

The Impact of ESG Performance on the Financing Cost of Listed Companies: An Empirical Analysis Based on Chinese A-Share Listed Companies

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Abstract. With sustainability taking hold in the world of capital markets, Environmental, Social and Governance (ESG) is becoming more important when it comes to getting funded by companies. This paper tests how does ESG affects Financing cost of A- shares Listed Company from 2019 – 2023 on information Asymmetry, signaling transmission &Stakeholders theory using Chinese company. As per the above results, higher ESG rating can reduce both the debt financing cost and total financing cost which confirms for the financial; advantage of good ESG. Checking out the sub – dimensions, it's obvious. Corporate Governance is most effective in reducing financing costs as it is negative in all models. Social performance can reduce the cost of borrowing money. But it will raise the cost of borrowing for the time being because more green spending means less cash flow. And robustness check's back those results: This paper gives companies a way for the ESG investment, it can help banks decide on credits pricing along with regulators attempting at some kind of standardisation about the ESG disclosure.

Keywords: ESG Performance, Financing Cost, A-Share Listed Companies

1. Introduction

Environmental, social, and corporate governance, or ESG has spread all over global capital markets quickly over the past few years, and this is now how people find out if a company is really sustainable. The China's capital market is also starting to pay attention to ESG. Regulators have been releasing a bunch of policy documents in order to make publicly traded companies disclose more standard and official ESG information. In 2024, the stock exchanges of Shanghai, Shenzhen and Beijing released regulations on sustainability report respectively, which is the next step for building up China's ESG disclosure system. In that scenario, it is genuine worth to ask does ESG performance make a difference in corporate finance.

The information asymmetry theory holds that the financing companies and investors on the capital market have different information; due to this difference, there is adverse selection and moral hazard. As a result, the cost of financing increases [1]. And with strong ESG disclosure people can get to close this and allow crediturs and shareholders to see companies' risks and growth opportunities. The Signal transmission theory goes one step ahead. High ESG scores work like

market signals, which make outside people think that a business isn't risky, making the price difference investors want to pay go down [2]. And it says people need to pay attention to enviro and soc issues as well as governance, so firms that are serious about ESG probably will be able to reduce the probability of litigation, compliance, reputation, or uncertainty about future cashflows [3].

On the practical side is financing costs in the middle of the company's decisions. Lower financing costs make the investment more effective, companies are more competitive, and it is helpful for directing social capital to be sustainable. But there is no consensus about which of the ESG areas matter most for financing costs. Some say its Corporate Governance but some talk about the Environmental side [4, 5]. This is probably due to the different samples and the indicators and also because of the institutions.

This paper selects China's A-listed corporations between 2019-2023 as sample and testing whether in total or its part, ESG affects a company's overall cost of capital using ESG ratings provided by Huazhong Securities. The new bit of this paper is that people do not just talk about ESG lowering costs in general but also look at how its environmental parts and social parts do different things, which means businesses can really know what to spend their ESG money on.

2. Literature review and research hypotheses

Linking up with how well a company does with ESG is being looked at more often in academic now. The current work seems to consider it from 3 different theories which are Information Asymmetry Signal Transmission Stakeholder theory.

Information asymmetry theory looks at the info gap b/t firms & outside investors as a big reason for high financing cost. Full ESG disclosure makes things more open with companies, it is better for investors to find out information and assess risks since the bad choices become less likely [1, 6]. When the market can "really" see, accept, and absorb the ESG efforts from a company then creditor's default will be simpler to judge – hence requires less in terms of the price.

According to signal transmission theory, when there is incomplete info then the high-quality firms send a positive signal about their own worth by doing what they really do. A strong ESG score is one such signal. Firms spend money on environmental protection, social responsibility and governance to say to creditors and investors that the company cares about long term value & proper risk, which means it gets better terms on its finances [7].

The Stakeholder Theory states that the company should be responsible for its shareholders as well as its employees, community and environment amongst others [3]. The companies paying more attention to ESG will have better stakeholder relationships. They could reduce the risk of lawsuits and fines due to pollution, labor disputes, bad management etc., thereby reducing compliance cost and avoiding harm on company image [8]. Like lowering the riskier ones and it'll be a cheaper cost for financing.

According to literature most of the work's seems like have a low financing cost in ESG performances. Use European listed companies, Eliwa et al., show that the companies have a better ESG, enjoy less debt financing cost [4]. NG and REZAEY find that more ESG disclosure lower the cost of a firm's equity capital [9]. In China: According to Qiu Myuan and Yin Hong's view, ESG performances cut off the price of the company debt finance [10]. But when it comes to what really matters, there is no clear answer: Some say it is the most direct and crucial factor, some studies point out that the environmental effect is larger in certain sectors [4, 11].

