

THE ESG INVESTMENT PARADOX: INTEGRATING INTERNAL RISK CONTROL INTO A RESOURCE GOVERNANCE FRAMEWORK

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Article history

Received date : 19-6-2026

Revised date : 20-6-2026

Accepted date : 25-7-2026

Published date : 1-8-2026

To cite this document:

Weiru, W., & Abdul Halim, H. (2026). The ESG investment paradox: Integrating internal risk control into a resource governance framework. *International Journal of Accounting, Finance and Business (IJAFB)*, 11 (67), 492 - 506.

Abstract: While strong environmental, social, and governance (ESG) performance improves capital access, manufacturing firms often face a "capital allocation paradox." Information asymmetry and agency problems can divert these resources toward greenwashing or unproductive over-investment rather than efficient projects. This study aims to address this paradox by developing a "Resource-Governance" conceptual framework that shifts the focus from capital acquisition to capital allocation. Grounded in agency theory and supplemented by enterprise risk management (ERM) and the resource-based view (RBV), this conceptual study explores the theoretical interplay between non-financial ESG signals and internal governance. Methodologically, the framework proposes evaluating investment inefficiency via Richardson's (2006) residual model. The conceptual framework proposes that internal risk controls act as strategic "gatekeepers." The framework suggests that robust control mechanisms systematically embed risk-adjusted return calculations into capital budgeting, effectively blocking negative-NPV projects and curbing ESG-related agency costs. Furthermore, it highlights China's ownership segmentation, specifically the heterogeneous budgetary constraints between state-owned and non-state-owned enterprises, as a critical institutional boundary condition for this governance mechanism's effectiveness. The true financial value of ESG resources cannot be unlocked automatically; it depends critically on the synergistic integration of green signaling and internal process discipline. This conceptual model offers actionable insights for promoting ethical governance, curbing greenwashing, and ensuring sustainable economic value.

Keywords: ESG Performance, Investment Efficiency, Internal Risk Control, Greenwashing, Agency Costs

Introduction

Severe environmental pressures, strict regulatory requirements and increasing expectations from stakeholders have made the global capital market pay great attention to low-carbon transformation (Friede, Busch, & Bassen, 2015). Corporate evaluation is no longer limited to traditional financial indicators, but carries out a more comprehensive assessment of enterprise environmental, social and governance (ESG) performance. At present, ESG performance has not only developed into a core non-financial signal for investors, banks and regulators, but also widely used to assess the long-term risk and internal management quality of enterprises (PricewaterhouseCoopers, 2023; Morgan Stanley Institute for Sustainable Investing, 2024). This transformation is particularly noticeable in capital-intensive industries such as manufacturing. In order to achieve the net zero emission target, such industries need billions of dollars to invest in the purchase of clean equipment, improve energy efficiency and upgrade production processes. Driven by the reallocation of large-scale capital to clean energy and industrial transformation, sustainable investment has become an indispensable part of global capital market activities (International Energy Agency, 2023, 2024; Global Sustainable Investment Alliance, 2023). Under this paradigm, enterprises with excellent ESG performance can effectively relieve financing pressure, obtain funds with a lower risk premium, and significantly reduce their overall financing costs.

However, sufficient capital supply is not automatically equivalent to efficient capital allocation. Can excellent ESG performance really bring the best investment decision? This divergence constitutes the "ESG investment paradox" that this study aims to address. Existing studies usually assume that good ESG performance can automatically increase the value of enterprises by easing financing constraints (Hu, Zhang, & Dong, 2025), but most of them ignore the internal capital allocation process after enterprises obtain funds. Although enterprises with high ESG ratings are more likely to obtain financing, in the absence of a strict internal supervision and restraint mechanism, management may use their own decision-making power to transfer new resources to symbolic green projects, reputation projects or blind organizational expansion. This kind of management opportunistic behavior will prevent capital from allocating to positive economic activities with net present value (NPV), resulting in the inability to achieve efficient capital deployment (Jensen, 1986). In addition, the current ESG performance does not always objectively reflect the real internal value creation level of the enterprise. The wide differences in ESG ratings have further exacerbated the problem of information asymmetry in the market (Berg, Kölbel, & Rigobon, 2022, Chen, Li, Mao, & Yoon, 2025). At the same time, widespread problems such as "greenwashing", inconsistency between sustainable development expression and actual disclosure, and disconnection between ESG performance and daily operations make it extremely difficult for external investors to observe and monitor the real flow of ESG-related funds (International Organization of Securities Commissions, 2023; IFRS Foundation, 2023). This highlights an important but neglected academic gap: research in the field of ESG performance and internal governance is still in a state of high isolation. Therefore, the core question of this article is not only whether ESG helps enterprises attract capital, but more importantly whether enterprises have the internal governance capabilities required to effectively allocate the capital.

In order to fill this research gap, this article shifts the theoretical focus of the research from capital acquisition to capital allocation by building a comprehensive conceptual framework of "resource governance". The framework innovatively integrates the three theoretical perspectives of agency theory, enterprise risk management (ERM) and resource-based view

(RBV). Through the integration of the above perspectives, this study builds a conceptual framework, regards ESG as a valuable resource (Hart, 1995), and positions internal risk control as an indispensable guarantee to ensure the effective allocation of ESG resources. This framework proposes that internal risk control plays the role of a strategic "gatekeeper" by systematically embedding the risk-adjusted income measurement into the capital budgeting process, so as to effectively screen out projects with negative NPV and suppress agency costs related to ESG (Gates, Nicolas, & Walker, 2012; Masulis, Wang, & Xie, 2007). In addition, in order to analyze the above mechanism in the context of emerging markets, this framework incorporates the special classification of Chinese enterprise ownership. This article clearly discusses how the heterogeneous budget constraints faced by state-owned enterprises (SOEs) and non-state-owned enterprises (non-SOEs) affect the ultimate utility of this internal governance mechanism (Kornai, 1986; Lin, Lu, Zhang, & Zheng, 2020). The conceptual framework proposed in this study provides a practical inspiration for evaluating real sustainable value creation, and also provides a clear and powerful theoretical roadmap for ensuring the strict matching of external green signals and internal process specifications.

