

Mandatory ESG Disclosure in China—A Structured Review and Integrative Framework

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Abstract. China's stock exchanges moved from a largely voluntary or comply-or-explain model toward mandatory sustainability reporting in 2022, placing China within a broader global shift toward harder-law ESG disclosure. To assess what that transition is likely to achieve, this paper draws on a structured set of 17 coded studies and synthesises the core evidence on China's mandatory or semi-mandatory ESG disclosure regime. The review indicates three recurrent benefits: lower default risk and, conditionally, reduced crash risk; improved earnings quality; and stronger innovation-related investment or performance. At the same time, the literature does not support a simple "more disclosure, better outcomes" claim. Effects vary with enforcement credibility, governance quality, firm resources, ownership structure, and the verifiability of reported data. Persistent rating divergence, strategic disclosure, and short-run compliance costs show that disclosure mandates are necessary but not self-executing. Building on these findings, the paper synthesises the evidence through a four-link framework connecting mandate design, information quality, stakeholder response, and corporate outcomes, and identifies unresolved issues concerning materiality, safe-harbour design, and technology-governance complementarity.

Keywords: Mandatory ESG disclosure, Structured review, Information quality, Innovation, China

1. Introduction

Across major capital markets, ESG reporting has shifted from soft guidance to formal disclosure obligations. The EU has built a comprehensive sustainability-reporting architecture, the ISSB has supplied a global baseline, and Asian markets such as Hong Kong and Singapore have adopted staged, partly mandatory models. China belongs to this wider trend, but its state-led policy setting, mixed ownership structure, and fragmented disclosure infrastructure make it a distinctive case.

That distinctiveness is both practical and scholarly. Mandatory ESG disclosure affects investors, listed firms, regulators, and green-transition goals. It also offers a test of whether harder-law disclosure improves real information quality rather than merely increasing reporting volume.

Chinese regulators and scholars often justify stronger ESG disclosure through an information-risk logic: standardised sustainability data should reduce opacity, discipline managerial opportunism, lower financing frictions, and support dual-carbon objectives. Yet the literature also identifies

uneven disclosure quality, persistent rating disagreement, and legal uncertainty over materiality and liability.

These tensions make China different from a simple convergence story. Compared with the EU's broader double-materiality orientation, China remains more cautious and selective. Compared with Hong Kong's semi-mandatory "comply or explain" path, mainland reform is more closely intertwined with domestic industrial policy and differentiated exchange rules.

The empirical and doctrinal evidence is now substantial but still scattered. Studies of the 2008 disclosure mandate link mandatory reporting to lower default risk and, more conditionally, lower stock price crash risk when ESG performance quality is taken into account. Other work finds improved earnings quality, higher ESG performance among A+H firms exposed to Hong Kong's semi-mandatory regime, and positive market reactions to the 2024 guidelines. At the same time, some studies report greater rating divergence, symbolic disclosure incentives, or growth-related cost pressures.

What remains missing is an integrated account of the benefits, boundary conditions, and contradictions within this literature. The issue is not whether there are positive findings in isolation, but how the different strands fit together.

Accordingly, this paper conducts a structured review using a set of 17 coded studies, with the final synthesis centred on the most directly relevant empirical and doctrinal contributions.

The review has three objectives.

First, it consolidates the literature on three core benefits repeatedly associated with stronger disclosure pressure: lower risk, better earnings quality, and stronger innovation-related outcomes.

Second, it evaluates heterogeneity and mechanism, including differences by ownership, industry, firm capability, and governance conditions.

Third, it develops an integrative framework that links mandate design to information quality, stakeholder response, and downstream corporate outcomes, while also identifying unresolved legal and policy questions.

2. Method

2.1. Search and screening

The review was reconstructed from the record set that can still be verified in the Zotero library used for the project. That library contains 41 preliminarily screened records, including 32 from CNKI and 9 from Web of Science. CNKI was retained for Chinese-language scholarship in law, accounting, finance, and policy; Web of Science was retained to add international peer-reviewed coverage.

Searches focused on combinations of terms such as "ESG disclosure," "mandatory ESG," "sustainability reporting," and "China." Because the original search history could not be fully reconstructed, only stages that remain verifiable from the retained Zotero record set and the final reference list are reported.

Studies were included when they examined the Chinese context, addressed mandatory or semi-mandatory ESG or sustainability disclosure, and provided analysable evidence on at least one core dimension: risk, earnings quality, rating divergence, innovation or growth, and legal-institutional design. Generic commentary, duplicates, and non-substantive items were excluded.

