International Conference on Economic Management and Intelligent Society (EMIS 2026)

ESG Performance and Economic Consequences: How Environmental, Social, and Governance Ratings Shape Financing Costs and Stock Returns

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Abstract: Environmental, social, and governance (ESG) performance has emerged as a central variable in capital allocation, yet its economic consequences remain contested. This paper synthesizes the theoretical mechanisms and empirical evidence linking ESG ratings to financing costs and stock returns across firm-, market-, and institutional-level contexts. Drawing on asset-pricing theory, stakeholder theory, and disclosure research, we examine how risk mitigation, information quality, governance discipline, and investor preferences translate ESG signals into observable capital-market outcomes. Evidence consistently shows that stronger ESG performance reduces both debt and equity financing costs by lowering perceived downside risk, improving transparency, and broadening the investor base. Stock-return evidence is more ambiguous: ESG-associated return outperformance tends to emerge during crisis periods and market repricing episodes, but may compress once sustainable preferences are institutionalized. Rating divergence across providers further complicates inference. These findings suggest that ESG functions as a conditional force—reshaping financing terms reliably, but reshaping expected returns only under specific institutional conditions, timing, and measurement frameworks.

Keywords: ESG; Cost of Capital; Cost of Equity; Cost of Debt; Stock Returns; Sustainable Investing; Rating Divergence

1.Introduction

The rise of ESG investing has encouraged a seductive but analytically unstable expectation [1,2]: that responsible firms should simultaneously enjoy cheaper financing and deliver superior stock returns. The attraction of this proposition is obvious. It promises moral legitimacy without financial sacrifice. Yet the same capital-market logic that can reward better ESG with cheaper funding may also erode future returns by bidding up the prices of firms already perceived as desirable. The debate therefore cannot be settled by asking whether ESG is "good" for financial performance in the abstract. It must distinguish between ex ante financing conditions and ex post market returns.

That distinction matters because financing cost and stock return capture different points in the valuation process. A lower cost of capital reflects investors requiring less compensation for bearing a firm's risk, whether because ESG reduces expected cash-flow volatility, improves governance credibility, limits regulatory exposure, or broadens the investor base. Stock returns, by contrast, depend on how ESG is priced relative to expectations. If ESG improvements are already capitalized into prices, the very process that lowers the discount rate may reduce future expected returns. A positive ESG-return relation is therefore not the only plausible outcome; a negative relation may simply indicate that investors are willing to pay for sustainability preferences, resilience, or regulatory hedging rather than that ESG destroys value [3-5].

The literature has gradually moved from broad claims about "doing well by doing good" toward a more conditional framework. Early studies emphasized lower capital costs and reduced risk among better-performing firms [6-8]. Later work showed that the effect depends on disclosure credibility, materiality, and the horizon of investors rather than on symbolic ESG gestures alone [9-11]. More recent research has further complicated the story by showing that ESG ratings diverge substantially across providers, making many empirical findings partly artifacts of measurement design rather than reflections of a single underlying construct [12,13]. Once this point is taken seriously, the question becomes less about whether ESG has

economic consequences and more about how markets translate a noisy, multidimensional signal into prices. Table 1 organizes these channels systematically.

A more persuasive interpretation emerges by separating three layers. First, ESG can alter firm fundamentals through operational discipline, stakeholder relations, regulatory preparedness, and governance quality. Second, ESG can alter information environments through disclosure, verification, and reputational signaling. Third, ESG can alter demand for securities through investor tastes, mandates, and benchmark construction. These layers do not always reinforce one another. Their interaction explains why financing costs are more consistently affected than stock returns, and why realized return evidence often looks contradictory rather than cumulative.

