ESG PERFORMANCE AND FIRM VALUE: EVIDENCE FROM THE CHINESE STOCK MARKET

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Abstract: ***This paper examines the impact of Environmental, Social, and Governance (ESG) performance on firm value in the Chinese stock market using a panel dataset of listed firms. Firm value is measured by Tobin's Q to capture market-based valuation effects. Fixed-effects OLS estimations are employed to assess the baseline relationship between ESG performance and firm value, while two-step system GMM estimations are used to address potential endogeneity and valuation persistence. The results show that overall ESG performance is positively and significantly associated with firm value. Decomposition analyses indicate that this effect is primarily driven by the environmental and social pillars, whereas the governance pillar does not exhibit a significant valuation impact. These findings remain robust under dynamic specifications, highlighting the heterogeneous valuation relevance of ESG dimensions in an emerging-market context. The study contributes to the ESG literature by providing evidence from China and offers implications for firms and policymakers in transition economies.***

• Keywords: *environmental, social, and governance (ESG); firm value; tobin's Q; ESG pillars; emerging markets; China.*

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1. Introduction

Environmental, Social, and Governance (ESG) considerations have become increasingly central to corporate strategy and investment decision-making in the context of the global transition toward sustainable development. ESG captures firms' approaches to managing environmental, social, and governance-related risks and to aligning corporate activities with stakeholder expectations. A growing body of research suggests that ESG engagement can create economic value by improving risk management, reducing information asymmetry, and strengthening investor confidence, thereby supporting firm valuation (Friede et al., 2015; Eccles et al., 2014).

At the institutional level, ESG principles have been progressively embedded in international policy frameworks such as the Paris Agreement, the United Nations' 2030 Agenda, and the European Green Deal. These initiatives have translated sustainability objectives into concrete expectations for corporate behavior, shifting the evaluation of corporate performance toward long-term value creation rather than short-term financial outcomes alone. Consistent with this trend, ESG adoption and disclosure have expanded rapidly across both developed and emerging markets, where firms increasingly use ESG performance as a signaling mechanism to convey transparency and long-term strategic orientation to investors (Wong et al., 2021; Yuan et al., 2022).

Despite this global momentum, empirical evidence on the ESG–firm value relationship remains mixed, particularly in emerging economies. While some studies document positive valuation effects associated with ESG engagement (Ni et al., 2024; Duan et al., 2023), others report weak or context-dependent relationships (Tan et al., 2024; Xiao et al., 2025). These inconsistencies suggest that the economic consequences of ESG depend on institutional conditions, industry characteristics, and the relative importance of specific ESG dimensions. In emerging markets, ESG practices may be driven more by regulatory compliance or reputational considerations than by deeply embedded value-enhancing strategies, potentially weakening their valuation effects.

China provides a particularly relevant setting to examine these issues. As the world's second-largest economy, China has experienced rapid economic growth alongside significant environmental and social challenges. ESG adoption in Chinese capital markets has accelerated in recent years due to regulatory initiatives, closer alignment with international sustainability standards, and increasing scrutiny from global investors. At

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the same time, persistent concerns regarding transparency and governance quality raise questions about whether ESG engagement is effectively reflected in firm valuation.

Recent evidence indicates that the ESG–firm value relationship in China is characterized by substantial heterogeneity. ESG does not operate as a uniform value driver across firms and industries, and valuation effects are often driven by specific ESG dimensions rather than aggregate scores. In particular, environmental and social performance appear to play more prominent roles in reducing risk exposure, improving financing conditions, and enhancing firm value (Duan et al., 2023; Fang et al., 2025;).

Motivated by these considerations, this study examines the impact of ESG performance on firm value in the Chinese stock market using firm-level panel data. Beyond the aggregate ESG score, ESG is decomposed into environmental, social, and governance pillars to assess heterogeneous valuation effects across dimensions. By employing both static and dynamic estimation techniques, this study provides evidence from a major emerging market undergoing rapid institutional transformation and offers insights relevant for other emerging economies facing similar sustainability and governance challenges.

2. Literature Review and Hypotheses Development

2.1. Theoretical Foundation

This study examines the relationship between Environmental, Social, and Governance (ESG) performance and firm value through the lens of Stakeholder Theory (Freeman, 1984). Stakeholder Theory posits that firms operate within a network of relationships with multiple stakeholder groups whose continued support is essential for long-term value creation.

