
THE LEGAL ARCHITECTURE OF GREEN FINANCE: COMPARATIVE STUDY OF INDIA'S SOVEREIGN GREEN BONDS AND THE UK GREEN FINANCE STRATEGY

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ABSTRACT

The acceleration of climate change necessitates the development of new funding instruments to support the shift to a low-carbon and climate-resilient economy.

Green finance, which includes investments that are environmentally sustainable, has become a very important tool towards meeting the global climate objectives. Sovereign green bonds and national green finance policy have become more popular in this framework, where capital markets are connected to environmental policy. The current paper is a comparative legal study of the sovereign green bonds structure in India and the Green Finance Strategy in the United Kingdom, to look at the regulatory, institutional, and policy frameworks that govern the green finance in both the United Kingdom and India.

After providing an overview of the concept's historical evolution, the article delves further into the legal framework for sovereign green bonds in India, including the Reserve Bank of India's issuing guidelines, regulations, and compliance periods. The UK Green Finance Strategy is then examined, along with its transparency requirements, regulatory interventions, and market-driven innovations aimed at encouraging both public and private finance to engage in sustainable ventures.

In terms of legal frameworks, policy integration, investor protections, and conformity to global norms like the Paris Agreement, the study uses a comparative approach to identify important parallels and divergences between India and the UK. The analysis also reveals a regulatory loophole, enforcement dilemma, and harmonization of global environment standards to empower the legal framework of green finance. The paper ends with suggestions as to how transparency, accountability, and cross-border collaboration can be improved to create a sustainable and healthy green finance ecosystem.

Keywords: Green Finance, Sovereign Green Bonds, UK Green Finance Strategy, Climate Change Law, Comparative Study

1. Introduction

The problems of climate change and environmental degradation are one of the most urgent world issues of the twenty-first century. The growing level of greenhouse gas emissions, the rise of the number of extreme weather events, and the growing concern about the loss of biodiversity has put sustainability in the focus of the international policy and legal discussion. With governments around the world making bold climate ambitions in framework. The question of how to finance these changes has never been more important, especially considering initiatives like the Paris Agreement and the Sustainable Development Goals (SDGs) of the UN. The emphasis on climate-resilient infrastructure and the consideration of environmental externalities has been lacking in conventional financial systems, whose logic is centered on short-term profit maximization. The relationship between environmental objectives and cutting-edge financial tools meant to mobilize both public and private resources in the context of sustainable development has led to the proposal of green finance as a game-changing tool.

Green finance is essentially the funding of projects and activities that appear to improve the environment, such as climate adaptation, low-carbon transportation, sustainable agriculture, renewable energy, and water conservation. Carbon markets, climate funds, sustainability-linked loans, and green bonds have all become crucial tools for directing capital into environmentally friendly initiatives. However, the growth of this sector is heavily dependent on the presence of an open legal and regulatory environment that promotes accountability, transparency, and trustworthiness. Greenwashing, the practice of falsely portraying investments as environmentally friendly without necessarily passing the required stringent regulation, is a practice that can easily occur in the absence of sound legislation governing disclosure, certification, and enforcement.

Among the various forms of green financing that have attracted a lot of attention in recent years are sovereign green bonds. These bonds, which are issued by governments, show that a state is prepared to implement strong economic and environmental policies in addition to being a source of funding for climate-related initiatives. Likewise, green finance initiatives at the national level seek to make sure that environmental issues are addressed in the financial regulatory framework and that fiscal and monetary policies, as well as the investment choices made by the non-state sector, align with climate objectives.

India and the United Kingdom are the countries that can serve as interesting case studies in the comparison of the law of green finance. India is currently confronted with the twin problem of balancing high economic growth rates with the transformation to low carbon future, as it is one of the fastest growing economies in the world and a leading emitter of greenhouse gases. This has prompted the Government of India to issue sovereign green bonds in 2023, which come under the regulatory directive of the Reserve Bank of India (RBI) and the Ministry of Finance. The bonds are used to fund projects in renewable energy, clean transportation, and climate adaptation with special mechanisms of project selection, allocation of funds and reporting of impacts. Yet, being a relatively new project, the framework of green bonds in India remains underdeveloped, and the policy questions of the depth of the market, investor confidence and standardization mechanisms are still the center of policy discussions.

