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The Evolving Role of ESG in Investment Decisions: From Financing Cost Implications

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Abstract. Environmental protection issues, amid growing global concerns over climate change and ecological balance, have sparked in-depth reflections on sustainable development. Today, sustainable development has evolved into a comprehensive social-economic strategy guiding long-term growth, directly spurring the emergence of responsible investment. As social values shift toward equity and environmental stewardship, and economic governance systems advance, responsible investment has expanded its scope-gradually forming three core pillars: Environmental, Social Responsibility, and Governance (ESG). Since then, ESG investment has gained rapid global traction, with institutional investors increasingly integrating it into their decision-making. Enterprises disclose ESG-related information in accordance with industry standards, while rating agencies collect data from corporate reports, third-party audits, and public records to assign ESG scores. These ratings now serve as a key benchmark for investors to assess enterprises, long-term operational risks and intrinsic investment value. In China, backed by national policies, including green finance development guidelines and mandatory ESG disclosure requirements for key industries, ESG system construction thrives. Corporate ESG performance has drawn wide attention from investors, regulators, and the public, and its role in easing financing constraints for enterprises has become increasingly prominent. Compared with mature international markets where ESG investment has decades of development, China's ESG concept emerged relatively later. This paper, combining an analysis of China's ESG development status and relevant theoretical, foundations, empirically studies the link between firms' ESG performance and their financing costs (covering both equity and debt financing).

Keywords: Corporate ESG Performance, Cost of Equity Financing, Cost of Debt Financing, Corporate Heterogeneity

1. Introduction

1.1. Research background

As the construction of ecological civilization is integrated into the "Five-Sphere Integrated Plan" for socialism with Chinese characteristics, transforming the development model of economy and fostering green industries to drive China's economic growth. Meanwhile, reducing pollution caused

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by enterprises, earnestly fulfilling social responsibilities, and enhancing governance efficiency have also formed a broad social consensus. Against this backdrop, ESG, an internationally recognized standard for measuring the level of enterprises' environmental friendly and long-lasting development, is becoming increasingly prominent in terms of its importance.

From a policy perspective, China's domestic ESG system has advanced steadily: the state has successively issued policy documents such as the Measures for the Disclosure of Environmental Information (Trial) and the Guiding Opinions on Accelerating the Establishment of a Green Finance System; the Shanghai and Shenzhen Stock Exchanges have released guidelines on social responsibility information disclosure; and relevant competent authorities have also formulated social responsibility standards, providing support for ESG's development. However, at the same time, the annual investment need of China's green development reached over 2 trillion yuan, while fiscal funds can only cover 10%-15% of this green investment demand. Guiding the market to increase green investment has become urgent, and ESG serves as a key link connecting the enduring development of enterprises and the allocation of market resources.

In the research field, current domestic studies on ESG have obvious shortcomings: there are more studies on macro-level policies, while micro-level empirical studies mostly focus on a single aspect of ESG. Studies that conduct a comprehensive examination of corporate ESG performance often rely on indicators constructed by researchers themselves, and the scientificity and reliability of such studies still need to be verified by subsequent research. Furthermore, although domestic and foreign study on the economic impacts of company's ESG performance covers a wide range, earlier studies focuced on financing costs are scarce, especially those comparing the differential impacts of ESG on enterprises' cost of equity and cost of debt financing; classified studies addressing corporate heterogeneity are also relatively insufficient.

In addition, the concept of ESG investment entered the Chinese market relatively late. Although its attention has increased with the progress of the ESG system, it still needs further verification whether improving corporate ESG performance can achieve a mutually benefical situation, and if it can reduce financing costs. Based on the aforementioned policy orientation, market demand, and research gaps, conducting research on the relationship between corporate ESG performance and financing costs is necessary and urgent.

1.2. Research significance

Qiu and Yin found that ESG dimensions have differentiated effects: environmental and corporate governance performance significantly reduce financing costs-each additional environmental penalty increases the debt interest ratio by 0.182, while a 1-unit rise in the governance index lifts Tobin's Q by 0.22 [1].

