

ESG PERFORMANCE AND CORPORATE FINANCIAL RISK: A CONCEPTUAL REVIEW AND INTEGRATIVE FRAMEWORK

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ABSTRACT

Environmental, social, and governance (ESG) considerations have moved from the periphery of corporate reporting to the centre of financial decision-making, yet the precise channels through which ESG performance shapes corporate financial risk remain fragmented across disciplines and empirical settings. This paper undertakes a conceptual review of the ESG-financial risk literature with two specific objectives: first, to synthesise the theoretical and empirical evidence linking ESG performance to different dimensions of corporate financial risk, and second, to develop an integrative conceptual framework that explains the mechanisms through which environmental, social, and governance performance individually and jointly influence systematic risk, idiosyncratic risk, credit and default risk, and operational risk. Drawing on stakeholder theory, risk-mitigation (insurance-like) arguments, agency theory, and legitimacy theory, the paper argues that ESG performance operates as a risk-management mechanism that reduces information asymmetry, strengthens stakeholder relationships, and buffers firms against regulatory, reputational, and operational shocks. The review also highlights persistent inconsistencies in measurement, rating methodology, and contextual factors that complicate cross-study comparison. The proposed framework is intended to guide future empirical work and to offer practitioners and policymakers a structured basis for evaluating ESG-related risk exposure. The paper concludes by outlining the boundary conditions of the framework and directions for subsequent empirical validation.

Keywords: ESG performance; corporate financial risk; sustainability risk; stakeholder theory; risk mitigation; conceptual framework

1. INTRODUCTION

The last two decades have witnessed a marked shift in how investors, regulators, and corporate boards evaluate firm performance. Financial statements alone are no longer considered sufficient to capture the full risk profile of a firm; non-financial dimensions of performance, particularly those relating to environmental stewardship, social responsibility, and governance quality, are increasingly treated as material to long-term value creation and risk exposure. This shift is reflected in the rapid growth of ESG rating agencies, the expansion of ESG-linked debt instruments, and the incorporation of ESG criteria into institutional investment mandates.

Corporate financial risk, understood broadly as the probability that a firm will be unable to meet its financial obligations, will experience excessive volatility in its returns, or will suffer a deterioration in its capacity to generate stable cash flows, has traditionally been analysed through leverage ratios, earnings volatility, credit ratings, and market-based risk measures

such as beta and idiosyncratic volatility. A growing body of research now examines whether ESG performance systematically affects these risk measures, and if so, through which mechanisms. The findings, however, remain scattered: some studies report a clear risk-mitigating effect of ESG performance, others find the relationship to be sector-specific, non-linear, or contingent on firm size and institutional context, while a smaller stream of literature finds little or no significant association once appropriate controls are introduced.

Given this fragmentation, a conceptual synthesis is warranted. Rather than adding another single-context empirical test, this paper steps back to consolidate existing theoretical explanations and empirical patterns into a coherent framework that can orient future research and inform practice. The paper is structured as follows: Section 2 reviews the literature on ESG performance and corporate financial risk along its environmental, social, and governance dimensions and outlines the principal theoretical lenses used to explain the relationship. Section 3 identifies the research gap motivating this study. Section 4 states the two objectives of the paper. Section 5 develops the proposed conceptual framework. Sections 6 to 8 discuss the implications, limitations, and directions for future research, followed by the conclusion.

2. LITERATURE REVIEW

2.1 Conceptualising ESG Performance and Corporate Financial Risk

ESG performance is generally understood as a composite construct capturing a firm's environmental practices (such as emissions management, resource efficiency, and climate risk exposure), social practices (such as labour relations, product responsibility, human capital, and community engagement), and governance practices (such as board independence, ownership structure, executive compensation, and shareholder rights). Most empirical studies rely on third-party ESG ratings issued by providers such as Refinitiv (LSEG), MSCI, Sustainalytics, or Bloomberg, though these ratings are known to diverge considerably in methodology and scope, a point that has itself become a subject of scholarly concern regarding measurement validity.