According to the theory and literature above, the paper will put forward the following assumptions.

To conclude, all the strong performances of ESG are realized in three ways. It shrinks information as whole, sends good market info, and reduces stakeholders' conflicts. When a company gets an ESG rating that is high, creditors and investors feel better when the company is operating. They therefore want less risk. This paper puts forth the first hypothesis.

H1: The higher the ESG score is, the lower the financing costs of listed companies.

Three ESGs also have influence on different ways of financing costs. And on the governance aspect, robust governance structures link right away with what clear the company's finances are, how well internal controls function, and how typical their choices are. This is all that matters to a creditor on making his credit decision [12]. And good corporate governance reduces agency costs and moral hazard; it is the one that cuts down the financing cost most directly. Social dimension is when companies that actually do take on their social responsibility, it will establish a good market reputation and public trust to reduce the reputation risk premium. Environmental dimension: Environmental investment will reduce environmental and compliance risks in the future, but a large amount of expenditure on environment during the period is also an increase in funding and financial burden. This paper puts out the second one.

H2: There are differences between the three aspects of ESG, and it is found that the restraining impact on financing cost is highest for G.

3. Empirical research design

3.1. Sample selection and data sources

This article takes all the Chinese A-shares listed companies from 2019-2023 as the research samples: Most of it comes from the CSMAR database and the Huazheng ESG rating database. Financial industry companies were removed as well since their statements and businesses are quite different from ordinary companies. ST and *ST companies are also removed in order to rule out the impact of unusual operation. Samples with lots of missing keys too, are deleted as well. For all continuous variables, they are truncated at 1% and 99% levels. Then, there will be 13778 firm-year observations as the final sample: It is a five-year full year sample. The industry includes manufacture, information & telecom, real estate, energy and so on, which is quite representative.

3.2. Variable definition

The main variables of this article are the dependent variable and the core explanatory variable and the control variable.

The dependent variable of this paper is the financing cost, and there are two indexes. Cost_debt is the cost of debt financing. It is the sum of all the interest expenses, fees and other financial costs over total debt, indicating how much the company pays for money taken from lenders. Cost1 is the total financing cost. It is the ratio of financial expenses to total liability and it is broader, thus it shows how much a firm has to finance overall.

The main explanatory variable is ESG performance. This paper uses Huazheng ESG rating system which includes three parts of environment, society and Corporate Governance. It's among the ones most frequently covered and updated on the ESG rating system here in China. There are 9 ratings ranging from C to AAA, which have codes 1 - 9 and larger numbers indicate better ESG performances. To look at it more closely, the Environmental Score E_Score, the Social Score S_Score and the Governance score G_score are added to the model as well on thereown.

The control variables in this paper follow the previous studies which include firm size, asset-liability ratio, return on total asset, revenue growth and the nature of ownership. It contains firm size, financial risk, profitability, growing power and property right characteristics [4, 9].

3.3. Model construction

To see what effect ESG performance has on the financing cost of listed companies, this paper sets up the following panel fixed-effect regression model:

Model 1 tests how the ESG comprehensive rating affects the cost of debt financing.

$$Cost_debt_{i,t} = \alpha_0 + \alpha_1 ESG_{i,t} + \sum_k \beta_k Controls_{k,i,t} + \mu_i + \lambda_t + \varepsilon_{i,t} \quad (1)$$

Model 2 tests how the ESG comprehensive rating affects comprehensive financing cost.

$$Cost1_{i,t} = \alpha_0 + \alpha_1 ESG_{i,t} + \sum_k \beta_k Controls_{k,i,t} + \mu_i + \lambda_t + \varepsilon_{i,t} \quad (2)$$

In Model 3, this paper feeds in all the 3 ESG Dimension scores and checks if they collectively effect debt financing costs.

$$\begin{aligned} Cost_debt_{i,t} = & \alpha_0 + \alpha_1 E_Score_{i,t} + \alpha_2 S_Score_{i,t} + \alpha_3 G_Score_{i,t} \\ & + \sum_k \beta_k Controls_{k,i,t} + \mu_i + \lambda_t + \varepsilon_{i,t} \end{aligned} \quad (3)$$

Model 4 uses the same setup but puts comprehensive financing cost as the dependent variable.

$$\begin{aligned} Cost1_{i,t} = & \alpha_0 + \alpha_1 E_Score_{i,t} + \alpha_2 S_Score_{i,t} + \alpha_3 G_Score_{i,t} + \sum_k \beta_k Controls_{k,i,t} \\ & + \mu_i + \lambda_t + \varepsilon_{i,t} \end{aligned} \quad (4)$$

Among them, i represents the individual enterprise, t represents the year, μ_i is the individual fixed effect, λ_t is the time fixed effect, $\varepsilon_{i,t}$ is the random error term. Model is controlling for both an individual and a time fixed effect at the same time such that individuals and time specific traits that do not change with time will not bias the results. Use robust std err that are clustered on firm if u have within group autocorrelated and heteroskedastic.

