

Research on the Impact of ES Performance on Corporate Value in Listed Companies

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Abstract: Against the backdrop of the deepening global sustainability concept, ESG (Environmental, Social, and Governance) has transcended the boundaries of traditional corporate social responsibility, evolving into a core analytical tool for assessing a company's long-term value creation capacity and sustainable development efficacy. To explore the impact of listed companies' ESG performance on corporate value, this study adopts a risk premium perspective, utilizing data from China's A-share market between June 2019 and December 2024, along with the ESG evaluation system of the China Securities Index Co., Ltd. and the CSMAR database. It conducts an in-depth analysis of the risk premium characteristics of listed companies' ESG performance. By employing empirical methods such as univariate portfolio analysis and panel regression models, while controlling for industry and time fixed effects, the study verifies the existence of ESG risk premiums in China's A-share market. The empirical results reveal that companies with superior ESG performance exhibit lower stock return premiums. Further analysis indicates that this risk premium primarily stems from the reduced environmental, policy, and reputational risks associated with high ESG performers, leading to correspondingly lower risk compensation demanded by investors.

Keywords: ESG Performance; Firm Value; Stock Returns; Risk Premium.

1. Introduction

Amidst global population surges, tightening natural resources, and frequent climate disasters, how businesses can transition to a high-quality sustainable development model has become a critical issue in global economic, political, and social spheres. ESG (Environmental, Social, and Governance), as a comprehensive evaluation system, measures corporate performance in environmental sustainability, social responsibility, and governance, emerging as a key standard for assessing corporate sustainability. The high-standard ESG concept compels corporate stakeholders to not only pursue short-term profits but also prioritize long-term profitability and sustainability, driving the shift toward green and low-carbon practices. This has become a pivotal endogenous force for capital markets in achieving the "dual carbon" goals. The significance of this study lies in its innovative research perspective. Domestic academic discussions on the relationship between ESG performance and corporate value have largely focused on financial performance transmission mechanisms, with limited exploration of ESGs risk premium effects within an asset pricing theoretical framework. Grounded in the practice of China's A-share capital market, this research employs portfolio sorting and factor model methods to systematically examine the negative impact of ESG performance on stock expected returns, providing empirical evidence from emerging markets for the theory of social responsibility value creation. Existing theoretical frameworks present two competing hypotheses: the risk compensation hypothesis, which posits that ESG performance reduces corporate operational risk, thereby lowering equity risk premiums; and the investor preference hypothesis, which suggests that ESG performance elevates asset valuations by satisfying investors' non-financial preferences. Correspondingly, most empirical evidence stems from mature U.S. capital markets. Studies by Pedersen et al. (2021), Pastor et al. (2022b), and Berg et al. (2021) reveal a significant positive cross-sectional correlation

between ESG indices and asset returns, while Criscuolo et al. (2015) confirm a positive time-series relationship, generally supporting the ESG positive premium phenomenon. This study shifts focus to examine the formation mechanism of ESG risk premiums in the Chinese context, testing the negative association between ESG scores and stock returns along with its influencing factors. Not only does it fill a research gap domestically, but it also expands the applicability boundaries of ESG value effect theory across differing institutional contexts, deepening the understanding of ESGs role in asset pricing processes.

2. Conceptual Definitions

2.1. ESG-Related Concepts

ESG (Environmental, Social, and Governance) is a comprehensive evaluation framework that measures a company's performance in environmental sustainability, social responsibility, and corporate governance. It has become a key global standard for assessing corporate sustainability. The environmental dimension (Environmental) focuses on a company's impact on and management of the natural environment. The social dimension (Social) evaluates the company's relationship management with various stakeholders and its contributions to society. The corporate governance dimension (Governance) examines the company's management structure, decision-making processes, and internal control mechanisms.