However, social responsibility (S) performance shows no significant impact. Chen further identified financing-type heterogeneity: ESG performance negatively affects equity financing costs but positively impacts debt financing costs for CSI 300 and CSI 500 constituent enterprises [2]. Wang and Xie Meng supplemented the mechanism: ESG disclosure cuts financing costs through the "information effect" and "reputation effect" [3].

Qiu and Yin advised enterprises to prioritize environmental governance and corporate governance over blind social responsibility spending. Wang and Xie emphasized standardized quantitative disclosure to avoid "whitewashing." Chen suggested non-state-owned enterprises use ESG to lower equity financing costs and state-owned enterprises balance ESG investment with debt costs. It noted ESG disclosure effects equity financing more than debt (0.009), guiding equity investors to focus on

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disclosure quality. Qiu and Yin reminded creditors to assess environmental risks. Chen highlighted stronger ESG impacts in non-heavily polluting industries for industry-specific adjustments.

1.3. Research purpose and structure

This study systematically reviews domestic and international literature on the relationship between ESG performance and corporate financing costs. Through critical analysis, it clarifies the core conclusions, controversial focuses, and influencing mechanisms of their relationship, and identifies gaps in current research regarding theoretical application, variable measurement, and sample selection. Ultimately, it provides a literature context for subsequent empirical research and offers theoretical support for enterprises to optimize their strategies for cost reduction and for policymakers to improve disclosure systems.

This study proceeds following the logic of "background-theory-empirics-mechanism-controversy-conclusion": The introduction, combined with the global ESG investment boom, clarifies the research significance, literature inclusion criteria, and defines the meaning of "ESG performance" and "financing costs". The second part sorts out the explanations of Information Asymmetry Theory and Stakeholder Theory on their relationship, compares the controversies related to the "Cost Hypothesis", and explores the possibility of theoretical integration. The third part summarizes empirical conclusions by classifying them into two financing costs, and analyzes the differential impacts of the three dimensions within the ESG framework. The fourth part sorts out mediating paths such as "ESG → reduced information asymmetry → lower financing costs" and analyzes the moderating effects of factors like industry and policy. The fifth part extracts the controversy between "ESG premium vs. discount" and its causes, and identifies gaps in variable measurement and research scenarios. Finally, it summarizes core consensus and functional mechanisms, proposes future research directions such as cross-border comparisons, and points out limitations in terms of literature scope.

2. Literature review

Against the backdrop of China's A-share market, this study aims to address four core research questions: First, does a firm’s ESG performance have a huge influence on its debt financing costs, and what are the direction and magnitude of this impact? Second, if such an impact exists, through which specific mediating pathways—such as mitigating information risk, reducing financial risk, or enhancing external supervision—does ESG performance affect debt financing costs, and are there changes in the proportion of mediating effects across these pathways? Third, do heterogeneous factors moderate the relationship between ESG performance and debt financing costs, and what are the heterogeneous characteristics of these moderating effects in different contexts? Fourth, do the three aspects of ESG exhibit differentiated impacts on debt financing costs? Specifically, is the effect of the Governance dimension significantly stronger than that of the Environmental and Social dimensions, and what are the core driving factors behind this dimensional discrepancy?

Extant studies have generally confirmed a negative correlation between them. Lian used semi-annual data of 2,631 A-share listed firms in Shanghai and Shenzhen from 2009 to 2020. In their baseline regression industry and time are fixed effects, they found that each one-level upgrade in ESG ratings reduced debt financing costs by 0.088, accounting for 2.41% of the average debt financing costs of the sample. This conclusion remained robust after addressing endogeneity through individual fixed effect models, lagged ESG variables, and instrumental variable methods [4].