Table 1. Distinct Channels Linking ESG to Economic Consequences

Channel	Immediate mechanism	Likely effect on financing cost	Likely effect on stock returns
Risk mitigation	Lower litigation, regulatory, operational, and tail risk	Decrease	Ambiguous: lower risk can imply lower expected returns
Information channel	Better disclosure, lower asymmetry, improved analyst/investor confidence	Decrease	Positive if disclosure reveals underpriced quality; neutral once priced
Governance discipline	Lower agency costs, better capital allocation, stronger oversight	Decrease	Positive if governance improvements are unexpected and persistent
Stakeholder loyalty	More stable customer, employee, and supplier relationships	Decrease through cash-flow stability	Positive in crises; weaker in normal periods
Investor preference channel	ESG-mandated demand and preference-based ownership	Decrease through broader investor base	Can compress future expected returns
Rating disagreement	Noisy measurement, inconsistent scoring, weak comparability	Attenuates or distorts measured effect	Generates contradictory pricing evidence

2. Why ESG More Reliably Affects Financing Costs Than Stock Returns

The more stable empirical result in this field is not abnormal equity outperformance but the reduction of financing frictions. This asymmetry is economically intuitive. Creditors and equity investors do not ask the same question. Credit markets are primarily concerned with downside protection: default probability, covenant quality, legal exposure, governance reliability, and the durability of cash flows. ESG can matter here even when it does not produce spectacular upside. A firm that pollutes less, manages labor relations better, and has more credible governance may still be unexciting from a growth perspective, yet easier to lend to and cheaper to insure. That is why evidence linking ESG to lower debt costs tends to be more coherent than evidence linking ESG to stock premia. Corporate bond spreads also narrow for firms with stronger social performance [14] and better CSR records [15], with recent evidence confirming these patterns in Chinese equity markets [16] and through quasi-experimental designs [17].

The same logic applies to equity financing. El Ghoul et al. [18] argue that firms with stronger CSR profiles face lower implied costs of equity because responsible behavior reduces perceived risk and attracts a broader investor base. Dhaliwal et al. [19] add an information dimension: the initiation of CSR reporting is associated with lower equity capital costs, especially when disclosure reduces uncertainty around the firm's broader stakeholder orientation. Chava, focusing on environmental externalities, shows that environmentally irresponsible firms face higher costs of capital, suggesting that capital markets price environmental harm not merely as a moral defect but as a source of expected economic burden. The implication is subtle but important. Markets need not believe that ESG creates immediate profit to lower the discount rate; they need only believe that poor ESG raises future liabilities or narrows financing opportunities.

What makes this finding stronger than many

ESG-stock-return claims is that financing cost is structurally closer to the channels ESG most plausibly influences. Governance affects monitoring. Social performance affects labor disputes, consumer backlash, and reputational fragility. Environmental performance affects exposure to fines, cleanup costs, transition policy, and stranded assets. Even when these effects are slow-moving, debt markets can incorporate them in spreads, ratings, and loan terms because lenders price downside contingencies rather than chasing upside narratives.

Yet this apparent strength has its own limit. A lower cost of capital does not automatically prove superior productive efficiency. In some cases, ESG may reduce financing costs because investors possess nonpecuniary preferences and accept lower returns from sustainable assets. Pástor et al. formalize precisely this possibility: if investors prefer green assets, prices rise and expected returns fall. From the firm's perspective this still lowers the cost of capital. From the investor's perspective, however, it means sustainability preference can look like financial underperformance. The same empirical pattern therefore admits two competing interpretations: one efficiency-based, the other preference-based. The first treats ESG as reducing risk and agency costs; the second treats ESG as benefiting from taste-driven demand. The real economy may involve both, which is why simplistic celebrations of ESG as a free lunch tend to collapse under closer inspection. Representative evidence is collected in Table 2.

Table 2. Representative Studies on ESG and Financing Costs

Study	Outcome variable	Main finding	Core interpretation
[6]	Cost of equity	Better CSR associated with lower equity cost	Lower perceived risk; broader investor base
[7]	Bank loan spreads	CSR concerns raise bank loan costs	Lenders penalize downside risk and weak responsibility
[19]	Cost of equity	CSR-reporting initiation lowers equity cost	Disclosure reduces information asymmetry
[8]	Cost of capital	Environmental externalities increase capital cost	Markets price environmental liabilities
[14]	Cost of debt, ratings	Better social performance linked to better debt pricing	Social performance affects creditor perceptions
[9]	Cost of equity	CSR disclosure lowers equity cost, conditional on transparency	Not all disclosure is equally credible
[15]	Corporate bond spreads	CSR associated with lower bond financing costs	Public debt investors reward credible responsibility
[16]	Cost of equity	ESG lowers equity cost in China	Risk reduction and diversification effects
[14]	Cost of debt	Better ESG lowers debt cost around rating thresholds	ESG affects debt pricing with quasi-causal evidence
[17]	Overall cost of capital	High ESG lowers cost of capital, especially in weaker legal settings	ESG partly substitutes for weak institutions

