

Chapter-15

The Architecture of Green Trust: A Policy-Centric Analysis of Regulatory Frameworks for Sustainable Finance and Green Accounting Integration

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Abstract

This policy-oriented research paper analyses the critical role of guiding architecture in creating the essential conditions for suggestive blend between sustainable finance and green accounting. This paper claims that voluntary agendas alone are insufficient to overcome the structural barriers of short-termism, information asymmetry, and greenwashing that wave current efforts. Through a relative analysis of leading approaches across three authorities—the European Union (EU), Singapore, and California—this study identifies the key design values for effective policy involvement. The EU's approach, characterised by obligatory disclosure requirements under the Corporate Sustainability Reporting Directive (CSRD) and taxonomy-based definitions of sustainable activities, represents a complete top-down model. Singapore's strategy emphasises public-private coordination, capacity building, and positioning itself as a green finance hub for Asia. California's focus on climate risk disclosure validates state-level leadership in the absence of federal consensus in the United States. The investigation reveals that positive blend requires a tripartite regulatory foundation: (1) mandatory, assured disclosure standards that create a level playing field for green accounting; (2) a science-based classification system (taxonomy) that defines what constitutes a sustainable economic activity for finance; and (3) clear alignment of fiduciary duties to require institutional investors to consider sustainability risks. The paper concludes that policymakers must act as system designers, creating the guidelines and organization that allow markets to accurately price environmental flexibility. The path towards a sustainable financial system will be determined less by technological innovation in accounting and more by the strength, coherence, and enforceability of the regulatory frameworks that govern it.

Keywords: Governing Policy, Sustainable Finance, Green Accounting, Corporate Disclosure, Policy Design.

1. Introduction: The Governance Imperative

The transition to a sustainable economy is often framed as a technological and financial challenge: developing green technologies and mobilising trillions in capital. However, this transition is fundamentally constrained by a **governance gap**. Markets for sustainable finance and credible green accounting cannot emerge spontaneously because

they suffer from profound information failures, misaligned incentives, and the public goods nature of environmental resilience (Schoenmaker & Schramade, 2019). Voluntary corporate social responsibility (CSR) and a proliferation of private ESG ratings have proven inadequate, often creating confusion and opportunities for greenwashing rather than transparency and accountability (Christensen et al., 2021).

This paper theorizes that the integration of sustainable finance and green accounting is primarily a **problem of institutional design** that requires thoughtful public policy intervention. Finance and accounting are not neutral technical fields; they are governed by rules, standards, and legal duties that shape behaviour. Therefore, the question is not whether regulation is needed, but what form it should take to be effective. This research moves beyond technical discussions of accounting metrics or financial products to analyse the **meta-architecture**—the laws, regulations, and supervisory frameworks—that must reinforce them. Through a relative policy analysis, this paper investigates how different authorities are building the governing fundamentals for a sustainable financial system. It asks: What regulatory models are emerging? What are their core components and underlying philosophies? And what can we learn about the essential design principles for policy that truly aligns finance with ecological boundaries? This analysis is crucial for policymakers, regulators, and business leaders who must circumnavigate and shape this rapidly budding landscape.

2. Research Objectives

This study is guided by the following objectives:

1. To plot and analyse the essential regulatory tools being deployed to fit in sustainable finance and green accounting in three leading jurisdictions: the EU, Singapore, and California.
2. To compare and contrast the underlying policy philosophies—ranging from comprehensive regulation to market facilitation—that characterise each approach.
3. To identify the critical success factors and potential limitations of each regulatory model.

3. Methodology: A Comparative Policy Analysis

This research employs a **comparative public policy analysis** framework (Dodds, 2018). This qualitative method is ideal for examining how different political and economic contexts shape policy responses to a common global challenge. The study aims for systematic thoughtful into the structure and logic of different governing methods.