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Mei Yali extended the sample period to 2009–2021, and their results showed that the regression coefficient of ESG on debt financing costs was -0.186. This cost-reducing effect persisted in the T+1 and T+2 periods and only became insignificant in the T+3 period, confirming the long-term role of ESG performance [5]. Fan constructed a comprehensive ESG performance score using principal component analysis and found that ESG performance's standard deviation increase by 1 percent will led to a 5.13% decrease in debt financing costs [6].

Supplementary evidence also supports this negative correlation. Chen analyzed data from A-listed manufacturing firms between 2010 and 2022, showing that a 10-point progress in ESG performance reduced costs by 0.12 percentage points, this result remained valid even after excluding samples influenced by financial crises and the pandemic.

Existing research identifies two primary proccess through which ESG affects debt financing costs which are risk mitigation and information transmission. Lian Yonghui proposed that ESG rating reduces debt financing costs through refuce three types of risks: financial risk, information risk, and agency risk. Among these, the mediating effect of information risk accounted for up to 43.91% of the total effect. Zhang supplemented this by noting that the mediating role of information risk is more obvious in not state owned enterprises, as these firms have lower initial information disclosure quality, leaving greater room for ESG to improve information transparency [7].

Focusing on the information transmission mechanism, Mei Yali found that ESG performance significantly increases analyst attention and institutional investor shareholding ratios, thereby alleviating information asymmetry between firms and creditors. Li Wang further pointed out that ESG information disclosure also reduces creditors' information search and evaluation costs, indirectly lowering debt financing premiums, with the total contribution of the information transmission pathway reaching 38.2% in their study.

Li Quan classified creditors into three categories and found that bond market' investors and institutional investors were sensitive to ESG performance, while domestic ordinary legal persons, natural persons, and small-to-medium institutional investors showed no significant response. They also confirmed that the Governance dimension had a far more significant debt cost-reducing effect than the Environmental and Social dimensions [8].

Zhao explored the role of ownership between ESG on debt financing was more significant in non-SOEs than in SOEs. Which is because SOEs' inherent financing advantages weaken the signaling value of ESG.

Xiao emphasized the moderating role of financial agglomeration, noting that firms in financially agglomerated regions have more abundant financing channels, which amplifies ESG's cost-reducing effect. They also identified a firm size threshold: the synergistic effect of ESG and financial agglomeration can only be fully exerted when the logarithm of total assets exceeds 21.0496 [9].

Chen & Li focused on emerging industries and found that the impact coefficient of ESG rating on debt financing costs was -0.256 for firms in new energy and carbon neutrality sectors, significantly higher than the -0.163 coefficient for traditional industries. This is because ESG investments in emerging sectors align better with policy orientations, making them more likely to gain creditor recognition.

Additionally, Zhang explored ESG's indirect impact from the perspective of financing constraints, finding that ESG performance reduces financing constraints, which in turn provides financial support for corporate green technological innovation.

Fan and Li both confirmed that the G dimension has a stronger effect, but neither explained why the E and S dimensions have weaker effects. At the same time, existing studies lack deep study of the value of the E and S dimensions across different industries-Wang pointed out that in high-

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energy-consuming industries, the debt cost-reducing effect of the Environmental dimension is higher than that of the Social dimension, but this conclusion has not been extended to the cross-industry comparison level. Mei Yali only tracked ESG's impact on financing costs within the T+3 period and did not explore longer-term trend changes.

Most studies use all A-share listed companies as examples, lacking attention to emerging fields such as new energy and carbon neutrality, and failing to systematically analyze the ESG financing effects for SMEs. Some studies have pointed out that the ESG rating coverage rate of A-share SMEs is less than 30%, and in the samples of existing studies, the proportion of SMEs is only 15%–20%, this makes it difficult to reflect the true correlation between ESG and the financing costs of SMEs.

In addition, Fan found that rating divergence increases debt financing costs by 1.8927 but did not propose unified rating standards or pathways to alleviate such divergence. Although Zhang compared the differences among six rating systems, he/she did not further explore the mechanism through which rating divergence affects financing costs, nor did he/she put forward corresponding response strategies.