Corporate financial risk is similarly multidimensional. It is commonly decomposed into systematic risk (sensitivity to market-wide movements, typically proxied by beta), idiosyncratic or firm-specific risk (return volatility unexplained by market factors), credit and default risk (the probability of failing to meet debt obligations, often proxied by credit ratings, distance-to-default measures, or the cost of debt), and operational or earnings risk (volatility in operating cash flows and profitability). A recurring theme across the literature is that ESG performance does not affect all these risk dimensions uniformly, which is one of the reasons a unifying framework is needed.

2.2 Environmental Performance and Financial Risk

Environmental performance is theorised to reduce financial risk primarily by lowering exposure to regulatory penalties, litigation, stranded-asset risk, and reputational damage associated with environmental incidents. Firms with stronger environmental management systems are argued to be better positioned to anticipate and absorb climate-related transition risk, which in turn reduces the volatility of future cash flows. Empirical evidence from environmentally sensitive industries lends support to this reasoning: a study of mining-industry firms finds that stronger ESG ratings are associated with lower corporate financial risk, operating through reduced financing constraints and improved risk control (Fu, Yu, Guo, & Zhang, 2024). At the same time, the strength of this relationship has been shown to vary by industry and time horizon, and a smaller stream of research cautions that in some capital-

intensive, transition-exposed sectors the short-run effect of improved ESG performance on default risk can run in the opposite direction, at least until the underlying investments mature (Gao, Omenihu, Brahma, & Nwafor, 2025).

2.3 Social Performance and Financial Risk

The social dimension of ESG is most frequently linked to financial risk through the lens of stakeholder theory, which holds that firms maintaining constructive relationships with employees, customers, suppliers, and communities are less exposed to boycotts, labour disputes, supply-chain disruptions, and reputational shocks. Albuquerque, Koskinen, and Zhang (2019) formalise this reasoning, showing theoretically and empirically that corporate social responsibility is associated with lower systematic risk because it differentiates firms' products and increases customer loyalty, thereby stabilising cash flows. In a related vein, Benlemlih and Girerd-Potin (2017) find that the risk-reducing effect of social and environmental responsibility is moderated by the strength of the surrounding legal environment, suggesting that stakeholder-relationship benefits are most pronounced where formal investor protection is comparatively weak. This body of work frequently characterises strong social performance as functioning like insurance: it does not directly increase profitability in every period, but it cushions the firm against the financial consequences of adverse events, thereby lowering the volatility of returns and the cost of capital.

2.4 Governance Performance and Financial Risk

Governance quality is the ESG pillar most directly connected to agency theory. Strong governance structures, such as independent boards, separation of the roles of chief executive and chair, robust internal controls, and transparent ownership, are associated with reduced information asymmetry between managers and outside investors. This reduction in information asymmetry is theorised to lower the risk premium demanded by investors and creditors, improve credit ratings, and reduce the likelihood of financial misconduct or restatement. Evidence from Chinese listed firms, for example, links ESG disclosure quality directly to a lower incidence of financial irregularities, reinforcing the governance-risk channel identified in earlier corporate finance research (Yuan, Li, Xu, & Shang, 2022). More broadly, Sassen, Hinze, and Hardeck (2016) find that among the three ESG pillars, corporate governance and social performance show the most consistent risk-reducing associations with firm risk across a large panel of European firms, whereas the environmental pillar's association with risk is comparatively weaker and more context-dependent, a pattern echoed in subsequent work decomposing ESG performance into its component pillars when explaining corporate risk-taking (Sun, Lu, & Zhang, 2024).

2.5 Theoretical Perspectives on the ESG-Risk Relationship

Four theoretical lenses recur across the literature. Stakeholder theory frames ESG performance as a mechanism for managing the expectations and goodwill of non-shareholder constituencies, thereby reducing the probability of stakeholder-driven disruptions. The risk-mitigation or insurance-like view, closely related to stakeholder theory, treats ESG engagement as a buffer that firms can draw upon during periods of controversy or crisis. Agency theory emphasises the governance pillar and explains risk reduction through improved monitoring and reduced managerial opportunism. Legitimacy theory suggests that firms invest in ESG practices to maintain their social licence to operate, and that a loss of legitimacy, whether through environmental incidents or social controversy, translates into tangible financial risk through regulatory action, litigation, or loss of customer trust. These

perspectives are not mutually exclusive; rather, they operate at different levels of analysis and, taken together, motivate the integrative framework developed in Section 5.