The primary objective of this study is to construct a conceptual framework that examines the interaction between ESG performance and internal risk control in determining corporate investment efficiency. By addressing this objective, the current study makes three key contributions to the existing literature. First, it advances agency theory by identifying internal risk control as a specific governance mechanism that mitigates ESG-based agency conflicts. Second, it enriches the resource-based view by demonstrating that ESG resources require the organizational capability of process discipline to generate sustainable economic value. Third, it contextualizes this interaction within China's financial dualism, providing new insights into how ownership structures shape the effectiveness of risk governance in emerging markets.

The remainder of this article is organized as follows. The subsequent section provides a critical review of the literature on ESG performance, internal risk control, and their integration. This literature review serves as the theoretical foundation for developing the conceptual framework, explicitly highlighting the unresolved debates that necessitate a resource-governance perspective. Following this, the conceptual framework and its corresponding propositions are presented in detail. Finally, the methodological implications and conclusions are discussed.

Literature Review

This section reviews the literature underlying the relationship between ESG performance, internal risk control, and corporate capital allocation, explicitly identifying the theoretical gaps and unresolved debates that motivate this conceptual framework.

ESG Performance and Capital Allocation

There are two opposing research views on the relationship between ESG performance and capital allocation. This critical review of the literature reveals a fundamental, unresolved debate regarding the true economic consequences of ESG performance on capital allocation. The "capital supply" hypothesis holds that ESG performance can improve investment efficiency by alleviating financing frictions. Based on the signal theory, high-quality ESG information disclosure can play the role of reputation collateral and reduce the degree of information asymmetry. This signal effect can reduce the cost of enterprise capital and alleviate binding financing constraints (Benlemlih & Bitar, 2018; Friede et al., 2015). The latest research

evidence shows that higher ESG ratings can improve the availability of enterprises to obtain bank loans, which is especially significant for enterprises that lack tangible assets (Zhang & Liu, 2025; Yang, Zhang, Gao, & Yang, 2025). By easing the above financing constraints, excellent ESG performance can help enterprises obtain funds and invest in projects with positive NPV that have previously been forced to abandon due to capital constraints, thus effectively alleviating the problem of insufficient investment (Biddle, Hilary, & Verdi, 2009; Zhao, Liu, Tang, & Zhang, 2024; Li, Ma, Yang, & Li, 2024).

On the contrary, the second point of view uses agency theory to emphasize the resource crowding effect. The critical view believes that in the absence of strict governance, the pursuit of ESG goals may distort resource allocation. Managers may be motivated by reputation incentives to carry out opportunistic ESG activities that are expensive but lack real value creation (Gerged, Kuzey, Uyar, & Karaman, 2023). If mismanaged, such opportunistic investments will increase cash flow volatility (He, Ding, & Yue, 2023). In addition, weak internal supervision will exacerbate the risk of greenwashing, resulting in the inability to convert ESG investment into effective assets (Wu, Long, & Wang, 2025). This distortion is also aggravated by rating differences and scale deviations, which may mislead external investors (Drempetic, Klein, & Zwergel, 2019; Berg, Kölbel, & Rigobon, 2022).

The above divergent conclusions reveal a key theoretical gap: existing literature often divides capital acquisition from capital allocation. The supply-side point of view assumes that the reduction of the difficulty of financing will automatically bring about improved efficiency, but ignores the waste of resources caused by the agency problem (Jensen, 1986); in contrast, the squeeze-out effect point of view emphasizes the relevant risks, but overlooks how agency costs can be controlled through systematic means (He et al., 2023; Tabur & Bildik, 2025). The missing core link is the internal governance mechanism that determines the capital allocation method related to ESG. To fill this theoretical gap, this study positions internal risk control as a basic screening mechanism: effective risk control can restrain management opportunistic behavior, prevent "greenwashing" problems, and ensure that newly acquired ESG resources are screened through strict projects. After incorporating this mechanism, it can explain how enterprises can avoid the resource squeeze-out effect while obtaining ESG financing benefits.

Internal Risk Control as a Strategic Gatekeeper

Traditional literature often regards internal risk control as a passive compliance burden. However, according to the modern Committee of Sponsoring Organizations of the Treadway Commission [COSO] (2017) framework, recent studies have redefined it as an active value creation tool and a strategic gatekeeper. High-quality internal risk control optimizes investment efficiency through a variety of empowerment mechanisms. First of all, it acts as a screening mechanism to curb excessive investment. By embedding strict risk assessment into the capital budgeting process, sound control can eliminate projects with negative NPV and curb the expansion impulse of management (Gates et al., 2012). As a signal transmission mechanism, it alleviates the problem of underinvestment by improving the credibility of reports and expanding external financing capacity (Berry-Stölzle, Che, & Xu, 2026). Furthermore, standardized risk management transforms external uncertainty into calculable decision-making confidence to ensure that long-term investment in high-risk areas is always a prudent and strategic measure (Zhu, Huang, & Huang, 2025; Alkaraan, Elmarzouky, Jabbour, Jabbour, & Gulko, 2025).