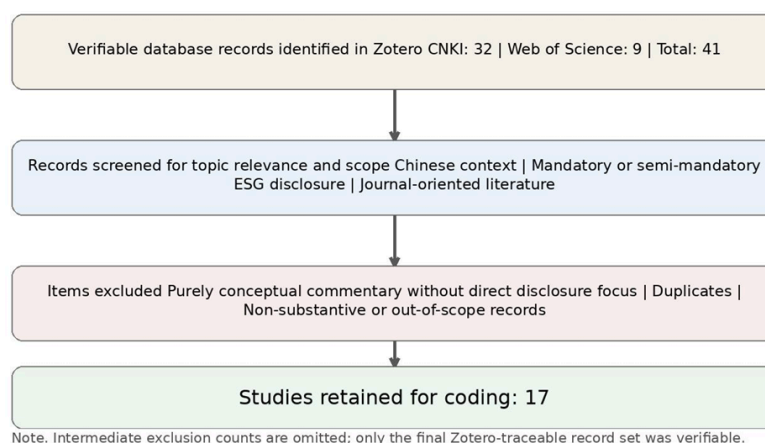


Figure 1. Review selection process based on the verifiable Zotero record set

2.2. Coding scheme

Each included study was coded along three axes rather than two.

First, theme: risk, earnings quality, rating divergence and data quality, innovation or growth, and legal-institutional design.

Second, research strategy: quasi-experimental empirical work, non-experimental panel analysis, event study, doctrinal or comparative legal analysis, and mixed policy analysis.

Third, analytic function in the review: whether the study primarily informs the link from mandate to information quality, from information quality to stakeholder response, from stakeholder response to firm behaviour, or from firm behaviour to corporate outcomes.

Coding was completed manually against literature cards prepared for the structured set of 17 coded studies. For each paper, the review recorded the policy setting, sample or doctrinal scope, identification method, main finding, mechanism or moderation claim, and key limitation, in order to distinguish direct findings from later synthesis.

2.3. Quality and synthesis approach

The empirical literature was assessed by identifying credibility, robustness, and the fit between the claimed mechanism and design. Doctrinal studies were assessed for analytical transparency, comparative grounding, and practical specificity. The synthesis then combined direction-of-effect comparison with a structured causal-chain reading. Here, "strong" evidence means repeated support from multiple credible studies; "moderate" evidence means positive but more conditional support; and "tentative" evidence means isolated or short-window results.

3. Findings

3.1. Risk-reduction channel

3.1.1. Core findings

The strongest evidence concerns risk reduction. Li, Du, and He report a DID coefficient of 1.08 ($p < 0.01$) on Merton-model distance-to-default, indicating materially lower default risk after the 2008 mandate [1]. Hao et al., however, find that the main effect of disclosure alone on stock price crash

risk is not statistically significant; the reduction appears only when ESG performance quality, rather than the binary act of reporting, is used [2]. Zhong et al. further show that the three-day cumulative abnormal return around the April 2024 announcement averages -4.9%, but firms with one-standard-deviation-higher ESG scores earn approximately 0.33 percentage points more, with governance driving the strongest differential [3]. Taken together, these studies support the view that mandatory disclosure can reduce tail-risk perception in both credit and equity markets, but that equity-market gains depend more clearly on disclosure quality than on reporting alone.

3.1.2. Boundary conditions

These effects are not uniform. The literature suggests stronger gains where leverage is higher, where external monitoring is more intense, and where cross-listed or externally scrutinised firms face stronger market discipline. Li, Du, and He find that the risk-reduction effect is more pronounced among firms with higher financial constraints, lower asset turnover, smaller supervisory boards, lower institutional ownership, and lower media attention, collectively suggesting that mandatory ESG disclosure substitutes for otherwise weak monitoring and information environments [1]. Cui et al. similarly report stronger effects among firms with higher leverage and higher short-term borrowing [4]. This indicates that disclosure rules work best when they interact with, or compensate for, existing monitoring structures rather than operating in isolation.

3.2. Governance and earnings quality

3.2.1. Accrual and reporting discipline

Cui et al. report that mandatory disclosure reduces absolute discretionary accruals by 0.6 to 1 percentage point under modified-Jones and Dechow-Dichev models, whereas voluntary disclosure has no comparable effect [4]. The mechanism appears to run through greater transparency around specific accounting items and a tighter consistency requirement between ESG narratives and financial reporting: special items, employee compensation accruals, bad-debt provisions, and asset impairments all shift significantly under mandatory regimes. Voluntary disclosure shows no comparable effect on any of these measures.