A parallel and growing stream of bibliometric and meta-analytic work has sought to make sense of this theoretical plurality. Large-scale meta-analyses covering thousands of primary studies generally report an overall positive association between ESG performance and financial performance or financial stability, but with substantial heterogeneity across studies, time horizons, and institutional settings. More recent systematic reviews specifically focused on financial risk and financial stability echo this conclusion, noting that short-term analyses sometimes reveal weaker or even negative associations, whereas longer time horizons tend to show a more consistently favourable relationship between ESG performance and reduced financial risk.

3. RESEARCH GAP

Three gaps emerge from the literature reviewed above. First, while numerous studies examine the ESG-financial performance relationship, comparatively fewer studies isolate financial risk as the outcome variable, and fewer still disaggregate financial risk into its systematic, idiosyncratic, credit, and operational components within a single analytical structure. Second, the theoretical explanations for the ESG-risk relationship are typically invoked selectively, with individual studies drawing on one theory to explain one risk outcome, rather than integrating multiple theoretical lenses to explain the full range of risk dimensions simultaneously. Third, measurement inconsistency across ESG rating providers continues to limit the comparability of findings, yet few conceptual papers explicitly address how this measurement heterogeneity should be accounted for when building theoretical models of the ESG-risk relationship. This paper responds to these gaps by consolidating the fragmented evidence into a single conceptual framework rather than proposing yet another isolated empirical test.

4. OBJECTIVES OF THE STUDY

In light of the research gap identified above, this paper pursues two specific objectives.

Objective One

To critically review and synthesise the existing theoretical and empirical literature on the relationship between ESG performance and corporate financial risk, with attention to how the environmental, social, and governance dimensions relate to distinct risk outcomes.

Objective Two

To develop an integrative conceptual framework that articulates the mechanisms through which ESG performance, both at the level of individual pillars and as a composite construct, influences systematic risk, idiosyncratic risk, credit and default risk, and operational risk, thereby providing a structured basis for future empirical validation.

5. CONCEPTUAL FRAMEWORK

Building on the theoretical perspectives discussed in Section 2.5, this paper proposes a framework organised around four linking mechanisms between ESG performance and corporate financial risk: (i) an information mechanism, (ii) a stakeholder-relationship mechanism, (iii) a regulatory and legitimacy mechanism, and (iv) an operational resilience mechanism. Each mechanism is associated more strongly with one or more ESG pillars and, in turn, with specific risk outcomes.

The information mechanism operates primarily through the governance pillar. Higher governance quality and more transparent ESG disclosure reduce information asymmetry between the firm and external capital providers. This reduction in asymmetry is theorised to lower the risk premium embedded in the cost of debt and equity, improve credit assessments, and reduce idiosyncratic volatility associated with information-driven mispricing.

The stakeholder-relationship mechanism operates primarily through the social pillar. Firms that invest in employee welfare, product safety, and community relations accumulate a reserve of stakeholder goodwill that can be drawn upon during adverse events, reducing the financial impact of disputes, boycotts, or supply-chain disruptions. This mechanism is expected to dampen idiosyncratic risk and, over time, contribute to more stable operating cash flows.

The regulatory and legitimacy mechanism operates primarily, though not exclusively, through the environmental pillar. Firms with stronger environmental management are better positioned to anticipate regulatory tightening and avoid the financial penalties, litigation costs, and asset write-downs associated with environmental non-compliance or reputational loss of legitimacy. This mechanism is expected to reduce credit and default risk, particularly in environmentally sensitive industries.

The operational resilience mechanism cuts across all three pillars. Firms with integrated ESG management systems are argued to develop more robust internal controls, supply-chain oversight, and risk-monitoring processes generally, which lowers the volatility of operating performance independent of any single ESG pillar. This mechanism links composite ESG performance to reduced operational risk.

