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The Effect of ESG Performance Expectation Gap on the Cost of Equity Financing

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Abstract: *In recent years, there has been increasing focus in both academic and practical circles on enhancing corporate sustainable development through ESG (Environmental, Social, and Governance) performance. Based on theories including information asymmetry, stakeholder theory, principal-agent theory, and organizational expectations, this study employs annual data from A-share listed companies from 2010 to 2023 to examine the impact of ESG performance expectation gaps on the cost of equity financing. The results indicate that a larger ESG performance expectation gap is positively associated with a higher cost of equity financing. This effect is particularly evident among high-tech firms, non-heavily polluting companies, and profitable enterprises. In terms of underlying mechanisms, corporate reputation and product market competitiveness are identified as important channels through which the gap influences financing costs. By investigating financing costs from the perspective of ESG performance expectation gaps, this study contributes to motivating listed companies to place greater emphasis on their ESG performance.*

Keywords: *Performance Expectation Gap; Cost of Equity Financing; ESG Performance; Stakeholders*

1. Introduction

The concept of ESG (Environmental, Social, and Governance), first introduced by the United Nations in 2004, aims to integrate environmental, social, and governance considerations into investment decision-making to promote sustainable development. In recent years, driven by policy support and market demand, ESG investment in China has grown rapidly, accompanied by the continuous emergence of related financial products such as ESG-themed funds and green bonds. Furthermore, Chinese enterprises are actively adopting ESG principles by engaging in initiatives such as rural revitalization and community development, thereby embedding themselves within broader social governance frameworks.

Alongside the evolution of China's capital markets, corporate financing activities have become increasingly diversified, primarily divided into equity financing and debt financing. Each approach possesses distinct advantages, applicability, and risk characteristics. Equity financing can help optimize a firm's capital structure and reduce financing costs, while debt financing may avoid the dilution of ownership (Liu, 2025)[1]. In the context of cultivating new quality productive forces and promoting high-quality development, equity financing is generally regarded as more conducive than debt financing to fostering technological innovation, scientific progress, and productivity growth. The cost of equity financing is influenced by investors' assessment of corporate risk and growth prospects (Fang, 2025)[2]. An ESG performance expectation gap is likely to raise concerns among stakeholders regarding corporate risk, thereby increasing the cost of equity financing.

2. Literature Review

2.1. A Review of the Literature on ESG Performance-Expectation Gaps

Driven by policy initiatives in China, corporate ESG performance increasingly influences long-term value and competitiveness (Wang, 2025)[3]. Grounded in organizational expectation theory, prior research has evolved from examining financial performance gaps to investigating non-financial ones and their economic consequences (Nason, 2019)[4]. Scholars further treat such performance deviations as a key contextual factor shaping stakeholder reactions (Wang, 2020)[5]. A synthesis indicates that ESG

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performance-expectation gaps affect firms primarily through two mechanisms: ESG rating signals and stakeholder feedback.

2.2. A Review of the Cost of Equity Capital

Effective external financing, comprising both debt and equity, is vital for corporate growth, with each source entailing distinct stakeholder interests and costs of capital (Liu Qiqi, 2025) [6]. Equity financing, in particular, is characterized by its long-term orientation, attracting investors focused on sustained value creation (Wang Chunfei & Guo Yunnan, 2021) [7], which aligns with contemporary developmental priorities.

Jiao Yang (2023) [8] summarizes the main factors influencing the cost of equity financing into three categories: corporate governance, information disclosure, and firm-specific characteristics. In terms of corporate governance, the agency problems prevalent in listed companies may lead executives to pursue private benefits at the expense of shareholders. This risk compels investors to implement monitoring mechanisms and demand higher returns to compensate for associated oversight costs (Jiang Yan & Lu Zhengfei, 2009) [9]. Furthermore, Guo Zhigang (2025) [10] notes that specific carbon disclosure practices may reduce information asymmetry, mitigate compliance risks, and enhance corporate reputation, thereby lowering financing costs and improving capital market competitiveness. However, such disclosures may also increase external reporting costs and expose firms to risks related to opaque or inconsistent reporting standards, which could negatively affect equity financing. Additionally, a firm's financial condition and industry attributes remain significant determinants of its cost of equity.