4. Empirical results

4.1. Descriptive statistical analysis

Table 1 reports the descriptive statistical results of the main variables.

Table 1. Descriptive statistics

Variable	N	Mean	Median	S.D.	Min	Max
Cost_debt	13778	0.0169	0.0150	0.0126	0.0000	0.0551
Cost1	13778	0.0050	0.0091	0.0283	-0.1317	0.0550
ESG	13778	4.2027	4.0000	0.9899	1.0000	8.0000
E_Score	13778	62.6116	61.7800	6.8542	46.9100	82.3000
S_Score	13778	76.8204	77.0800	6.9332	54.0000	94.2900
G_Score	13778	78.0651	79.2100	6.2708	55.5000	89.3300
Size	13778	22.4936	22.2999	1.3235	20.1160	26.1559
Lev	13778	0.4315	0.4251	0.1967	0.0654	0.8869
ROA	13778	0.0338	0.0367	0.0685	-0.2436	0.1921
Growth	13778	0.1785	0.1317	0.3452	-0.5431	1.8136
SOE	13778	0.3620	0.0000	0.4806	0.0000	1.0000

The mean cost of debt financing is 0.0169 and the mean cost of comprehensive financing is 0.0050: Their standard deviation is respectively 0.0126 and 0.0283, so there is difference among the cost of financing for samples companies. Average ESG is around 4.20 which falls into BB -A on the Huazheng scale and thus it can be seen that a majority of companies fall somewhere in middle to top end of the ESG. Of the three subdimensions, governance has the most high scores; secondly, social; environmental gets the least. Which means Chinese listed companies are much better in the aspect of governance than environment and society. The avg asset-lev is 0.43, the avg ROA is 0.03, about 36% of them are state-owned, which lines up with what people see across the board in the A share market.

4.2. Benchmark regression analysis

As shown in Table 2, these are the benchmarks regressing ESG performance on Corporate Financing Cost Models 1 and 2 models the ESG overall ratings. Model 3 and 4 modeled on the three-dimension scores.

Table 2. Baseline regression results

Variables	(1) Cost_debt	(2) Cost1	(3) Cost_debt	(4) Cost1
ESG	-0.0002** (0.0001)	-0.0009*** (0.0002)		
E_Score			0.0001*** (0.0000)	0.0000 (0.0000)
S_Score			-0.0000*** (0.0000)	-0.0000 (0.0000)

Table 2. (continued)

G_Score			-0.0001*** (0.0000)	-0.0003*** (0.0000)
Size	0.0010 (0.0008)	-0.0013 (0.0015)	0.0010 (0.0008)	-0.0013 (0.0015)
Lev	0.0204*** (0.0028)	0.0586*** (0.0055)	0.0202*** (0.0028)	0.0573*** (0.0054)
ROA	-0.0102*** (0.0038)	-0.0019 (0.0063)	-0.0098*** (0.0037)	-0.0015 (0.0063)
Growth	-0.0005 (0.0005)	0.0011 (0.0010)	-0.0006 (0.0005)	0.0010 (0.0010)
SOE	-0.0010 (0.0011)	-0.0043 (0.0036)	-0.0009 (0.0011)	-0.0044 (0.0035)
N	13776	13776	13776	13776
R ²	0.752	0.685	0.754	0.686
F-statistic	17.605	29.942	18.899	26.514

Note: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. All models include firm and year fixed effects with standard errors clustered at the firm level.

The coefficient on the ESG comprehensive rating in model 1 is -0.0002 and this is statistically significant at the 5% level. Controlling firm level as well as 2WFEs and then every single 1 up change ESG Rating would lower on average the Debt financing cost by about -0.02pp. The number may seem small in absolute numbers but given that the average debt financing cost for the sample was 1.69% the reduction is equal to 0.0118 *the mean* or quite large! In Model 2, the ESG coefficient is -0.0009 and it is very significant at the 1% level, which is much bigger than the effect on debt financing cost alone. So ESG performance does reduce the cost of debt financing, but it is also bigger for cutting down on the entire financing load of the company. These show H1 - better ESG means less cost to borrow money for the company.