3.1. Case Selection:

Three jurisdictions were selected as illustrative cases representing distinct models:

The European Union: Selected as the most comprehensive and prescriptive supervisory rule, pursuing a "Green Deal" through binding legislation.

Singapore: Selected as a model of strategic market facilitation, where policy emphasizes on building organization, competences, and aligning within global finance.

California, USA: Selected as an example of subnational leadership in the face of federal deadlock, using its large market power to set *de facto* national standards.

3.2. Data Collection and Analysis:

The analysis is based on documentary analysis of primary policy sources:

Legislation and Regulations: EU's CSRD, Sustainable Finance Disclosure Regulation (SFDR), and EU Taxonomy; Singapore's Green Finance Action Plan and ESG Disclosure Guidelines; California's SB 261 (Climate Risk Disclosure) and SB 253 (Greenhouse Gas Emissions Disclosure).

Official Guidance and Frameworks: Technical screening criteria from the EU, guidelines from the Monetary Authority of Singapore (MAS), and implementation rules from the California Air Resources Board.

Academic and Think-Tank Commentary: Critical analysis from policy scholars and institutions (e.g., Grantham Research Institute, CFA Institute) to contextualise the documents.

The analysis followed a structured process: (1) Description of each jurisdiction's key policy instruments; (2) Comparison across dimensions such as mandatory/voluntary nature, scope of coverage, enforcement mechanisms, and underlying policy theory; (3) Evaluation of strengths and weaknesses based on criteria of coherence, enforceability, and potential impact on capital allocation.

4. Analysis: Three Models of Regulatory Integration

4.1. The European Union: The Comprehensive Regulator

The EU has created an interlocking regulatory suite with the explicit aim of reorienting capital flows.

The Foundation: Mandatory Disclosure (CSRD). The CSRD requires over 50,000 companies to account according to the European Sustainability Reporting Standards (ESRS). This creates the green accounting groundwork—standardised, guaranteed, and public data on environmental impacts, risks, and opportunities.

The Organization Engine: The EU Taxonomy. This provides a science-based definition of what is "sustainable." It creates a shared language for sustainable finance by classifying economic activities that contribute noticeably to ecological objectives. It avoids random green claims.

The Investment Driver: The SFDR (Sustainable Finance Disclosure Regulation). This regulation mandates financial market participants to disclose how they fit in sustainability risks and impacts at both entity and product level. It directly shapes maintainable finance by requiring transparency on the "greenness" of investment funds.

Philosophy and Critique: The EU model is rules-based, top-down, and harmonising. Its strength is completeness and legal certainty. Critics argue it is remarkably complex, imposes high compliance costs, and its political negotiation can lead to diluted technical criteria (e.g., the controversial inclusion of natural gas as a "transition" activity).

4.2. Singapore: The Strategic Facilitator

Singapore's approach is to enable markets rather than prescribe outcomes.

Core Strategy: The Green Finance Action Plan focuses on building ecosystem enablers: (1) evolving green finance talent and research; (2) fostering innovation in green fintech and solutions; (3) setting sustainability reporting based on the "The Task Force on Climate Related Financial Disclosures TCFD/ISSB framework on a "comply-or-explain" basis.

Market Positioning: Policy is geared towards creating Singapore as a reliable hub for green finance in Asia. This involves championing ASEAN taxonomy development, promoting green bond issuance (via grant schemes), and hosting international platforms for dialogue.

Philosophy and Critique: This model is principles-based, facilitative, and market-responsive. Its strength is agility and alignment with Singapore's role as a global financial centre. The limitation is that the "comply-or-explain" disclosure rule may lack the teeth to drive universal, high-quality green accounting, potentially leaving room for idlers.

4.3. California: The Aggressive First-Mover

Operating without federal leadership, California uses its economic immensity to set standards.