Drawing on the above literature, this study examines the impact of ESG performance-expectation gaps on the cost of equity financing, with a particular focus on the role of ESG rating information disclosure.

2.3. A Review of the Impact of ESG Performance-Expectation Gaps on Equity Financing Costs

The effect of ESG performance-expectation gaps—a non-financial metric—on the cost of equity remains underexplored, and organizational expectation theory has seen limited extension to stakeholder-specific effects. This study therefore examines the influence of these gaps on equity financing costs.

An ESG performance-expectation gap is defined as the deviation of a firm's actual ESG performance from its anticipated level, where a negative deviation (or deficit) is the primary focus of this study regarding its economic consequences.

ESG performance-expectation gaps can elevate the cost of equity by damaging corporate reputation. As a key mechanism for contract enforcement (A. Smith, 1763), reputation relies on observable firm behavior, which ESG disclosure enhances (Lei Ruoxi, 2024) [11]. A negative ESG gap signals underperformance and potential risks, raising investors' perceived risk and required return, thereby increasing financing costs.

Second, ESG performance-expectation gaps may increase the cost of equity by undermining a firm's product market competitiveness. Building on empirical evidence that such gaps harm competitive standing (Luo Jinhui, 2024) [12], we posit that a weakened market position elevates business risk, prompting investors to demand a higher risk premium and thereby raising the cost of equity.

3. Empirical Research

3.1. Sample Selection and Data Sources

Based on data availability, this study selects A-share listed companies in China from 2010 to 2023 as the initial sample. The following screening procedures are applied: (1) exclude firms in the financial industry; (2) exclude companies labeled as ST, *ST, or those delisted during the sample period; (3) exclude firms with missing values for key variables; and (4) apply winsorization to all continuous variables at the 1st and 99th percentiles to mitigate the influence of outliers.

The ESG rating data are sourced from the HuaZheng ESG ratings available through the WIND

ISSN 2616-5902 Vol. 8, Issue 2: 37-44, DOI: 10.25236/AJBM.2026.080205

database. Financial indicators and corporate governance data are obtained from the China Stock Market & Accounting Research (CSMAR) database.

3.2. Empirical Model and Variable Selection

The paper constructs the following baseline regression model:

$$CAPM_{i,\ t+1} = \beta_0 + \beta_1 \mathrm{ESGGAP}_{i,\ t} + \beta_2 \mathrm{Controls}_{i,\ t} + \sum INDUSTRY + \sum YEAR + \varepsilon_{i,t} \quad (1)$$

$$ESGGAP_{i,t} = ESG_{i,t} - \alpha ESG_{i,t-1} - (1-\alpha) IndustryESG_{i,t} \quad (2)$$

$$IndustryESG_{i,t} = \sum_{J \neq i} \frac{P_{j,t}}{N-1} \quad (3)$$

$$CAPM_i = R_f + \beta_i (R_m - R_f) \quad (4)$$

Ri denotes the expected return of asset i, Rf the risk-free rate, Rm represents the market return, β is the systematic risk.

The explanatory variable in this study is ESGGAP. the weight coefficient, bounded between0 and 1. Following common practice, this paper sets a=0.3.Furthermore, we construct a dummy variable I, which takes the value of 1 when the ESG performance-expectation gap is negative and 0 otherwise. The product of this censored indicator variableI and ESGGAP constitutes the target firm's final measure of ESG performance-expectation shortfall, denoted as ESGGAP. $P_{j,t}$, represents the ESG performance of peer firms(excluding the firm itself). $\mathrm{Controls}_{i,t}$represents the control variables at the enterprise level;and also includes industry and time fixed effects;$\varepsilon_{i,t}$represents the random disturbance term. The variables selected in this paper are shown in Table 1:

Table 1: Variable Definitions.

