{23} \cdot RD_intensity_{i,t} + \sum_{k=3}^n \beta_{k3} \cdot Control_{k,i,t} + \alpha_i + \gamma_t + \epsilon_{3,i,t} \quad (3)$$

In the model, TobinQ is the dependent variable, representing firm performance; is the key independent variable; Controls denotes the set of control variables; yanfa_rate serves as the mediating variable; and Control_j represents a series of control variables, including Size, Lev, Quick, RD_rate, EM, NetProfit, Rec, Inv, CAP, Employee1, FirmAge, Top10, and Big4. α_i denotes firm fixed effects, which control for unobservable time-invariant characteristics at the firm level, such as corporate culture and industry position; Year represents year fixed effects, controlling for macro-level shocks such as policy changes, economic cycles, and market conditions. ϵ_{it} is the random error term, represents the constant term, and denotes the regression coefficients.

During the regression process, The model adjusts standard errors clustered at the firm level to account for potential serial correlation among observations of the same firm across different years, ensuring the robustness of significance tests. The model also employs high-dimensional fixed effects regression, absorbing both firm and year fixed effects while adjusting standard errors clustered at the firm level. Additionally, a one-period lag of the variable was generated to further analyze the dynamic relationships among the variables.

3.2.2. Descriptive Statistics of Variables

Table 1 presents the descriptive statistics of the main variables. Regarding the key variables, firm performance has a mean of 2.0370 and a standard deviation of 2.3122, with a maximum value of 122.1895 and a minimum of 0, indicating substantial heterogeneity in performance across firms. Some firms exhibit high market value and strong growth potential, while others are less recognized by the market. The ESG rating divergence has a mean of 2.1646, a standard deviation of 0.4720, and ranges from 0 to 3.5286, suggesting that rating inconsistencies are common among the sample firms. The divergence is 0 for firms with a single rating, whereas differences are notable for firms evaluated by multiple agencies. The level of firm innovation (RD_intensity) has a mean of 2.6532 and a standard deviation of 3.8706, with a maximum of 87.2402 and a minimum of -2.4767, reflecting substantial disparities in R&D resource allocation; some firms invest heavily in R&D, while a few exhibit insufficient or even abnormal negative values.

Table 1. Descriptive Statistics of Variables.

Variables	N	Mean	Std	Min	Max
TobinQ	15,648	2.037	2.312	0.000	122.190
ESG_diff	15,648	2.165	0.472	0.000	3.529
RD_intensity	15,648	2.653	3.871	-2.477	87.240
Size	15,648	22.828	1.363	17.641	28.697
Lev	15,648	0.467	0.206	0.013	1.957
Quick	15,648	1.550	1.842	0.019	41.266
RD_rate	15,648	10.281	12.480	0.000	100.000
EM	15,648	2.468	7.063	-339.171	417.253
NetProfit	15,648	0.039	0.487	-37.419	12.0805
REC	15,648	0.109	0.103	0.000	0.713
Inv	15,648	0.140	0.138	0.000	0.931
CAP	15,648	2.915	5.703	0.0719	303.339
Employee	15,648	8154.739	23945.980	0.000	521566.000
FirmAge	15,648	3.115	0.262	1.792	4.248
Top10	15,648	0.540	0.153	0.013	0.986
Big4	15,648	0.080	0.272	0.000	1.000

4. Results

The impact of ESG rating divergence on firm performance is reported in Table 2. Column (1) presents the results with firm and year fixed effects but without control variables. The regression coefficient of ESG rating divergence on firm performance is -0.1925 and is significant at the 1% level, indicating that as ESG rating imbalance increases, firm performance significantly decreases,

preliminarily supporting a negative relationship between ESG rating divergence and firm performance. Column (2) reports results after including control variables but without firm and year fixed effects. The regression coefficient of ESG rating divergence on firm performance is -0.9301, significant at the 1% level, further confirming that ESG rating imbalance significantly suppresses firm performance. Column (3) presents results with both control variables and firm and year fixed effects. The regression coefficient of ESG rating divergence on firm performance is -0.2457, remaining significant at the 1% level, suggesting that even after accounting for individual heterogeneity and time trends, the negative impact of ESG rating imbalance on firm performance persists, thus supporting Hypothesis H1.

