

Article

Corporate Strategic Orientation and ESG Performance: Financial Distress and Boundary Conditions in China's Evolving Green-Policy Environment

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Abstract

How does corporate strategic orientation relate to ESG (environmental, social, and governance) performance in China's evolving green-policy environment? Using 12,998 firm-year observations of Chinese A-share listed firms (2010–2023) with Bloomberg ESG scores, we compare profit- and growth-oriented firms in firm- and year-fixed-effects specifications that support associational rather than causal interpretation. Profit-oriented firms show higher ESG performance and growth-oriented firms lower; these associations are robust to continuous measures, four-quadrant classifications, threshold variation, expanded controls, and alternative fixed-effect structures. A financial-distress channel appears under an Ohlson-type measure (mediated shares of 3.9% versus 1.2%, a 3.25-fold difference that is itself statistically significant) but does not generalize to an Altman Z-score or temporally ordered specifications; we therefore present it as one possible, measure-dependent channel rather than as a transmission hub (a causal-mediation reading would require the sequential-ignorability assumptions that our design does not deliver). Among boundary conditions, moderators show only exploratory asymmetries concentrated in firm size that do not survive multiple-testing correction, whereas financing-constraint nulls are certified by equivalence testing. The growth-oriented ESG discount deepens after the 2020 dual-carbon announcement. We discuss implications for calibrated, firm-type-differentiated ESG policy.

Keywords: strategic orientation; ESG performance; financial distress risk; boundary conditions; equivalence testing; staggered policy evaluation; Chinese listed firms



Academic Editor:

Izabela Jonek-Kowalska

Received: 31 August 2026

Revised: 19 September 2026

Accepted: 21 September 2026

Published: 23 September 2026

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1. Introduction

China's green-policy environment has evolved in stages. The 2016 Guidelines for Establishing the Green Financial System [1] brought ESG into national top-level design; the 2020 announcement of the dual-carbon goals (peaking carbon emissions before 2030 and achieving carbon neutrality before 2060) raised the stakes further; and the 2024 sustainability reporting guidelines [2] (which postdate our sample and therefore serve as institutional context rather than as part of the tested environment) mark the latest stage of partially mandatory disclosure. For Chinese firms, ESG (environmental, social, and governance) performance is no longer a peripheral moral issue; it has become a strategic concern that bears on survival and competitiveness. This agenda speaks directly to SDG 8 (decent work and economic growth), SDG 12 (responsible consumption and production),

and SDG 13 (climate action) of the United Nations Sustainable Development Goals; firm-level ESG performance therefore constitutes the micro-foundation on which these goals ultimately rest.

For managers, however, the road to ESG excellence is fraught with strategic tension: should a firm give priority to long-term profitability and financial soundness, or to rapid expansion and market share? Prior research shows that a firm's strategic orientation is systematically related to its ESG performance: green entrepreneurial orientation, strategic social value orientation, and the strategic emphasis of CSR reporting all significantly shape ESG outcomes [3–5], although the strategic constructs in these studies are not the profit–growth dichotomy itself. Zhou and Park [6] established the profit-versus-growth orientation dichotomy in the Chinese setting, but their outcome was long-term financial performance rather than ESG. Recent China-specific work has covered green finance policy and ESG performance [7], green credit and corporate green innovation [8], the low-carbon pilot and green innovation [9,10], business strategy and carbon-reduction performance [11], ESG and firm risk [12], financing constraints and investment [13], and media coverage and ESG [14], but not the strategy–ESG nexus with an explicit mechanism and policy boundary conditions; this paper extends that dichotomy to ESG and examines its mediating channel. These directional effects are not unconditional. Their strength is shaped jointly by the institutional environment and the resource conditions firms face. Why does this happen, and under what conditions does the relationship strengthen or weaken?

Existing answers are fragmented and at times contradictory. Resource dependence, stakeholder, cost–benefit, and agency theories each contain bidirectional implications that both promote and crowd out ESG, so the strategy–ESG relation resists reduction to a single linear function; its observed direction depends on context (Section 2.2).

The Chinese setting adds complexity. The dual-carbon policy framework and mandatory disclosure impose strong institutional pressure, while the capital market remains characterized by sizable financing constraints, information asymmetry, and regional and industrial heterogeneity. Their coexistence amplifies the tension between long-term sustainability and short-term survival, and existing frameworks capture neither the mediating channel nor the boundary conditions well. This Chinese setting is both the analytical context of our framework and the main boundary of its external validity.

Three research questions guide the analysis, ordered by the strength of claim each can support. RQ1 (descriptive): how is strategic orientation (profit versus growth) associated with ESG performance? RQ2 (mechanism): is financial distress risk a plausible channel, and how robust is it to measurement and specification? RQ3 (boundary conditions): do contextual conditions moderate the association, and does any asymmetry survive formal between-path tests? The questions speak to four threads in the literature: relative to firm life-cycle accounts, our classification isolates a profitability–growth trade-off rather than age or stage; relative to strategic-myopia work, we do not assume a time-preference equivalence but test the temporal reading as a lens; relative to the financial-constraints literature, financing conditions enter as one moderating logic among several rather than as the master constraint; and relative to ESG-disclosure studies, our outcome is a third-party performance score rather than disclosure behavior.

We adopt a design that combines theory-building with empirical testing. Theoretically, we interpret profit orientation and growth orientation through the lenses of long- and short-termism, examine financial distress risk as a possible mediating channel, and classify external moderating conditions by their operative logic into incentive-type instruments and pressure-type conditions, from which we derive 15 testable hypotheses. Empirically, using 12,998 firm-year observations of Chinese A-share listed firms in Shanghai and Shenzhen over 2010–2023, we first confirm the baseline main effects, then test mediation

and the moderating effects of the two classes of conditions with two-way fixed-effects models, and evaluate the policy instrument on the low-carbon city pilot [15] using the heterogeneity-robust staggered-adoption estimator of Callaway and Sant’Anna [16] with city-level inference, alongside a conventional event study.

The most informative results concern not which hypotheses are supported but two asymmetries: the financial-risk channel differs by a factor of about 3.25 in explanatory power across the two strategic paths (Section 4.2; about 99% of the growth-orientation suppression of ESG does not operate through financial distress risk), and the same class of policy instruments shows a contrasting pattern across the two paths. The pattern is as follows. Among growth-oriented firms, none of the three positive incentive instruments shows a detectable moderating effect, while pressure-type conditions significantly aggravate their ESG suppression; among profit-oriented firms, the two payoff-reshaping instruments (the low-carbon policy and environmental subsidies) both exhibit positive moderation. This contrast suggests a mechanism that the existing literature has not examined: the effectiveness of a policy instrument is consistent with a joint dependence on the firm’s strategic orientation and the channel through which the instrument acts. The strength of the evidence varies. The null effects of the resource-provision channel are precisely estimated on both paths, whereas the policy-signal and cost-compensation channels are measured with limited precision on the growth-oriented side; they are consistent with this pattern but cannot establish it on their own.

Our contributions are three, tiered by evidentiary strength. First, descriptively, we document a robust orientation–ESG association that survives continuous measures, four-quadrant decomposition, threshold variation, expanded controls, alternative fixed-effect structures, and replication under a second ESG rating vendor. Second, on mechanism, we examine financial distress risk as a candidate channel and show that it is measure-dependent: present under the O-Score (with the mediated shares differing by a factor of about 3.25 across the two paths), absent under the Altman Z-score and under temporally ordered specifications, a qualification we report as part of the finding. Third, we propose and test a moderating framework that classifies external conditions by their operative logic into incentive-type instruments and pressure-type conditions and apply policy resistance as an interpretive lens to the ESG suppression of growth-oriented firms and propose a candidate micro-foundation for it: the divergence of these conditions’ effectiveness along strategic orientation and instrument channel, observed before multiple-testing correction, is reported as a core pattern. Purely resource-relaxing instruments show no detectable effect on either type of firm, payoff-reshaping instruments show detectable effects on the profit-oriented path only (an exploratory contrast; the between-path differences are not themselves significant), and pressure-type variables such as firm size show a nominal amplification of the negative effect of growth orientation on ESG (significant before multiple-testing correction). This makes the policy implications sharper than a call for stronger incentives and provides direct input for differentiated regulatory design.

2. Theoretical Foundation and Hypotheses

2.1. *The Time Dimension of Strategic Orientation and the Chinese ESG Context*

The profit-versus-growth orientation dichotomy that Zhou and Park [6] developed for the Chinese setting captures a central tension in strategic choice. We read this opposition through the lens of time preference: profit-oriented firms prioritize long-term profitability and financial soundness, a profile consistent with a longer evaluation horizon; growth-oriented firms emphasize rapid expansion and market share, a profile consistent with a shorter evaluation horizon. We treat this temporal reading strictly as a theoretical lens, not as a measurement equivalence (this section draws the construct boundary).

Building on Laverty's [17] account of economic short-termism, we summarize time preference in three operational dimensions: the time horizon over which returns are assessed, the window used for performance evaluation, and the intergenerational span of commitments to stakeholders. Slawinski and Bansal's [18] framework of intertemporal tensions supports this distinction. Two qualifications apply. Their study concerns the conflict between short-term and long-term time frames and does not equate profit orientation with long-termism; and our reconceptualization is an analytic refinement rather than a semantic equivalence, since hybrid firms exist and our framework focuses on each firm's dominant time preference.

In China, the rise of ESG has been distinctly policy-driven. The 2016 Guidelines for Establishing the Green Financial System brought ESG into national top-level design, and the 2024 sustainability reporting guidelines moved the A-share market into mandatory disclosure. Institutional theory holds that such coercive pressure shapes organizational decisions by altering the legitimacy beliefs that guide behavior [19]. Chinese scholars have systematically reviewed the alignment of governance frameworks with international standards, disclosure practice under the dual-carbon goal, and regional variation in governance [20–22], and recent work examines value creation through ESG in the dual-carbon context [23]. The dual-carbon institutional environment has thus substantively changed the payoff structure of ESG investment, but its incidence is markedly heterogeneous.

2.2. Theoretical Dilemmas and Our Analytical Position

Existing theories explain the strategy–ESG relation with competing logics, and every theory contains bidirectional implications; this is our point of departure. Resource dependence and stakeholder theory support a resource-release hypothesis, in which profit-oriented firms treat ESG as a strategic asset that builds legitimacy and secures critical resources [24,25]; yet the same theories warn that when shareholder value predominates and regulatory pressure is slack, firms may treat ESG as a cost burden. Cost–benefit and agency theory support a resource-squeeze hypothesis, in which growth-oriented firms are more likely to cut ESG investment to conserve capital [26]; yet the impression-management motive in agency theory can also push such firms toward ESG for legitimacy.

The crux therefore lies in tensions within theories rather than between them: the realized effect depends on which contextual conditions are activated. Paradox theory [27] offers a useful lens: organizational tensions are not either/or choices to be resolved but oppositions that persist and must be managed dynamically. Rather than choosing among competing hypotheses, we identify financial distress risk as the key mediator that transmits both strategic logics and explain how, and under what conditions, they translate into different ESG outcomes. Our directional hypotheses (H1a/H1b) presuppose China's strong institutional context; in settings with weaker institutions or looser resource constraints, the direction of the effects may reverse or attenuate.

2.3. The Financial Distress Channel: A Possible Mediating Pathway

Corporate financial distress risk, namely the risk of debt default, financial distress, or loss of going-concern ability, is the pivotal link between strategic orientation and ESG performance.

We order the analysis from strategic choice through financial distress risk to ESG rather than from ESG investment to lower financial distress risk [28,29]. Strategic orientation precedes resource-allocation decisions [30]; financial distress risk is an annual stock variable that is relatively stable in the short run, whereas the effect of ESG investment on financial distress risk typically requires a longer lag (the full argument is in Text S3). The two directions are not mutually exclusive; medium- to long-term reverse feedback is treated as a boundary condition in Section 5.

Strategic orientation and financial distress risk. Profit-oriented firms take stable profitability as their primary goal and make conservative choices: moderate leverage, cash reserves, and a preference for organic over aggressive external expansion yield predictable cash flows and lower financial distress risk at reasonable debt levels. Growth-oriented firms give priority to rapid expansion; their strategies typically involve heavy capital expenditure, frequent acquisitions, and strong reliance on external financing, and hence high leverage, while rapid expansion brings integration challenges and market uncertainty that amplify cash-flow volatility.

Hypothesis 1a (H1a). *Profit orientation is negatively associated with corporate financial distress risk.*

Hypothesis 1b (H1b). *Growth orientation is positively associated with corporate financial distress risk.*

Financial distress risk and ESG performance. Financial distress risk directly constrains a firm's ability and willingness to invest in activities such as ESG that carry immediate costs and uncertain long-term returns. The resource-based view supplies the analytic tool: organizational slack buffers experimentation, innovation, and strategic investment [31]. Firms with lower financial distress risk retain discretionary resources after meeting operating and debt-service needs, and low risk extends management's time horizon; firms with higher risk must prioritize rigid expenditures and inevitably cut non-rigid investments such as ESG. Opler and Titman [32] show that financially distressed firms suffer significant losses of market share and sales; Whited and Wu [33] show that financial constraints compress investment flexibility; recent evidence from Thailand and the United States confirms the association between ESG performance and financial risk [34,35]; and He et al. [12] identify financing constraints as the mechanism linking the two.

Hypothesis 2 (H2). *Corporate financial distress risk is negatively associated with ESG performance. (H2 carries no a/b branches: the suppressive effect of financial distress risk on ESG is the shared mediating link of the two pathways and does not change direction with strategic orientation.)*

Opposing pathways. Integrating the arguments yields a system of opposing indirect associations. Path one (resource release) runs from profit orientation to lower financial distress risk to greater slack and a longer time horizon to stronger ESG performance; path two (resource squeeze) runs from growth orientation to higher financial distress risk to constrained slack and a compressed time horizon to weaker ESG performance. The same indirect channel turns two opposing strategic logics into opposing ESG outcomes.