Variable Category	Variable Name	Metric
Independent Variable	ESG Performance-Expectation Gap	Actual ESG Score – Expected ESG Score
Dependent Variable	Cost of Equity Financing	Estimated using the CAPM model
Mediating Variables	ProductMarket Competitive Position	Product Market Competitive Position
	Corporate Reputation	Measured by constructing a corporate reputation evaluation system
Control Variables	Firm Size	Natural logarithm of total assets at year-end, Ln(Assets)
	Growth Opportunity	Annual growth rate of operating revenue: (Current Period – Previous Period) / Previous Period
	Institutional Ownership	Number of shares held by institutional investors / Total shares outstanding
	Largest Shareholder Holding	Number of shares held by the largest shareholder / Total shares outstanding
	CEO Duality	Equals 1 if the Chairman and CEO positions are held by the same person, otherwise 0

ISSN 2616-5902 Vol. 8, Issue 2: 37-44, DOI: 10.25236/AJBM.2026.080205

	Board Size	Total number of directors on the board
	Proportion of Independent Directors	Number of independent directors / Total number of board directors
	Beta	Stock volatility relative to the overall market
	Big Four Auditor	Equals 1 if the annual report is audited by PwC, Deloitte, EY, or KPMG, otherwise 0
	Tobin's Q	(Market Value + Book Value of Liabilities) / Book Value of Assets
	Management Ownership	Number of shares held by executives / Total shares outstanding
	Total Asset Turnover	Operating Revenue / Average Total Assets

3.3. Baseline Regression Results and Analysis

Table 2 presents the results of the benchmark regression analysis. Model 1 does not include control variables, while Model 2 incorporates them. The mean variance inflation factor (VIF) for Model 2 is 1.20, well below the conventional threshold of 10, indicating no severe multicollinearity issues in the regression model. Furthermore, regardless of whether control variables are included, the regression coefficients remain significantly positive at the 1% level, and their magnitudes do not change substantially.

Specifically, the regression coefficient for the ESG performance–expectation gap is 0.003 and is significantly positive at the 1% level, indicating a positive association between ESG performance–expectation gaps and the cost of equity financing.

Table 2: Baseline Regression.

variables	Model 1 Capm	Model 2 Capm
ESGGAP	0.003***	0.003***
	(2.746)	(2.858)
Size		0.099***
		(4.621)
Growth		0.002*
		(1.857)
Indep		0.000
		(0.861)
Dual		-0.001
		(-0.745)
β		-0.014***

ISSN 2616-5902 Vol. 8, Issue 2: 37-44, DOI: 10.25236/AJBM.2026.080205

		(-8.844)
Mshare		-0.000
		(-0.971)
TobinQ		0.003***
		(5.330)
Big4		0.005
		(1.324)
Top1		-0.020***
		(-3.504)
Board		-0.006
		(-1.400)
ATO		0.001
		(0.673)
Observations	27619	27619
Industry effects	Yes	Yes
Year Effects	Yes	Yes
VIF		1.20
Adj. R^2	0.9549	0.9552
ΔR^2		0.0003***

3.4. Robustness Tests

Using an alternative explanatory variable measured via the ESG industry-performance–expectation gap model (Wang Lijuan, 2019) [13], the regression(as shown in Table 3) yields a coefficient of 0.0016 (t=1.862), which remains significant at the 10% level, confirming the robustness of the findings. The dependent variable is remeasured using a total market-value-weighted CAPM approach, with Rm defined as the annual market return including dividend reinvestment. Results remain robust, showing a t-statistic of 2.816 (significant at the 1% level).A random subsample test (using 80% of observations) confirms robustness: the regression of Capm2 on ESGGAP yields a t-statistic of 3.032, significant at the 1% level.

Table 3: Robustness Test.

	Alternative Explanatory Variable Capm	Alternative Dependent Variable Capm2	Random Subsampling Capm
INDESGGAP	0.0016*		

ISSN 2616-5902 Vol. 8, Issue 2: 37-44, DOI: 10.25236/AJBM.2026.080205

	(1.862)		
ESGGAP		0.0026***	0.0033***
		(2.816)	(3.032)
Controls	Yes	Yes	Yes
Industry/Year FE	Yes	Yes	Yes
observations	27619	27619	22060
Adj.R^2	0.955	0.957	0.955

3.5. Mediation Effect Analysis

Using the two-step approach (Jiang Ting, 2022) [14] confirm both pathways (as shown in Table 4). ESG performance-expectation gaps negatively affect product market competitiveness (coef. = -0.018, t = -5.97) and corporate reputation (coef. = -0.144, t = -7.87), both significant at the 1% level. Since lower competitiveness and reputation are associated with higher equity financing costs (Yao Haixin et al., 2021) [15], the mediating roles are established.