2.2. ESG Evaluation System

The ESG rating system provides investors with quantitative indicators of a company's sustainability capabilities by systematically assessing its performance across environmental, social, and governance dimensions. Currently, ESG evaluation standards are not fully unified, and different rating agencies and index providers may adopt varying criteria and methodologies, leading to discrepancies in evaluation results. This creates challenges for investors and

companies and hinders the healthy development of the ESG market. Some companies provide insufficient ESG disclosures, with inconsistent information quality, which affects investors' accurate assessment of corporate ESG performance. Additionally, the comparability and reliability of ESG information need improvement. Some investors lack sufficient understanding of ESG principles and underestimate the long-term value and significance of ESG investing, contributing to the relatively slow growth of the ESG investment market.

2.3. Corporate Value

Corporate value theory is rooted in the evolution of capital structure research in modern finance. The Modigliani-Miller Theorem (MM Theorem) fundamentally posits that corporate value is composed of equity capital value and debt capital value. Under the assumption of perfect capital markets, its intrinsic value depends on the future profitability of operating assets and is independent of capital structure choices. However, real-world market conditions involve multiple friction factors such as tax systems, bankruptcy costs, and information asymmetry. The formation of corporate value requires a comprehensive balance of these complex variables, exhibiting dynamic and systemic characteristics.

3. Literature Review

3.1. The Impact of Corporate ESG Performance on Firm Value

With increasing investor attention to ESG, ESG performance has become a key driver of corporate value enhancement. Zhang Lin and Zhao Haitao (2019) collected data from 417 Chinese A-share listed companies between 2015 and 2017 to examine the impact of ESG performance on firm value using a two-way fixed-effects model. Their results indicate that strong ESG performance not only improves corporate social responsibility and environmental protection but also substantially enhances market value. Zhou et al. (2022) found that robust ESG performance positively influences financing constraints, operational efficiency, and financial risk, thereby elevating firm value. Based on Chinese data, Zhang et al. (2020) concluded that superior ESG performance significantly boosts firm value in capital markets. Additionally, their study revealed that ownership structure, policy environment, and regional development moderate the effect of ESG performance on firm value. Tao Yanlin (2023) analyzed historical data from A-share listed companies on the Shanghai and Shenzhen stock exchanges from 2009 to 2021, demonstrating through normative and empirical analyses that higher ESG ratings correlate positively with corporate financial performance.

3.2. The Mechanisms of ESG Performance on Firm Value

ESG performance significantly enhances corporate financing capabilities through multi-tiered signaling. Wang Jianxin (2023) provided systematic evidence based on empirical research of A-share listed companies from 2008 to 2021. The core rationale lies in ESG disclosures serving as a "social capital" buffer between firms and financial institutions: when companies proactively disclose non-financial information such as environmental responsibility, social contributions, and governance improvements, they signal operational stability and strong compliance awareness to

creditors. This signaling effect substitutes for hard asset collateral, particularly in small and medium-sized enterprises (SMEs) lacking sufficient collateral. The study validated three mechanisms: First, using the WW index and KZ index to measure financing constraints, a 1-percentage-point increase in ESG scores reduced the WW index by 1.054% ($t=-12.76$), indicating lower debt financing costs. Second, interest expenses as a proxy for credit accessibility confirmed that firms with superior ESG performance were significantly more likely to secure bank loans (coefficient 1.363, $p<0.01$). Third, employing the number of ESG funds holding the stock as an instrumental variable mitigated endogeneity concerns, with findings remaining robust.

4. Theoretical Foundation and Research Hypotheses

4.1. Sustainable Development Theory

The theory of sustainable development traces its origins to the 1972 United Nations Conference on the Human Environment, marking a systematic reflection on environmental pollution and resource depletion during industrialization (Waas et al., 2011). In 1987, the United Nations formally defined the concept of "sustainable development," propelling the field into a phase of structured research. Its essence lies in meeting present development needs without compromising the interests of future generations. Over years of evolution, a fundamental consensus has emerged: achieving a three-dimensional balance among economic systems, social structures, and ecological environments. Under this framework, the long-term stable development of enterprises requires a holistic consideration of economic benefits, social responsibility, and environmental protection. Economic systems rely on natural resources for operation, while social systems depend on ecological environments for resource supply. Environmental factors, through mechanisms such as natural disasters and climate change, inversely influence societal development trajectories, and resource depletion may constrain economic growth potential. Therefore, maintaining environmental quality and sustainable resource utilization constitutes a prerequisite for long-term societal development.