Despite the above advantages, another academic study warns of the possible constraining effects of risk control. When the cost of compliance monitoring exceeds the economic benefits, large-scale investment in compliance infrastructure will squeeze out productive resources (Eastman, Ehinger, & Xu, 2024). More importantly, overly conservative risk appetite will give rise to innovative rigidity: strict process control tends to favor predictable short-term returns rather than long-cycle green technology (Neel & Xu, 2025; Patel, Pearce, & Oghazi, 2021). In a specific institutional context like China, governance distortions such as the pressure of controlling shareholders will further exacerbate this tendency, causing the management to shift from value optimization to simple risk security (Wang & Zhang, 2024). Therefore, the lack of a rigid risk control system with a clear strategic orientation may inhibit the organizational flexibility required for sustainable transformation.

This dialectical relationship between discipline and rigidity highlights the need to examine risk control in the context of strategic signal interaction such as ESG performance. In order to resolve the tension between compliance and innovation, ESG and internal risk control must work together. Internal risk control provides an indispensable process discipline to prevent ESG capital from becoming a greenwashing or opportunistic waste; while strong ESG performance can clarify the long-term strategic focus and enhance the legitimacy of the project, thus alleviating the inherent rigid problem of conservative risk assessment. Through synergy, internal risk control acts as a strategic gatekeeper, distinguishing disciplined green innovation from reckless expansion to ensure that ESG-driven resources are efficiently transformed into sustainable corporate value.

The Integration Gap: Mechanism and Theoretical Complementarity

Existing research shows a tendency to be disjoint, usually regarding ESG as an external tool to obtain resources, while internal risk control is only regarded as an internal compliance function (Gao, Li, & Zhou, 2024; Brunner-Kirchmair & Hiebl, 2025). This binary division has created an "integration gap" in the literature, which cannot explain why there are still significant differences in investment efficiency between enterprises with similar ESG ratings. prior studies largely overlook the interactive effect between ESG performance and internal risk control on corporate investment efficiency. By isolating these two factors, existing models cannot explain why firms with similar ESG ratings often demonstrate substantial variations in their actual capital allocation outcomes. If only ESG-driven funds are introduced without corresponding governance adaptation, it will lead to a serious dissipation of resources (Feng & Saleh, 2024; Wu et al., 2025).

At the theoretical level, the existing research obviously lacks theoretical complementarity in explaining the ESG investment paradox. Previous literature often relied on a single theoretical perspective, and it was difficult to fully grasp the complex dynamics of sustainable capital allocation. To thoroughly solve this paradox, we must go beyond a single theoretical analysis and deeply explore how ESG resources are integrated with the internal governance capabilities of enterprises. Therefore, this study proposes that three different theoretical perspectives should be comprehensively applied: agency theory, resource-based concept (RBV) and enterprise risk management (ERM). The key is that these theories do not overlap with each other, but strictly complement each other, focusing on different dimensions of the capital allocation process.

Agency theory (Jensen, 1986) identifies the motive for misallocation. It explains why the influx of ESG-driven free cash flow creates a hazard: managers are inherently incentivized to pursue speculative "greenwashing" or empire-building projects to enhance personal reputation at the expense of economic efficiency (Zhou, Qu, Liang, Tao, & Zhu, 2024). However, agency theory identifies the behavioral problem without prescribing the organizational conditions for success. The RBV (Barney, 1991) provides the conditional logic for success. It posits that a valuable resource (such as ESG-driven capital access) cannot generate sustained value in isolation. It strictly requires complementary organizational "capabilities" to be deployed effectively (Feng & Saleh, 2024). Yet, the RBV remains a macro-level concept and does not specify the exact financial mechanisms required to process these resources. ERM (COSO, 2017) supplies the operational mechanism. It operationalizes the abstract "capability" demanded by the RBV and directly neutralizes the "opportunism" identified by agency theory. By enforcing a rigorous "NPV filter" and risk-adjusted return evaluations on all ESG-funded projects (Zhu et al., 2025), ERM acts as the specific surgical tool that excises agency costs. Synthesizing these dynamics, the theoretical synergy is clear: Agency theory defines the threat, the RBV establishes the necessity of capability integration, and ERM executes the actual financial discipline.

Institutional Boundaries: Financial Dualism in China

The value creation of internal governance mechanisms does not occur in a vacuum, but is highly dependent on a specific institutional environment (Marquis & Raynard, 2015). In emerging markets such as China, the macroeconomic background fundamentally shapes the synergy between ESG performance and internal risk control. The most prominent institutional boundary feature in this scenario is financial dualism, which stems from the fundamental differences in the equity structure and the resulting rigidity of corporate budget constraints (Lin et al., 2020; Gao et al., 2024).

Non-SOEs are usually constrained by hard budgets and face primary credit discrimination in the financial market for a long time (Yang, Wang et al., 2025; Kornai, 1986). Because inefficient capital allocation will bring the existential threat of bankruptcy, such enterprises cannot afford the waste of scarce resources. When excellent ESG performance successfully attracts external capital, the role of internal risk control becomes a core necessary condition for survival. For such private enterprises, the marginal utility of risk control is maximized because it can ensure that the newly acquired resources through ESG are strictly allocated to investment projects with maximum value, rather than wasting them in inefficient projects (Li et al., 2024).

SOEs face a unique and complex dual mission. At the economic level, SOEs usually enjoy the implicit guarantee of government endorsement, and the resulting soft budget constraints may weaken the market-driven motivation to improve capital efficiency (Zhao & Xu, 2025). However, from the perspective of the system, SOEs are subject to extremely strict top-down administrative supervision, strict government audits and rigid accountability requirements for the preservation of state-owned assets. In order to meet these compliance requirements, SOEs have generally built a highly institutionalized internal risk control system (Lin et al., 2020). This high-intensity administrative review can act as a state-led alternative firewall to prevent ESG capital from being abused by opportunism.