Landmark Legislation: California's Senate Bill 253 (SB 253), the Climate Corporate Data Accountability Act, SB 253 requires large companies operating in California to disclose Scope 1, 2, and critically, Scope 3 greenhouse gas emissions—the broadest such mandate in the U.S. SB 261 requires disclosure of climate-related financial risks.

Theory of Change: California's policy forces the "California Effect"—whereby stringent regulations in a large market create *de facto* national or global standards, as companies harmonise their practices upwards to simplify compliance. It forces the formation of internal green accounting systems for climate data.

Philosophy and Critique: This model is ambitious, focused, and litigation-driven. Its strength is its boldness on the most material issue (climate) and its ripple effects. The tasks include legal battles over jurisdiction and the burden of Scope 3 data collection, which relies on value chain green accounting that may not yet exist.

5. Synthesis: Essential Design Principles for Effective Policy

From this comparative analysis, three non-negotiable design principles emerge for any regulatory framework aiming to integrate finance and accounting for sustainability.

Principle 1: Make it Mandatory and Assured

Voluntary frameworks result in selective disclosure and a race to the bottom. Mandatory compliance levels the playing field and ensures all market contributors contribute to the public data infrastructure. Crucially, this data must be subject to independent assurance (audit). Green accounting without verification is merely storytelling. The EU's CSRD+assurance and California's mandated emissions disclosure embody this principle.

Principle 2: Define Sustainability with Science, Not Marketing

To prevent greenwashing in sustainable finance, a robust, science-based classification system (taxonomy) is essential. It provides the conclusive orientation against which green accounting data is measured and financial products are labelled. It moves the debate from vague claims to concrete technical criteria. The EU Taxonomy, despite its defects, is the pioneering attempt at this. Singapore's support for an ASEAN taxonomy follows this logic.

Principle 3: Align Fiduciary Duties and Stewardship Codes

Regulation must address the core driver of investment decisions: fiduciary duty. Policies must evidently clarify that considering material sustainability risks and opportunities is part of investors' fiduciary obligations. The EU's Shareholder Rights Directive II (encouraging shareholder engagement on sustainability) and developing supervision from officials in the UK and elsewhere point in this direction. Without this, sustainable finance remains a niche "ethical" option rather than a mainstream imperative.

The Integrated Policy Stack: An effective regulatory regime functions as a stack where these principles interact. Mandatory disclosure (Principle 1) feeds data into the taxonomy (Principle 2), which investors are then obligated to use in their decision-making (Principle 3). This creates a closed loop of accountability.

6. Conclusion and Policy Recommendations

This paper concludes that the combination of sustainable finance and green accounting will be engineered not by markets alone, but by intelligent public policy. The relative analysis determines that while policy attitudes differ—from the EU's comprehensive rules to Singapore's enablement and California's aggressive targeting—the most effective approaches converge on the need for mandatory, science-aligned, and duty-shaping regulation.

For policymakers worldwide, the recommendations are clear:

1. **Adopt and Enforce Mandatory Disclosure Standards:** Implement or align with global baseline standards (like those from the ISSB) as a mandatory reporting requirement, coupled with a pathway to reasonable assurance.
2. **Develop or Adopt a Credible Taxonomy:** Create a national or regional taxonomy of sustainable activities grounded in climate and environmental science to define the boundaries of green finance.
3. **Clarify Fiduciary Duties:** Issue official guidance or amend legislation to state unequivocally that institutional investors must integrate material sustainability factors into investment analysis and stewardship.
4. **Ensure Coordinated Enforcement:** Equip financial regulators (like securities commissions) and accounting standard-setters with the mandate and resources to monitor and enforce these new rules cohesively.

The "architecture of green trust" is now being built. The design choices made today—between rigour and flexibility, between prescription and facilitation—will determine whether this architecture can bear the weight of the immense financial transition required for a resilient future. The lesson from global pioneers is that half-measures will not suffice; only robust, coherent, and enforceable policy can turn the promise of sustainable finance and green accounting into a tangible reality.

7. References

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