Three core theories underpin the correlation between ESG rating performance and debt financing costs: Stakeholder Theory provides a foundational explanation, positing that firms reduce debt financing costs by enhancing ESG rating performance to meet the demands of stakeholders like creditors and governments-Lian verified this by showing better ESG performance lowers creditors' risk premiums, while Fan noted the Social and Governance dimensions have more significant effects as they directly address stakeholders' core concerns, and Brown further found this negative correlation is stronger in China than in European and American markets due to the combined influence of national policies and creditors' risk preferences. Information Asymmetry Theory explains how ESG alleviates information gaps: Mei found firms with good ESG rating performance have higher information disclosure quality and lower earnings management, and ESG increases analyst attention and institutional shareholding to reduce creditors' information search costs; Li added that professional investors are more sensitive to ESG due to stronger information interpretation capabilities.Risk Mitigation Theory, meanwhile, is validated through three sub-dimensions: Lian proposed ESG reduces financial risk via a "reputational insurance effect" and curbs agency risk by substituting external supervision; Fan noted good ESG performance enhances financial discipline and Garcia found this risk mitigation effect is more prominent in economic downturns, when creditors' risk aversion is stronger and ESG's "risk buffer" value is amplified [10].

3. Results

In China's market, the impact of corporate ESG on debt financing costs has been empirically validated by multiple studies, with an overall dominant negative effect, though exceptions exist.

Lian's research (2009–2020) used semi-annual data from 2,631 Shanghai and Shenzhen A-share listed firms, defining it as the ratio between interest expenses to interest-bearing debt. Regression results showed the ESG performance coefficient was negative at the 1% level: each ESG rating upgrade reduced costs by 0.088, accounting for 2.41% of the average COD and 2.65% of the sample's standard deviation, proving both statistical and economic significance. Wang Liqing focused on CSI 300 and CSI 500 component firms, measuring costs via credit spread. Multiple regression yielded ESG coefficients between -0.188 and -0.202, all significant at 1%, further confirming the negative correlation [11]. Qiu Muyuan, studying under ecological civilization construction, found firms with strong Environmental and Governance performance effectively cut debt costs, and high-quality ESG information disclosure positively moderates this relationship. In contrast, Chen (2015–2019, 839 CSI 300/500 firms) measured costs by financial expenses vs.

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average interest-bearing liabilities, finding a weakly positive ESG coefficient. This was attributed to the high proportion of state-owned enterprises in the sample: traditional creditors viewed ESG investment as a short-term cost burden, fearing reduced profitability and demanding higher risk premiums. Though Wang did not provide direct ESG-cost coefficients, he noted standardized ESG disclosure reduces information asymmetry, indirectly lowering debt costs, aligning with most studies' negative impact conclusions.

Designated literatures identify four key mediating pathways for ESG's impact on debt costs, with notable differences in their effect proportions. First, mitigating information risk is the most critical channel, accounting for 43.91% of the total effect. Lian measured information risk using disclosure quality and earnings management. Results showed ESG performance correlated positively with DIQ and negatively with ABSDA, as ESG disclosure supplements non-financial information, reducing creditors' operational uncertainty. Second, reducing financial risk contributes 2.68% of the total effect. Lian used semi-annual standard deviations of individual stock excess returns and CAPM residuals to measure risk; ESG correlated negatively with both, enhancing debt-servicing capacity by lowering operational and market risks. Third, alleviating agency risk is reflected indirectly via moderating effects: Lian introduced interaction terms between external supervision and ESG. Positive coefficients showed ESG reduces debt costs more strongly in firms with weak supervision, constraining management behavior. Fourth, easing financing constraints accounts for 13.4% of the effect. Zhang (2015–2019 A-share firms) used the SA index's logarithmic absolute value to measure constraints, finding ESG correlated negatively with FC. Tang Hua further confirmed ESG reduces constraints in ESG-innovation research, a logic applicable to debt financing: eased constraints lower reliance on high-cost debt [12].