The above-mentioned institutional forces of mutual checks and balances have formed a unique theoretical tension: market-driven survival pressure dominates the governance dynamics of

private enterprises, while state-driven administrative compliance shapes the behavior mode of SOEs. Therefore, the moderating role of ownership nature on the interaction between ESG and internal governance is still unclear at the theoretical level. Clarifying this differentiation is crucial to understanding how institutional boundaries determine the actual allocation of sustainable capital in economies in transition (Feng & Saleh, 2024).

The "Resource-Governance" Conceptual Framework

As shown in Figure 1, this study builds a conceptual framework for resource governance to clarify how ESG performance and internal risk control jointly affect the investment efficiency of enterprises.

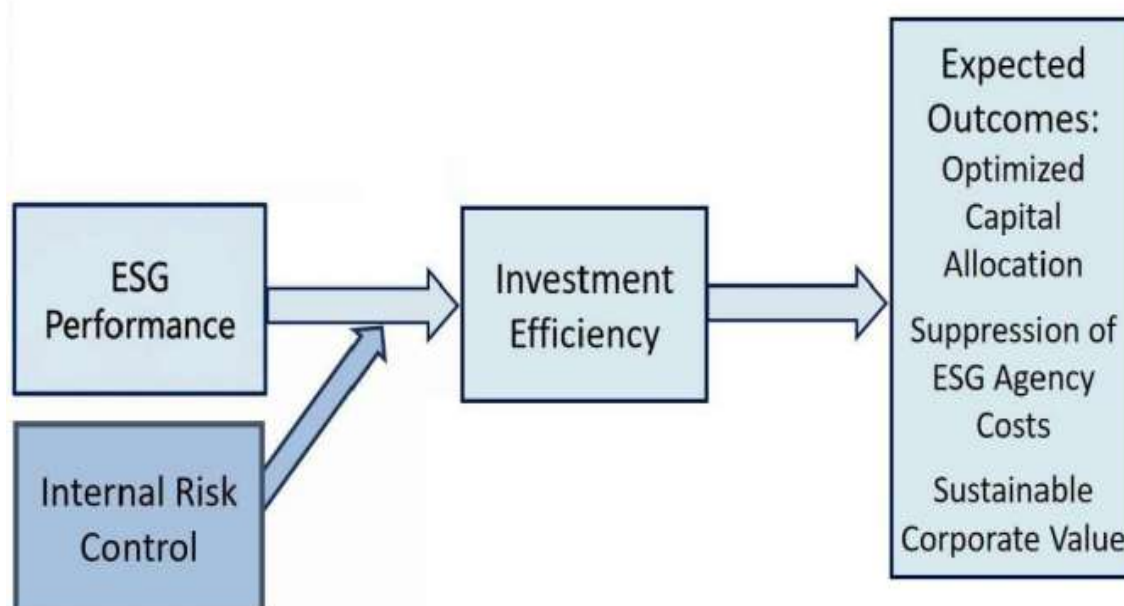


Figure 1: The Resource-Governance Conceptual Framework

The Direct Effect of ESG Performance

Relying on the literature related to signal theory and information asymmetry (Connelly, Certo, Ireland, & Reutzel, 2011; Spence, 1973), high-quality ESG performance can be used as a reliable market signal to bridge the information gap between management and external investors (Benlemlih & Bitar, 2018). By showing the market that enterprises are committed to long-term sustainable development, enterprises can reduce their risk perception level, thereby reducing capital costs (Dhaliwal, Li, Tsang, & Yang, 2011; Fatemi, Glaum, & Kaiser, 2018). This process can alleviate rigid financing constraints, provide incremental liquidity, and enable enterprises to invest in positive NPV projects that were originally forced to abandon (Biddle et al., 2009; Zhao et al., 2024). To illustrate this practically, a traditional manufacturing enterprise aiming for a low-carbon transition can leverage a high ESG rating to issue green bonds at a discounted interest rate, securing the exact capital needed to upgrade energy-efficient machinery that was previously shelved. Accordingly, the increase in capital supply will help alleviate the problem of insufficient investment and improve the efficiency of benchmark capital allocation.

Proposition 1: ESG performance is positively associated with investment efficiency by alleviating information asymmetry and financing constraints.

The Gatekeeper Role of Internal Risk Control

When operating under the ERM framework of modern enterprises, internal risk control is a structural guarantee mechanism to prevent capital misallocation (COSO, 2017; Gatzert & Martin, 2015). Perfect internal risk control is not a passive compliance checklist, but a risk-adjusted return assessment directly embedded in the capital budgeting process (Gates et al., 2012; Li et al., 2024). While competing structural theories sometimes criticize strict internal controls as bureaucratic constraints that stifle organizational agility, this framework argues that such discipline is precisely what protects shareholder value during green transitions.

The checkpoint function relies on the rigorous transmission mechanism embedded in the whole life cycle of enterprise investment: First, in the pre-capital budgeting stage, the high-quality internal risk control system requires that all projects marked with ESG attributes must meet the preset threshold yield and have a strict risk-adjusted return on capital (RAROC) Evaluation. This financial screening mechanism strips away the "green aura" of sustainable development projects and forces managers to demonstrate the economic feasibility of the project itself, rather than relying solely on reputation narratives to obtain resources. Second, in the implementation stage, internal risk control imposes rigid budget constraints and carries out continuous supervision to avoid the misappropriation of newly raised ESG funds to traditional inefficient capacity expansion or administrative expenses for personal gain. The mechanism is equivalent to a mandatory firewall, which can screen out opportunistic projects driven by managers' excessive self-confidence or the motivation to build an enterprise empire and projects with negative NPV (Jensen & Meckling, 1976; Masulis et al., 2007). By implementing the above procedural constraints, internal risk control can ensure that the enterprise's resources are allocated to investment projects with real economic value, rather than being left to the discretion of managers without restraint.