Hypothesis 3a (H3a). *Financial distress risk mediates the positive relationship between profit orientation and ESG performance.*

Hypothesis 3b (H3b). *Financial distress risk mediates the negative relationship between growth orientation and ESG performance.*

H3a and H3b are formally symmetric, but whether the mediated shares are also symmetric is an empirical question; Section 4.2 shows that they differ substantively.

2.4. Contextual Conditions: Incentive-Type and Pressure-Type Operative Logics

Whether the mediating mechanism strengthens or weakens depends on the external conditions in which firms are embedded. We classify these conditions by operative logic rather than by level (macro, meso, or micro), because what determines whether a condition

can change firm behavior is which link of the decision it acts on, not the level from which it comes. An a priori dichotomy follows.

Incentive-type instruments act by changing the firm's feasible set and payoff structure: they provide cost compensation, resource provision, or signals about future payoffs so that ESG investment pays off more under the existing objective function. Their logic is cost-benefit [26] and presupposes an internal conversion mechanism that turns new resources or signals into long-term input. Pressure-type conditions act by raising short-term performance pressure, exposure costs, and external accountability; they do not relax constraints but directly change the trade-off between expansion and responsibility, corresponding to coercive isomorphism in institutional theory [19].

Accordingly, the low-carbon policy (payoff signals), government environmental subsidies (cost compensation), and the easing of financing constraints (resource provision) are classified as incentive-type instruments; media attention (exposure and accountability) and firm size (performance pressure and agency chains) are classified as pressure-type conditions. We emphasize that the five members differ in conceptual status: the pilot is a policy intervention, subsidies are government transfers, the Kaplan–Zingales (KZ) index and firm size are firm-level states or characteristics, and media attention is a feature of the information environment. The typology therefore classifies operative logics, not policy instruments; in particular, a null financing-constraint interaction speaks to firm-level financial conditions and cannot by itself ground conclusions about green credit or green bond policy, which we do not observe. The classification precedes and is independent of the estimates: the criterion is operative logic, not the sign or significance of coefficients. Both classes contain supported and unsupported hypotheses (among incentive-type instruments, H4b and H5b are nominally supported, while H6b is not; among pressure-type conditions, H8b is nominally supported, while H8a is not), so the dichotomy is not a post hoc grouping of results. All moderating effects below presuppose China's strong institutional context; in weaker settings, the directions may reverse.

2.5. The Moderating Role of Incentive-Type Instruments

Low-carbon policy. Low-carbon city pilots, emission controls, green credit requirements, and environmental information disclosure rules directly raise the cost of carbon-intensive behavior and raise the potential returns to green investment. For growth-oriented firms, such policies make expansion at the expense of the environment more costly and more damaging to reputation, and regulatory pressure breaks the existing short-term cost-benefit calculus. Empirical support already exists for this promoting effect of green finance policy: Sun et al. [7] test it on listed Chinese manufacturing firms. For profit-oriented firms, the low-carbon policy is highly compatible with their long-term logic: alignment with environmental regulation enhances legitimacy and access to policy resources.

Hypothesis 4a (H4a). *The low-carbon policy attenuates the negative association between growth orientation and ESG performance: the coefficient on $Growth \times DID$ (difference-in-differences) is positive, so the conditional slope of growth orientation is less negative once the firm's city has entered the pilot.*

Hypothesis 4b (H4b). *The low-carbon policy strengthens the positive association between profit orientation and ESG performance: the coefficient on $Profit \times DID$ is positive.*

Government environmental subsidies. Subsidies directly lower the marginal cost of ESG activity and improve its cost-benefit structure by internalizing part of the positive externality: for growth-oriented firms they provide targeted resources that partially offset

expansion-related financial pressure; for profit-oriented firms they raise the financial return to ESG investment.

Hypothesis 5a (H5a). *Government environmental subsidies (GES) attenuate the negative association between growth orientation and ESG performance: the coefficient on $Growth \times GES$ is positive.*

Hypothesis 5b (H5b). *Government environmental subsidies strengthen the positive association between profit orientation and ESG performance: the coefficient on $Profit \times GES$ is positive.*

Financing constraints (the resource-provision channel). Financing constraints limit access to external capital and raise its cost [36,37]; the policy instrument is the easing of such constraints (green credit and green bond channels), whose channel is resource provision. Liu et al. [38] document that the structure of external capital providers is associated with corporate ESG performance; we cite that study for the investor-composition association only, as it does not measure financing constraints or green-credit policy. Because we measure constraints with the KZ index, the hypotheses are stated in the direction of tightening; read as resource provision, they reverse. For growth-oriented firms, tighter financing deepens financial strain and marginalizes ESG investment further; for profit-oriented firms, financing constraints limit discretionary resources and weaken ESG investment capacity.

Hypothesis 6a (H6a). *Tighter financing constraints deepen the negative association between growth orientation and ESG performance: the coefficient on $Growth \times KZ$ is negative.*

Hypothesis 6b (H6b). *Tighter financing constraints weaken the positive association between profit orientation and ESG performance: the coefficient on $Profit \times KZ$ is negative.*

2.6. The Moderating Role of Pressure-Type Conditions

Media attention. As an external governance mechanism, media attention shapes firm behavior through information intermediation and public scrutiny [39]. Its moderating effect operates through different mechanisms and runs in opposite directions for the two orientations. For growth-oriented firms, the mechanism is short-term performance pressure: when media focus on short-term indicators such as revenue growth and market share, managers cater to market expectations and favor quick-payoff projects over ESG with long payback periods; the more positive coverage a firm receives, the more visible its growth narrative and the higher market expectations rise, and the stronger this pressure. Our measure of media attention counts positive reports and thus captures exposure intensity rather than reporting sentiment. For profit-oriented firms, the mechanism is long-term accountability: sustained media scrutiny makes long-term commitments concrete and visible, encouraging firms to build reputational capital through ESG. Dyck et al. [40] document the substantive governance role of media; Cai et al. [41] and He et al. [14] show that its direction depends on the combination of internal and external conditions.

Hypothesis 7a (H7a). *Media attention deepens the negative association between growth orientation and ESG performance: the coefficient on $Growth \times Media$ is negative.*

Hypothesis 7b (H7b). *Media attention strengthens the positive association between profit orientation and ESG performance: the coefficient on $Profit \times Media$ is positive.*

Firm size. The moderating effect of firm size is double-edged. On the resource side, larger firms command more organizational slack [31], which makes ESG more feasible; on the agency side, longer agency chains give managers an incentive to maintain the ap-

pearance of growth and neglect long-horizon, low-visibility investments such as ESG. Our central claim is that the relative weight of the two effects varies with strategic orientation: the resource effect predominates for profit-oriented firms, whereas for growth-oriented firms, the agency effect may predominate. Greater performance pressure and stronger motives to maintain the appearance of growth, with slack pre-committed to expansion, make size amplify the negative effect. In this sense, size is a pressure-type condition: it does not relax constraints but raises the pressure of maintaining the growth appearance. Li et al. [13] provide indirect support for the joint role of resource endowment and governance quality in shaping ESG decisions.

Hypothesis 8a (H8a). *Firm size strengthens the positive association between profit orientation and ESG performance (the resource effect predominates): the coefficient on Profit $\times$ Size is positive.*

Hypothesis 8b (H8b). *Firm size deepens the negative association between growth orientation and ESG performance (the agency effect predominates): the coefficient on Growth $\times$ Size is negative.*

2.7. The Integrated Framework

Figure 1 presents the full framework. At its core is a pair of opposing pathways in which financial distress risk may serve as an indirect channel: profit orientation is associated with higher ESG performance alongside lower financial distress risk, whereas growth orientation is associated with lower ESG performance alongside higher financial distress risk. The mechanism is nested in a moderating system of two classes of external conditions: incentive-type instruments act by changing the feasible set and payoff structure, and pressure-type conditions act by raising short-term performance pressure and external accountability.

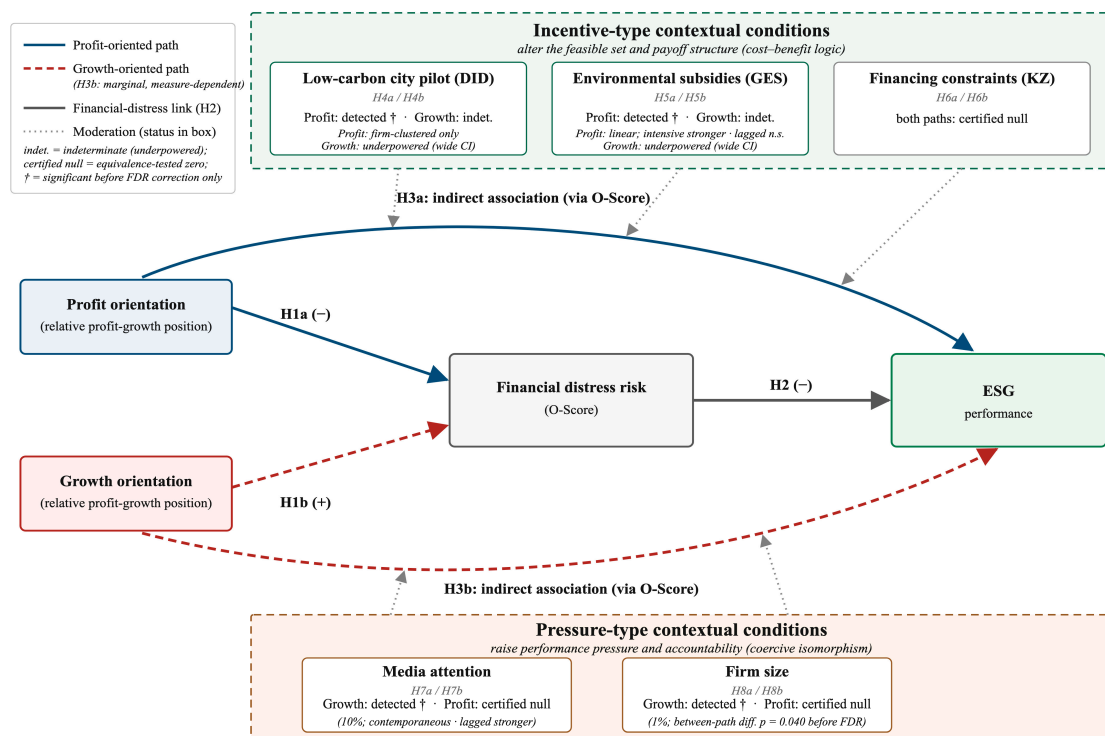


Figure 1. The framework linking strategic orientation to ESG (environmental, social, and governance) performance: the financial distress channel and two types of moderating conditions. Solid versus dashed lines distinguish detected from marginal or measure-dependent links; each moderator box

reports its empirical status by path (indet. = indeterminate (underpowered); certified null = equivalence-tested zero; † = significant before false discovery rate (FDR) correction only). “Integrated” denotes a unified conceptual framework nesting separately estimated mediation and moderation mechanisms, not a formally estimated moderated-mediation model. H3a/H3b denote the indirect paths through financial distress risk rather than direct effects; this association is measure-dependent, holding under the Ohlson O-Score specification and not generalizing to the Altman Z-score or temporally ordered specifications (Section 4.2). Orientation constructs denote relative profit-growth positions; the temporal reading (Section 2.1) is an interpretive lens. Growth-side intervals for the policy and subsidy interactions are too wide to determine, and the between-path differences are not statistically significant (Sections 4.3 and 4.4).

The framework in Figure 1 is formally symmetric, with each pathway facing its own class of moderating conditions, but this formal symmetry is a product of theory rather than an empirical fact. Throughout, “integrated” denotes a unified conceptual framework that nests separately estimated mediation and moderation mechanisms; it does not denote a formally estimated moderated-mediation model. Section 4 shows that the two paths differ systematically in both mediated share and capacity for moderation; Section 4.8 argues that the breakdown of this symmetry is itself the paper’s most important empirical finding.

3. Materials and Methods

3.1. Sample and Data

The initial sample covers Chinese A-share listed firms on the Shanghai and Shenzhen exchanges from 2010 to 2023. Two reasons motivate the 2010 starting point: before then, non-financial disclosure by Chinese listed firms was not standardized, and ESG data were sparse and lacked long-run comparability; in addition, Bloomberg has provided systematic three-dimensional ESG scores for Chinese listed firms since 2010, suitable for long panels.

Screening proceeds as follows: (1) financial and insurance firms are excluded for their special accounting structures; (2) firm-years flagged as ST or *ST, or carrying negative net assets, at the time of data cleaning are excluded; (3) firm-years without Bloomberg ESG scores are excluded; and (4) all continuous variables are winsorized at the 1st and 99th percentiles. The final sample comprises 12,998 firm-year observations of 1404 firms, an unbalanced panel. Two features of this rule matter for interpretation. First, it removes only firm-years flagged at the cleaning date: firms that were ever designated ST during the window remain in the sample (2437 firm-years, 18.8%), and their distress distribution is intact (mean O-Score -7.83 versus -8.97 for never-ST firm-years), so the upper tail of the mediator is not truncated. Second, the estimable population is therefore distress variation among firms not currently flagged as distressed, and we report sensitivity under both stricter and looser screening in Section 4.6. A stage-by-stage flow table (13,039 cleaned firm-years; 12,998 after the ESG merge; 12,629 in the mediation sample; 9168 in the event-study sample), per-year coverage, and a comparison of the 41 observations lost to ESG coverage are reported in the Supplementary Materials.

Data sources: ESG scores come from Bloomberg L.P. (New York, NY, USA) [42]; the alternative ESG ratings used in the robustness analysis (Section 4.6) come from the Chinese Research Data Services Platform (CNRDS) [43]; explanatory variables, controls, financial distress risk, firm size, and the low-carbon pilot batches come from CSMAR (GTA Information Technology Co., Ltd., Shenzhen, China) [44]; subsidy details are hand-compiled from the government-subsidy item details in annual-report notes; media attention data come from the China Financial News Database (CFND) and the CSMAR news sub-database [44,45]. All estimation is performed in Stata/MP 18.0 (StataCorp LLC, College Station, TX, USA).