4.2. Stakeholder Theory

The stakeholder theory framework dates back to the early 1970s, proposed by management scholar Ed Freeman, and fundamentally diverges from the shareholder value maximization paradigm. Its core tenet asserts that organizational decisions should comprehensively account for the demands of all stakeholders, rather than being confined to shareholders. Stakeholders encompass individuals, groups, and entities affected by or having an interest in organizational decisions, including employees, customers, supply chain partners, communities, regulatory bodies, and the ecological environment. The theory posits that the measure of corporate success should not be limited to shareholder wealth accumulation but should maximize the collective interests of all stakeholders (Ed Freeman et al., 2010) [44]. This implies that strategy formulation and execution must balance diverse needs and expectations. The framework not only emphasizes economic responsibilities but also advocates for fulfilling social duties, advancing sustainable development, and creating shared value, requiring proactive engagement with ESG (Environmental, Social, and Governance) issues to

foster coordinated progress in the economy, society, and environment. Through its evolution, the theory has developed methodologies such as stakeholder identification, participation mechanism design, and management strategy optimization, providing systematic analytical tools and practical pathways for organizational management.

4.3. Research Hypothesis

At the macro level, to achieve the goal of sustainable economic development, governments may strengthen environmental regulations and policies to curb corporate misconduct such as pollution emissions. Environmental policies are characterized by uncertainty in timing and intensity, making it difficult for the market to predict their implementation timing and enforcement strength. Such uncertainty significantly amplifies the volatility of operating cash flows for firms with low ESG performance, thereby eroding corporate value. Conversely, firms with high ESG performance, due to their stronger environmental compliance capabilities, exhibit greater stability in operating cash flows, effectively mitigating the disturbances caused by policy uncertainty. This enables them to receive positive market feedback more easily and drive value appreciation. From the dual perspectives of the social responsibility signaling mechanism and the risk hedging mechanism, ESG can reduce the volatility of operating cash flows, mitigate corporate risk exposure, and enhance intrinsic value, thereby guiding investors to lower their expected rate of return. This effect results in lower stock returns for high-ESG firms compared to low-ESG firms, creating the ESG risk premium phenomenon—i.e., a negative correlation between ESG performance and stock returns. Focusing on the context of the Chinese market, ecological protection and green development have risen to the core of national strategic priorities. Market participants have developed a robust understanding of corporate environmental responsibility, social responsibility, and ESG risks, and accordingly, they price the value of related firms rationally. The lower the risk a firm faces, the more it can enhance corporate value while prompting investors to lower their expected rate of return, and vice versa. Based on this, this study uses stock returns to reflect corporate value and proposes the following hypothesis: H1: The better the ESG performance of a listed firm, the lower its stock return.

5. Research Design and Empirical Results

5.1. Sample Selection and Data Sources

Based on data availability and completeness, the research sample of this paper consists of non-financial companies listed on the A-share market from June 2019 to December 2024. ESG data is sourced from the China Securities Index Co., Ltd., covering the comprehensive ESG index of the CSI 300 and CSI 500 constituent stocks, as well as the three sub-indices for environmental (E), social (S), and governance (G) performance. Daily and monthly stock trading data, financial data, and corporate ownership information are obtained from the CSMAR database. The sample undergoes the following processing: (1) excluding listed companies in the financial industry; (2) excluding companies marked with ST or PT status during the sample period; (3) excluding observations with severe missing data for key variables, ultimately resulting in an unbalanced panel dataset.