By contrast, the United Kingdom has made itself a global leader in sustainable finance with its Green Finance Strategy (2019, revised in 2023). The UK is anchored in a well-established financial market, and its strategy combines a variety of regulatory, fiscal, and market-driven interventions to encourage the use of green investments. It also features the creation of a UK Green Taxonomy on categorizing sustainable economic activity, obligatory disclosures on climate related financial reporting in line with the Task Force on Climate-Related Financial Disclosures (TCFD) and the creation of bodies like the Green Finance institute to encourage innovation and stakeholder involvement. The UK model provides important lessons to the emerging economies such as India because of the high degree of policy coherence and institutional capacity.

Although India and the UK have the same goals, they are quite different in terms of the law systems, market infrastructure, and regulation maturity. The model of India is characterized by a state-oriented strategy, that is, the formation of supportive structures and investor trust, and the UK characterizes it with market-oriented mechanisms, leadership of the private sector, and compliance with climate finance standards on an international scale. A comparative legal study of these jurisdictions, thus, can offer information on alternative ways of regulation, identifying the best practices and gaps that need to be addressed by reform.

This article follows a doctrinal and comparative research design, whereby it uses statutes, policy documentations, international conventions and scholarly references to undertake a legal architecture of green finance in both India and the UK. It attempts to provide responses to the

following research questions:

What are India and the UK doing to regulate and implement green finance, in particular sovereign green bonds and national green finance strategies?

What do their legal, regulatory, and institutional structures have in common and what are the differences?

What can we learn in order to build stronger green finance architecture in the world?

The answers to these questions make the research article an addition to the existing literature on sustainable finance law, providing tangible suggestions to policymakers, regulators, and stakeholders who wish to align the fields of environment and finance regulation. Finally, the article concludes by proposing a more coordinated, transparent, and globally linked legal framework so as to realize the full potential of green finance in the fight against climate change.

2. Evolution and Conceptual Framework of Green Finance

Green finance is a notion that has developed along with the increased focus on the environmental degradation, climate change, and the necessity to introduce sustained economic development.¹ The connection between finance and ecological issues used to be disjointed, but in the last three decades, there have been substantial initiatives to incorporate the ecological issues into the processes of financial decision-making.²

1 Early Developments in Green Finance

Green finance originates back to the 1970s and 1980s when the environment started to play a role in policy discussion at an international level. The 1972 United Nations Conference on the Human Environment in Stockholm was a breakthrough as people started to realize that economic growth is interconnected with environmental sustainability and that the mechanisms of financing environmental protection were limited in scope and were mostly entailed in the public expenditure and multilateral financial support provided by such institutions as World Bank and United Nations Environment Programme (UNEP).³

¹ United Nations Environment Programme (UNEP), Green Finance Progress Report (2016).

² Id.

³ United Nations Conference on the Human Environment, Stockholm Declaration (June 16, 1972).

The 1990s only caused the mainstream financial markets to start to consider environmental issues. It was the Rio Earth Sum of 1992 that introduced the concept of sustainable development into the global policy discourse and stated the necessity of financial flows toward environmentally sound projects.⁴ The concept of environmental, social, and governance (ESG) criteria appeared on the list of responsible investment strategies at around the same time, when the first green investment funds were introduced by the actors of the private sector.

These trends were formalized in the 2000s, including efforts such as the Equator Principles (2003) which offered voluntary guidelines on environmental/social risk management in project finance, strengthening the place of finance in combating climate change.

2. The definition of Green Finance: Concepts and Principles.

Although widely used, the term green finance has no globally agreed definition because these financial instruments, actors, and regulators are all diverse in nature. On the one hand, green finance implies financial investments that bring positive environmental outcomes and are economically viable.

The conceptual framework of green finance is based on several guiding principles:

Environmental Additionality: Green-instrument-financed projects should produce quantifiable environmental benefits in situations other than those of business-as-usual.

Transparency and Disclosure Investors need credible data about the selection of projects, the distribution of funds, and their effects on the environment to ensure that it is not greenwashed.

Standardization and Taxonomy: There should be clear guidelines to what constitutes green activities to have credibility in the market and investor confidence.

Congruence with International Obligations: Green finance programs must be in line with international agreements such as the Paris Agreement, as well as Sustainable Development Goals SDGs).⁵

⁴ United Nations, Report of the United Nations Conference on Environment and Development (Rio de Janeiro, 1992).

⁵ United Nations, Transforming Our World: The 2030 Agenda for Sustainable Development (2015).

These guidelines have also been reflected in the formulation of international principles like the Green Bond Principles (GBP) by the international capital market association (ICMA) that are voluntary principles of proceeds use, project assessment, fund management and reporting requirements.