Heterogeneous factors significantly moderate the ESG-debt cost relationship. In terms of ownership, non-SOEs benefit more: Lian's group regression showed non-SOEs had an ESG coefficient of -0.141, while SOEs' 0.013 was insignificant; the full-sample SOE×ESG term was 0.112, as SOEs rely on government credit for low-cost financing, weakening ESG’s marginal effect. Chen Ruohong’s results echoed this, with SOEs' positive ESG-cost coefficient higher than non-SOEs’ insignificant one. For regional marketization, Lian’s grouping showed high-marketization regions had an ESG coefficient of -0.113 vs. -0.025 in low-marketization areas; the MKI×ESG term was -0.017 due to better legal systems and transparency in high-marketization regions. Under macroeconomic moderation, adverse conditions amplify ESG's "risk buffer": Lian found positive gdp×ESG and m2×ESG terms, but negative EPU×ESG, meaning low growth, tight money, or high policy uncertainty strengthen ESG's effect. Wang Liqing's pandemic-era (2019.12–2020.4) regression showed a larger ESG coefficient absolute value. By industry, non-heavy-polluting sectors see more significant ESG impacts: Chen's CSRC-classified grouping showed non-heavy-polluting firms had an ESG coefficient of 0.002, while heavy-polluting sectors' was insignificant—creditors trust ESG performance less in policy-vulnerable heavy-polluting firms.

ESG's three dimensions have differentiated impacts: Governance is most significant, Environmental weakest. Andrieș (493 international banks, including Chinese ones) found G correlated negatively with total funding costs and deposit costs, robust to controls. Qiu confirmed strong G reduces A-share firms’ debt costs. For Social, Andrieș found it correlated negatively with banks' total funding costs and deposit costs, with larger coefficients than E but smaller than G, employee/community investment boosts reputation but weakly. E's impact is weak: Andrieș found it only weakly correlated with total funding costs and insignificant for deposits; Chen's A-share study also showed an insignificant E coefficient. Core drivers: G directly eases shareholder-creditor agency risks and management moral hazards; E is weak as many firms' environmental investment

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remains compliance-only, with unquantifiable long-term benefits; S is indirect. Li's ESG-innovation research indirectly confirms G's stable support for long-term development, reinforcing its core role in debt cost reduction [13].

4. Discussion

This study pay more attention to China's A-share market in order to find the conncetion between company's ESG rating performance and financing costs, and interprets the core research results from four dimensions: overall effect, mediating mechanism, heterogeneous moderation, and dimensional difference.

Regarding the overall negative effect of ESG on debt financing costs, most empirical results show a significant negative correlation between the two. The essential logic behind this phenomenon lies in that ESG performance can transfer signals to the market that an enterprise "has sustainable development capabilities", thereby reducing information asymmetry between creditors and the enterprise, creditors regard ESG performance as a reflection of an enterprise's risk management level and long-term value, and thus lower their requirements for risk premiums. However, Chen found a positive correlation between the two in the sample of state-owned enterprises (SOEs). The reason is that SOEs already have low-cost financing advantages relying on government credit, while traditional creditors view ESG investment as short-term non-productive costs and worry that it will weaken the enterprise's short-term profitability. This conclusion also reflects the reshaping effect of institutional context on the signaling value of ESG.

Among mediating pathways, their mechanisms differ. Mitigating information risk is the core channel, as ESG disclosure supplements non-financial information to reduce creditors' uncertainty about business operations. Easing financing constraints helps enterprises obtain more external funds by enhancing reputation and credibility, reducing reliance on high-cost debt. Reducing financial risk indirectly strengthens debt-servicing capacity by lowering stock price volatility, though its proportion is small. Alleviating agency risk works by constraining management behavior; ESG acts as a substitute supervision mechanism in firms with weak external oversight, reducing moral hazards.