Within this framework, ESG engagement represents a strategic response to stakeholder expectations regarding environmental responsibility, social conduct, and governance quality. Rather than reflecting purely philanthropic motives, ESG activities can reduce stakeholder-related conflicts, enhance organizational legitimacy, and facilitate access to critical resources such as capital, labor, and regulatory support. These mechanisms can strengthen operational stability and ultimately enhance firm value.

Conversely, weak ESG performance may trigger adverse stakeholder reactions, including reputational damage, regulatory pressure, and restricted access to capital, thereby impairing firms' competitive position. Accordingly, Stakeholder Theory provides a coherent foundation for explaining why ESG performance may be systematically associated with firm value, particularly in emerging markets characterized by information asymmetry and evolving institutional frameworks.

2.2. ESG Performance

The Environmental, Social, and Governance (ESG) framework is widely used to assess firms' sustainability performance and exposure to non-financial risks. ESG ratings consolidate firm-level information on environmental management, social responsibility, and governance practices into a standardized indicator that allows investors to evaluate long-term risks and opportunities beyond traditional financial measures.

Prior empirical evidence generally indicates that ESG engagement is associated with favorable economic outcomes. Cross-country studies document a positive relationship between ESG practices and market-based performance, while findings from emerging markets suggest that ESG engagement can improve firm profitability and innovation-related outcomes (Soschinski et al., 2024; Tan & Zhu, 2022).

However, the economic effects of ESG are not uniform across institutional contexts. The magnitude and transmission channels through which ESG performance influences firm outcomes vary across markets and firm characteristics, underscoring the importance of market-specific analysis and motivating further examination of how ESG performance is translated into firm value.

2.3. Firm value

Firm value reflects investors' expectations regarding a firm's future performance, growth prospects, and risk profile. Valuation theories emphasize that market-based measures incorporate forward-looking assessments of future cash flows and uncertainty rather than solely realized accounting outcomes (Grossman & Stiglitz, 1977).

Accordingly, market-based indicators such as

Tobin's Q are particularly suitable for capturing the value relevance of non-financial information, including ESG performance. Tobin's Q reflects the extent to which the market values a firm beyond its recorded assets, incorporating expectations of future profitability, growth opportunities, and risk mitigation.

Consistent with this perspective, recent evidence shows that improvements in ESG quality are positively associated with firm value among Chinese listed firms, suggesting that ESG-related information is incorporated into market valuation (Wei & Yang, 2024). These considerations support the use of Tobin's Q as an appropriate proxy for firm value in examining the ESG–valuation relationship.

2.4. Hypotheses Development

2.4.1. ESG performance and firm value

Drawing on Stakeholder Theory, firms that actively engage in ESG practices signal their commitment to balancing economic objectives with stakeholder interests. Enhanced ESG disclosure reduces information asymmetry, strengthens stakeholder relationships, and facilitates access to long-term capital, thereby improving competitive positioning and firm value (Freeman, 1984).

Empirical evidence largely supports a positive ESG–firm value relationship. Pu (2023) documents a nonlinear association between ESG engagement and corporate efficiency among Chinese firms, while Zhang et al. (2024) shows that higher ESG disclosure improves firm value by enhancing financing structures and reducing information asymmetry. Accordingly, the first hypothesis is proposed:

H1: ESG performance has a positive effect on firm value.

2.4.2. Environmental performance and firm value

From a stakeholder perspective, environmental performance is closely linked to firms' relationships with regulators, communities, and environmentally conscious investors. Proactive environmental practices reduce regulatory and environmental risks and improve resource efficiency, which may enhance firm value.

Empirical studies support this argument. Qureshi et al. (2021) find that stronger environmental performance is positively associated with market-based valuation in U.S. firms, while Jo et al. (2015) show that environmental initiatives contribute to higher firm value through long-term cost reduction and performance improvement. Accordingly:

H2: Environmental performance has a positive effect on firm value.

2.4.3. Social performance and firm value

Stakeholder Theory emphasizes firms' responsibilities toward employees, customers, suppliers, and local communities. Strong social performance enhances trust and loyalty among stakeholders, reduces agency conflicts, and supports operational stability.

Prior evidence indicates that social engagement contributes positively to firm value. Waddock and Graves (1997) document a positive association between corporate social performance and financial outcomes, while Barko et al. (2022) find that the social dimension of ESG plays a key role in driving long-term firm value measured by Tobin's Q. Thus:

H3: Social performance has a positive effect on firm value.