3. Global Expansion of Green Finance Instruments

The modern era of green finance started in 2007⁶, when the European Investment Bank issued the first global green bond, and later in 2008 the World Bank did the same, proving the viability of raising finance to fund environmental projects by capital markets and not necessarily relying on public funds.⁷

Others innovative tools have developed as well such as:

Sustainability-Linked Bonds (SLBs): They are linked to the accomplishment of established sustainability goals of the issuer, instead of the financing of a specific project.

Green Loans and Credit Lines: Commercial banks provide this loan to finance small and medium-sized enterprises (SMEs) involved in green activities.

Climate Investment Funds: Multilateral schemes to offer concessional finance to low-carbon and climate-resilient initiatives in developing nations.

The growth of these tools indicates the growing integration of financial market and environmental policy, which introduces new opportunities to the stakeholders, both public and private.

4. Role of International Organizations and Soft Law Instruments

The international bodies have been very important in the formulation of the normative aspects of green finance. Principles, taxonomies and best-practice guidance to support sustainable investment have also been issued by organizations such as the UNEP Finance Initiative (UNEP FI) and the Organization for Economic Co-operation and Development (OECD), which are now being adopted in domestic regulatory frameworks, including in the UK.

⁶ European Investment Bank, First Climate Awareness Bond (2007).

⁷ World Bank, World Bank Green Bonds (2008).

These soft law tools have enabled the convergence around major concepts, which include materiality of climate risks, scenario analysis and environmental risk management even though there are no binding international treaties on green finance.

5. Contemporary Challenges and the Need for Legal Frameworks

Nevertheless, the green finance sector is frequently characterized by inconsistent definitions, absence of standard taxonomies, disparate regulatory regulation, and the ever-present problem of greenwashing, and tends to be limited in its institutional capacity, shallow capital markets, and competing developmental priorities, limiting the magnitude of green finance mobilization in emerging economies.⁸

Statutory laws on disclosure, certification and enforcement can therefore be used to guarantee credibility, investor protection and are also seen as complementary to voluntary guidelines to provide a solid structure of sustainable finance in India and in the UK with the Green Finance Strategy.

3. India's Sovereign Green Bonds: Legal and Regulatory Framework

The launch of Sovereign Green Bonds (SGBs) by India was the first announcement in the Union Budget of 2022-23 which was a pioneering effort to fund green infrastructure through market-based instruments with solid legal support. The initiative aims at matching climate finance objectives with financial prudence and in a bid to signal Indian commitment to international climate agreements.

3.1 Genesis of Sovereign Green Bonds in India

In the 2022-23 budget speech, the Government of India declared its plan to issue sovereign green bonds.⁹ The Finance Minister announced on February 1, 2022 that the country was mobilizing resources to support green infrastructure through green bonds and on November 9, 2022, the Sovereign Green Bonds Framework, which outlines what is eligible to be covered and procedural safeguards, was approved and released by the Ministry of Finance.¹⁰

⁸ OECD, Green Finance and Investment (2017).

⁹ Press Information Bureau, Finance Minister announces plan to issue sovereign green bonds, National Press Release, Feb. 1, 2022.

¹⁰ Framework for Sovereign Green Bonds, Department of Economic Affairs, MoF, Nov. 9, 2022.

3.2 Legal Authority and Regulatory Oversight

SGBs are subject to the government securities and public debt regulations in place in India, specifically the Public Debt Act, 1944, which forms the legal basis of sovereign borrowing.¹¹ The operational issuance and management of SGBs is subject to the oversight of the Reserve Bank of India (RBI), which is the government debt manager under constitutional and statutory authority.¹² Although the current disclosure regulations of SEBI are concerned with corporate green bonds, their emphasis on impact reporting and transparency application has had an impact on the standards used to govern SGBs.¹³

3.3 The Sovereign Green Bond Framework (2022)

The Sovereign Green Bond Framework was issued in November 2022 outlining four fundamental elements based on the ICMA Green Bond Principles: purposes of the proceeds, project selection and appraisal, proceeds management, and reporting.¹⁴ It specifically identifies what is eligible to receive proceeds deposits into the Consolidated Fund of India, including renewable energy, clean transportation, sustainable water/waste management and biodiversity projects, but omits fossil fuel extraction and large scale hydropower. An inter-ministerial Green Finance Working Committee (GFWC)

3.4 Issuance and Market Reception

The initial SGB issues in India were offered on January 25 and February 9, 2023, in 5- and 10-year tranches of INR 40 billion each, and they were oversubscribed in the range of 1.7 to 3.8 times, indicating that the market was eager to apply the new instruments (Initially 1).

3.5 Alignment with International Standards

The framework links the sovereign issuance of India with the international norms by embracing the ICMA Green Bond Principles and combining them with domestic environmental policy and UN Sustainable Development Goals.¹⁵ Technical support of the World Bank through the

¹¹ Public Debt Act, 1944 (India).