By comparing the three regression models, all significant at the 1% level, the baseline regression results robustly confirm the inhibitory effect of ESG rating divergence on firm performance. Moreover, after controlling for firm and year fixed effects, the model's goodness-of-fit increases to 0.5839, indicating a more appropriate model specification and greater reliability of the results.

Table 2. Baseline Regression Results.

Variables	(1) TobinQ	(2) TobinQ	(3) TobinQ
ESG_diff	-0.19251*** (0.04166)	-0.93014*** (0.03889)	-0.24566*** (0.04061)
Size		-0.90978*** (0.01791)	-1.24673*** (0.18626)
Lev		0.92871*** (0.11328)	0.83185 (0.52807)
Quick		0.1054102*** (0.01124)	0.02501 (0.02717)
RD_rate		0.003687* (0.00148)	-0.00402 (0.00336)
EM		0.0013553 (0.00243)	0.00037 (0.00199)
NetProfit		0.09170* (0.03551)	0.09505 (0.07127)
REC		-0.56166* (0.17718)	-2.47064 (1.86672)
Inv		0.33318* (0.12683)	-0.10058 (0.45616)
CAP		-0.00357 (0.00300)	-0.00288 (0.00352)
Employee1		0.00001*** (<0.00001)	0.00003*** (<0.00001)
FirmAge		0.08144 (0.06708)	2.971598** (1.03571)
Top10		0.43466*** (0.12226)	0.43681 (0.41119)
Big4		0.37483*** (0.06807)	0.105522 (0.13787)
_cons	2.45376*** (0.09018)	23.58898*** (0.44703)	21.21999*** (3.66155)
N	15648	15648	15648
R ²	0.55390	0.18400	0.58390
Time Fixed Effects	Yes	No	Yes
Firm Fixed Effects	Yes	No	Yes

Note: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively; values in parentheses are standard errors.

4.1. Mediating Effect Analysis

The previous results have demonstrated that ESG rating divergence has an inhibitory effect on firm performance. Theoretical analysis suggests that ESG rating divergence may indirectly affect firm performance by weakening firm innovation capability. Based on this, this study examines the mediating role of firm innovation in the relationship between ESG rating divergence and firm performance. The specific results of the mechanism analysis are presented in Table 3. Column (1) presents the baseline regression results, indicating that ESG rating divergence significantly suppresses firm performance. Column (2) tests the effect of ESG rating divergence on firm innovation capability, with a regression coefficient of -0.1292. Although it does not reach conventional statistical significance (P-value ≈ 0.056), it exhibits a negative trend, suggesting that ESG rating divergence may partially undermine innovation capability by reducing the efficiency of R&D resource allocation, indicating a potential mediating effect and providing partial support for the hypothesis. Column (3) shows the results when both ESG rating divergence and firm innovation capability are included in the regression. The coefficient of ESG rating divergence on firm performance is -0.2443, larger in absolute value compared with the baseline coefficient of -0.1925 and still significant at the 1% level, while the coefficient of firm innovation capability is 0.0103, not statistically significant but in the theoretically expected positive direction.

Table 3. Mediating Effect Analysis Results.

Variables	(1) TobinQ	(2) yanfa rate	(3) TobinQ
ESG_diff	-0.19251*** (0.04166)	-0.12921 (0.06757)	-0.24433 (0.04020)
yanfa_rate			0.01032 (0.01583)
Control Variables	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes
N	15,648	15,648	15,648
R ²	0.55390	0.80310	0.58400

4.2. Robustness Checks

To verify the reliability and stability of the baseline regression results, this study conducts robustness checks using three approaches: lagging the independent variable, replacing the independent variable, and replacing the dependent variable. All tests control for firm and year fixed effects and adjust standard errors clustered at the firm level to ensure that the results are not affected by potential confounding factors. The results, presented in Table 4, are consistent with the findings of the baseline regression.

Table 4. Robustness Check Results.

Variables	(1) TobinQ	(2) TobinQ	(3) TobinQ	(4) TobinQ_L1
Lagged Independent Variable (t-1) ESG_diff_L1	-0.01596 (0.03088)			
Lagged Independent Variable (t-2) ESG_diff_L2		-0.12748** (0.04258)		
Independent Variable Replacement ESG_diff_19			-0.10836*** (0.01791)	
Dependent Variable Replacement ESG_diff				-0.00133*** (0.00186)
Control Variables	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes

_cons	13.25997*** (1.78979)	21.22756*** (3.67842)	21.32835*** (3.65404)	-0.62864*** (0.09718)
N	11817	15645	15647	15647

Note: *, **, and *** respectively indicate significance at the 10%, 5%, and 1% levels; The numbers in parentheses are standard errors.