2.4.4. Governance performance and firm value

Effective governance mechanisms mitigate agency conflicts, enhance transparency, and improve resource allocation, thereby supporting firm value. Evidence from China suggests that governance-related ESG disclosure can reduce financing mismatches and improve access to long-term capital (Zhang et al., 2024), while stronger governance structures are associated with higher ESG ratings and financial performance.

However, the valuation impact of governance practices may depend on institutional context and ownership structure. In environments where governance standards are highly regulated or relatively homogeneous, governance-related ESG indicators may provide limited incremental information to investors, weakening their direct association with firm value (Pu, 2023). Based on these considerations, the final hypothesis is stated as follows:

H4: Governance performance has a positive effect on firm value.

3. Research methodology

3.1. Model Specification and Variables

3.1.1. The regression model

This study examines the relationship between ESG performance and firm value using panel-data regressions with year and industry fixed effects. The baseline specification is as follows:

$$TobinQ_{w,i,t} = \beta_0 + \beta_1 ESG_{i,t} + X_{i,t}\beta + \gamma_t + \delta_{industr\ y} + \varepsilon_{i,t},$$

where $TobinQ_{w,i,t}$ denotes firm value, $ESG_{i,t}$ represents ESG performance, $X_{i,t}$ is a vector of control variables, γ_t are year fixed effects, and $\delta_{industry}$ are TRBC industry fixed effects.

To examine pillar-level effects, the aggregate ESG score is replaced by the Environmental, Social, and Governance pillar scores in separate specifications:

$$TobinQ_w, i, t = \beta_0 + \beta_1 Pillar_i, t + X_i^{'}, t\beta + \gamma_t + \delta_{industry} + \varepsilon_{i,t},$$

where Pillar_i,t∈{Environmental, Social, Governance}.

3.1.2. Independent variables

The main independent variable is the aggregate ESG score obtained from Refinitiv. To capture heterogeneity across sustainability dimensions, three pillar-level variables Environmental, Social, and Governance are also employed. All ESG measures are standardized scores provided by Refinitiv and are widely used in empirical ESG research.

3.1.3. Dependent variables

Firm value is measured by Tobin's Q, computed as:

$$TobinQ = \frac{\text{Total Debt} + \text{Market Capitalization}}{\text{Total Assets}}.$$

All financial variables, including Tobin's Q, are winsorized at the 1st and 99th percentiles to mitigate the influence of outliers.

3.1.4. Control variables

Consistent with the ESG–firm value literature, the regressions include the following control variables: audit quality (*AQ*), measured as a Big 4 auditor indicator; financial leverage (*LEV*); firm size (*SIZ*), proxied by the logarithm of total assets; growth opportunities (*GRO*); capital expenditure intensity (*CAP*); and listing age (*AGE*), capturing firm maturity. All models further include year and TRBC industry fixed effects to control for time-specific shocks and sectoral heterogeneity.

3.2. Sample and Methodology

The final sample comprises 1,148 firm-year observations of non-financial firms listed on the Shanghai and Shenzhen Stock Exchanges. Firms are included only when ESG performance data are available to ensure consistency across observations. ESG data are obtained from Refinitiv, while financial and market variables are collected from firms' financial statements and stock market data.

Baseline estimations are conducted using ordinary least squares (OLS) with year and industry fixed effects. To address potential endogeneity and valuation persistence, robustness checks are performed using two-step system GMM, in which lagged Tobin's Q is treated as endogenous. Standard diagnostic tests are applied to assess model validity.

4. Results and Discussions

4.1. Summary statistics

Table 1 reports descriptive statistics for the main variables. The mean Tobin's Q is 2.72, with substantial dispersion, indicating considerable heterogeneity in firm valuation. ESG performance also exhibits wide variation across firms, suggesting uneven sustainability engagement.

Among the ESG pillars, governance shows the highest average score, while environmental and social dimensions display greater dispersion. Approximately 14.5% of firm-year observations are audited by Big 4 auditors. Control variables indicate meaningful heterogeneity in leverage, firm size, investment intensity, growth, and listing age.