Heterogeneous moderation follows clear logic. By ownership, non-SOEs benefit more from ESG, as they need ESG to mitigate "financing discrimination", while SOEs have weak marginal ESG effects due to government credit support. In highly marketized regions, sound legal systems and transparent information make creditors more likely to trust ESG performance, strengthening its cost-reducing effect. In adverse macro environments, ESG's "risk buffer" role becomes prominent, as seen during the COVID-19 pandemic. By industry, non-heavy-polluting firms show more significant ESG effects, creditors have lower trust in ESG performance of heavy-polluting firms, which are vulnerable to environmental policy shocks.

Dimensional differences in ESG are traceable. The Governance dimension has the strongest impact, as it directly eases shareholder-creditor-manager agency conflicts, reducing creditors' default risk concerns. The Social dimension is less impactful: investments in employee welfare boost reputation but affect debt costs indirectly via "reputation transmission". The Environmental dimension is weak, as most A-share firms' E investments remain compliance-focused without forming green competitiveness, and long-term benefits are hard to quantify in the short term, leading to low creditor recognition.

In terms of international continuity, global studies have confirmed the negative ESG-debt cost correlation, with the G dimension being most influential. This study validates this conclusion in the A-share market, demonstrating the "cross-border consistency of ESG value logic", whether in

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mature or emerging markets, G's role in mitigating agency risk and ESG's role in reducing information asymmetry are core to creditor decisions.

In Chinese contextual innovation, it differs from domestic studies in three ways. First, it breaks the "black box of overall effects": previous domestic research focused on whether ESG affects debt costs, while this study quantifies the proportion of four mediating pathways, clarifying how ESG works and addressing fragmented mediating mechanism research. Second, it expands heterogeneous dimensions: prior studies focused only on ownership, but this adds three moderators, identifying "ESG's risk buffer in adversity" and "ESG trust discounts in heavy-polluting industries", aligning with China's "institutional transition + ecological governance" context. Third, it refines drivers of dimensional differences: while prior studies noted ESG dimensional gaps, this explains why G is strongest and E weakest via "agency mitigation, compliance investment, and indirect reputation", reflecting China's ESG practice of "valuing governance over environment".

This study makes three theoretical breakthroughs. First, it enriches the "mediating mechanism theory" of ESG and capital costs: by quantifying mediating effects, it opens the black box of "ESG → debt costs", providing a "multi-path comparison" framework for future research. Second, it expands institutional theory's application in ESG: it emphasizes how China's transitional institutional environment moderates ESG's signaling value, addressing international studies' neglect of emerging market institutional uniqueness. Third, it improves ESG dimensional heterogeneity theory: explaining dimensional differences via "agency risk-reputation transmission-compliance investment", offering a context-adaptive logic for related research.

This study has four limitations. First, single ESG rating data sources may cause measurement bias, as different agencies use varied indicators. Second, mediating pathways and heterogeneous factors are undercovered. Third, causal identification is limited, multiple regression cannot fully exclude reverse causality or omitted variables. Fourth, short sample periods and narrow firm coverage reduce generalizability.

Future research can address these limitations. First, optimize ESG measurement and causal identification. Second, explore emerging mediating variables and micro moderators. Third, study policy shocks to track E dimension changes. Fourth, compare ESG effects across markets and analyze ESG's impact on debt maturity/financing methods. Fifth, examine E/S/G's complementary/substitutional effects and dynamic ESG changes on debt costs.

5. Conclusion

This study empirically examines the connection between corporate ESG rating performance and debt financing costs in China's A-share market, focusing on four core research questions: the overall impact of ESG, its mediating pathways, heterogeneous moderators, and dimensional differences in ESG's effects.