3. Financing Cost Effects are Real, But Conditional Rather Than Universal

The strongest financing-cost evidence emerges when ESG is treated not as a decorative score but as a governance-relevant signal. Dhaliwal et al. show that disclosure matters less in itself than through stakeholder orientation and financial transparency. This is crucial because it shifts the argument away from the volume of ESG communication toward the credibility of the reporting environment. The economic advantage does not arise from saying more, but from making the firm more legible to outside capital providers. In that sense, disclosure is not valuable as public relations; it is valuable when it changes the quality of contract formation between the firm and financiers.

The same pattern appears in the materiality literature. Khan et al. find that sustainability investments in material issues outperform investments in immaterial ones. This distinction addresses a major weakness in much ESG discourse: aggregation. Once environmental,

social, and governance factors are rolled into a single score, the appearance of precision masks a loss of strategic relevance. Water use matters differently in semiconductors than in software. Labor practices matter differently in retail than in regulated utilities. Governance failures can overwhelm positive environmental gestures. By showing that material ESG issues have stronger economic content, the literature suggests that some null findings are not evidence against ESG but evidence against indiscriminate aggregation.

A further condition is institutional context. Priem and Gabellone [20] argue that high ESG can partly substitute for weaker legal environments by reducing the perceived contractual uncertainty surrounding the firm. This idea helps explain why ESG effects are often stronger in emerging or institutionally incomplete settings. Where investor protection, disclosure enforcement, or legal predictability are weaker, firm-level responsibility and transparency carry greater marginal value. In mature institutional environments, the same ESG improvement may matter less because baseline protections already exist. The implication is that ESG is not an isolated variable; it interacts with the credibility of the surrounding market order.

However, once ESG is understood as partially substituting for institutional weakness, another tension arises. If investors reward ESG because it compensates for deficient legal protection, then ESG can become a privatized repair mechanism for public institutional failure. This generates an uncomfortable normative conclusion: capital markets may praise ESG not because firms have transcended structural risk, but because they have learned to insure themselves against it individually. That mechanism can reduce a firm's cost of capital while leaving the broader governance environment unchanged. The private gain is real, but its social meaning is more limited than ESG rhetoric often implies.

4. Why Stock-Return Evidence Remains Unsettled

The stock-return literature is harder to interpret because returns can rise for opposite reasons. A positive relation between ESG and realized returns may indicate that markets underreact to sustainability-related quality or underestimate resilience. Yet a negative relation may indicate that investors strongly prefer sustainable firms, pushing prices up and future returns down. In other words, both signs can be consistent with ESG being priced. The sign alone is therefore not decisive.

Early evidence such as the eco-efficiency premium documented by Derwall et al. [21] suggested that environmentally efficient firms could outperform, implying that markets had not fully appreciated environmental quality. Mănescu [22], by contrast, questioned whether ESG-related returns reflected genuine mispricing or rational compensation for risk. This tension continues through recent work. Broadstock et al. [23] find that higher-ESG firms in China were more resilient during COVID-19, indicating that ESG may function as a crisis hedge. Ding et al. [24] similarly show that firms with stronger pre-pandemic CSR experienced milder stock-price declines during the shock. Complementary evidence from Chinese markets further documents positive ESG–return associations [25]. Such results are not trivial marketing victories. They indicate that stakeholder relations, governance capacity, and organizational discipline can matter when ordinary risk metrics become inadequate.

Still, crisis resilience should not be conflated with normal-period alpha. A firm that falls less in a crash may still not outperform over long horizons once its safer profile is fully priced. Albuquerque et al. [26] show that CSR is associated with lower systematic risk, which helps explain why such firms may protect value in downturns. But lower systematic risk does not guarantee higher expected returns; standard asset-pricing logic often implies the reverse. What appears to be "better performance" in one state of the world may be the mirror image of lower required returns across states.