Proposition 2: High-quality internal risk control plays a strategic gatekeeping role by constraining managerial opportunism and screening out value-destroying projects through strict capital budgeting and continuous monitoring mechanisms.

The Synergistic Resource-Governance Interaction

The core of the conceptual framework lies in the interaction between ESG resources and internal governance. By analyzing the free cash flow hypothesis and the resource basic concept, the theoretical necessity of the synergy of the two can be clearly explained. When the enterprise's excellent ESG performance successfully reduces its own financing costs and attracts external capital inflows, it will unintentionally form "resource slack" within the enterprise, that is, abundant free cash flow. According to the agency theory, unrestrained resource slack serves as a breeding ground for managerial opportunism. In the absence of strict supervision, the management may use the liquidity brought by ESG to carry out reputation projects, overinvest in redundant business, or improve personal reputation through superficial "greenwashing" behavior, ultimately damaging shareholder value (Jensen, 1986; Wu, Long, & Wang, 2025; Cao, Chen, & Zhu, 2024).

The RBV posits that valuable resources such as capital access brought by ESG will not automatically bring competitive advantages to enterprises. Only when enterprises have the complementary organizational "ability" that can effectively allocate them can they be transformed into competitive advantages (Barney, 1991; Sirmon, Hitt, & Ireland, 2007). In this theoretical situation, internal risk control is an indispensable organizational capability. It is a "governance antidote" for the inherent agency risks of ESG resources. Without internal process discipline, managers might divert these funds into superficial reputation engineering, such as constructing a zero-carbon administrative building, rather than upgrading core manufacturing technologies. However, when paired with high-quality internal risk control, this capital is strictly channeled into core green technological innovations. Internal risk control positively moderates the relationship between ESG and efficiency by playing the role of the executive filter: it transforms the influx of abundant capital into disciplined strategic execution ensuring that the liquidity driven by ESG is systematically allocated to innovative activities with economic rationality, rather than being consumed by agency costs (Broadstock, Chan, Cheng, & Wang, 2021; Gao, Li, & Zhou, 2024)

Proposition 3: Internal risk control positively moderates the relationship between ESG performance and investment efficiency; when internal governance transforms unrestrained resource slack into standardized value-creating investment, the effect of ESG on efficiency will be significantly amplified.

Institutional Boundary Conditions

The intensity of this resource-governance synergy is constrained by the institutional situation at the structural level, and in emerging markets such as China, it is especially constrained by the heterogeneity of ownership. Non-SOEs often face hard budget constraints and fierce market competition, which makes the checkpoint function of internal risk control crucial to prevent the fatal mismatch of scarce ESG capital (Kornai, 1986; Lin et al., 2020). In contrast, SOEs operate in a soft budget-constrained environment under the buffer of implicit government support, but need to accept stronger administrative compliance requirements and political goal constraints (Zhao et al., 2024; Zhao & Xu, 2025).

Due to the fundamental differences in survival pressure, incentive structure and regulatory supervision of different ownership types of enterprises, this article expects that the moderating effect of internal risk control on ESG capital allocation will show significant situational heterogeneity (He et al., 2023; Wang, Ma, Dong, & Zhang, 2023). For example, a non-SOE facing intense market competition will use risk control to ensure every unit of ESG funding strictly maximizes financial returns to avoid bankruptcy. In contrast, an SOE might utilize its state-mandated administrative audits to prevent the opportunistic misuse of ESG capital, prioritizing policy compliance alongside economic efficiency.

Proposition 4: The synergistic effect of ESG performance and internal risk control is constrained by institutional heterogeneity; due to the differences in budget constraints and governance incentives faced by SOEs and non-SOEs, there are significant differences in the moderating role of risk control expected in this article between the two types of enterprises.

Methodological Implications

This research is a conceptual research, and the proposed "resource governance" framework is constructed through a rigorous literature review. Through critical review and integration of scattered research results in the fields of ESG performance, enterprise risk management and capital allocation, this study systematically sorts out the theoretical intersection between agency theory, resource-based view (RBV) and enterprise risk management. This comprehensive process provides a basis for the logical derivation of the above propositions, and also lays the theoretical foundation for future empirical tests.

To translate this conceptual framework into an empirical design, future research must carefully operationalize the core variables. A key methodological step is the measurement of investment efficiency. This study strongly advocates the use of Richardson (2006) residual model instead of directly using the original investment expenditure indicator. The specific reason for choosing this model is that the core of the ESG investment paradox lies in capital mismatch, not mere capital size. The Richardson (2006) model clearly captures the inefficiency of investment by calculating the deviation between actual investment and expected investment (Gao et al., 2024). By modeling expected investment into a function of growth opportunities and financial fundamentals (Biddle et al., 2009; Zhao et al., 2024), the residual item can accurately reflect the investment part that exceeds the normal business needs. This is highly consistent with our theoretical concerns, allowing researchers to quantitatively judge whether ESG-driven funds are wasted on speculative overinvestment or symbolic spending. Importantly, since dependent variables are defined as inefficiency, empirical interpretation should follow the opposite logic: negative coefficients indicate that investment efficiency has improved.