3.2. Variable Measurement

Dependent variable: ESG performance (ESG). We use “ESG performance” rather than “ESG engagement”: in the corporate governance literature, engagement denotes investor–firm interactions [46]. We use the Bloomberg composite ESG score; its structured, quantifiable, and cross-firm comparable character suits panel regression better than narrative CSR ratings.

Explanatory variables: strategic orientation (Profit, Growth). Following Zhou and Park’s [6] measurement for the Chinese setting, profitability (return on assets) and growth (total asset growth) are each compared with the industry-year mean. Firms whose profitability is above and growth below the industry mean are profit-oriented (Profit = 1); those below on profitability and above on growth are growth-oriented (Growth = 1); the rest form the reference group. This relative definition removes industry-cycle confounds and captures the trade-off firms make between profitability and expansion.

Mediator: financial distress risk (O-Score). We use the Ohlson [47] O-Score bankruptcy model. Compared with Altman’s [48] Z-score, the O-Score is logit-based and better suited to non-manufacturing firms. Higher values indicate a higher probability of financial distress, so its expected relation with ESG is negative.

Moderators. Incentive-type instruments: the low-carbon policy is measured by a multi-period policy shock variable (DID) that equals 1 from the year a firm’s registered city enters the pilot list onward. Government environmental subsidies (GES) are hand-compiled from the government-subsidy item details in annual-report notes: a subsidy item is counted when its description contains an environment-related keyword (“green”, “environmental subsidy”, “environment”, “sustainable development”, “clean”, or “energy saving”), the same program listed in multiple note lines is counted once, and the firm-year amounts are summed and scaled by operating revenue. Financing constraints use the KZ index from CSMAR’s China Listed Firm’s Business Distress Research Database, which follows Kaplan and Zingales [49] and re-estimates the five components for Chinese listed firms by ordered logistic regression (the KZ index measures the degree of constraint; read as resource provision, it reverses; construction details in Appendix A). Pressure-type conditions: media attention (Media) is the natural logarithm of one plus the count of positive newspaper and online news reports in the year [39]; firm size (Size) is the natural logarithm of year-end total assets.

Controls. Following prior work, we control for the book-to-market ratio (BM), leverage (Lev), state ownership (SOE), the cash ratio (CashRatio), and ownership concentration (Top1, the largest shareholder’s stake). The baseline retains this five-control set so that the estimates remain directly comparable, and we re-estimate the baseline, mediation, and moderation models with firm size (Size) added and with an expanded set (firm age, board size, board independence, CEO duality, asset turnover); the headline estimates are unchanged under both (Section 4.6).

3.3. Model Specification

Baseline and moderation models. To address firm-level unobserved heterogeneity and macro-level annual shocks, we use two-way fixed-effects models (firm and year). The baseline model is as follows:

$$\text{ESG}(it) = \alpha + \beta_1 \cdot \text{Profit}(it) + \beta_2 \cdot \text{Growth}(it) + \gamma \cdot \text{Controls}(it) + \mu(i) + \lambda(t) + \varepsilon(it),$$

and the moderation models add a moderator *M* and its interactions with the two orientation dummies:

$$\text{ESG}(it) = \alpha + \beta_1 \cdot \text{Profit}(it) + \beta_2 \cdot \text{Growth}(it) + \beta_3 \cdot \text{M}(it) + \beta_4 \cdot \text{Profit} \times \text{M} + \beta_5 \cdot \text{Growth} \times \text{M} \\ + \gamma \cdot \text{Controls}(it) + \mu(i) + \lambda(t) + \varepsilon(it).$$

β_4 and β_5 are the moderating coefficients of interest. Because both orientation variables are dummies, the interaction coefficients read directly as between-group differences and do not require centering of the moderator.

Mediation test. The three-step system is (a) $\text{O-Score}(it) = \alpha + a_1 \cdot \text{Profit}(it) + a_2 \cdot \text{Growth}(it) + \gamma \cdot \text{Controls}(it) + \mu(i) + \lambda(t) + \varepsilon(it)$; (b/c') $\text{ESG}(it) = \alpha + c_1' \cdot \text{Profit}(it) + c_2' \cdot \text{Growth}(it) + b \cdot \text{O-Score}(it) + \gamma \cdot \text{Controls}(it) + \mu(i) + \lambda(t) + \varepsilon(it)$, with the total effect (c) given by the baseline equation above; because the second equation contains both orientation dummies, a single b is shared by the two paths. We judge mediation by whether the 95% confidence interval of the indirect effect $a \times b$ excludes zero, with the interval constructed by firm-level clustered nonparametric bootstrap: 2000 resampling draws with firms as the sampling units (with a fixed random seed for reproducibility), re-setting the panel identifiers and re-estimating the fixed-effects models for paths a and b in each draw, and taking the 2.5th and 97.5th percentiles of the empirical distribution. Firm-level resampling preserves within-firm residual correlation across years, and the procedure draws from the joint distribution without imposing any assumption on the covariance between the two path estimates. We do not use the Baron and Kenny [50] causal-steps rule, which has been criticized for low statistical power. As a cross-check, we also construct Monte Carlo intervals [51,52] with 200,000 draws; the two methods agree on both paths.

We report the ratio of the indirect to the total effect as a rough guide to magnitude; the ratio is unstable when the indirect effect is small, so interpretation also appeals to absolute values and interval width.

Difference-in-differences and event study. The low-carbon city pilots were rolled out in four batches (2010, 2012, 2014, and 2017; the 2014 cohort comprises Haikou and Sanya, which implemented the provincial pilot plan of Hainan, the only province-level unit in the 2012 second batch, in 2014), so we use a multi-period difference-in-differences design in which the policy shock is defined by the registered city's entry and its timing, with firm and year fixed effects. To test the parallel-trends assumption, we estimate an event-study model with one period before implementation as the baseline and dynamic effects from three periods before to two periods after: parallel trends hold if the pre-implementation coefficients are jointly insignificant.

4. Results

4.1. Descriptive Statistics, Correlations, and Baseline Relations

Table 1 reports descriptive statistics for the regression sample (non-missing ESG score, $N = 12,998$), with all continuous variables winsorized as described in Section 3.1. The ESG score averages 30.946 (SD 10.011) and ranges from 12.946 to 61.666: ESG performance is dispersed and modest on average. The orientation groups comprise 4987 profit-oriented firm-years (38.4%) and 1031 growth-oriented firm-years (7.9%); the remaining 6980 (53.7%), firms that are simultaneously above or simultaneously below the industry mean on both margins, form the reference group. The two dummies are strictly mutually exclusive (no observation takes both), consistent with the definitions in Section 3.2. The O-Score averages -8.754 (SD 2.120, range $[-15.896, -4.141]$), implying generally low but dispersed probabilities of financial distress.

The bivariate correlation matrix appears in Table S5, and the bivariate directions match expectations except for subsidies, whose negative bivariate correlation with ESG is taken up in Section 4.4: profit orientation correlates positively with ESG and negatively with the O-Score, growth orientation shows the reverse pattern, and the O-Score correlates neg-

atively with ESG; KZ correlates negatively with ESG, while media attention and firm size correlate positively, matching the main effects in Sections 4.4 and 4.5. Two high correlations (O-Score with KZ, and O-Score with leverage) are expected by construction, since both the Ohlson score and the Kaplan–Zingales index take leverage as a core input. Variance inflation factors show no identification threat: even in the strictest case with all five moderators included simultaneously, the two largest VIFs are 5.63 (O-Score) and 5.55 (Lev), with a mean of 2.25, below the conventional threshold of 10 in all three diagnostic tiers (Table S5 notes). Coefficient estimates are therefore not materially affected by multicollinearity.

Table 1. Descriptive statistics of the main variables.

Variable	N	Mean	SD	Min	P25	Median	P75	Max
ESG	12,998	30.946	10.011	12.946	24.605	29.434	35.499	61.666
Profit	12,998	0.384	0.486	0.000	0.000	0.000	1.000	1.000
Growth	12,998	0.079	0.270	0.000	0.000	0.000	0.000	1.000
O-Score	12,629	−8.754	2.120	−15.896	−9.830	−8.419	−7.361	−4.141
KZ	12,829	1.460	2.095	−5.213	0.315	1.698	2.850	5.835
Media	12,964	4.734	1.073	2.197	4.007	4.700	5.429	7.619
GES	12,998	0.024	0.087	0.000	0.000	0.000	0.004	0.644
Size	12,998	23.244	1.291	20.470	22.317	23.158	24.073	26.386
BM	12,998	1.452	1.561	0.098	0.464	0.895	1.812	8.328
Lev	12,998	0.480	0.199	0.069	0.328	0.492	0.633	0.888
SOE	12,998	0.500	0.500	0.000	0.000	0.000	1.000	1.000
CashRatio	12,998	0.637	0.919	0.026	0.181	0.337	0.666	5.985
Top1	12,998	0.368	0.161	0.088	0.240	0.354	0.488	0.740

Note: variable definitions are in Section 3.2. The sample is the regression sample with non-missing ESG scores (N = 12,998); all continuous variables are winsorized at the 1st and 99th percentiles as described in Section 3.1, and the table reports the winsorized distributions. Complete-case counts differ by variable (ESG 12,998; O-Score 12,629; KZ 12,829; Media 12,964); a missingness table by variable and year is in the Supplementary Materials. Media counts positive reports, and its observed minimum ($2.197 \approx \ln 9$) reflects the CFND coverage rule that every listed firm-year has at least eight positive reports in the database construction period. Among subsidy recipients only, the GES distribution is: $p_{25} = 0.006$, $p_{50} = 0.022$, $p_{75} = 0.073$, $p_{90} = 0.209$ (share of operating revenue). The counts for O-Score (12,629), KZ (12,829), and Media (12,964) are slightly lower owing to missing data; the O-Score count of 12,629 matches the third-step mediation model in Table 2. GES is environmental subsidies scaled by operating revenue.

One distributional feature matters directly for what follows: environmental subsidies are zero-inflated. Of the 12,998 firm-year observations, 8917 (68.6%) have exactly zero subsidies; the 25th and 50th percentiles are both 0, the 75th percentile is only 0.004 (0.4% of operating revenue), and the maximum reaches 0.644, an extremely right-skewed distribution. More than two-thirds of the sample never receive any identifiable subsidy, and most recipients receive less than one percent of revenue. The variable thus has little meaningful variation for most observations, and the insignificant growth-side subsidy moderation reported in Section 4.4 partly reflects thin treatment intensity rather than a refutation of the subsidy mechanism; we return to this qualification there.

The baseline relation comes from the first step of the mediation test (Table 2): with firm and year fixed effects, profit orientation raises ESG significantly ($\beta = 1.773$, $p < 0.01$), and growth orientation lowers it ($\beta = -1.110$, $p < 0.01$; within- $R^2 = 0.700$). These opposite-signed coefficients are consistent with the temporal reading of the two orientations developed in Section 2.1 and serve as the starting point for the mechanism tests; the relation is highly stable across all models (Section 4.6).

4.2. The Mediating Effect of Financial Distress Risk

Table 2 reports the mediation results for the two paths.

Table 2. Mediation analysis of financial distress risk.

Path and Coefficient	Profit-Oriented Path	Growth-Oriented Path
Strategic orientation → ESG (total effect c)	1.773 *** (0.110)	−1.110 *** (0.167)
Strategic orientation → O-Score (a)	−0.267 *** (0.022)	0.050 ** (0.025)
O-Score → ESG (b)	−0.262 *** (0.071)	−0.262 *** (0.071)
Strategic orientation → ESG (direct effect c')	1.703 *** (0.112)	−1.097 *** (0.166)
Indirect effect (a × b)	+0.070	−0.013
Indirect effect 95% CI (bootstrap)	[+0.032, +0.109]	[−0.030, −0.001]
Indirect effect 95% CI (Monte Carlo, benchmark)	[+0.032, +0.110]	[−0.030, −0.0001]
Indirect/total effect ratio (reference)	3.9%	1.2%
R ² (within), three steps in order	0.7000/0.5474/0.7007	0.7000/0.5474/0.7007
N/Groups	12,629/1372	12,629/1372

Note: firm-level clustered robust standard errors in parentheses. All three steps are estimated on the same sample (N = 12,629) with BM, Lev, SOE, CashRatio, Top1, and firm and year fixed effects controlled. ** $p < 0.05$, *** $p < 0.01$. The second-stage regression includes Profit and Growth simultaneously, so the b coefficient is a single estimate shared by the two columns. The 95% confidence intervals (CIs) of the indirect effects come from a firm-level clustered nonparametric bootstrap (2000 resamples, all successful; firms are the sampling units, and panel identifiers are re-generated after each draw so that duplicated firms are not treated as the same unit, with a fixed random seed for reproducibility); Monte Carlo intervals (200,000 draws based on the point estimates and standard errors of paths a and b under independent sampling) are shown as a benchmark. The two methods agree on both paths, and neither interval contains zero.

The profit-oriented path. All coefficients match expectations: profit orientation lowers financial distress risk ($a = -0.267$, $p < 0.01$), supporting H1a; financial distress risk suppresses ESG performance ($b = -0.262$, $p < 0.01$), an association that holds under the Ohlson specification of the mediator; and adding the mediator moves the direct effect from 1.773 to 1.703, still highly significant. The indirect effect is $(-0.267) \times (-0.262) \approx +0.070$, with a 2000-draw clustered bootstrap 95% CI of [+0.032, +0.109] excluding zero (Monte Carlo: [+0.032, +0.110]). With the direct effect still significant, this is partial mediation, and the indirect association is measure-dependent (H3a): profit-oriented firms that compress the probability of financial distress also show higher ESG performance, consistent with released organizational slack channeling into environmental, employee, and governance investment.