Table 1. Variable descriptions and descriptive statistics

Variable	Symbol	Mean	Std. Dev.	Min	Max
Firm value	TobinQ	2.7155	3.1705	0.2647	18.0739
ESG performance	ESG	31.3563	15.5035	1.0693	81.0506
Social pillar	SOC	24.0687	18.2037	1.0549	88.6073
Governance pillar	GOV	46.5925	20.7037	0.8995	90.6314
Environmental pillar	ENV	24.3470	21.2485	0.0000	86.2546
Audit quality	AQ	0.1446	0.3518	0	1
Leverage	LEV	0.0634	0.0715	0.0000	0.2856
Firm size	SIZ	21.6605	0.7538	19.7786	23.3054
Growth	GRO	0.1043	0.2929	-0.4310	1.5544
Capital expenditure	CAP	0.0511	0.0443	0.0008	0.2151
Listing age (years)	AGE	12.9477	7.8015	0	31

4.2. Empirical Results

Table 2 shows that aggregate ESG performance is positively and statistically significant in explaining firm value. The coefficient on ESG

equals 0.0100 and is significant at the 5% level (p = 0.047), indicating that higher ESG performance is associated with a higher Tobin's Q. This result provides support for Hypothesis H1.

When ESG is decomposed into its constituent pillars, environmental performance exhibits a positive and statistically significant effect on firm value, with a coefficient of 0.0077 (p = 0.044), supporting Hypothesis H2. Social performance also shows a positive and significant association with Tobin's Q (coefficient = 0.0086, p = 0.041), providing support for Hypothesis H3. In contrast, the governance pillar is positive but statistically insignificant (coefficient = 0.0054, p = 0.142), indicating that governance-related ESG performance does not exert a distinct valuation effect. Accordingly, Hypothesis H4 is not supported.

Table 2. OLS estimates of the impact of ESG and its pillars on firm value

Variables	(1) TobinQ	(2) TobinQ	(3) TobinQ	(4) TobinQ
ESG	0.0100**			
	[0.047]			
ENV		0.0077**		
		[0.044]		
SOC			0.0086**	
			[0.041]	
GOV				0.0054
				[0.142]
AQ	0.8618***	0.8626***	0.8708***	0.9040***
	[0.000]	[0.000]	[0.000]	[0.000]
LEV	−1.9518*	−1.9861*	−1.8667	−2.1631*
	[0.089]	[0.083]	[0.104]	[0.059]
SIZ	−1.3120***	−1.3321***	−1.3149***	−1.2620***
	[0.000]	[0.000]	[0.000]	[0.000]
CAP	5.5505***	5.4905***	5.4907***	5.3423***
	[0.002]	[0.002]	[0.002]	[0.003]
AGE	−0.0271**	−0.0280**	−0.0269**	−0.0282**
	[0.015]	[0.011]	[0.016]	[0.011]
Constant	28.9117***	29.3975***	29.0214***	27.9384***
	[0.000]	[0.000]	[0.000]	[0.000]
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
R-squared	0.3613	0.3614	0.3615	0.3595

Notes: p-values are reported in brackets. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. All financial variables are winsorized at the 1st and 99th percentiles. Year and industry fixed effects are included in all specifications. ESG and its individual pillars are estimated in separate models to avoid multicollinearity.

4.3. Robustness Check

The system GMM results reported in Table 3 confirm the robustness of the baseline findings after accounting for potential endogeneity and valuation persistence. Aggregate ESG performance remains positively associated with firm value, while the environmental and social pillars continue to exhibit value-enhancing effects. In contrast, the governance pillar remains statistically insignificant.

These consistent patterns across static and dynamic specifications indicate that the positive relationship between ESG particularly its environmental and social dimensions and firm value is not driven by reverse causality or unobserved heterogeneity, but reflects a stable valuation effect in the Chinese market.

Table 3. System GMM estimates of the impact of ESG and its pillars on firm value

Variables	(1) TobinQ	(2) TobinQ	(3) TobinQ	(4) TobinQ
ESG	0.0112*			
	[0.052]			
ENV		0.0072*		
		[0.075]		
SOC			0.0091*	
			[0.082]	
GOV				0.0055
				[0.176]
AQ	0.7770**	0.7814**	0.8040**	0.8487**
	[0.027]	[0.022]	[0.021]	[0.015]
LEV	−1.7002*	−1.7525*	−1.6139*	−1.8224*
	[0.071]	[0.063]	[0.079]	[0.054]
SIZ	−1.2729***	−1.2679***	−1.2737***	−1.2353***
	[0.000]	[0.000]	[0.000]	[0.000]
CAP	3.7781	3.7784	3.8457	3.5273
	[0.157]	[0.158]	[0.145]	[0.181]
AGE	−0.0325**	−0.0341**	−0.0316**	−0.0328**
	[0.025]	[0.015]	[0.024]	[0.026]
Constant	29.4487***	28.9873***	29.0924***	28.7440***
	[0.000]	[0.000]	[0.000]	[0.000]
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
AR(2) p-value	0.810	0.935	0.922	0.924
Hansen test p-value	0.970	0.949	0.972	0.991