The framework further proposes that the strength of each mechanism is moderated by firm size, industry sensitivity to ESG issues, institutional and regulatory context, and the time horizon under consideration, consistent with the heterogeneity documented in prior meta-analytic work. Larger firms, for example, are likely to experience a stronger information-mechanism effect owing to greater analyst coverage and disclosure scrutiny, while firms in environmentally sensitive sectors are likely to experience a stronger regulatory and legitimacy-mechanism effect. The framework is deliberately structured so that each of its four mechanisms generates testable propositions linking a specific ESG pillar (or composite ESG score) to a specific financial risk outcome, moderated by the contextual factors noted above.

6. DISCUSSION

The framework developed in Section 5 offers a way of reconciling what otherwise appears to be conflicting evidence in the literature. Studies that find a strong ESG-risk association in credit markets are typically capturing the regulatory and legitimacy mechanism operating through the environmental pillar, whereas studies that find ESG performance reduces stock return volatility are often capturing the stakeholder-relationship or information mechanisms. Studies that report weak or insignificant associations, particularly over short time horizons, may be observing settings in which the relevant mechanism has not yet had sufficient time to translate into measurable risk outcomes, or in which moderating factors such as firm size or sector have not been adequately controlled for.

The framework also clarifies why composite ESG scores, which aggregate environmental, social, and governance sub-scores into a single number, may obscure more than they reveal. Because each pillar is theorised to operate through a distinct mechanism and to affect a distinct risk outcome, aggregation risks masking pillar-specific effects that operate in

different directions or at different strengths. This suggests that future empirical work would benefit from disaggregating ESG scores by pillar when the objective is to explain a particular financial risk outcome, rather than relying solely on a composite ESG rating.

7. THEORETICAL AND PRACTICAL IMPLICATIONS

Theoretical Implications

The proposed framework contributes to the literature by integrating stakeholder theory, risk-mitigation arguments, agency theory, and legitimacy theory into a single structure organised around identifiable causal mechanisms rather than treating these theories as competing explanations. This integrative approach responds directly to the fragmentation noted in Section 3 and provides a scaffolding on which subsequent empirical studies can be positioned according to which mechanism and which risk outcome they examine.

Practical Implications

For corporate managers, the framework suggests that ESG investment should be evaluated not as a single undifferentiated initiative but as a portfolio of distinct interventions, each targeted at a specific risk exposure: governance reforms aimed at reducing the cost of capital, social investment aimed at reducing idiosyncratic volatility, and environmental risk management aimed at reducing regulatory and credit risk. For investors and credit-rating analysts, the framework offers a structured basis for interpreting ESG ratings in relation to the specific risk dimension of interest, rather than treating a composite ESG score as a uniform risk signal. For policymakers and standard-setters, the framework underscores the importance of improving the comparability of pillar-level ESG disclosure, since the practical value of ESG information for risk assessment depends on the ability to isolate pillar-specific effects.

8. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

As a conceptual paper, this study does not test the proposed framework against primary data, and its propositions therefore require empirical validation across different institutional settings, industries, and time horizons before firm conclusions can be drawn. The framework also relies on the assumption that third-party ESG ratings meaningfully capture the underlying pillar-level constructs, an assumption that is complicated by the well-documented divergence across rating providers. Future research could usefully test the framework's propositions using panel data across multiple countries and industries, employ pillar-disaggregated ESG scores rather than composite scores, and examine whether the strength of each proposed mechanism varies systematically with the moderating factors identified in Section 5. Longitudinal designs capable of distinguishing short-run from long-run effects would be particularly valuable, given the evidence that the ESG-risk relationship may differ across time horizons.

CONCLUSION

This paper set out to achieve two objectives: to synthesise the fragmented literature on ESG performance and corporate financial risk, and to develop an integrative conceptual framework explaining the mechanisms linking ESG performance to distinct dimensions of financial risk. The review indicates that ESG performance is generally associated with reduced financial risk, but that the strength, direction, and time horizon of this relationship vary depending on which ESG pillar and which risk dimension are under examination. The proposed framework, built around information, stakeholder-relationship, regulatory and legitimacy, and operational resilience mechanisms, offers a structured way of reconciling these varied findings and

provides a foundation for future empirical work seeking to disentangle the precise channels through which sustainability performance shapes corporate financial risk.

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