Regarding independent variables and adjustment variables, it is recommended to adopt continuous indicators such as the ESG score of the Chinese certificate to retain the subtle differences between enterprises (Berg et al., 2022). Internal risk control can be effectively represented by the DIB internal control index, which provides a fine measure of the quality of internal governance and is suitable for the screening mechanism proposed by the inspection in the context of the Chinese system (Sun, Huang, & Feng, 2024; Huang, Cheng, & Zheng, 2025). In the empirical model, the key test of our framework needs to introduce the interaction between ESG performance and internal risk control. If the coefficient of $ESG \times \text{internal risk control}$ is significantly negative, it can be empirically verified that risk control helps to transform ESG resources into more efficient capital allocation, rather than reducing them to the discretionary space of management (Li et al., 2024; Wu et al., 2025).

Finally, although the detailed description of complex econometric procedures is beyond the scope of this conceptual paper, future empirical designs should use appropriate panel regression models. In order to test the institutional boundary conditions (proposition 4), researchers can use triple interaction terms ($ESG \times \text{internal risk control} \times SOE$) to assess whether risk control has a screening effect of different weights in market-oriented private enterprises and state-owned enterprises (Lin et al., 2020). Future research must also solve endogenous problems, such as the inverse causal relationship between enterprise efficiency and ESG ability, by adopting standard robustness strategies such as lag interpretation variables. These targeted empirical extensions will allow the conceptual framework proposed in this article to be rigorously tested.

Conclusion

This study addresses the persistent “ESG investing paradox” by asking a fundamental question: does the influx of capital associated with strong ESG performance inherently guarantee efficient capital allocation? This article shifts the focus of analysis from capital acquisition to capital allocation, and builds a "resource-governance" analysis framework. The core argument points out that the financial value of ESG resources cannot be automatically released, and its value realization depends on the collaborative integration of external green signal transmission and internal process constraints. Without the strategic control role of internal risk control, ESG-driven capital may be susceptible to the impact of management opportunistic behavior, symbolic investment and resource mismatch (Zhou et al., 2024).

From an academic perspective, the value of this paper lies in applying the existing theoretical perspective and linking it to the topic of ESG investment paradox. Agency theory explains why ESG-related resources may be transferred to symbolic projects or occupied by management opportunistic behavior (Jensen, 1986; Masulis et al., 2007). The RBV helps to clarify that ESG advantages need to rely on complementary internal capabilities to create economic value (Barney, 1991; Sirmon et al., 2007). Enterprise Risk Management further explains how internal risk control can function as a screening mechanism in capital allocation (COSO, 2017; Gates et al., 2012). By integrating the above theoretical perspective, this article provides a more systematic analysis path to clarify why ESG performance can only improve investment efficiency with the support of effective internal governance. The framework also highlights the importance of China’s ownership-based institutional context, where SOEs and non-SOEs may differ in political objectives, budget constraints, and exposure to market discipline (Lin et al., 2020; Zhao & Xu, 2025).

From a practical point of view, the research framework is of enlightening significance to enterprise managers, investors and regulators. For corporate executives, the framework points out that building an external ESG reputation cannot replace sound internal capital budgeting discipline; ESG strategies should be embedded in risk assessment, project screening and investment approval processes to avoid green projects becoming symbolic measures or inefficient expenditures (Zhu et al., 2025). For investors and regulators, the framework shows that even in economies in transition, relying on ESG ratings alone is not enough to assess the ability to create sustainable value. (Broadstock et al., 2021; Chen et al., 2025). Stakeholders need to look beyond disclosure quality and examine whether firms possess internal governance systems capable of translating ESG resources into economically justified investment decisions.

This study is conceptual in nature and therefore does not provide direct empirical evidence for the proposed relationships. Future research can test this framework using panel data from Chinese A-share manufacturing firms, measuring investment inefficiency through the Richardson residual model, ESG performance through continuous Huazheng ESG scores, and internal risk control through the DIB Internal Control Index. Further empirical work should also address endogeneity concerns and examine whether the ESG and risk control interaction differs between SOEs and non-SOEs. Ultimately, the value of ESG should not be assessed only by whether firms engage in sustainability practices, but by whether such practices are governed through effective internal mechanisms that support efficient and long-term capital allocation.

This research is relying on the synthesis of existing literature, not empirical data. Therefore, the proposed relationship, especially the cooperative interaction between ESG performance and internal risk control, is still theoretically derived and needs to be verified by strict experience. In addition, the framework is closely related to China's unique institutional environment, especially financial dualism and division of ownership. While this provides targeted theoretical insights for economies in transition, it may limit the direct extension of the proposed mechanism to developed economies characterized by mature, market-driven financial systems and homogeneous budgetary constraints.

To address these limitations and advance the resource-governance framework, future empirical research is highly recommended. First, researchers should validate this framework using longitudinal ESG data to capture the dynamic, long-term effects of internal risk control on capital allocation over time. Second, conducting cross-country comparisons would be a valuable theoretical extension. Analyzing how the ESG–risk control interaction functions across different institutional environments and varying regulatory regimes could determine the global applicability of this framework and identify additional institutional boundary conditions.

Acknowledgments

The authors would like to sincerely thank Professor Hazianti for her expert guidance and continuous encouragement during the preparation of this manuscript. Special thanks are also extended to Universiti Pendidikan Sultan Idris (UPSI) for providing the necessary academic resources and database access that made this research possible.