First, regarding the core question of ESG's impact on debt financing costs: most evidence confirms a significant negative correlation-better ESG performance reduces debt costs by lowering creditors' risk premiums, though SOE samples show a weak positive association due to institutional credit advantages and short-term cost concerns. Second, on mediating mechanisms: ESG acts through four pathways, with mitigating information risk as the key channel, followed by easing financing constraints, while reducing financial risk and alleviating agency risk play supplementary roles. Third, for heterogeneous moderators: non-SOEs, firms in highly marketized regions, those in adverse macro environments, and non-heavy-polluting enterprises gain stronger debt cost reductions from ESG, reflecting the boundary conditions of ESG's value in China's institutional context. Fourth, on ESG dimensional differences: the G dimension put the most negative impact, the Social

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dimension has a weaker indirect effect, and the Environmental dimension shows insignificant or weak effects, driven by differences in agency risk mitigation, reputation transmission, and compliance-focused investment.

This study's innovations lie in three aspects: it quantifies the proportional contribution of multiple mediating pathways, expands heterogeneous research to include regional marketization, macroeconomy, and industry attributes, and clarifies the underlying logic of ESG dimensional differences. Practically, it provides actionable guidance: enterprises can prioritize G improvement and standardized disclosure to optimize financing; creditors can integrate ESG into credit pricing; policymakers can promote differentiated ESG policies to drive value-oriented practice.

Overall, this research validates ESG's role in reducing debt financing costs in China's A-share market, clarifies its functional boundaries and mechanisms, and offers a context-specific reference for ESG-driven financial efficiency improvement in emerging markets.

References

[1] Qiu, M. Y., & Yin, H. (2019). Corporate ESG performance and financing costs under the background of ecologicalcivilization construction. Journal of Quantitative & Technical Economics, (3), 108-123. https: //doi.org/10.13653/j.cnki.jqte.2019.03.007.

[2] Chen, R. H., Zhao, X. Y., & Jin, H. (2022). The impact of corporate ESG performance on its financing costs. Scientific Decision-Making, (11), 24-40.

[3] Wang, Y. Q., & Xie, M. (2022). The impact of ESG information disclosure on corporate financing costs: Empirical evidence from China's A-share listed companies. Nankai Economic Studies, (11), 75-94. https: //doi.org/10.14116/j.nkes.2022.11.005.

[4] Lian, Y. H., He, X. Y., & Zhang, L. (2023). Corporate ESG performance and the cost of debt. Collected Essays onFinance and Economics, (1), 48-58.

[5] Mei, Y. L., & Zhang, Q. (2023). The impact of ESG performance on corporate debt financing costs. Finance andEconomy, (2), 51-63.https: //doi.org/10.19622/j.cnki.cn36-1005/f.2023.02.005.

[6] Fan, Y. P., Meng, Y. J., & Hu, B. (2023). Corporate ESG performance and debt financing costs: Theoretical mechanismsandempiricalevidence.EconomicManagement, (8), 123144. https: //doi.org/10.19616/j.cnki.bmj.2023.08.007.

[7] Zhang, Y. M. (2021). Corporate ESG performance, financing constraints and green technologicalinnovation. Commercial Accounting, (11), 33-39.

[8] Li, Q., Li, T. S., & Zhang, Y. (2024). ESG performance, heterogeneous creditors, and bond financing costs: Firmlevel evidence. Finance Research Letters, 66, 105527.

[9] Xiao, D., & Xu, X. T. (2025). Financial Agglomeration, Financing Costs, and Corporate ESG Performance. Finance Research Letters, 84, 107786.http: //dx.doi.org/10.1016/j.frl.2025.107786

[10] Freeman, R. E. (1984). Strategic management: A stakeholder approach. Pitman.

[11] Wang, L. Q., & Yang, X. F. (2022). A study on the correlation between ESG performance and corporate financingcosts. China Market, (9), 47-53.https: //doi.org/10.14116/j.nkes.2022.11.005.

[12] Tang, H. (2022). The Effect of ESG Performance on Corporate Innovation in China: The Mediating Role of Financial Constraints and Agency Cost. Sustainability, 14(7), 3769.

[13] Andrieş, A. M., & Sprincean, N. (2023). ESG Performance and Banks' Funding Costs. Finance Research Letters, 54, 103811.