This is where the preference-based asset-pricing literature becomes indispensable. Pástor et al. argue that sustainable assets can have lower expected returns because investors derive utility from holding them. Pedersen et al. further show that ESG enters portfolio choice both as information about fundamentals and as an object of investor preference, creating an ESG-efficient frontier rather than a universal return premium. Once this framework is adopted, a persistent demand shift toward high-ESG firms can simultaneously increase valuations, lower financing costs, and reduce future expected returns. What disappears is the naïve expectation that every favorable capital-market

effect should show up as return outperformance. Table 3 summarizes representative studies on ESG and stock returns.

Table 3. Representative Studies on ESG and Stock Returns

Study	Market/outcome	Main finding	Best interpretation
[21]	Equity returns	Eco-efficient firms outperform	Market underreaction to environmental quality
[22]	Risk-adjusted returns	Ambiguous relation between ESG and returns	Distinguishing mispricing from risk compensation is difficult
[10]	Material sustainability and returns	Material ESG issues matter more than immaterial ones	Economic relevance depends on issue materiality
[11]	Fund flows and sustainability ranks	Investors direct capital toward higher-sustainability funds	Demand channel can affect asset prices
[26]	Firm risk	CSR linked to lower systematic risk	Lower risk may reduce required returns
[23]	Crisis-period stock performance	High-ESG firms more resilient in COVID shock	ESG acts as a shock absorber
[24]	Pandemic stock reactions	CSR supports corporate immunity	Stakeholder capital matters in stress periods
[3]	Expected returns in equilibrium	Sustainable assets can have lower expected returns	Investor preferences compress returns
[4]	Portfolio choice and pricing	ESG affects both cash flows and investor tastes	No single monotonic prediction for returns
[25]	China stock returns	Positive ESG-return relation	Possibly reflects innovation, disclosure, and market heterogeneity

5.The Real Source of Contradiction: Measurement, Heterogeneity, and Timing

A large share of the ESG debate has been distorted by the assumption that ESG scores are stable facts. Berg et al. demonstrate that ESG ratings diverge materially across agencies because of differences in scope, measurement, and weighting. This is more than a technical inconvenience. If the independent variable itself changes depending on the provider, then the empirical literature cannot be read as though every paper is studying the same construct. A finding that "ESG lowers the cost of debt" may partly reflect what one provider chooses to reward under governance, while another treats the same feature differently or ignores it altogether. Contradictory findings therefore arise not only because markets disagree, but because scholars are sometimes estimating different phenomena under the same acronym. Table 4 categorizes the main sources of this empirical divergence.

The implications are deeper than replication difficulty. Rating divergence affects corporate strategy itself, and has been shown to systematically distort bond spreads [27]. A firm facing inconsistent ESG assessments receives mixed signals about which investments markets value. That weakens the disciplining function of ESG and encourages optimization for score visibility rather than substantive improvement. Once this occurs, the link between ESG and economic consequence becomes endogenous to rating architecture. Measured ESG no longer simply reflects underlying quality; it reflects the politics of classification. The literature that continues to treat ESG scores as transparent proxies for sustainability therefore risks overstating both precision and causality.

Another source of heterogeneity is investor horizon. If long-term investors care more about transition risk, stakeholder relations, and governance durability, ESG should matter more to them than to short-horizon traders. That helps explain why some return effects emerge only over long windows or during crises, while disappearing in short-run abnormal-return tests. The market is not a single evaluator. It is a changing composition of investors with different constraints, mandates, tastes, and horizons. ESG pricing, therefore, is unlikely to appear as one stable coefficient across all settings.

Timing introduces a further complication. ESG may be rewarded when it is newly salient, underpriced, or shock-relevant, but not after it becomes mainstream. Once sustainable preferences are institutionalized through indices, mandates, and asset-owner policies, valuation effects can be front-loaded. The firms that benefited from the first wave of ESG repricing may not continue to deliver abnormal returns after their sustainability reputation becomes

common knowledge. This temporal dynamic explains why crisis-period studies often find stronger effects than unconditional panel regressions.