The growth-oriented path. All coefficients match expectations in direction, but the magnitudes are much weaker than on the profit side: growth orientation raises financial distress risk ($a = 0.050$, $p = 0.048$), significant at the 5% level, supporting H1b; the coefficient is less than one-fifth of the profit-side value (-0.267) in absolute terms. Financial distress risk weakens ESG performance ($b = -0.262$, as on the profit side), and the direct effect moves from -1.110 to -1.097 . The indirect effect is $0.050 \times (-0.262) \approx -0.013$. The 2000-draw clustered bootstrap 95% CI is $[-0.030, -0.001]$, excluding zero (Monte Carlo: $[-0.030, -0.0001]$); the growth-path indirect effect is therefore only marginally distinguishable from zero. We do not read this as a meaningful channel: with a mediated share of 1.2%, the growth path operates primarily through non-financial mechanisms (Section 4.8), and we treat H3b as measure-dependent rather than supported. The key is magnitude rather than significance: the indirect effect is only 1.2% of the total effect, meaning about 99% of the growth-orientation suppression of ESG does not operate through financial distress risk. With the direct effect still highly significant, this is also partial mediation, but the mediated share is far smaller than the 3.9% on the profit side. The bootstrap interval of this path

excludes zero yet lies close to it (one-sided $p = 0.018$; the interval is fully reproducible); the mechanism is interpreted below.

The gap in mediated share between the two paths is itself one of the core findings. The indirect effects are statistically distinguishable from zero on both paths under the O-Score specification (and the share difference itself is significant under a joint cluster bootstrap, 95% CI [0.009, 0.053]), but the growth-side contribution is too small to carry explanatory weight. The asymmetry is not that one channel exists while the other does not; it is that the same channel differs by a factor of about 3.25 in explanatory power across the two sides. This is the first piece of evidence of path asymmetry, and the mechanism follows.

Why is the growth-side mediated contribution so small?

In theory, the mediating structure is symmetric: strategic orientation changes financial distress risk, which constrains ESG investment. Empirically, both links of this chain exist and reach significance on both paths, but with vastly different strength: the first link on the growth side ($a = 0.050$) is significant at the 5% level yet less than one-fifth of the profit-side value (-0.267) in absolute terms.

We attribute this to the different role financial distress risk plays on the two paths. For profit-oriented firms, low financial distress risk is part of the outcome and objective of their strategy; a sound financial structure is itself a component of long-termism, so strategy and risk are tightly linked ($a = -0.267$), and the mediation chain carries real explanatory weight. For growth-oriented firms, high financial distress risk is a by-product of rapid expansion rather than its object; the squeeze on ESG happens first at the level of managerial attention and the organizational agenda. Capital expenditure, merger integration, and market-share contests occupy top-management bandwidth, and ESG is excluded from the agenda before budgeting even begins. We offer this as a conjecture, not evidence: we observe no direct measure of managerial attention (board agendas, ESG committees, or MD&A tone), and the account is therefore falsifiable rather than established (candidate tests are listed in Section 5.3). The conjecture is that attention crowding-out precedes and is independent of funding crowding-out, so most of the suppressive effect appears as a direct effect that bypasses financial distress risk; the explanation is consistent with the data but has not been directly tested.

Qualification of the channel. The mediation just reported is measure- and specification-dependent, and three exercises probe this dependence. First, replacing the O-Score with the Altman Z-score yields no detectable indirect association on either path ($b \approx -0.002$, $p = 0.927$); a horse race between the two measures shows that the ESG-relevant distress information resides in the Ohlson structure (its loss indicator and nonlinear terms) rather than in the Altman linear combination. Second, once firm size and the expanded control set enter the model, the b-link (distress to ESG) attenuates to statistical zero (-0.029 , $p = 0.694$), indicating that the O-Score's size component accounts for part of the baseline association. Third, a temporally ordered specification (orientation at $t - 1$, distress at t , ESG at $t + 1$) does not reproduce the chain, and Granger-style tests detect feedback from lagged ESG to subsequent distress ($p = 0.003$), so the contemporaneous link is bidirectional. What survives every specification is the a-link: strategic orientation robustly predicts financial distress risk. We therefore present financial distress as one possible, measure-dependent channel, not as a transmission hub, and we frame the mediation results as statistical indirect associations. A sequential-ignorability-based sensitivity analysis in the sense of Imai et al. [53] was considered and not pursued: it requires ignorability assumptions stronger than our design delivers, and the associational framing above does not rest on them.

4.3. Incentive-Type Instruments (I): The Low-Carbon City Pilot Policy

Table 3 reports the difference-in-differences and event-study results for the low-carbon city pilot. Because staggered adoption makes two-way fixed-effects weights unreliable under treatment-effect heterogeneity, we report the Callaway–Sant’Anna cohort-robust estimates as the primary results and the TWFE figures as the benchmark.

Table 3. Difference-in-differences and event-study results for the low-carbon city pilot policy.

Variable	Model 1 (Baseline DID)	Model 2 (Policy $\times$ Orientation)	Model 3 (Event Study)
DID	−0.078 (0.314)	−0.177 (0.330)	—
Profit	—	1.545 *** (0.165)	—
Growth	—	−1.191 *** (0.239)	—
DID $\times$ Profit	—	0.390 * (0.209)	—
DID $\times$ Growth	—	0.053 (0.333)	—
Difference of interactions	—	0.337 (0.355), $p = 0.343$	—
Pre3	—	—	0.002 (0.459)
Pre2	—	—	0.254 (0.339)
Current	—	—	0.103 (0.274)
Post1	—	—	0.009 (0.231)
Post2	—	—	0.269 (0.243)
Joint test of pre-periods	—	—	$F = 0.29, p = 0.752$
Lev	−3.113 *** (0.870)	−1.108 (0.872)	−4.034 *** (1.095)
Controls	Yes	Yes	Yes
Firm and year fixed effects	Yes	Yes	Yes
N	12,998	12,998	9168
Groups	1404	1404	1003
R ² (within)	0.6850	0.6967	0.6815

Note: firm-level clustered robust standard errors in parentheses. Controls include BM, Lev, SOE, CashRatio, and Top1, with Lev reported separately for its direct link to the risk mechanism. ‘Difference of interactions’ is DID $\times$ Profit minus DID $\times$ Growth (lincom); ‘Joint test of pre-periods’ is the F-test, with Pre3 and Pre2 jointly zero. Group-specific policy effects (linear combinations on Model 2, whose DID main effect is the effect for firms of neither orientation, −0.177): profit-oriented = DID + DID $\times$ Profit = 0.213 (95% CI [−0.448, 0.874], $p = 0.528$); growth-oriented = DID + DID $\times$ Growth = −0.124 (95% CI [−0.968, 0.720], $p = 0.773$). Models 1 and 2 use all observations with non-missing ESG scores, treating missing pilot status as non-entry (983 firm-years, 7.6% of the main sample); excluding these 983 observations leaves the interactions essentially unchanged (DID $\times$ Profit = 0.455, $p = 0.043$; N = 12,015); Model 3 uses firms whose registered city ever entered the pilot list, with one pre-implementation period as the baseline. * $p < 0.1$, *** $p < 0.01$.

Cohort-robust results. The Callaway–Sant’Anna average treatment effect is indistinguishable from zero under not-yet-treated controls (ATT = 0.083, $p = 0.842$), under never-treated controls (0.078, $p = 0.858$), and with city-level clustering (0.083, $p = 0.855$); the event-study pre-trend average is −0.010 ($p = 0.945$). Cohort sizes (firms/cities) are 2010: 130/7, 2012: 690/58, 2014: 9/2, 2017: 185/27, and the city-pilot crosswalk is provided in the replication package. Inference for the interaction is fragile: the DID $\times$ Profit coefficient (0.390) is marginal under firm clustering ($p = 0.063$) and attenuates under city clustering ($p = 0.071$), wild-cluster bootstrap ($p = 0.096$), and firm-year two-way clustering ($p = 0.142$); we therefore do not read it as evidence of an asymmetry. A pre-policy-orientation split (heterogeneity defined before treatment, as the orientation dummies are contemporaneous) shows flat pre-trends in both groups ($p = 0.273$ and $p = 0.446$); the cohort-robust subgroup ATTs are −1.876 (SE 0.827, $p = 0.023$) for the pre-policy profit-oriented group, +3.911 (SE 1.720, $p = 0.023$) for the pre-policy growth-oriented group, and +0.881 (SE 0.465, $p = 0.058$) for the remainder (Text S6.16). These subgroup ATTs estimate each group’s average effect rather than the path-specific interactions tested above, so we do not use them to support H4b. Parallel trends in the TWFE event study (Table 3, Model 3): insignificant coefficients

for the third ($p = 0.996$) and second ($p = 0.453$) periods before implementation, and their joint test is insignificant as well ($F = 0.29$, $p = 0.752$), so the parallel-trends assumption is not rejected in this test. The implementation period and the two following periods are insignificant too, indicating no detectable average treatment effect. The DID coefficient in Model 1 (-0.078 , $p = 0.803$) is consistent with this. Model 2, however, shows a pattern masked by the average effect: $\text{DID} \times \text{Profit}$ is 0.390 ($p = 0.063$), positive at the 10% level, while $\text{DID} \times \text{Growth}$ is 0.053 ($p = 0.873$), insignificant. The ESG effect of the low-carbon policy emerges only among profit-oriented firms, which is a within-path contrast, not a significant between-path difference (precision qualification below): for firms already oriented to the long term, the policy may function as a strategic signal; for growth-oriented firms, it produces no detectable behavioral change. H4b is nominally supported at the 10% level, and H4a is indeterminate (underpowered).

Temporal scope of the framework. The orientation–ESG association predates the 2020 dual-carbon announcement: it is significant in 2010–2019 (Profit 1.684 , Growth -0.836 , both $p < 0.001$), and the growth-side suppression deepens significantly afterward (Growth $\times$ post-2020 = -1.051 , $p = 0.011$; Profit $\times$ post-2020 = 0.190 , $p = 0.476$; a 2021-cutoff variant is consistent). The policy effect itself does not strengthen after 2020 ($\text{DID} \times \text{post-2020} = 0.119$, $p = 0.769$). The evolving-policy-environment framing of Sections 1 and 2 is therefore an empirical description, not a relabeling.

Precision qualification for the growth-side null. A large p -value cannot support a substantive no-effect conclusion. Given the standard errors in Table 3, the 95% CI of $\text{DID} \times \text{Growth}$ is $[-0.600, +0.706]$, and the endpoint farthest from zero reaches 63.6% of the baseline total effect (the Growth coefficient of -1.110 in Table 2, step 1). H4a should therefore be stated as not supported, with insufficient evidence to determine, rather than as the policy having no effect on growth-oriented firms. The difference between the two interactions is 0.337 , and a direct test shows this difference is not statistically significant ($F = 0.90$, $p = 0.343$); we therefore do not claim a statistically significant difference in the low-carbon policy's moderating effect between the two paths, and our claims rest only on the respective interval precision. That our DID main effect is insignificant while prior studies mostly find green policies raising ESG is not a conflict: the effect is highly heterogeneous across firms, and pooling the two types dilutes the positive effect. The full event-study coefficients are in Table S4, the dynamic-effects plot is in Figure S5, and the argument is in Text S1.

Leverage is significantly negative in Models 1 and 3 (-3.113 and -4.034) and has the same direction without significance in Model 2 (-1.108), broadly consistent with the mediation logic.

4.4. Incentive-Type Instruments (II): Environmental Subsidies and Financing Constraints

The sign of the subsidy variable. One sign in Table S5 deserves note: the bivariate correlation between GES and ESG is negative ($r = -0.051$, $p < 0.05$), opposite to the interaction prediction of H5b; yet in the two-way fixed-effects model, the GES main effect is also negative and marginally significant (-1.998 , $p = 0.087$; Table 4, Model 1), so the two agree in direction. The negative sign does not conflict with H5b. H5b concerns the interaction (Profit $\times$ GES = 2.404 , $p = 0.046$), the differential effect of subsidies for profit-oriented firms relative to the reference group, whereas the main effect describes the average association between subsidies and ESG among reference-group firms; a negative main effect and a positive interaction can coexist. Why that average association is negative cannot be determined from our design (one possibility is that subsidies flow toward firms under greater environmental pressure, which we do not test), so we simply record the fact.

Table 4. Moderation by incentive-type instruments and pressure-type conditions.

Variable	Incentive: Model 1 (GES)	Incentive: Model 2 (KZ)	Pressure: Model 3 (Media)	Pressure: Model 4 (Size)
Profit	1.726 *** (0.114)	1.817 *** (0.125)	1.686 *** (0.460)	3.214 (2.042)
Growth	−1.177 *** (0.174)	−1.248 *** (0.249)	0.116 (0.708)	6.771 ** (3.000)
Moderator main effect	−1.998 * (1.166)	−0.155 *** (0.059)	0.568 *** (0.121)	2.014 *** (0.225)
Profit × Moderator	2.404 ** (1.201), $p = 0.046$; two-part: receipt −0.450 (0.217), $p = 0.038$; amount +3.674 (1.319), $p = 0.005$	−0.016 (0.053), $p = 0.755$	0.019 (0.096), $p = 0.842$	−0.060 (0.089), $p = 0.499$
Growth × Moderator	0.848 (1.849), $p = 0.646$; two-part: see Section 4.4	0.038 (0.082), $p = 0.645$	−0.271 * (0.147), $p = 0.065$	−0.346 *** (0.129), $p = 0.007$
Difference of interactions	1.556 (1.773), $p = 0.380$	−0.054 (0.088), $p = 0.539$	0.290 (0.161), $p = 0.073$	0.286 ** (0.139), $p = 0.040$
Controls	Yes	Yes	Yes	Yes
Firm and year fixed effects	Yes	Yes	Yes	Yes
N	12,998	12,829	12,964	12,998
Groups	1404	1404	1399	1404
R ² (within)	0.6968	0.6974	0.6983	0.7042

Note: firm-level clustered robust standard errors in parentheses. GES is environmental subsidies scaled by operating revenue; Size is the natural logarithm of year-end total assets. Controls include BM, Lev, SOE, CashRatio, and Top1. Group-specific conditional slopes (linear combinations, moderator + interaction): reported in the Supplementary Materials for all four moderators at observed percentiles; e.g., the GES slope for profit-oriented firms is $−1.998 + 2.404 = 0.406$. ‘Difference of interactions’ reports the estimate, standard error, and p -value of Profit × Moderator minus Growth × Moderator (lincom, incorporating the covariance of the two coefficients). The GES column additionally reports the two-part specification of Section 4.4 (receipt of any subsidy; subsidy amount among recipients), which separates the extensive and intensive margins of the zero-inflated subsidy variable. Interactions are not centered: the Profit and Growth main effects are effects at zero values of the moderator, which is uninformative in Models 3 and 4 (see the text). * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 4 arranges the remaining four moderators by the Section 2.4 typology: Models 1 and 2 are incentive-type instruments (environmental subsidies and financing constraints), discussed in this section, and Models 3 and 4 are pressure-type conditions, discussed in Section 4.5, with the marginal-effects plots for the four moderators in Figures S1–S4. All four models use the same two-way fixed-effects specification and controls as the baseline, with firm-clustered standard errors; every null result is accompanied by a 95% CI for judging precision, and the test of the difference between the two interactions is reported for each. One reading note: interactions are not centered, so the Profit and Growth main effects are effects at zero values of the moderator. That reference point is meaningless in the Media and Size models (log assets cannot be zero), so those main effects should not be compared with Models 1 and 2 or with the baseline. Because the reference point is uninformative in some models, precision comparisons below always use the baseline total effects from Table 2, step 1 (Profit 1.773, Growth −1.110); ‘shares’ in null-result comparisons take the endpoint farthest from zero, not either sign alone.