3.2.2. Strategic substitution and limits

The evidence is nevertheless not uniformly benign. Zhang, Pan, Liu, and Zeng show that compensation incentives can induce managers to expand ESG disclosure strategically [5]: the executive pay-gap coefficient on ESG disclosure is 0.619 ($p < 0.01$), and real earnings management partially mediates the relationship, with a bootstrap 95% confidence interval for the indirect effect of [0.019, 0.093]. The implication is that more disclosure may coexist with symbolic or self-protective managerial behaviour unless incentives and monitoring are aligned.

3.2.3. Durability

Only a limited number of studies follow firms over longer post-policy windows. As a result, the durability of earnings-quality gains remains less certain than the existence of short-run improvements.

3.3. Innovation and growth channel

3.3.1. Innovation gains

The literature provides substantial support for a positive innovation channel. Wu, Li, Dai, Shen, and Hossain find that a one-unit increase in ESG rating is associated with a 26.8% increase in invention patents, a 26.7% increase in utility model patents, and a 20.7% increase in design patents, with R&D expenditure rising 31.4% [6]; the similar magnitudes for invention and utility model patents suggest a broad innovation effect rather than one confined to basic or applied research alone. Their 2SLS estimates using industry-province average ESG ratings as instruments are consistent with the baseline results. Green-finance policy also appears to improve ESG disclosure quality, which may lower financing frictions for firms able to translate compliance into innovation investment.

3.3.2. Cost-side tension

This positive account is qualified by Li and Zheng, who find that ESG implementation is associated with a 0.346-unit decrease in revenue growth ($p < 0.01$), with the effect concentrated among growth-stage firms (-0.533) and firms in forced-implementation settings (-0.487). The mechanism runs through cost channels, including reduced management expenses and lower net profits [7]. A more defensible reading of the literature is therefore not that ESG always increases firm performance, but that mandatory disclosure may impose immediate compliance and resource-allocation costs while generating longer-run innovation or risk-management benefits under favourable conditions.

3.4. Rating divergence and data quality

3.4.1. Divergence problem

Feng, Guo, and Zeng show that more extensive ESG disclosure does not automatically produce rating convergence [8]. Each unit increase in Bloomberg ESG disclosure score raises the cross-agency rating coefficient of variation by 0.0113 ($p < 0.01$), with stronger effects in heavily polluting industries (0.0100 versus 0.0068) and large firms (0.0086 versus 0.0057). Critically, voluntary ESG report publication reduces divergence (-0.118, $p < 0.01$) while mandatory publication does not, suggesting that quality, not quantity, drives convergence.

3.4.2. Technology complementarity

By contrast, Li, Wang, and Zheng indicate that stronger data assets can improve the ESG information environment and narrow inter-agency disagreement [9]. The paper's more important point is complementary: proprietary data assets are associated with improved ESG performance across Hexun, Wind, and Bloomberg ratings, with stronger effects among firms without mandatory disclosure requirements and among firms with higher agency costs. Technology, therefore, appears to substitute partly for missing disclosure pressure while also improving the underlying verifiability of ESG information.

3.5. Strategic disclosure and agency incentives

3.5.1. Incentive effects

Studies of executive pay gaps and internal monitoring suggest that disclosure behaviour is partly shaped by agency incentives rather than transparency goals alone. Where executive compensation gaps widen, managers may treat ESG disclosure as a strategic signal; this pay-gap effect is stronger in voluntary-disclosure settings and among firms with higher internal control quality, suggesting that strategic disclosure is a governance-embedded choice rather than a random response.

3.5.2. Monitoring complementarity

External monitoring partly counteracts that risk. Media scrutiny, Big-4 auditing, stronger internal controls, and cross-market exposure all appear to reinforce the disciplining effect of disclosure rules. The broader lesson is that mandate design and governance design are complements, not substitutes.

4. Conceptual framework

Figure 2 summarises the literature through a four-link chain with a feedback loop.

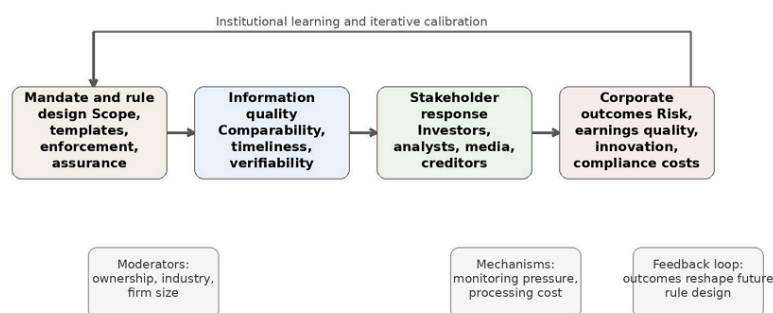


Figure 2. Integrative framework linking rule design, information quality, stakeholder response, and corporate outcomes

1. Mandate to information quality. Rules matter first by defining scope, comparability, and verification requirements. This link is strong, supported by empirical studies and legal-institutional analyses. Across these studies, the effect is moderated by standard unification, enforcement intensity, and data asset capability: disclosure mandates improve information quality most clearly when reporting categories are comparable, liability is credible, and firms can generate verifiable machine-readable data.