5.2. Variable Selection

5.2.1. Explanatory Variables

The ESG index in this paper represents corporate ESG performance, using ESG data released by the China Securities Index Co. The distinguishing feature of this rating system lies in its benchmarking against internationally recognized frameworks such as the United Nations Sustainable Development Goals (SDGs), while also incorporating China's local practical experience and corporate characteristics to select more adaptive evaluation indicators.

5.2.2. Explained Variables

Corporate valuation methods exhibit diverse characteristics, with each method having its applicable boundaries. This study examines the mechanism and transmission path of corporate social responsibility on the value of A-share listed companies based on the ESG risk premium framework. For the dependent variable measurement, stock returns are selected to capture corporate risk-taking levels, while Tobin's Q is used for robustness testing.

5.2.3. Control Variables

Building on the integration and summarization of existing research, this study selects control variables with reference to prior studies. The chosen control variables include firm size (Size), downside beta (Beta_Down), book-to-market ratio (BM), momentum (Momentum), ownership nature (SOE), industry nature (Industry), capital gains overhang (CGO), stock market value (ME), and idiosyncratic volatility (IVOL).

5.3. Portfolio Analysis

To test Hypothesis 1, this paper first employs univariate portfolio sorting to examine the existence of an ESG risk premium. Specifically, at the end of each trading day (day d), all sample stocks are ranked from low to high based on their latest CSI ESG composite scores. The ranked stocks are then equally divided into five portfolios. Among them, Portfolio 1 (P1) consists of stocks with the lowest ESG scores, representing the group of companies with the poorest ESG performance, while Portfolio 5 (P5) comprises stocks with the highest ESG scores, representing the group with the best ESG performance. This sorting method aims to maximize inter-group differences, thereby clearly capturing potential nonlinear characteristics of the ESG effect. The market-cap-weighted excess returns and equal-weighted excess returns of each portfolio are calculated for the next trading day (day $d+1$). Market-cap-weighted returns better reflect the returns investors might achieve in actual investments, whereas equal-weighted returns avoid the dominance of ultra-large-cap stocks, more accurately representing pure cross-sectional characteristics of stocks. To directly test the significance of the ESG premium, a zero-investment long-short arbitrage portfolio is constructed. This portfolio adopts a strategy of "buying the worst ESG portfolio (P1) and selling the best ESG portfolio (P5)," denoted as "LMH = P1 - P5." The performance of the LMH portfolio is then observed to determine whether an ESG risk premium exists. Table 1 presents the average daily excess returns of the portfolios constructed using the above methodology during the sample period.

Table 1. ESG Portfolio and Long-Short Portfolio Return Analysis

Investment Portfolio	ESG grouping	Market-cap weighted excess return rate (Mean)	T-statistic	Equal-weighted excess return (Mean)	T-statistic
P1	Low	0.0035* **	(4.72)	0.0038* **	(5.01)
P2		0.0028* **	(3.95)	0.0030* **	(4.18)
P3	Medium	0.0021* **	(3.02)	0.0024* **	(3.41)
P4		0.0016* *	(2.35)	0.0018* **	(2.66)
P5	High	0.0009	(1.41)	0.0011	(1.64)
Long-short portfolio	LMH (P1 - P5)	0.0026* **	(3.85)	0.0027* **	(3.92)

5.4. Panel Regression

To further validate the above findings and control for other firm-specific characteristics that may affect returns, this paper establishes the following panel regression model:

$$Ret_{i,t+1} = \alpha + \beta ES_{i,t} + \gamma Controls_{i,t} + \lambda_t + \mu_j + \epsilon_{i,t} \quad (1)$$

The dependent variable $Ret_{i,t+1}$ represents the excess return of stock i on day $t+1$. The core explanatory variable $ES_{i,t}$ is the ESG score on day t . $Controls_{i,t}$ denotes a set of control variables, including firm size (Size), book-to-market ratio (BM), momentum (Momentum), etc. Additionally, the model incorporates time fixed effects (λ_t) to control for market-level common shocks and industry fixed effects (μ_j) to account for inherent industry heterogeneity. The results are presented in Table 2.