References

- Alkaraan, F., Elmarzouky, M., Jabbour, A. B. L. de S., Jabbour, C. J. C., & Gulko, N. (2025). Maximising sustainable performance: Integrating servitisation innovation into green sustainable supply chain management under the influence of governance and Industry 4.0. *Journal of Business Research*, 186, 115029. doi:10.1016/j.jbusres.2024.115029
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. doi:10.1177/014920639101700108
- Benlemlih, M., & Bitar, M. (2018). Corporate social responsibility and investment efficiency. *Journal of Business Ethics*, 148(3), 647–671. doi:10.1007/s10551-016-3020-2
- Berg, F., Kölbel, J. F., & Rigobon, R. (2022). Aggregate confusion: The divergence of ESG ratings. *Review of Finance*, 26(6), 1311–1347. doi:10.1093/rof/rfac033
- Berry-Stölzle, T. R., Che, X., & Xu, J. (2026). Enterprise risk management, external financing, and corporate investment. *North American Actuarial Journal*, 30(2), 480–513. doi:10.1080/10920277.2025.2559960
- Biddle, G. C., Hilary, G., & Verdi, R. S. (2009). How does financial reporting quality relate to investment efficiency? *Journal of Accounting and Economics*, 48(2–3), 112–131. doi:10.1016/j.jacceco.2009.09.001
- Broadstock, D. C., Chan, K., Cheng, L. T. W., & Wang, X. (2021). The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China. *Finance Research Letters*, 38, 101716. doi:10.1016/j.frl.2020.101716
- Brunner-Kirchmair, T. M., & Hiebl, M. R. (2025). Enterprise risk management maturity and organisational ambidexterity: Evidence from German Mittelstand firms. *Accounting & Finance*, 65(3), 2753–2777.

- Cao, C., Chen, Q., & Zhu, L. (2024). Corporate greenwashing unexpectedly caused by the green credit policy: A comparison between environmental sustainability information disclosure and actual environmental protection investment from China's listed companies. *Sustainability*, 16(17), 7369. doi:10.3390/su16177369
- Chen, Z., Li, Z., Mao, T., & Yoon, A. (2025). Global versus local ESG ratings: Evidence from China. *The Accounting Review*, 100(4), 161–192. doi:10.2308/TAR-2022-0703
- Committee of Sponsoring Organizations of the Treadway Commission. (2017). *Enterprise risk management: Integrating with strategy and performance*. New York, NY: Author.
- Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management*, 37(1), 39–67. doi:10.1177/0149206310388419
- Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *The Accounting Review*, 86(1), 59–100. doi:10.2308/accr.00000005
- Drempetic, S., Klein, C., & Zwergel, B. (2019). The influence of firm size on the ESG score: Corporate sustainability ratings under review. *Journal of Business Ethics*, 167(2), 333–360. doi:10.1007/s10551-019-04164-1
- Eastman, E. M., Ehinger, A. C., & Xu, J. (2024). Enterprise risk management and corporate tax planning. *Journal of Risk and Insurance*, 91(3), 1–36. doi:10.1111/jori.12469
- Fatemi, A., Glaum, M., & Kaiser, S. (2018). ESG performance and firm value: The moderating role of disclosure. *Global Finance Journal*, 38, 45–64. doi:10.1016/j.gfj.2018.03.001
- Feng, X., & Saleh, N. M. (2024). Managerial ability and ESG risks: The moderating effect of internal control quality. *Sustainability*, 16(22), 9838. doi:10.3390/su16229838
- 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. doi:10.1080/20430795.2015.1118917
- Gao, D., Li, S., & Zhou, Y. (2025). Investment efficiency, ESG performance and corporate performance: Evidence from Chinese listed enterprises. *Chinese Management Studies*, 19(2), 567–599. doi:10.1108/CMS-06-2022-0210
- Gates, S., Nicolas, J. L., & Walker, P. L. (2012). Enterprise risk management: A process for enhanced management and improved performance. *Management Accounting Quarterly*, 13(3), 28–38.
- Gatzert, N., & Martin, M. (2015). Determinants and value of enterprise risk management: Empirical evidence from the literature. *Risk Management and Insurance Review*, 18(1), 29–53. doi:10.1111/rmir.12028
- Gerged, A. M., Kuzey, C., Uyar, A., & Karaman, A. S. (2023). Does investment stimulate or inhibit CSR transparency? The moderating role of CSR committee, board monitoring and CEO duality. *Journal of Business Research*, 159, 113762. doi:10.1016/j.jbusres.2023.113762
- Global Sustainable Investment Alliance. (2023). *Global sustainable investment review 2022*. Retrieved from <https://www.gsi-alliance.org/members-resources/gsir2022/>
- Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of Management Review*, 20(4), 986–1014. doi:10.5465/amr.1995.9512280033