Table 4. Why empirical ESG findings diverge

Source of divergence	How it changes results	Typical empirical consequence
Rating disagreement	Different providers measure different things	Coefficients vary across datasets
Materiality differences	Not all ESG issues matter equally by industry	Aggregated scores dilute economic effects
Institutional context	ESG carries more value where legal protections are weaker	Stronger effects in emerging markets
Investor horizon	Long-horizon owners price transition/stakeholder risk more heavily	Stronger long-run or crisis-period effects
Market regime	ESG may matter more in shocks than in normal times	Resilience effects exceed alpha effects
Disclosure credibility	Symbolic reporting differs from verifiable transparency	Mere disclosure can produce weak or null effects
Endogeneity	Better firms may self-select into ESG investment	Positive ESG coefficients may reflect omitted quality

6.An integrated Interpretation

A more coherent synthesis follows from refusing to collapse financing costs, returns, and firm value into one undifferentiated notion of "performance." ESG can lower the cost of debt because creditors care about downside contingencies [28]. ESG can lower the cost of equity because better disclosure, broader demand, and lower risk reduce the discount rate. Yet those very same mechanisms can reduce future expected returns by making sustainable firms more expensive today. No contradiction is necessary. The variables answer different questions.

This distinction also clarifies why some anti-ESG critiques are conceptually weak. When critics point to lower expected returns for green assets, they often treat that as evidence that ESG has failed financially. But from the issuer's perspective, lower expected returns are the essence of cheaper capital. A market in which investors accept lower returns on sustainable firms is precisely a market in which sustainability preferences have financing consequences. The more serious question is whether those consequences improve real efficiency or merely reallocate capital according to investor tastes. Here the evidence is mixed. Material ESG investments, credible disclosure, and strong governance appear more likely to support real value creation than symbolic aggregate scores, while mandatory CSR frameworks show mixed effects depending on institutional context [29], [30]. Yet rating divergence and mandate-driven demand show that part of ESG pricing is undeniably constructed through classification and preference.

The best conclusion is therefore neither triumphalist nor dismissive. ESG is not a universal generator of alpha, nor is it an empty moral veneer. It is a multidimensional signal that affects different capital-market outcomes through distinct channels. Its financing benefits are strongest where ESG improves legibility, lowers downside risk, or compensates for institutional weakness. Its return effects are strongest where markets have not yet fully priced those qualities, or where shocks suddenly reveal the value of resilience. Once ESG becomes crowded, standardized, or preferences become embedded in prices, outperformance may fade even while financing advantages remain.

Such a conclusion also has methodological implications. Future research should rely less on omnibus ESG scores and more on issue-level materiality, cross-provider triangulation, and institutional interaction effects. Without such refinement, the literature will continue reproducing a debate whose contradictions are partly manufactured by measurement choices. The field does not suffer from too little empirical evidence; it suffers from forcing unlike economic margins into the same interpretive frame.

7.Conclusion

The economic consequences of ESG are real but conditional. The most defensible empirical claim is not that ESG invariably increases stock returns, but that it often changes the terms on

which firms access capital. Better ESG performance can reduce financing costs by lowering perceived risk, improving transparency, strengthening stakeholder credibility, and expanding the investor base. Yet these same mechanisms may compress expected returns once sustainable firms become more highly valued. Return evidence is therefore mixed not because ESG lacks economic content, but because returns reflect both fundamentals and valuation.

The deeper lesson is that ESG should not be judged through a single performance metric. Cost of capital captures how the market prices firm risk and credibility ex ante. Stock returns capture how prices evolve relative to expectations ex post. Treating these as interchangeable has produced much of the confusion surrounding ESG. Once separated, the literature becomes more intelligible: financing-cost effects are stronger and more consistent; stock-return effects are contingent on materiality, investor preferences, timing, and measurement architecture.

The remaining challenge is not whether markets should price ESG, but whether the measures used to represent ESG are precise enough to guide capital efficiently. As long as rating divergence remains high and aggregate scores blur materially different dimensions, ESG will continue to shape economic outcomes while simultaneously obscuring the basis on which those outcomes are produced. The future of the field therefore lies less in repeating whether ESG pays, and more in clarifying what exactly is being priced when markets claim that it does.

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