Table 4: Mediation Effect Analysis.

	REP	PCM
ESGGAP	-0.144*** (-7.87)	-0.018*** (-5.97)
Controls	Yes	Yes
Industry FE	Yes	Yes
Year FE	Yes	YES
Observation	24106	22662
F-statistic	131.07	16.76
Adj.R^2	0.534	0.102

3.6. Heterogeneity Analysis

Heterogeneity tests reveal differentiated effects of ESG performance-expectation gaps on the cost of equity across firm types.In non-heavily polluting firms, the coefficient is significantly positive at the 1% level, while it is insignificant in heavily polluting firms, with a significant between-group difference(as shown in Table 5).

For high-tech firms, the coefficient is 0.006 ($t=3.404$, $p<0.01$), notably larger than in non-high-tech firms (0.002, $t=1.715$, $p<0.10$), and the Chow test confirms a stronger penalty effect in the high-tech subgroup ($p<0.05$).

In non-loss-making firms, the coefficient is significantly positive at the 5% level, whereas it is insignificant in loss-making firms, again with a significant between-group difference.

Overall, the positive impact of ESG performance-expectation gaps on the cost of equity is more pronounced in non-heavily polluting, high-tech, and profitable enterprises.

ISSN 2616-5902 Vol. 8, Issue 2: 37-44, DOI: 10.25236/AJBM.2026.080205

Table 5: Heterogeneity Analysis.

CAPM	Heavily Polluting	Non-Heavily Polluting	High-tech	Non-high-tech	Loss	Non-loss
ESGGAP	-0.001 (-0.459)	0.003*** (3.486)	0.006*** (3.404)	0.002* (1.715)	0.004 (1.404)	0.002** (2.323)
Between-group coefficient difference	0.075*		0.093*		0.082*	
Observation	3094	24525	7215	20404	3488	24131
Adj.R^2	0.946	0.957	0.957	0.955	0.953	0.956

4. Conclusion and Policy Recommendations

4.1. Research Findings

Drawing on theoretical frameworks including organizational expectation theory, information asymmetry, stakeholder theory, and principal-agent theory, this study utilizes annual observational data from A-share listed companies in Shanghai and Shenzhen stock exchanges spanning the period 2010–2023. A fixed-effects model is established to empirically examine the impact of ESG performance-expectation gaps on the cost of equity financing. The findings are summarized as follows:

(1) ESG performance-expectation gaps significantly increase the cost of equity financing for listed companies. This conclusion remains robust after a series of rigorous sensitivity and robustness tests.

(2) Regarding the mechanisms of influence, this study finds that ESG performance-expectation gaps primarily elevate the cost of equity through two channels: impairing corporate reputation and weakening competitive position in the product market.

(3) Heterogeneity analysis reveals that the effect of ESG performance-expectation gaps on the cost of equity is more pronounced in high-tech enterprises, non-heavy polluters, and profitable firms.

This study contributes to the literature by integrating non-financial performance feedback into equity financing research and offers practical implications for regulators and corporate managers in emerging markets.

4.2. Policy Recommendations

This study offers valuable implications for policy and practice. First, the ESG performance of listed companies holds strategic significance for their financing behavior. Firms should allocate greater resources and attention to improving their ESG performance, striving to meet stakeholder expectations, thereby alleviating financing constraints. Second, listed companies should proactively manage corporate reputation and strengthen quality control to avoid sending negative signals to consumers and investors. Third, regulatory authorities may consider developing targeted financing instruments for high-tech, non-heavily polluting, and profitable firms, guiding and incentivizing these enterprises to control the lower bound of ESG performance-expectation gaps and rewarding them with lower-cost equity capital.

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