Financing constraints. The KZ main effect is significantly negative ($−0.155$, $p = 0.009$), consistent with the mediation logic of H2. Both interactions are insignificant: Profit × KZ is $−0.016$, and Growth × KZ is 0.038 ; H6a and H6b are both unsupported, and their difference is insignificant as well ($−0.054$, $p = 0.539$). The precision of both nulls supports substantive conclusions. The 95% CI of Profit × KZ is $[−0.120, +0.087]$, its farthest endpoint a mere 6.8% of the baseline total effect (1.773); Growth × KZ is $[−0.123, +0.198]$, at 17.9% of the baseline ($−1.110$). Both are precisely estimated null effects: financing conditions do not change the effect of strategic orientation on ESG on either path.

This is the evidence that carries the most weight in the policy-resistance reading.

Government environmental subsidies. The GES main effect is -1.998 ($p = 0.087$), marginally negative at 10%. The two interactions are asymmetric in direction, though not significantly different between paths: Profit $\times$ GES is 2.404 ($p = 0.046$), positive at the 5% level; H5b is nominally supported under the linear specification, and the two-part estimates attribute the association to the subsidy amount among recipients (below). Subsidies strengthen ESG investment among profit-oriented firms, the same direction as H4b, showing that both payoff-reshaping instruments work for profit-oriented firms. Growth $\times$ GES is 0.848 , insignificant, so H5a is unsupported; the difference between the interactions is 1.556 , insignificant ($p = 0.380$). H5a's 95% CI is $[-2.779, +4.475]$, with the farthest endpoint at 403% of the baseline total effect, an overly wide interval. H5a should therefore be stated as not supported, with insufficient evidence to determine, rather than as subsidies having no effect on growth-oriented firms. With 68.6% of observations at zero subsidy, thin treatment intensity is the direct cause of the width.

Two-part specification. Because subsidies are zero for 68.6% of firm-years, we re-estimate the subsidy moderation in two parts. The extensive margin (receipt of any subsidy) is negative for profit-oriented firms (-0.450 , $p = 0.038$), consistent with subsidies targeting weak-ESG firms; the intensive margin (amount among recipients) is positive and stronger than the linear specification ($+3.674$, $p = 0.005$). The substantive association with ESG therefore resides in the amount margin; the receipt margin is small, negative, and does not carry the positive association, and the linear model's wide interval (the 403% endpoint noted above) was an artifact of conflating the two margins. Lagged-moderator versions are in the Supplementary Materials: the profit-side interaction does not survive lagging ($p = 0.804$), so we describe it as a contemporaneous association.

4.5. Pressure-Type Conditions: Media Attention and Firm Size

Results for the two pressure-type conditions appear in Table 4, Models 3 and 4.

Media attention. The main effect is significantly positive (0.568 , $p < 0.01$). The interactions are asymmetric in direction, with only a marginal between-path difference: Growth $\times$ Media is -0.271 ($p = 0.065$), negative at the 10% level, meaning media attention aggravates the growth-orientation suppression of ESG, consistent with the short-term performance pressure mechanism derived in Section 2.6; H7a is nominally supported at the 10% level. Profit $\times$ Media is 0.019 , insignificant, so H7b is unsupported; its 95% CI is $[-0.168, +0.207]$, with the farthest endpoint at 11.7% of the baseline total effect (1.773), a precisely estimated null: media attention does not additionally strengthen the ESG performance of profit-oriented firms. The difference between the interactions is 0.290 , marginally significant at 10% ($p = 0.073$), a hint of opposite-signed moderation across the two firm types, but the evidentiary strength of this difference is limited. H7a itself rests at the 10% level, so we do not let it carry weight alone and read it together with the firm-size result below. Media attention itself responds to lagged ESG ($p < 0.001$; Text S6.9), so the media results are read as conditional associations.

Firm size. The main effect is significantly positive (2.014 , $p < 0.01$), as the resource-based view expects. The interactions show how the double edge distributes: Profit $\times$ Size is -0.060 , insignificant, so H8a is unsupported; its 95% CI is $[-0.234, +0.114]$, with the farthest endpoint at 13.2% of the baseline total effect (1.773), a precise null. Growth $\times$ Size is -0.346 ($p = 0.007$), negative at the 1% level, and H8b is nominally supported: the larger the growth-oriented firm, the stronger its ESG suppression. Crucially, the difference between the interactions is 0.286 and significant at 5% ($p = 0.040$), the only between-path difference test in the paper to reach conventional significance. Firm size moderates the two orientations differently in this test, with one side significant and the other not. This test is the most direct evidence consistent with the policy-resistance reading.

This pattern is consistent with an agency reading of large growth-oriented firms: such firms face stronger motives to maintain the appearance of growth and longer agency chains, and the slack that size brings is pre-committed to expansion; it is equally consistent with a visibility reading, and we do not adjudicate between the two (Section 5.3). Firm size and media attention are the only two moderators that significantly aggravate the growth-side suppression, and their common feature is raising pressure rather than relaxing constraints. This common feature is the clue that drives Section 4.8, with firm size as the main pillar (1% level, not setting-dependent) and media attention as corroboration.

4.6. Robustness Checks

Ten robustness exercises support the findings; full outputs are in Tables S1–S6 and Texts S5 and S6. (1) Estimating on the environmental, social, and governance sub-dimensions separately (Table S1), the effect is concentrated mainly in the governance and social dimensions rather than spread evenly across the three: governance is strongest (Profit = 3.558 ***, Growth = −3.078 ***), social next (0.904 ***, −0.403 **), and environment weaker (Profit = 0.539 **, significant only at the 5% level; Growth = −0.286, insignificant). This matches the mechanism account that strategic orientation acts on organizational agendas and resource allocation, with environmental performance more constrained by industry technology, but it implies caution in extrapolating the conclusions to purely environmental performance. (2) Including both current and one-period-lagged orientation variables (Table S2), current-period coefficients are significant and the lags are insignificant, a pattern consistent with a contemporaneous association, though this specification cannot prove temporal ordering (Text S5.7). (3) Including the lagged dependent variable (Table S3), the core coefficients remain robust once ESG inertia is controlled (Profit = 1.763 ***, Growth = −1.283 ***). In addition, the main effects in the two directly comparable moderation models are 1.726 and 1.817 and −1.177 and −1.248, close to the baseline estimates (1.773, −1.110); baseline coefficients are identical under default, heteroskedasticity-robust, and firm-clustered standard errors, and clustering, the choice used in all tables, is the conservative option in this sample.

(4) Measurement: continuous industry-adjusted measures (profitability deviation +9.06, growth deviation −1.60, both $p < 0.001$), a four-quadrant decomposition (profit +0.933 and growth −0.705 against the low-low cell, both $p < 0.001$; the high-high cell is indistinguishable from it (−0.265, $p = 0.143$)), and median and exclusion-band thresholds all reproduce the baseline; 9.0% of firms never change quadrant, and 57.7% never change growth status (57.4% under the baseline classification used in the models). (5) Controls and inference: adding firm size and the expanded set (firm age, board size, board independence, CEO duality, asset turnover) leaves the headline main-effect estimates unchanged (Profit 1.822, Growth −1.323, both $p < 0.001$), as do industry-by-year and province-by-year fixed effects and firm + year two-way clustering [54,55], under which the firm-size interaction remains significant at 5% (Growth $\times$ Size = −0.346, SE 0.147, $p = 0.035$); the inference chain for the DID interaction is reported in Section 4.3. (6) Alternative rater: under CNRDS ratings (inter-rater correlation with Bloomberg 0.31, within the divergence range documented for ESG ratings [56,57]), the main effects replicate on the identical sample (Profit +1.369, Growth −1.588, both $p < 0.001$), and the profit-side environmental-dimension association is likewise positive and significant. The dimensional structures diverge across raters: under Bloomberg, the orientation–ESG association concentrates in the governance and social pillars, whereas under CNRDS, the composite association is significant on all three pillars and led by the social one (environmental +0.625, $p = 0.006$; social +1.538 and governance +1.235, both $p < 0.001$; dimensional regressions in Text S6.8), so the dimensional pattern is rater-dependent. (7) Null results are tiered by equivalence testing (TOST): the financing-

constraint interactions are certified nulls at the 10% bound ($p = 0.001, 0.043$) and remain null under the alternative SA index ($p = 0.502$ and $p = 0.925$; the two indices are nearly orthogonal, $r = 0.024$, so the two nulls are complementary rather than redundant), while the growth-path policy and subsidy interactions are indeterminate (minimum detectable effects 52% and 290% of the full-sample baseline profit total effect; Table S6). Interaction-family p -values carry Benjamini–Hochberg q -values; nothing survives the seventeen-test family at $q < 0.10$, so interaction evidence is exploratory unless noted. (8) Temporal ordering and moderator timing: an orientation($t - 1$)-distress(t)-ESG($t + 1$) specification does not reproduce the mediation chain, and Granger-style tests detect bidirectionality (lagged distress to ESG, $p = 0.025$; lagged ESG to distress, $p = 0.003$); lagged-moderator models are reported, with the subsidy interaction attenuating ($p = 0.804$) and the media interaction strengthening ($-0.301, p = 0.029$). (9) Sample screening: three alternative sample definitions (baseline; dropping the 25 residual flagged firm-years; dropping all 2437 ever-ST firm-years) leave headline coefficients unchanged, and re-including the 249 ST/*ST firm-years excluded at baseline (those with Bloomberg ESG coverage) reproduces the main effects on the broader sample of 13,247 (Profit 1.792, Growth -1.092 , both $p < 0.001$; Text S6.16), with the profit-side mediation share attenuating to 2.6% and the growth-side share moving to 1.8% under the strictest threshold. (10) Two-part subsidy specification: Section 4.4.

4.7. Summary of Hypothesis Tests

Table 5 summarizes the tests of the 15 hypotheses. Decision rule: we distinguish 5% from 10% evidence; an unsupported hypothesis is further classified as a certified null (equivalence established within prespecified bounds by TOST) or as indeterminate (neither significance nor equivalence: an underpowered test). Interaction-family p -values are reported raw and after Benjamini–Hochberg correction across the seventeen-test family; no interaction survives at $q < 0.10$ (the size interaction remains marginal within the narrower ten-test interaction family, $q = 0.074$), so interaction evidence is interpreted as exploratory unless noted.

Table 5. Summary of hypothesis test results.

Hypothesis	Content	Key Coefficient	Conclusion	Precision of the Null
H1a	Profit orientation negatively related to financial distress risk	$a = -0.267^{***}$	Supported	—
H1b	Growth orientation positively related to financial distress risk	$a = 0.050^{**}$ ($p = 0.048$)	Supported (5% level; small effect)	—
H2	Financial distress risk negatively related to ESG performance	$b = -0.262^{***}$	Measure-dependent association (O-Score only)	—
H3a	Financial distress risk mediates the profit-orientation/ESG relation	Indirect effect +0.070, 3.9% of total	Measure-dependent indirect association (3.9% share)	Bootstrap 95% CI [+0.032, +0.109]; excludes zero under both methods
H3b	Financial distress risk mediates the growth-orientation/ESG relation	Indirect effect -0.013 , 1.2% of total	Measure-dependent (marginal; 1.2% share)	Bootstrap 95% CI $[-0.030, -0.001]$; excludes zero under both methods; significance is marginal: upper bound 0.001 from zero, one-sided $p = 0.018$, and the share is only 1.2%

Table 5. Cont.