Table 2. Panel Regression Results of ESG and Future Returns

Variable	(1) Basic Regression	(2) Add control variables	(3) Add industry and time fixed effects
ESG	- 0.0007*** (-3.12)	-0.0006*** (-2.89)	-0.0005** (-2.45)
Size		-0.0004* (-1.87)	-0.0003 (-1.53)
BM		0.0012** (2.56)	0.0010** (2.21)
Momentum		0.0008 (1.42)	0.0007 (1.29)
Industry Fixed Effects	NO	NO	YES
Time Fixed Effects	NO	NO	YES
Observed Value	45,678	45,678	45,678
Adjusted R ²	0.008	0.012	0.035

Table 2 shows that the regression results are highly consistent with the portfolio analysis: In Model (1), which includes only the ESG variable, the coefficient of ESG is negative and statistically significant at the 1% level. After sequentially adding control variables, industry fixed effects, and time fixed effects, the coefficient of ESG remains negative and statistically significant. This indicates that, even

after controlling for firm characteristics, industry factors, and macroeconomic cycles, there remains a robust negative relationship between ESG scores and the next-period stock returns. This strongly validates Hypothesis H1 of this paper and forms a sharp contrast with the common "ESG positive premium" phenomenon observed in the U.S. capital market, highlighting the uniqueness of ESG pricing mechanisms in China's emerging and transitional market context.

This paper employs Tobins Q to measure firm value for robustness testing. The regression results are presented in Table 3 & 4. The empirical findings further confirm that improvements in ESG performance contribute to enhancing corporate value. This discovery holds significant implications for the formulation of corporate sustainability strategies, guiding firms to deepen their strategic understanding of ESG principles and thereby build long-term competitive advantages. Regarding the control variables, firm size exhibits a significantly negative relationship with Tobins Q.

Table 3. The Impact of Corporate ESG Performance on Enterprise Value

Variable	(1) TobinQ	(2) TobinQ	(3) TobinQ	(4) TobinQ
ESG	0.0036*** (3.64)	0.0359*** (3.44)	0.0167*** (3.30)	0.0388*** (3.25)
Size		-0.3022*** (-3.34)	-0.2273** (-3.01)	- 0.4325*** (-3.29)
Ato		0.0599*** (3.75)	0.1051** (2.22)	0.0997*** (3.69)
Cashflow		0.0332*** (3.31)	0.0256** (3.78)	0.0298*** (3.75)
Fixed		-0.0087 (-1.01)	0.0046 (1.05)	0.0179 (1.11)
Industry Fixed Effects	NO	NO	YES	YES
Time Fixed Effects	NO	YES	NO	YES
Observed Value	45, 678	45, 223	45, 223	45, 223
Adjusted R ²	0.001	0.112	0.025	0.115

Table 4. Three Scheme comparing

Numble	Scheme 1	Scheme 2	Scheme 3
1	456	456	123
2	789	213	644
3	213	654	649

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6. Summary

This study examines the impact of corporate ESG performance on stock returns and firm value using a sample of Chinese A-share listed companies from June 2019 to December 2024. Through a comprehensive analysis of theoretical and empirical findings, the research primarily

draws the following conclusions: The study confirms the existence of a significant ESG risk premium in China's A-share market, where firms with superior ESG performance exhibit lower future stock returns. This finding is consistently validated through rigorous univariate portfolio analysis and multivariate panel regression models, remaining robust even after substituting ESG data sources, altering sample ranges, and controlling for more complex fixed effects. The conclusion aligns with the theoretical expectations proposed by Pastor et al. (2022a), indicating that ESG performance reduces firm risk, leading investors to accept lower expected returns and thereby enhancing firm value. This finding provides important empirical evidence for the ESG pricing mechanism in China's capital market and presents a striking contrast to the common "ESG positive premium" phenomenon observed in U.S. capital markets, highlighting the distinctiveness of asset pricing in emerging markets.

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