4.3. Heterogeneity Analysis

While ESG rating divergence has a significant inhibitory effect on firm performance, the impact may vary under different conditions and environments. To explore this, the sample is divided along three dimensions: geographical location, industry technological characteristics, and pollution intensity. The heterogeneity analysis examines how ESG rating divergence affects firms with different characteristics. The results are presented in Table 5.

Based on geographical location, the inhibitory effect of ESG rating divergence on firm performance varies significantly across regions, with most regions showing a statistically significant negative effect. Firms in the southern region are most adversely affected, with a regression coefficient of -0.2829891. Although the southern region is economically active, its firms are diverse, and some may not fully adapt to ESG rating standards. This may exacerbate resource misallocation caused by rating divergence, resulting in a stronger negative impact on performance. Northern firms show a coefficient of -0.156792, representing the lowest negative impact among significant groups. Northern firms, often benefiting from policy support or advantages in traditional industries, are less sensitive to ESG rating divergence, and their performance is less affected.

Regarding industry technological characteristics, both high-tech and non-high-tech firms are significantly negatively impacted, but high-tech firms experience a stronger effect. This is because high-tech firms rely heavily on R&D investment, and rating divergence can increase financing difficulties and crowd out R&D resources. Non-high-tech firms are less affected due to stable business models and lower reliance on innovation funding.

When classified by pollution intensity, both high-pollution and low-pollution firms are significantly negatively affected by ESG rating divergence. However, low-pollution firms are slightly more affected, with a coefficient of -0.2452042, slightly higher in absolute value than that of high-pollution firms. Although high-pollution firms pay more attention to ESG performance, mandatory disclosure requirements for environmental indicators reduce differences in data availability and rating discrepancies, thereby mitigating the negative impact on performance.

Table 5. Heterogeneity Analysis Results.

Variable	(1) TobinQ Northern Firms	(2) TobinQ Southern Firms	(3) TobinQ High-Tech Firms	(4) TobinQ Non-High-Tech Firms	(5) TobinQ High-Pollution Firms	(6) TobinQ Low-Pollution Firms
ESG_diff	-0.15679** (0.05579)	0.282989** * (0.053408)	-0.29565*** (0.05896)	-0.21370*** (0.04716)	-0.190517*** (0.04106)	-0.24520*** (0.05423)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
_cons	20.30930** * (3.69678)	22.58180** * (5.50132)	24.76500*** (6.73700)	12.08401** (3.45897)	16.23016*** (3.71114)	24.54999*** (5.35963)
N	5,435 0.6650	10,208 0.5735	8,268 0.5883	7,293 0.6567	3,945 0.7346	11,649 0.5807

5. Conclusion

Based on data from 2010 to 2023, excluding ST, PT, and financial firms, this study examines the impact and mechanism of ESG rating divergence on firm performance. Baseline regression results show that ESG rating divergence (ESG_diff) significantly inhibits firm performance (TobinQ), regardless of the inclusion of control variables or firm and year fixed effects, supporting Hypothesis H1. Mediating effect analysis indicates that ESG rating divergence negatively affects firm innovation capability (measured by R&D intensity), although not statistically significant at conventional levels. When both ESG rating divergence and innovation capability are included in the regression, the negative effect of ESG rating divergence on firm performance remains significant, while the coefficient of innovation aligns with the theoretical expectation of enhancing performance. This suggests that ESG rating divergence may partially suppress performance by reducing the efficiency of firms' innovation resource allocation, providing partial support for Hypothesis H2.

To mitigate ESG rating divergence and promote high-quality corporate development, this study offers recommendations for regulators, firms, and rating agencies. Regulators should improve ESG standards and disclosure frameworks, implement phased mandatory reporting, and establish a disclosure quality rating mechanism. Firms should integrate substantive ESG practices into strategic planning, avoid superficial compliance, and tailor disclosure to regional and industry characteristics. Rating agencies should enhance transparency by publicly disclosing methodologies and data sources, coordinate industry-wide rating standards, implement cross-validation mechanisms, and strengthen analyst professional training to reduce rating biases. Collectively, these measures aim to reduce ESG information asymmetry, improve resource allocation, and support sustainable corporate performance.

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