*Notes: p-values are reported in brackets. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. All models are estimated using two-step system GMM with Windmeijer-corrected robust standard errors. Year and industry fixed effects are included in all specifications. The AR(2) and Hansen test statistics indicate no second-order serial correlation and valid instrument sets.*

4.4. Discussion and Implications for Emerging Economies

The results indicate that ESG performance is value-relevant in the Chinese market, but this relevance is asymmetric across ESG dimensions. The consistent valuation effects of the environmental and social pillars suggest that investors place greater weight on ESG activities that directly address regulatory risk, operational stability, and stakeholder relationships. This pattern is consistent with stakeholder theory, which emphasizes that firms creating value for key stakeholder groups are more likely to achieve superior market valuation (Freeman, 1984; Waddock & Graves, 1997).

The stronger valuation effects of environmental performance reflect China's regulatory and institutional environment, where environmental compliance is closely linked to regulatory enforcement, environmental risk exposure, and access to external financing (Broadstock et al., 2021; Zhang et al., 2024; Fang et al., 2025). Similarly, social performance enhances corporate legitimacy by strengthening relationships with employees, customers, and local communities an important mechanism in markets where formal institutions are still evolving and stakeholder trust remains salient (Deegan, 2002; Yuan et al., 2022).

In contrast, the absence of a significant valuation effect for the governance pillar suggests that governance-related ESG indicators convey limited incremental information to investors. This outcome likely reflects relatively standardized governance practices shaped by regulatory requirements and state influence, which reduce perceived cross-firm variation in governance quality (Jensen & Meckling, 1976; Pu, 2023; Zhang et al., 2024). Overall, the findings imply that ESG value relevance in China is conditioned by institutional salience rather than uniform ESG engagement.

These insights offer relevant implications for other emerging economies with comparable institutional characteristics, such as Vietnam. In such contexts, strong state involvement, bank-oriented financial systems, and evolving ESG frameworks suggest that investors may similarly prioritize ESG dimensions that directly mitigate environmental and social risks (Wong et al., 2021). While governance improvements remain essential for long-term sustainability, their valuation effects may be weaker or delayed in markets where governance standards are largely regulation-driven and exhibit limited firm-level differentiation (Barko et al., 2022; Wei & Yang, 2024).

Conclusion

This study examines the relationship between ESG performance and firm value in the Chinese stock market using static and dynamic panel estimations. The results show that higher overall ESG performance is associated with higher firm value, with this effect primarily driven by the environmental and social pillars, while the governance pillar does not exhibit a significant valuation effect. These findings highlight the heterogeneous valuation relevance of ESG dimensions in an emerging-market context.

By providing firm-level evidence from China, this study contributes to the ESG–firm value literature by demonstrating that ESG value relevance is conditioned by institutional context and pillar-specific salience rather than uniform ESG engagement. While governance practices remain important for long-term sustainability, investors appear to place greater weight on environmental and social performance in valuation decisions. Future research may extend this analysis to other emerging markets or explore alternative ESG measurement frameworks and transmission channels through which ESG performance affects firm value.

References:

Broadstock, D. C., Chan, K., Cheng, L. T., & Wang, X. (2021). The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China. Finance research letters, 38, 101716. https://doi.org/10.1016/j.frl.2020.101716

Barko, T., Cremers, M., & Renneboog, L. (2022). Shareholder engagement on environmental, social, and governance performance. Journal of Business Ethics, 180(2), 777-812. https://doi.org/10.1007/s10551-021-04850-z

Deegan C., 2002. Introduction: The legitimising effect of social and environmental disclosures–a theoretical foundation. Accounting, auditing & accountability journal 15 (3): 282-311. https://doi.org/10.1108/09513570210435852

Duan, Y., Yang, F., & Xiong, L. (2023). Environmental, social, and governance (ESG) performance and firm value: Evidence from Chinese manufacturing firms. Sustainability, 15(17), 12858. https://doi.org/10.3390/su151712858

Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. Management Science, 60(11), 2835–2857. https://doi.org/10.1287/mnsc.2014.1984

Fang, M., Hong, J., Nie, H., & Shen, X. (2025). Environmental regulation, ESG, and firm value: evidence from China. Applied Economics, 57(58), 10009–10024. https://doi.org/10.1080/00036846.2024.2425117

Freeman, R. E. (1984). Strategic management: A stakeholder approach. Boston, MA: Pitman.

Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. Journal of Sustainable Finance & Investment, 5(4), 210–233. https://doi.org/10.1080/20430795.2015.1118917

Grossman, S. J., & Stiglitz, J. E. (1977). On value maximization and alternative objectives of the firm. The Journal of Finance, 32(2), 389-402. https://www.jstor.org/stable/2326771

Jo, H., Kim, H., & Park, K. (2015). Corporate environmental responsibility and firm performance in the financial services sector. Journal of business ethics, 131, 257-284. https://doi.org/10.1007/s10551-014-2276-7

KPMG China. (2024, April 20). China stock exchanges mandate Sustainability Report for larger listed entities.

Meckling, W. H., & Jensen, M. C. (1976). Theory of the Firm. Managerial behavior, agency costs and ownership structure, 3(4), 305-360.

Ni, X., Yuan, F., & Gao, H. (2024). Research on the impact of environment, social and governance performance on corporate valuation: Evidence from China. Corporate Social Responsibility and Environmental Management, 31(2), 948-961. https://doi.org/10.1002/csr.2612

Nguyen, T. H., Elmagrhi, M. H., Ntim, C. G., & Wu, Y. (2021). Environmental performance, sustainability, governance and financial performance: Evidence from heavily polluting industries in China. Business Strategy and the Environment, 30(5), 2313-2331. https://doi.org/10.1002/bse.2748

Pu, G. (2023). A non-linear assessment of ESG and firm performance relationship: evidence from China. Economic research-Ekonomska istraživanja, 36(1). DOI: 10.1080/1331677X.2022.2113336

Qureshi, M. A., Akbar, M., Akbar, A., & Poulova, P. (2021). Do ESG endeavors assist firms in achieving superior financial performance? A case of 100 best corporate citizens. SAGE Open, 11(2). https://doi.org/10.1177/21582440211021598

Soschinski, C. K., Mazzioni, S., Dal Magro, C. B., & Leite, M. (2024). Corporate controversies and market-to-book: the moderating role of ESG practices. Revista Brasileira de Gestão de Negócios, 26, e20230115. https://doi.org/10.7819/rbgn.v26i01.4255

Tan, W., Cai, Y., Luo, H., Zhou, M., & Shen, M. (2024). ESG, technological innovation and firm value: evidence from china. International Review of Financial Analysis, 96, 103546. https://doi.org/10.1016/j.irfa.2024.103546

Tan, Y., & Zhu, Z. (2022). The effect of ESG rating events on corporate green innovation in China: The mediating role of financial constraints and managers' environmental awareness. Technology in Society, 68, 101906. https://doi.org/10.1016/j.techsoc.2022.101906

Waddock, S. A., & Graves, S. B. (1997). The Corporate Social Performance–Financial Performance Link. Strategic Management Journal, 18(4), 303-319. https://doi.org/10.1002/(SICI)1097-0266(199704)18:4<303::AID-SMJ869>3.0.CO;2-G

Wei, J. X., & Yang, Y. H. (2024). ESG Quality, Attention, and Firm value: An Empirical Analysis of Chinese A-Share Listed Companies. Opportunities and Challenges in Sustainability, 3(3), 186-199. https://doi.org/10.56578/ocs030305.

Wong, W. C., Batten, J. A., Mohamed-Arshad, S. B., Nordin, S., & Adzis, A. A. (2021). Does ESG certification add firm value?. Finance Research Letters, 39, 101593. https://doi.org/10.1016/j.frl.2020.101593

Xiao, R., Hou, M., & Kong, D. (2025). When Does ESG Matter? Industry Heterogeneity of the ESG–Firm Value Relationship in Chinese Market. Sustainable Operations and Computers. https://doi.org/10.1016/j.susoc.2025.09.001

Yuan, X., Li, Z., Xu, J., & Shang, L. (2022). ESG disclosure and corporate financial irregularities–Evidence from Chinese listed firms. Journal of Cleaner Production, 332, 129992. https://doi.org/10.1016/j.jclepro.2021.129992

Zhang, F., Lai, X., & Guo, C. (2024). ESG disclosure and investment-financing maturity mismatch: Evidence from China. Research in International Business and Finance, 70, 102312. https://doi.org/10.1016/j.ribaf.2024.102312