2. Information quality to stakeholder response. Better and more structured disclosure changes how investors, analysts, creditors, media actors, and rating agencies process firm-level sustainability information. This link is moderate, supported by empirical and theoretical contributions. Its operation is moderated by market efficiency and investor composition, especially the relative weight of institutional versus retail actors, which helps explain why some market reactions are immediate while others remain weak or conditional.

3. Stakeholder response to corporate behaviour. Once monitoring pressure, financing conditions, and reputational incentives shift, firms adjust their reporting strategy, earnings management, innovation spending, and broader ESG behaviour. This link is moderate, supported by the reviewed studies, though with mixed directions. The mix reflects moderation by governance quality, executive

compensation structure, and ownership type: the same stakeholder response can discipline managerial behaviour in some firms and induce strategic disclosure in others.

4. Corporate behaviour to outcomes. Downstream outcomes include lower default risk, conditionally reduced crash risk, better earnings quality, and, in some settings, stronger innovation. This link is moderate, supported by the reviewed studies, but observation windows rarely exceed three years. Its effects are moderated by industry, firm life-cycle stage, and leverage, which is why the literature records both benefits and short-run compliance costs rather than a single uniform treatment effect.

Two additional points follow from this framework. First, moderators such as ownership, industry, data capability, and governance strength shape the effect at each stage rather than only at the end of the chain. Second, the process is iterative: observed outcomes feed back into later rule design, which is why debates over materiality, liability, and phased implementation remain central.

5. Discussion & implications

5.1. Theoretical contributions

The review contributes in three ways. First, it refines the information-risk account of mandatory ESG disclosure by showing that the literature supports real benefits, but only conditionally. Second, it separates disclosure quantity from disclosure quality, explaining why some studies find better reporting discipline and lower risk while others find rating divergence or strategic signalling. Third, it shows that reporting outcomes depend on the interaction among rule design, governance, and data capacity.

The literature also suggests that agency theory and institutional theory should be read together. Institutional pressure explains why firms expand disclosure under regulatory and market expectations, whereas agency theory explains why that same response may become substantive in some settings and strategic in others.

5.2. Regulatory agenda

For short-term implementation (1-2 years), the priority is standardisation and credible minimum comparability. A national taxonomy aligned, where feasible, with ISSB-style baseline concepts should reduce fragmentation while leaving room for sector supplements. The core mandatory set should initially target the sixteen "heavily polluting" industry categories designated by the Ministry of Ecology and Environment, for which the empirical literature reports the clearest risk-reduction and earnings-quality gains [1, 8], before extending to lighter-footprint sectors. Safe-harbour protection for good-faith forward-looking climate statements would also reduce defensive boilerplate reporting.

For medium-term implementation (3-5 years), the regime should move from simple reporting expansion toward differentiated calibration. Materiality rules should combine investor relevance with impact-sensitive thresholds, while enforcement should distinguish good-faith estimation error from opportunistic omission or misstatement.

Governance and technology should be treated as parallel policy levers throughout both stages. Governance-linked incentives, stronger internal controls, audit quality, and external monitoring reduce the risk that disclosure becomes symbolic, while data taxonomies and digital reporting tools make reported ESG information more comparable and verifiable.

Phasing also helps contain compliance strain for smaller and growth-stage firms.

6. Conclusion

This structured review indicates that stronger ESG disclosure obligations in China are associated with three recurring benefits: lower default risk and, conditionally, reduced crash risk; improved earnings quality; and stronger innovation-related investment or performance.

The review also shows why a disclosure-only approach is insufficient. Rating divergence, symbolic disclosure, and short-run compliance costs remain visible across the literature. Mandatory ESG disclosure works best when it is paired with better standardisation, credible assurance or verification, internal governance alignment, and reporting technologies that reduce interpretation costs. For future research, the most important task is to move beyond short observation windows and to identify the channels through which rule design affects real behaviour. Longer panels, threshold-based designs, text-based analysis of narrative disclosure, and direct comparison across mainland and Hong Kong regimes would all sharpen causal inference.

For policy, the central implication is not simply that China should mandate more ESG reporting. It is that rule design should be phased, evidence-based, and attentive to heterogeneity. A regime built on calibrated materiality, selective safe-harbour protection, stronger data architecture, and governance complementarity is more likely to convert disclosure pressure into durable informational and economic gains.

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