In Model 3, this study puts all the ESG scores in the 3 dimensions; the dependent variable is the debt financing cost. The governance score G_Score is -0.0001 and it is very significant and negative at the 1% level. It has the largest impact on economics of the three, therefore corporate governance is the most important aspect of ESG for a company's cost of capital. Social score S_Score has also been important but with a negative sign on the 1% level, hence good social responsibility helps cut cost of debt financing. The environmental score E_Score is also very important, it's positive at 1%. This is probably due to the fact that companies which perform well on environmental issues spend more on environmental protection, hence their operating costs and financing requirements increase in the short term.

In model 4, it is the dependent variable of total cost of financing the only remaining score that is significant and negative is the Governance score at the 1% significance level; the Environmental & Social scores were not significant. Therefore, corporate governance will be the main factor for the financing costs of a firm. It is much more direct and constant than environment and society because governance quality means whether it is transparent with finances and runs its operation properly, these factors will be the key points that creditors and investors refer to as they evaluate the risks of

financing. These are in support of H2, which was the 3 ESGs have different effects and the governance had the largest impact on decreasing financing costs.

Control variables do as theories say they should: Asset-Liability is considerable and positive for all 4 model, this means companies that have more debt will have a higher cost of financing The ROA is significant and negative on Model 1 and 3 so better profits cut the financing costs. They match up well with the other research and support the model by doing so [4, 9].

5. Conclusion

Based on the information asymmetry, signal transmission and stakeholder theory, this paper empirically tests the influence of ESG performance on financing cost, taking China A-share listed companies from 2019 to 2023 as samples. The results show that: first, ESG performance can significantly reduce the financing cost of corporate debt and comprehensive financing cost and reduce the risk premium by enhancing transparency and transmitting positive signals. Second, there are differences in the three dimensions of ESG, and corporate governance has the most significant inhibitory effect on financing costs; The social dimension is equally effective, while the environmental dimension may push up the cost of debt financing due to the increase of short-term investment.

Based on the conclusion, this paper puts forward suggestions from three aspects: enterprises should give priority to improving governance level, improving internal control and information disclosure, rationally arranging environmental protection investment, and balancing short-term pressure and long-term development; Financial institutions need to incorporate ESG into credit pricing and risk assessment, and give preferential interest rates to high-quality enterprises; Regulators should improve the disclosure standards, unify the rating system, standardize the management of rating agencies, enhance the credibility of ESG, and guide the sustainable development of capital market services.

References

- [1] Freeman, R. E.: Strategic Management: A Stakeholder Approach. Pitman Publishing (1984)
- [2] Eliwa, Y., Aboud, A., & Saleh, A.: ESG practices and the cost of debt: Evidence from EU countries. *Critical Perspectives on Accounting*79, 102011 (2021)
- [3] Gillan, S. L., Koch, A., & Starks, L. T.: Firms and social responsibility: A review of ESG and CSR research in corporate finance. *Journal of Corporate Finance*66, 101889 (2021)
- [4] Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G.: Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *The Accounting Review*86(1), 59-100 (2011)
- [5] Apergis, N., Poufinas, T., & Antonopoulos, A.: ESG scores and cost of debt. *Energy Economics*112, 106186 (2022)
- [6] Broadstock, D. C., Chan, K., Cheng, L. T., & Wang, X.: The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China. *Finance Research Letters*38, 101716 (2021)
- [7] Wang, B.: Research on Digital Transformation of Manufacturing Enterprises — Taking G Enterprises as an Example. *Frontier of Economic Management*1(7) (2025)
- [8] Wang, H. J., Zheng, M. Q., Wang, H. Y., & Chang, C. P.: The impact of green finance on ESG: Evidence from the Chinese enterprises. *Oeconomia Copernicana*16(2), 557-592 (2025)
- [9] Chen, Z., & Xie, G.: ESG disclosure and financial performance: Moderating role of ESG investors. *International Review of Financial Analysis*83, 102291 (2022)
- [10] La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R.: Investor protection and corporate valuation. *Journal of Finance*57(3), 1147-1170 (2002)
- [11] Gao, K., & Yang, X.: ESG performance, corporate innovation, and downside risk: Evidence from China. *International Review of Economics & Finance*91, 550-564 (2024)
- [12] Wang, L., Lian, Y., & Dong, J.: Research on the Mechanism of ESG Performance's Impact on Enterprise Value. *Soft Science*36(6), 78-84 (2022).