Hypothesis	Content	Key Coefficient	Conclusion	Precision of the Null
H4a	Low-carbon policy weakens the growth-side negative effect	$\text{DID} \times \text{Growth} = 0.053$ ($p = 0.873$)	Indeterminate (underpowered)	Insufficient evidence: 95% CI $[-0.600, +0.706]$; farthest endpoint 63.6% of the baseline total effect
H4b	Low-carbon policy strengthens the profit-side positive effect	$\text{DID} \times \text{Profit} = 0.390^*$ ($p = 0.063$)	Nominally supported; exploratory after FDR correction; not robust to inference level	—
H5a	Subsidies weaken the growth-side negative effect	$\text{Growth} \times \text{GES} = 0.848$ ($p = 0.646$)	Indeterminate (underpowered)	Interval too wide to determine: 95% CI $[-2.779, +4.475]$; farthest endpoint 403% of the baseline total effect
H5b	Subsidies strengthen the profit-side positive effect	$\text{Profit} \times \text{GES} = 2.404^{**}$ ($p = 0.046$)	Nominally supported (linear spec); association concentrated in the amount margin	—
H6a	Financing constraints strengthen the growth-side negative effect	$\text{Growth} \times \text{KZ} = 0.038$ ($p = 0.645$)	Certified null (TOST, 10% bound)	Precisely estimated null: 95% CI $[-0.123, +0.198]$; farthest endpoint 17.9% of the baseline total effect
H6b	Financing constraints weaken the profit-side positive effect	$\text{Profit} \times \text{KZ} = -0.016$ ($p = 0.755$)	Certified null (TOST, 10% bound)	Precisely estimated null: 95% CI $[-0.120, +0.087]$; farthest endpoint 6.8% of the baseline total effect
H7a	Media attention aggravates the growth-side negative effect	$\text{Growth} \times \text{Media} = -0.271^*$ ($p = 0.065$)	Nominally supported (10% level)	—
H7b	Media attention strengthens the profit-side positive effect	$\text{Profit} \times \text{Media} = 0.019$ ($p = 0.842$)	Certified null (TOST, 10% bound)	Precisely estimated null: 95% CI $[-0.168, +0.207]$; farthest endpoint 11.7% of the baseline total effect
H8a	Firm size strengthens the profit-side positive effect	$\text{Profit} \times \text{Size} = -0.060$ ($p = 0.499$)	Certified null (TOST, 10% bound)	Precisely estimated null: 95% CI $[-0.234, +0.114]$; farthest endpoint 13.2% of the baseline total effect
H8b	Firm size aggravates the growth-side negative effect	$\text{Growth} \times \text{Size} = -0.346^{***}$ ($p = 0.007$)	Nominally supported (1% level)	Difference of interactions 0.286, $p = 0.040$ (the only between-path difference significant at 5%)

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. All coefficients are from firm + year two-way fixed-effects models with firm-clustered standard errors. The ‘precision of the null’ column distinguishes the evidential strength of unsupported conclusions: ‘precisely estimated null’ means the confidence interval rules out substantively meaningful effects and supports the substantive judgment that the condition does not operate; ‘insufficient evidence / interval too wide’ means the interval is too wide relative to the baseline total effect, so only ‘not detected’ (not ‘non-existence’) can be concluded. The comparison benchmark is the baseline total effect from Table 2, step 1 (Profit 1.773, Growth -1.110); because interactions are not centered, same-model main effects are unsuitable denominators in some models (Section 4.4). Interaction coefficients (H4b, H5b, H7a, H8b) are significant before Benjamini–Hochberg correction only; the corresponding conclusions are nominally supported and exploratory after the correction (Section 4.7). The label ‘measure-dependent’ marks results that hold under the Ohlson specification of the mediator and do not generalize to the Altman Z-score, temporally ordered specifications, or a distress index constructed without earnings-related components (Section 4.2; Text S6.16(i)). H5b additionally does not survive the lagged-moderator specification (Section 4.6, Text S6.9); H4b rests on firm-clustered inference and attenuates under city clustering, wild-cluster bootstrap, and two-way clustering (Section 4.3).

Two hypotheses are supported outright (H1a and H1b, both on the a-path), and 13 carry qualified labels: three are measure-dependent (H2, H3a, and H3b, which hold under the Ohlson specification of the mediator), four are nominally supported (H4b, H5b, H7a, and H8b, significant before multiple-testing correction), four are certified nulls (H6a, H6b, H7b, and H8a, with interval endpoints at 6.8–17.9% of the baseline total effect), and two lack the power to determine (H4a and H5a). H3b, though statistically detectable, carries a very small indirect share (values and reading in Section 4.2) with an upper bound close to zero and limited substantive meaning; our argument does not rest on it. This distribution is itself the core finding. On the profit-oriented path, the two payoff-reshaping instruments show nominal moderation (H4b at 10%, H5b at 5%; significant before correction under baseline firm-clustered inference). On the growth-oriented path, none of the three incentive instruments is significant; the financing-constraint null is precisely estimated (H6a), and the only variable that significantly aggravates the ESG suppression at the 1% level is firm size, a pressure-type condition (H8b), whose between-path difference passes at 5%, the paper's only between-path test significant at the 5% level (media attention aggravates it at the 10% level, H7a). One counter-intuitive result deserves note: financing constraints do not moderate the profit-oriented path either (H6b is a precise null), so the resource-provision channel shows no moderating power on either path, while the payoff-signal channel operates only on the profit-oriented path.

4.8. Why the Pattern Is Asymmetric: A Mechanism Reading

Nine of the 15 hypotheses are not supported, and how they fail differs by path: the distress-channel tests are measure-dependent rather than null (H2, H3a, and H3b), the profit-oriented failures are precisely estimated nulls (H6b, H7b, and H8a), the growth-side financing-constraint null is precisely estimated as well (H6a), and the growth-side payoff-reshaping tests (H4a and H5a) are indeterminate for lack of power. This section argues that this distribution is not a failure of the framework but the location of the paper's core finding, and reads the key patterns mechanistically. The mediated-share gap is read in Section 4.2; here, we focus on why the incentive instruments fail on the growth-oriented path.

Why do all three incentive instruments fail among growth-oriented firms while two of them work for profit-oriented firms?

The low-carbon city pilot, environmental subsidies, and the easing of financing constraints represent three distinct positive-incentive logics: institutional signaling, cost compensation, and resource provision. None reaches significance for growth-oriented firms, but, as qualified in Sections 4.3 and 4.4, their evidential strength differs. The resource-provision null is precisely estimated (its farthest endpoint at 17.9% of the baseline total effect); the signaling interval is wide (63.6%) and uninformative; and the compensation interval is so wide (403%) as to be entirely uninformative. By contrast, the same payoff-reshaping instruments work for profit-oriented firms: the low-carbon policy ($\text{DID} \times \text{Profit} = 0.390$, $p = 0.063$) and subsidies ($\text{Profit} \times \text{GES} = 2.404$, $p = 0.046$) are positive at 10% and 5%, respectively. This pattern is finer, and more informative, than a claim that incentive instruments fail across the board.

Our explanation is that positive incentives presuppose an internal conversion mechanism that translates new payoff signals into long-term input, and growth-oriented firms lack precisely that mechanism; the complementary half of the explanation is that payoff-reshaping and constraint-relaxing instruments differ in their conditions of action to begin with. Both the low-carbon policy and subsidies change the expected payoff of ESG, and both show detectable moderation for profit-oriented firms (at 10% and 5%, respectively, before multiple-testing correction). The corresponding between-path differences are not

themselves significant ($p = 0.343$ and $p = 0.380$), so we read the pattern as an effect detected in one group but not established as different across groups. When the firm's objective function already points to the long run, improving the payoff structure converts into actual input. For growth-oriented firms, signals pay off beyond their decision horizon, and subsidies, once received, flow to expansion under the existing priority ordering: the instrument changes the budget constraint or payoff expectations but not the objective function. The easing of financing constraints goes further, since it changes neither the payoff structure nor the objective function, only relaxes the constraint, and shows no moderation on either path. This yields an empirical regularity finer than the original proposition: purely constraint-relaxing instruments are precisely estimated at zero on both paths, payoff-reshaping instruments show significant moderation only for profit-oriented firms, and, for growth-oriented firms, the signaling and compensation channels are undetected, with current precision insufficient to establish that they are null.

A general pattern emerges in our estimates: when a policy instrument's channel is constraint relaxation, the observed effect varies with the firm's objective function, and for firms whose objective function points to short-term expansion, relaxing constraints only accelerates the existing orientation. This is the proposed micro-foundation of policy resistance, and it explains why the two variables significant for growth-oriented firms are both pressure-type: firm size and media attention do not relax constraints but raise short-term performance pressure and exposure costs, acting on the trade-off the firm's objective function faces rather than on its available resources. Firm size provides the load-bearing estimate (1% level, with its between-path difference significant at 5%); media attention (10% level, with the difference test only at 10%) serves as corroboration.

We do not use the consistent failure of the three instruments on the growth path as reinforcing evidence: only the resource-provision null reaches the precision needed for a substantive conclusion. The empirical fulcrum is a contrast rather than a homogeneous set of nulls. On the same firms, the moderation of resource-input conditions is precisely estimated at zero, while the moderation of pressure-imposing conditions (firm size) is significantly present at 1%, and the difference between the latter's two interactions passes at 5%. The contrast does not rely on any imprecise estimate (its coverage limits are in Section 5.3). The corresponding testable prediction is that re-estimated on higher-precision data, the signaling and compensation channels for growth-oriented firms should also fall within substantively negligible ranges. Should future work find a substantive effect in either channel, policy resistance should be narrowed to resource-provision instruments. We state this falsifiable boundary rather than presenting the evidence as established.

5. Discussion

5.1. Theoretical Contributions

Reading the two mechanism interpretations of Sections 4.2 and 4.8 together, our framework is not falsified but made strongly asymmetric: the profit-oriented path is a malleable path, mechanistically clear and open to multiple moderators, while the growth-oriented path is strongly suppressive, directly transmitted, and shows no detectable response to any incentive instrument. This claim's evidential basis needs immediate qualification: only the resource-provision null is precisely estimated and supports the substantive judgment that the path cannot be moderated, while payoff-signal instruments are merely undetected on that path (the full three-tier precision is in Section 4.7). We therefore call the path relatively rigid rather than demonstrably rigid. Three theoretical contributions follow.

First, we examine financial distress risk as a candidate mechanism, moving the strategy–ESG relation from association toward mechanism while marking its limits. Prior work offers fragmented explanations but rarely pursues the mediating channel empirically.

The tests (coefficients and intervals in Table 2, Section 4.2) show that financial distress risk behaves as a channel on the profit-oriented path under the Ohlson specification and also reaches significance on the growth-oriented path, but the mediated shares differ by a factor of about 3.25 (3.9% versus 1.2%). The asymmetry is itself a finding: it corrects the intuition of financial distress risk as a symmetric hub, about 99% of the growth-side suppression bypasses financial distress risk, and its main source is not a lack of resources. Our proposed account is the allocation of strategic attention (Section 4.2), which has not been directly tested (Section 5.3). The implication is that interventions for the two firm types would need to act at different points.

Second, we propose and test a framework that classifies moderating conditions by operative logic: incentive-type instruments (cost–benefit logic) change the firm’s feasible set and payoff structure, while pressure-type conditions (coercive-isomorphism logic) change the trade-off the firm faces. The dichotomy precedes the estimates and does not use coefficient signs as its criterion; each class contains both nominally supported and unsupported hypotheses, so it is not a post hoc grouping of results. The tests show that the conditions’ effectiveness diverges systematically by strategic orientation: the profit-oriented path is moderated by the payoff-reshaping instruments (its pressure-type interactions are certified nulls), while the growth-oriented path shows no detectable response to incentive instruments and reacts only to pressure-type conditions (itemized in Sections 4.3–4.5; precision tiers in Section 4.7). The methodological implication is that contextualized theory-building should not presuppose symmetric moderation, and an instrument’s operative logic predicts its effectiveness better than the level at which it sits.

Third, from the asymmetric pattern, we distill a new application of policy resistance in the ESG suppression of growth-oriented firms. Policy resistance means that the suppressive effect of a firm’s strategic orientation on ESG is not detectably mitigated by positive incentive-type institutional instruments and responds only to pressure-type or constraining conditions. The supporting evidence comes in three classes of unequal strength.

First, the resource-provision nulls are precisely estimated on both paths (farthest endpoints at 17.9% and 6.8% of the baseline total effect; Section 4.4), excluding substantively meaningful moderation. Second, the pressure-type evidence is the most direct and rests on no null result: the firm-size interaction is -0.346 ($p = 0.007$), and the difference between its two interactions is significant at 5% before correction (0.286 , $p = 0.040$), the paper’s only significant between-path test, though it does not survive Benjamini–Hochberg correction across the full seventeen-test family, and we therefore treat the asymmetry as suggestive rather than definitive. Media attention points in the same direction (-0.271 , $p = 0.065$) as corroboration. Third, the path-specificity of payoff-reshaping instruments receives positive support: the low-carbon policy and subsidies show significant positive effects for profit-oriented firms (Sections 4.3 and 4.4), while no significant moderation is detected for growth-oriented firms (interval widths in the precision qualifications of Sections 4.3 and 4.4). Because the growth-side intervals cannot support a substantive no-effect judgment, policy resistance is stated as a theoretical proposition awaiting further testing rather than an established regularity. Its transferable implication is that in markets combining strong institutional pressure with structural resource constraints, the coefficients of incentive instruments may vary systematically with firms’ relative profit-growth positions: the heterogeneity of policy effectiveness comes not only from the policy itself but also from the recipient’s strategic orientation.

Positioning against antecedents. Policy resistance as used here is distinct from three neighboring constructs. Oliver’s (1991) regulatory resistance [58] denotes a repertoire of organizational responses to institutional pressure (avoidance, defiance, manipulation); ours is a narrower, empirical boundary condition on instrument effectiveness conditional on

strategic orientation, not a response repertoire. Policy myopia (Marginson and McAulay, 2008) [59] locates short horizons inside managerial decision-making as a bias to correct; here, time horizon is a firm-level strategic attribute that moderates how policy is received, not a pathology. Decoupling (Boxenbaum and Jonsson, 2017) [60] is formal adoption without implementation; growth-oriented firms in our account do not adopt-then-decouple; they simply do not respond to payoff-reshaping incentives. The contribution is a new application with an explicit firm-level micro-foundation (the firm's position in the profit–growth trade-off), rather than a new construct.

5.2. Practical and Policy Implications

This section orders recommendations by evidentiary strength: the associations that survive measurement and inference checks anchor the recommendations, and the unsupported ones convert into demands on existing instruments. All recommendations are directional; their concrete parameters require industry benchmarks and policy evaluation.

For corporate managers. Profit-oriented firms: the mediation tests are consistent with financial distress risk as an indirect channel from strategy to ESG outcomes (H1a and H1b are supported; H2 and H3a hold under the Ohlson specification and are measure-dependent), so firms should build an ESG investment framework matched dynamically to their strategic orientation and risk level. Low-risk firms with stable strategies can position ESG as a strategic long-term investment; higher-risk firms should first secure basic compliance and communication with key stakeholders, treating ESG as a risk-mitigation tool. Growth-oriented firms: about 99% of the suppression bypasses financial distress risk (H3b is statistically detectable but measure-dependent, and the mediated share of the total effect is very small; Section 4.2), and resource-provision conditions show no mitigation. The obstacle is not the availability of funds but whether ESG enters the strategic agenda at all, so the remedy lies in governance structure rather than financing conditions.