¹² Reserve Bank of India, "Banker and debt manager to government," (Wikipedia entry), updated last week.

¹³ SEBI, Disclosure Requirements for Issuance and Listing of Green Debt Securities, SEBI (Issue and Listing of Debt Securities) Regulations, 2008, as amended 2017; Orfonline expert note on 2023 framework.

¹⁴ ICMA Green Bond Principles & Indian Framework alignment. Mayer Brown summary.

¹⁵ Alignment with ICMA and UN SDGs; Mongabay's independent analysis.

Sustainable Finance and ESG Advisory Services enhanced its credibility.¹⁶

3.6 Challenges in Legal Architecture

Battles are still there despite the progress. There is no independent statute of green finance in India, so the green finance is not enshrined in law but in an executive structure document. The jurisdiction overlaps among RBI, SEBI, and the Finance Ministry risks regulatory fragmentation. Moreover, there are not yet statutorily defined enforcement mechanisms, i. e. penalties against misreporting or greenwashing. There is also inadequate investor protection infrastructure such as grievance redressal channels of green issues.

The early success of SGB issuances provides an encouraging basis to develop climate financing in India. Prospects are to expand the eligible categories of projects, to include climate-linked performance indicators, and perhaps to launch sovereign sustainability-linked bonds. A convergence of regulatory norms through Green Finance Act would increase the legal certainty and confidence in the market.

4. UK Green Finance Strategy: Legal and Policy Analysis

The UK has embarked on an ambitious plan to make the financial sector global green finance hub. Starting with the Green Finance Strategy (2019), followed by the Mobilizing Green Investment: 2023 Green Finance Strategy (2023), the UK combines regulatory innovations, market-based solutions, and a combination of the public and private approaches in order to balance capital flows with the environmental and net-zero objectives. This chapter discusses the legal and policy framework of this strategy: its regulatory instruments, institutional design, implementation mechanisms, international alignment, and emerging challenges, such as the most recent decision not to introduce an independent UK Green Taxonomy and offers suggestions to enhance its regulatory coherence and efficacy.

1. Evolution of the UK Approach: 2019 to 2023

The Green Finance Strategy 2019 identified three strategic objectives, to align the role of private finance with sustainable growth, to enhance the competitiveness of the UK financial

¹⁶ World Bank advisory role

sector and to build the institutional capacity to enable green finance, including through the establishment of the Green Finance Institute (GMI).¹⁷

The 2023 Strategy, dubbed Mobilizing Green Investment, stepped up ambitions- aiming to mobilize trillions of private capitals and roll out faster pathways to net-zero and nature-positive outcomes¹⁸. It has also implemented new regulatory instruments such as Sustainability Disclosure Requirements (SDR), suggested a UK Green Taxonomy and widened methods of finance involving the public-sector such as green gilts and blended finance schemes.¹⁹

2. Legal Core and Regulatory Instruments

a. Sustainability Disclosure Requirements (SDR)

Financial Conduct Authority (FCA) has implemented SDR as a series of overall regulations which encompass product level sustainability disclosures and investment labelling provisions. PS23/16 established implementation timelines: an anti-greenwashing rule will be effective as of 31 May 2024, investment labels will be effective as of 31 July 2024, and naming and marketing restrictions will be effective as of 2 December 2024.²⁰ Firms must now ensure that their claims of sustainability are clear, fair, and not misleading and use these labels to use words such as sustainable or impact in marketing.

b. Taxonomy and Classification Tools

A Green Taxonomy, which was proposed by UK with technical advice provided by Green Technical Advisory Group, was convened by GFI. This was aimed at establishing green activities that qualify under the UK policy. The standalone taxonomy was cancelled by the government in mid-2025, however, due to concerns over costs, complexity, and risks of international divergence.

c. Market Rules, Product Labels, and Anti-Greenwashing Measures

The SDR product labels--such as Sustainable Focus, Improvers, Impact, and Mixed Goals--dictate disclosure categories and naming conventions. Non-compliance with designated labels

¹⁷ Transforming Finance for a Greener Future: 2019 Green Finance Strategy (UK Gov't), July 2, 2019.

¹⁸ Mobilising Green Investment: 2023 Green Finance Strategy (UK Gov't), Mar. 30, 2023.

¹⁹ Mobilising Green Investment: 2023 Green Finance Strategy (UK Gov't), Mar. 30, 2023.