- He, F., Ding, C., & Yue, W. (2023). ESG performance and corporate risk-taking: Evidence from China. *International Review of Financial Analysis*, 87, 102550. doi:10.1016/j.irfa.2023.102550
- Hu, H., Zhang, T., & Dong, H. (2026). The signaling power of ESG reports: How corporate sustainability disclosure shapes investment decisions in China. *International Review of Financial Analysis*, 109, 104691. doi:10.1016/j.irfa.2025.104691
- Huang, G., Cheng, J., & Zheng, S. (2025). Do securities firms' shareholdings improve corporate ESG performance? Evidence from China listed companies. *Finance Research Letters*, 84, 107797. doi:10.1016/j.frl.2024.107797
- IFRS Foundation. (2023). *IFRS S1 general requirements for disclosure of sustainability-related financial information*. London, England: Author.
- International Energy Agency. (2023). *World energy investment 2023*. Paris, France: Author.
- International Energy Agency. (2024). *World energy investment 2024*. Paris, France: Author.
- International Organization of Securities Commissions. (2023). *Supervisory practices to address greenwashing*. Madrid, Spain: Author.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76(2), 323–329.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. doi:10.1016/0304-405X(76)90026-X
- Kornai, J. (1986). The soft budget constraint. *Kyklos*, 39(1), 3–30. doi:10.1111/j.1467-6435.1986.tb01252.x
- Li, D., Ma, C., Yang, J., & Li, H. (2024). ESG performance and corporate fraud. *Finance Research Letters*, 62, 105212. doi:10.1016/j.frl.2024.105212
- Lin, K. J., Lu, X., Zhang, J., & Zheng, Y. (2020). State-owned enterprises in China: A review of 40 years of research and practice. *China Journal of Accounting Research*, 13(1), 31–55. doi:10.1016/j.cjar.2019.12.001
- Marquis, C., & Raynard, M. (2015). Institutional strategies in emerging markets. *The Academy of Management Annals*, 9(1), 291–335. doi:10.1080/19416520.2015.1014661
- Masulis, R. W., Wang, C., & Xie, F. (2007). Corporate governance and acquirer returns. *The Journal of Finance*, 62(4), 1851–1889. doi:10.1111/j.1540-6261.2007.01261.x
- Morgan Stanley Institute for Sustainable Investing. (2024). *Sustainable signals: Understanding the modern sustainable investor*. New York, NY: Morgan Stanley.
- Neel, M., & Xu, J. (2025). Does enterprise risk management bolster investor confidence? Evidence from options-based restatement contagion, investment, and misstatements. *Contemporary Accounting Research*, 42(4), 2826–2860. doi:10.1111/1911-3846.13063
- Patel, P. C., Pearce, J. A., II, & Oghazi, P. (2021). Not so myopic: Investors lowering short-term growth expectations under high industry ESG-sales-related dynamism and predictability. *Journal of Business Research*, 128, 551–563. doi:10.1016/j.jbusres.2020.11.013
- PricewaterhouseCoopers. (2023). *PwC's global investor survey 2023*. London, England: Author.
- Richardson, S. (2006). Over-investment of free cash flow. *Review of Accounting Studies*, 11(2–3), 159–189. doi:10.1007/s11142-006-9012-1
- Roodman, D. (2009). How to do xtabond2: An introduction to difference and system GMM in Stata. *The Stata Journal*, 9(1), 86–136.

- Sirmon, D. G., Hitt, M. A., & Ireland, R. D. (2007). Managing firm resources in dynamic environments to create value: Looking inside the black box. *Academy of Management Review*, 32(1), 273–292. doi:10.5465/amr.2007.23466005
- Spence, M. (1973). Job market signaling. *The Quarterly Journal of Economics*, 87(3), 355–374. doi:10.2307/1882010
- Sun, Y., Huang, Y., & Feng, Q. (2024). Internal control and stock liquidity. *Finance Research Letters*, 66, 105716. doi:10.1016/j.frl.2024.105716
- Tabur, M., & Bildik, R. (2025). The impact of ESG rating disagreement on the financial performance of environmentally sensitive industry companies worldwide. *Borsa Istanbul Review*, 25(3), 435–448. doi:10.1016/j.bir.2025.01.013
- Wang, J., Ma, M., Dong, T., & Zhang, Z. (2023). Do ESG ratings promote corporate green innovation? A quasi-natural experiment based on SynTao Green Finance's ESG ratings. *International Review of Financial Analysis*, 87, 102623. doi:10.1016/j.irfa.2023.102623
- Wang, M., & Zhang, Y. (2024). Controlling shareholders' equity pledge, litigation risk and corporate ESG performance. *International Review of Economics & Finance*, 95, 103453. doi:10.1016/j.iref.2024.103453
- Wintoki, M. B., Linck, J. S., & Netter, J. M. (2012). Endogeneity and the dynamics of internal corporate governance. *Journal of Financial Economics*, 105(3), 581–606. doi:10.1016/j.jfineco.2012.03.005
- Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data* (2nd ed.). Cambridge, MA: MIT Press.
- Wu, Z., Long, S., & Wang, Y. (2025). ESG greenwashing and organizational resilience: Exploring sustainable development paths from the perspective of unsystematic risk. *Journal of Environmental Management*, 390, 126395. doi:10.1016/j.jenvman.2024.126395
- Yang, X., Zhang, K., Gao, P., & Yang, Z. (2025). State-owned shareholders' participation and environmental, social, and governance performance of private firms: Evidence from China. *Applied Economics*, 57(26), 3503–3524. doi:10.1080/00036846.2024.2337797
- Zhang, X., Kong, L., & Hu, X. (2024). Shades of green: The impact of greenwashing on stock price crash risk. *Finance Research Letters*, 70, 106285. doi:10.1016/j.frl.2024.106285
- Zhang, Y., & Liu, Z. (2025). ESG rating disagreement and bank loan availability: Evidence from China. *Heliyon*, 11(1), e41392. doi:10.1016/j.heliyon.2024.e41392
- Zhao, L., Liu, X., Tang, Y., & Zhang, W. (2024). Functional subsidies, selective subsidies and corporate investment efficiency: Evidence from China. *Emerging Markets Review*, 61, 101162. doi:10.1016/j.ememar.2024.101162
- Zhao, P., & Xu, J. (2025). Can removing policy burdens improve SOEs' ESG performance? Evidence from China. *Sustainability*, 17(18), 8315. doi:10.3390/su17188315
- Zhou, K., Qu, Z., Liang, J., Tao, Y., & Zhu, M. (2024). Threat or shield: Environmental administrative penalties and corporate greenwashing. *Finance Research Letters*, 61, 105031. doi:10.1016/j.frl.2024.105031
- Zhu, Z., Huang, L., & Huang, W. (2025). Managers' perception of supply chain risk and total factor productivity of enterprises: Opportunity-seeking or loss-averse? *International Journal of Production Economics*, 279, 109456. doi:10.1016/j.ijpe.2025.109456