For policymakers. Differentiated regulation outperforms uniform intensity. Firm size significantly aggravates the growth-side suppression at 1% ($\text{Growth} \times \text{Size} = -0.346$, $p = 0.007$), with the between-path difference significant at 5% ($p = 0.040$), while resource-provision instruments are precisely estimated at zero on both paths. Our evidence shows where incentive instruments are weak, not that constraint-based instruments are effective; the following is therefore a direction for policy experimentation and evaluation rather than a validated intervention. A candidate lever for growth-oriented firms is the constraint-based toolkit: public financial data can identify the large, high-growth, high-leverage risk group for targeted environmental disclosure requirements and compliance oversight. Incentive instruments should instead be targeted by strategic type and tied to substantive ESG performance: the two payoff-reshaping instruments show detectable moderation on the profit-oriented path ($\text{DID} \times \text{Profit} = 0.390$, $p = 0.063$; $\text{Profit} \times \text{GES} = 2.404$, $p = 0.046$, both before multiple-testing correction), with the between-path differences themselves insignificant ($p = 0.343$ and $p = 0.380$), while purely financing-relaxing conditions show no detectable ESG effect on either path. Our data do not measure green credit or green bond policy directly, so the financing-constraint null does not by itself support a conclusion about those channels; the financing conditions we do measure show no ESG moderation on either path. Subsidies should also shift from universal grants to verified ESG-linked delivery: in our sample, 68.6% of firm-years receive zero subsidies, so the coverage and targeting of current delivery themselves have room for improvement.

The recommendations reduce to one principle: instrument type should be matched to strategic type. Payoff-reshaping instruments presuppose an existing long-term orientation; constraint-relaxing instruments work for neither type; pressure-type conditions directly change short-term trade-offs. The problem with one-size-fits-all design is thus not merely

wrong intensity but mismatched instrument type. Our evidence rules out large ESG gains from relaxing financing for growth-oriented firms (a precisely estimated null effect), and additional subsidies have so far shown no detectable effect and cannot yet be judged ineffective; by the Section 4.8 mechanism, merely relaxing constraints may instead accelerate the existing expansion orientation. Correspondingly, growth versus sustainability is not a problem to be solved once but to be managed continuously, and management intervention for growth-oriented firms would need to act on agendas and appraisal rather than on financial health.

5.3. Limitations and Future Research

Precision of null-effect claims. Policy resistance rests partly on insignificant interactions, and the evidential value of null results depends on estimation precision, so we tier them. Where precision permits substantive judgment (four interactions with endpoints at 6.8–17.9% of the baseline total effect), a substantive judgment is made; where it does not, the claim is limited to insufficient evidence ($\text{DID} \times \text{Growth}$, 63.6%) or non-determination ($\text{Growth} \times \text{GES}$, 403%). Symmetrically, on the positive side, only firm size carries weight at 1%, and its between-path difference is the paper's only difference test at the 5% level. The contrast we establish is narrow but solid: the direction is reliable, and the coverage awaits extension. Future work should use equivalence tests with explicit negligibility thresholds. One marginal limitation of the growth-path indirect effect (a bootstrap upper bound close to zero, one-sided $p = 0.018$, with the interval fully reproducible) is noted in Section 4.2 and not repeated here; it does not affect the substantive conclusion. The growth path's mediated share is very small (Section 4.2), so our claim that financial distress risk is not the main channel of the growth-oriented suppression rests on magnitude rather than significance.

Measurement and identification. Strategic orientation is a binary classification; continuous industry-adjusted measures, a four-quadrant specification, and median- and band-threshold variants reproduce the main results (Section 4.6); R&D intensity, which would sharpen the orientation measures, is not available in our data, but the classification still compresses strategic intensity and transition; financial distress risk is measured by the O-Score; cross-validation with the Altman Z-score does not reproduce the indirect association, and Granger-style tests detect feedback from lagged ESG to distress, so the channel is presented as a measure-dependent statistical association (Section 4.2). Two-way fixed effects and lagged regressors mitigate some endogeneity concerns, but unobserved common drivers may remain. The lagged-dependent-variable check (Table S3) is a fixed-effects specification subject to Nickell bias in short panels, so it only controls ESG inertia and does not correct endogeneity. We also tried system and difference GMM (full output in Text S4), and the diagnostics indicate instrument invalidity rather than mere weakness: the Hansen tests reject instrument validity at 1% in all three specifications ($p < 0.001$); coefficients are unstable across specifications, with the profit-oriented estimate crossing zero; and the difference-GMM lag coefficient of 0.243 falls outside the interval bracketed by the (downward-biased) fixed-effects estimate of 0.663 and the (upward-biased) pooled OLS estimate of 0.989. The structural reason is that the key regressors barely vary within firms: growth orientation never changes for 57.4% of firms under the baseline classification, and the within-firm first autocorrelation of ESG is 0.84. We therefore report no GMM point estimates and do not treat GMM as a test of the main results: with instrument exogeneity rejected, estimates under that specification are not evidence. Dynamic endogeneity remains a substantive limitation. The low-carbon DID carries three further qualifications (treatment defined by place of registration, a short event window, and Goodman–Bacon bias [61] under staggered adoption), and the cohort-robust re-estimation addressing them is reported in Section 4.3 and Text S2 (Callaway and Sant'Anna estimator [16], city-level clustering, and wild-cluster bootstrap).

Extending mechanisms and specifications. Three directions merit testing. The attention-before-funds explanation is untested directly; board agenda structures, ESG appraisal weights, or dedicated ESG governance bodies could serve as closer mediators for effect decomposition. Our specification is linear and does not test a possible inverted-U relation between growth orientation and ESG, while ESG is strongly path-dependent ($L1_ESG = 0.663$), so cumulative effects may need longer windows. And the moderators are tested one at a time without interactions among them. Given growth-oriented firms' non-response to single instruments, whether combinations of instruments can break the resistance is especially valuable, and configurational analysis (e.g., fsQCA) is well suited to such equifinal paths.

Four further qualifications deserve emphasis. First, on interpretation of the size result: the negative Growth $\times$ Size interaction is consistent with an agency reading (size amplifies suppression) but equally with a visibility reading (large growth firms attract more rating scrutiny and hence lower scores); without attention or agency-cost measures, we cannot adjudicate, and we treat the agency interpretation as speculative. Second, on identification with a persistent treatment: 57.4% of firms never change growth-orientation status under the baseline classification used in the models (57.7% under the continuous-benchmark reconstruction), so the growth-side estimates lean more on between-firm variation; profit orientation varies within 84% of firms, and only 9% never change quadrant under the continuous-benchmark reconstruction, which supports the fixed-effects design for the main results. Third, the two groups are unbalanced (4987 versus 1031 firm-years), and our minimum-detectable-effect analysis shows the growth-path policy and subsidy interaction tests could only detect effects larger than 52–290% of the full-sample baseline profit total effect (Section 4.6; Table S6); hence the indeterminate labels in Table 5. Fourth, on residual endogeneity: the GMM diagnostics fail (Hansen $p < 0.001$, instrument invalidity rather than weakness), the lagged-dependent-variable check is subject to Nickell bias, and Granger-style tests detect feedback from ESG to distress; we therefore present all mediation and moderation results as conditional associations.

External validity. The sample is limited to Chinese A-share listed firms. The state's strong role in steering the economy and the institutional pressure of the dual-carbon goals are both the conditions under which policy resistance is observable and a limit on direct transplantation: in settings with weaker institutions or looser resource constraints, the mediating role of financial distress risk may weaken, and the directions of moderation may change. Cross-country and cross-institutional comparison is the key test of whether policy resistance is specific to China.

6. Conclusions

Using 12,998 firm-year observations of Chinese A-share listed firms in Shanghai and Shenzhen over 2010–2023, this paper tested an integrated framework in which corporate financial distress risk may transmit the association between strategic orientation and ESG performance, with two classes of external conditions as candidate moderators: incentive-type instruments and pressure-type conditions.

The results revise theoretical expectations at three levels. First, financial distress risk serves as a measure-dependent indirect channel: under the O-Score specification, partial mediation is detected on both paths (marginal only on the growth side), and the shares differ by a factor of about 3.25, but the channel does not generalize to the Altman Z-score or to temporally ordered specifications. The indirect effect accounts for 3.9% of the total effect on the profit-oriented path versus 1.2% on the growth-oriented path, meaning about 99% of the latter's suppression bypasses financial distress risk. Second, the effectiveness of the two classes of moderating conditions diverges in exploratory ways:

payoff-reshaping instruments show detectable moderation on the profit-oriented path (the between-path differences are not themselves significant); financing-constraint nulls are certified by equivalence testing on both paths; and firm size significantly aggravates the growth-side suppression, the only between-path difference significant before (but not after) family-wide correction. The full pattern is reported in Section 4.7 with tiered decision rules. Third, from this pattern, we distill a policy-resistance pattern in the ESG suppression of growth-oriented firms: when the instrument's channel is constraint relaxation, no effect is detected for either type, and when the channel is payoff restructuring, the observed pattern is consistent with an effect that varies with the firm's objective function.

The policy implication is clear. For growth-oriented firms, looser financing shows no detectable ESG effect on either path in our data, and additional subsidies have so far shown no detectable effect, though the evidence is too imprecise to judge them ineffective; pressure-type and constraint-based instruments warrant testing as the next direction for intervention, namely differentiated disclosure requirements for the large, high-growth, high-leverage group and governance arrangements acting on board agendas and executive appraisal, while payoff-reshaping incentives are the natural candidates for firms whose profile already matches the long-horizon logic, where their marginal effect is largest. The contribution of this paper is to document how this symmetric framework breaks in practice, and to characterize the resulting pattern. We close with the question of whether constraint-based instruments can break the ESG suppression of growth-oriented firms, an implication that remains to be tested.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/su18199731/s1>, Table S1, ESG sub-dimension regressions (environmental, social, and governance); Table S2, one-period-lagged explanatory variables; Table S3, fixed-effects estimation with a lagged dependent variable; Table S4, full event-study coefficients for the low-carbon city pilot; Table S5, correlation matrix and tiered variance inflation factor diagnostics; Text S1, parallel trends, the precision qualification of the growth-side nulls, and the full argument on the direction difference from prior literature; Text S2, identification qualifications of the low-carbon pilot DID and the Goodman–Bacon bias; Text S3, the ordering of the mediation analysis and its rationale; Text S4, system and difference GMM attempts, diagnostics, and weak-instrument evidence; Text S5, full outputs of the three robustness checks, sub-dimension sample handling, and standard-error sensitivity; Table S6, equivalence-testing (TOST) and minimum-detectable-effect reporting for the key interaction tests; Text S6, additional analyses added in the revision (staggered-adoption estimation, alternative distress measurement, continuous and multi-threshold measurement, the two-part subsidy specification, multiple testing and equivalence testing, temporal ordering, expanded controls and alternative fixed effects, an alternative ESG rater, lagged moderators, inference robustness, sample construction and exclusion sensitivity, the non-overlapping distress index, pre-policy subgroup ATTs, missing-pilot and broader-sample sensitivity, reproducibility, missingness by variable and year, the SA-index replication, and marginal-effects plots and event-study dynamics); Figures S1–S4, marginal-effects plots with confidence intervals for the four continuous moderators; Figure S5, event-study dynamic effects with 95% confidence intervals. The core contributions and main results are retained in the main text; the Supplementary Materials contain only supporting and extending content. A replication package (do-files, codebook, city-pilot crosswalk, and output logs) and a minimal dataset are submitted as separate supplementary files.

Author Contributions: Conceptualization, S.S.; Methodology, S.S.; Software, S.S.; Formal analysis, S.S.; Investigation, S.S.; Data curation, S.S.; Writing—original draft, S.S.; Visualization, S.S.; Supervision, M.L. and I.S.; Writing—review and editing, S.S., M.L. and I.S. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The raw data come from commercial sources (Bloomberg ESG scores; CSMAR financial and subsidy records; CFND news counts) and cannot be redistributed publicly owing to licensing restrictions. All researcher-generated materials are shared in the Supplementary Materials and a replication package: (i) do-files for every table and figure; (ii) a codebook with variable-construction rules, including the strategic-orientation classification script (which reproduces 12,995 of 12,998 assignments; the three residual rows are exact boundary ties resolved by floating-point rounding); (iii) the city-pilot crosswalk; (iv) the Bloomberg merge-verification log (the four ESG variables are an unmodified firm-year merge from the raw extract); and (v) output logs with software and package versions. Researchers with licensed access to the underlying databases can reproduce every reported number from these materials, and the corresponding author will assist with access queries.

Acknowledgments: During the preparation of this work, the authors used generative AI-assisted tools for translation and language editing in order to improve the readability and language of the manuscript. After using these tools, the authors reviewed and edited the content as needed and take full responsibility for the content of the published article.

Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A. Variable Construction Details

O-Score: we use the Ohlson (1980) [47] bankruptcy-probability score as implemented by CSMAR, computed from nine components: log of total assets (deflated), total liabilities over total assets, working capital over total assets, current liabilities over current assets, a liabilities-exceed-assets indicator, net income over total assets, funds from operations over total liabilities, a two-consecutive-loss-years indicator, and the change in net income; construction uses year-end financials, and the score is winsorized at the 1st/99th percentiles after construction.

KZ index: as provided in CSMAR's China Listed Firm's Business Distress Research Database (table BDT_FinConstKZ). Following Kaplan and Zingales [49], five annual components (operating cash flow, cash dividends, and cash holdings over beginning-of-year total assets, leverage, and Tobin's Q) are split at the annual median into an ordinal index, which is re-estimated by ordered logistic regression on the continuous components to yield the firm-year index (the Chinese-market construction documented in the database manual); higher values indicate tighter constraints.

Government environmental subsidies (GES): hand-compiled from the government-subsidy item details in annual-report notes; an item counts when its description contains an environment-related keyword ("green", "environmental subsidy", "environment", "sustainable development", "clean", or "energy saving"); the same program listed in multiple note lines is counted once, and the firm-year amounts are summed and scaled by operating revenue. The raw variable is zero for 68.6% of firm-years, and the recipient-only distribution is reported in the note to Table 1.

Bloomberg ESG scores: a provider ESG/disclosure assessment, with composite and E/S/G sub-scores on Bloomberg's proprietary 0–100 scale. The scoring framework is periodically revised (indicator coverage and weights), so the score is not a fixed-vintage measure; robustness to the provider's methodology is therefore addressed through the sub-dimension analysis (Table S1) and the cross-rater replication under CNRDS ratings (Section 4.6) rather than through a single-source claim. The four variables are an unmodified firm-year merge from the raw extract (verified to storage precision), and the 2022 coverage dip originates in the source.

Replication: do-files for every table, the classification-reconstruction script (which reproduces 12,995 of 12,998 orientation assignments; the three residuals are floating-point

boundary ties), the city-pilot crosswalk, output logs, and package versions are available in the replication package described in the Data Availability statement.

References

1. People's Bank of China; Ministry of Finance; National Development and Reform Commission; Ministry of Environmental Protection; China Banking Regulatory Commission; China Securities Regulatory Commission; China Insurance Regulatory Commission. Guidelines for Establishing the Green Financial System; Yin Fa No. 228. 2016. Available online: https://www.mee.gov.cn/gkml/hbb/gwy/201611/t20161124_368163.htm (accessed on 11 September 2026). (In Chinese)
2. Shanghai Stock Exchange; Shenzhen Stock Exchange; Beijing Stock Exchange. Guidelines for the Sustainable Development Reporting of Listed Companies. 2024. Available online: https://www.szse.cn/aboutus/trends/news/t20240412_606840.html (accessed on 11 September 2026). (In Chinese)
3. Wang, S.; Hu, H.; Wang, X. Green entrepreneurship orientation and environmental, social, and governance performance: Do contractual strategic alliances matter? *Corp. Soc. Responsib. Environ. Manag.* **2024**, *31*, 5275–5295. [\[CrossRef\]](#)
4. de la Cruz Jara, M.F.; Spanjol, J.; Doppstadt, T. Strategic social value orientation and sustainability performance: A commensuration perspective. *Organ. Stud.* **2025**, *46*, 635–666. [\[CrossRef\]](#)
5. Hamed, R.; Smolarski, J.; Al-Shattarat, W.; Al-Shattarat, B. CSR reporting and corporate performance: The role of strategic emphasis. *Sustain. Account. Manag. Policy J.* **2025**, *16*, 845–873. [\[CrossRef\]](#)
6. Zhou, N.; Park, S.H. Growth or profit? Strategic orientations and long-term performance in China. *Strateg. Manag. J.* **2020**, *41*, 2050–2071. [\[CrossRef\]](#)
7. Sun, X.; Zhou, C.; Gan, Z. Green finance policy and ESG performance: Evidence from Chinese manufacturing firms. *Sustainability* **2023**, *15*, 6781. [\[CrossRef\]](#)
8. Chen, Y.; Zhang, Y.; Wang, M. Green credit, financial regulation and corporate green innovation: Evidence from China. *Financ. Res. Lett.* **2024**, *59*, 104768. [\[CrossRef\]](#)
9. Shi, L.; Wang, Y.; Jing, L. Low-carbon city pilot, external governance, and green innovation. *Financ. Res. Lett.* **2024**, *67*, 105768. [\[CrossRef\]](#)
10. Wang, S.; Cao, Y.; Wang, Y.; Wang, C. The impact of innovative and low-carbon pilot cities on green innovation. *Sustainability* **2024**, *16*, 7234. [\[CrossRef\]](#)
11. Zhao, M.; Wang, X.; Cheng, L. Business strategy, green innovation, and carbon reduction performance: Evidence from China. *J. Environ. Plan. Manag.* **2025**, *68*, 3035–3062. [\[CrossRef\]](#)
12. He, G.; Liu, Y.; Chen, F. Research on the impact of environment, society, and governance (ESG) on firm risk: An explanation from a financing constraints perspective. *Financ. Res. Lett.* **2023**, *58*, 104038. [\[CrossRef\]](#)
13. Li, W.; Zhu, J.; Liu, C. Environmental, social, and governance performance, financing constraints, and corporate investment efficiency: Empirical evidence from China. *Heliyon* **2024**, *10*, e40401. [\[CrossRef\]](#) [\[PubMed\]](#)
14. He, F.; Guo, X.; Yue, P. Media coverage and corporate ESG performance: Evidence from China. *Int. Rev. Financ. Anal.* **2024**, *91*, 103003. [\[CrossRef\]](#)
15. National Development and Reform Commission. Notices on the Pilot Program of Low-Carbon Provinces and Cities. 2010. Available online: https://www.ndrc.gov.cn/xxgk/zcfb/tz/201008/t20100810_964674.html (accessed on 11 September 2026). (In Chinese)
16. Callaway, B.; Sant'Anna, P.H.C. Difference-in-differences with multiple time periods. *J. Econom.* **2021**, *225*, 200–230. [\[CrossRef\]](#)
17. Laverty, K.J. Economic “short-termism”: The debate, the unresolved issues, and the implications for management practice and research. *Acad. Manag. Rev.* **1996**, *21*, 825–860. [\[CrossRef\]](#)
18. Slawinski, N.; Bansal, P. Short on time: Intertemporal tensions in business sustainability. *Organ. Sci.* **2015**, *26*, 531–549. [\[CrossRef\]](#)
19. DiMaggio, P.J.; Powell, W.W. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *Am. Sociol. Rev.* **1983**, *48*, 147–160. [\[CrossRef\]](#)
20. Cao, Q.; Xu, Q. Construction of the Financial ESG System. *Financ. Regul. Res.* **2019**, 95–111. (In Chinese)
21. Lu, Y. Corporate ESG Disclosure Practice under the Dual-Carbon Goal and Its Implications: A Case Study of Hengrui Medicine. *Int. Bus. Financ. Account.* **2023**, 36–39. (In Chinese)
22. Tsinghua University Global Sustainability Development Research Institute. *Research Report on the ESG Rating Index System of Chinese Local Governments*; Tsinghua University: Beijing, China, 2023. (In Chinese)
23. Li, Y.; Wang, H. Environmental, social and governance performance on brand value in the context of “Dual Carbon”: The mediating effect of R&D innovation. *Sustainability* **2024**, *16*, 10046. [\[CrossRef\]](#)
24. Pfeffer, J.; Salancik, G.R. *The External Control of Organizations: A Resource Dependence Perspective*; Stanford University Press: Stanford, CA, USA, 2003.
25. Freeman, R.E.; Evan, W.M. Corporate governance: A stakeholder interpretation. *J. Behav. Econ.* **1990**, *19*, 337–359. [\[CrossRef\]](#)

26. Boardman, A.E.; Greenberg, D.H.; Vining, A.R.; Weimer, D.L. *Cost-Benefit Analysis: Concepts and Practice*, 5th ed.; Cambridge University Press: Cambridge, UK, 2018.
27. Smith, W.K.; Lewis, M.W. Toward a theory of paradox: A dynamic equilibrium model of organizing. *Acad. Manag. Rev.* **2011**, *36*, 381–403. [\[CrossRef\]](#)
28. Albuquerque, R.; Koskinen, Y.; Zhang, C. Corporate social responsibility and firm risk: Theory and empirical evidence. *Manag. Sci.* **2019**, *65*, 4451–4469. [\[CrossRef\]](#)
29. Boubaker, S.; Cellier, A.; Manita, R.; Saeed, A. Does corporate social responsibility reduce financial distress risk? *Econ. Model.* **2020**, *91*, 835–851. [\[CrossRef\]](#)
30. Chandler, A.D. *Strategy and Structure: Chapters in the History of the Industrial Enterprise*; MIT Press: Cambridge, MA, USA, 1962.
31. Barney, J. Firm resources and sustained competitive advantage. *J. Manag.* **1991**, *17*, 99–120. [\[CrossRef\]](#)
32. Opler, T.C.; Titman, S. Financial distress and corporate performance. *J. Financ.* **1994**, *49*, 1015–1040. [\[CrossRef\]](#)
33. Whited, T.M.; Wu, G. Financial constraints risk. *Rev. Financ. Stud.* **2006**, *19*, 531–559. [\[CrossRef\]](#)
34. Suttipun, M. ESG performance and corporate financial risk of the alternative capital market in Thailand. *Cogent Bus. Manag.* **2023**, *10*, 2168290. [\[CrossRef\]](#)
35. Lee, J.; Koh, K. ESG performance and firm risk in the U.S. financial firms. *Rev. Financ. Econ.* **2024**, *42*, 328–344. [\[CrossRef\]](#)
36. Myers, S.C.; Majluf, N.S. Corporate financing and investment decisions when firms have information that investors do not have. *J. Financ. Econ.* **1984**, *13*, 187–221. [\[CrossRef\]](#)
37. Stiglitz, J.E.; Weiss, A. Credit rationing in markets with imperfect information. *Am. Econ. Rev.* **1981**, *71*, 393–410.
38. Liu, Y.; Jin, X.M.; Ly, K.C.; Mai, Y. The relationship between heterogeneous institutional investors' shareholdings and corporate ESG performance: Evidence from China. *Res. Int. Bus. Financ.* **2024**, *71*, 102457. [\[CrossRef\]](#)
39. Bushee, B.J.; Core, J.E.; Guay, W.; Hamm, S.J. The role of the business press as an information intermediary. *J. Account. Res.* **2010**, *48*, 1–19. [\[CrossRef\]](#)
40. Dyck, A.; Volchkova, N.; Zingales, L. The corporate governance role of the media: Evidence from Russia. *J. Financ.* **2008**, *63*, 1093–1135. [\[CrossRef\]](#)
41. Cai, C.; Hazaea, S.A.; Alsayegh, M.F.; Sahu, M.; Raid, M.; Al-Ahdal, W.M. Media coverage as a moderator in the nexus between audit quality and ESG performance: Evidence from China. *PLoS ONE* **2024**, *19*, e0312510. [\[CrossRef\]](#) [\[PubMed\]](#)
42. Bloomberg, L.P. Bloomberg ESG Data Service. Available online: https://data.bloomberglp.com/professional/sites/10/389674_CDS_REF_ESG_SFCT_DIG.pdf (accessed on 20 September 2026).
43. Chinese Research Data Services Platform (CNRDS): ESG Ratings Database. Available online: <https://www.cnrds.com/> (accessed on 8 September 2026).
44. China Stock Market & Accounting Research Database (CSMAR); GTA Information Technology Co.: Financial Statements, Government Subsidies, Corporate Governance, News, and Business Distress (KZ Index) Modules. Available online: <https://data.csmar.com/> (accessed on 30 August 2026).
45. China Financial News Database (CFND); Chinese Research Data Services Platform (CNRDS): News Coverage Records. Available online: <https://www.cnrds.com/> (accessed on 30 August 2026).
46. Dimson, E.; Karakas, O.; Li, X. Active ownership. *Rev. Financ. Stud.* **2015**, *28*, 3225–3268. [\[CrossRef\]](#)
47. Ohlson, J.A. Financial ratios and the probabilistic prediction of bankruptcy. *J. Account. Res.* **1980**, *18*, 109–131. [\[CrossRef\]](#)
48. Altman, E.I. Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *J. Financ.* **1968**, *23*, 589–609. [\[CrossRef\]](#)
49. Kaplan, S.N.; Zingales, L. Do investment-cash flow sensitivities provide useful measures of financing constraints? *Q. J. Econ.* **1997**, *112*, 169–215. [\[CrossRef\]](#)
50. Baron, R.M.; Kenny, D.A. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *J. Pers. Soc. Psychol.* **1986**, *51*, 1173–1182. [\[CrossRef\]](#) [\[PubMed\]](#)
51. MacKinnon, D.P.; Lockwood, C.M.; Williams, J. Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivar. Behav. Res.* **2004**, *39*, 99–128. [\[CrossRef\]](#) [\[PubMed\]](#)
52. Preacher, K.J.; Selig, J.P. Advantages of Monte Carlo confidence intervals for indirect effects. *Commun. Methods Meas.* **2012**, *6*, 77–98. [\[CrossRef\]](#)
53. Imai, K.; Keele, L.; Tingley, D. A general approach to causal mediation analysis. *Psychol. Methods* **2010**, *15*, 309–334. [\[CrossRef\]](#) [\[PubMed\]](#)
54. Cameron, A.C.; Gelbach, J.B.; Miller, D.L. Robust inference with multiway clustering. *J. Bus. Econ. Stat.* **2011**, *29*, 238–249. [\[CrossRef\]](#)
55. Thompson, S.B. Simple formulas for standard errors that cluster by both firm and time. *J. Financ. Econ.* **2011**, *99*, 1–10. [\[CrossRef\]](#)
56. Berg, F.; Kölbel, J.F.; Rigobon, R. Aggregate confusion: The divergence of ESG ratings. *Rev. Financ.* **2022**, *26*, 1315–1344. [\[CrossRef\]](#)
57. Christensen, D.M.; Serafeim, G.; Sikochi, A. Why is corporate virtue in the eye of the beholder? The case of ESG ratings. *Account. Rev.* **2022**, *97*, 147–175. [\[CrossRef\]](#)

58. Oliver, C. Strategic responses to institutional processes. *Acad. Manag. Rev.* **1991**, *16*, 145–179. [[CrossRef](#)] [[PubMed](#)]
59. Marginson, D.; McAulay, L. Exploring the debate on short-termism: A theoretical and empirical analysis. *Strateg. Manag. J.* **2008**, *29*, 273–292. [[CrossRef](#)]
60. Boxenbaum, E.; Jonsson, S. Isomorphism, diffusion and decoupling: Concept evolution and theoretical challenges. In *The SAGE Handbook of Organizational Institutionalism*, 2nd ed.; SAGE Publications: Thousand Oaks, CA, USA, 2017; pp. 77–97. [[CrossRef](#)]
61. Goodman-Bacon, A. Difference-in-differences with variation in treatment timing. *J. Econom.* **2021**, *225*, 254–277. [[CrossRef](#)]

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