²⁰ FCA Policy Statement PS23/16, Sustainability Disclosure Requirements and Investment Labels (Nov. 28, 2023).

prohibits use of key terms in marketing. The rules are combined with the Financial Services and Markets Act (FSMA), as well as the consumer law, to safeguard investors and mitigate the risk of greenwashing.

d. Public Finance Instruments and Guarantees

To de-risk climate infrastructure, the UK government uses the instruments of public investment: green gilts, blended financing, and guarantees to access institutional capital. The prominent ones are the Climate Investment Funds Capital Market Mechanism, the MOBILIST programme, results-based payment systems, and climate-resilient debt clauses. These tools are regulated within the law to meet the fiscal regulations and state aid regulations.

3. Institutional Architecture and Governance

In the UK, green finance is governed by a variety of agencies: the HM Treasury oversees strategy; DESNZ and DEFRA oversee sector policy; the FCA oversees SDR; the PRA and BoE incorporate climate risk in supervision and the DMO oversees sovereign green issuance. Technical and market support comes through bodies such as the GPI, GTAG, and Transition Plan Taskforce. This multi-stakeholder model allows flexibility but increases the problem of coordination and accountability when policy objectives are in conflict.^{21 22 23}.

4. Disclosure, Assurance, and International Alignment

UK links SDR with international standards such as ISSB, TCFD and the EU regulation to achieve cross-border alignment of disclosures to reduce costs of compliance. However, UK-specific regulations can fit the domestic policy interests (e.g. energy security), reconciling globalization with domestic interests.^{24 25}

5. Taxonomy Debate and July 2025 Development

The UK Green Taxonomy proposal showed contentious definitions of green, especially as far as transition activity and nature are concerned. In July 2025, the government rejected a

²¹ Transforming Finance for a Greener Future: 2019 Green Finance Strategy (UK Gov't), July 2, 2019.

²² UK Green Taxonomy: Consultation (UK Gov't).

²³ Gov.uk policy overview, and institutional mapping from DESNZ documentation.

²⁴ FCA Policy Statement PS23/16, Sustainability Disclosure Requirements and Investment Labels (Nov. 28, 2023).

²⁵ Mobilising Green Investment: 2023 Green Finance Strategy (UK Gov't), Mar. 30, 2023.

standalone taxonomy after public consultation on the grounds of fragmentation and risks of misalignment, instead highlighting a move to international convergence.

6. Market and Product-Level Effects

Firms have reacted differently to SDR and taxonomy uncertainty. Although the labels and the stricter rules of naming protect the integrity, the high cost of compliance particularly among the smaller managers has made some evade ESG terminology. Passive funds encounter further difficulties in satisfying the active engagement tags and as a result, they have their adoption practices being cautious.²⁶²⁷

7. Legal Risks, Enforcement, and Anti-Greenwashing

The UK's anti-greenwashing legal architecture combines SDR, FSMA obligations, consumer protections, and potential litigation avenues. An FCA imposed enforcement, plus courtroom risk, should encourage companies to support sustainability statements with technical support and record keeping.²⁸²⁹

8. International Law and Cross-Jurisdictional Issues

The interoperability bias adopted by the UK is to mitigate non-conformance with the EU/SFDR regimes as well as international standards. Nevertheless, by dumping the UK Taxonomy, we would become more reliant on external rulemaking which may restrict the influence of the UK in international sustainable finance regulation.

9. Governance and Accountability Gaps

In spite of institutional forms, there are always gaps: disunity in coordination, SDR implementation plans, ambiguity in taxonomy, and a lack of statutory responsibility regarding net-zero results. Climate goals are not enforced through objective mechanisms other than disclosure and product labeling, which would indicate that a firmer framework in legislation is

²⁶ Investor relations and sustainability sector commentaries on label uptake and market response.

²⁷ Financial News reporting on SDR label uptake; policy delays.

²⁸ FCA Handbook (§ ESG 4.3.1R) and associated guidance; see Norton Rose Fulbright analysis.

²⁹ Investor relations and sustainability sector commentaries on label uptake and market response.

needed.³⁰³¹

10. Recommendations: Legal and Policy Priorities

To enhance the green finance architecture of the UK:

- Promote compliance with statutory goals by regulators and agencies of public finance to harmonize climate and nature targets.
- Enforce the use of international standards and maintain the UK-specific flexibility by transparent rulemaking in the UK.
- Mandate robust assurance and MRV frameworks, with public access to performance data and audit trails.
- Make policy coordination formal through the establishment of a statutory delivery body to coordinate trade-offs.
- Support smaller firms through transitional compliance aids and capacity-building.
- The measures would help minimize uncertainty in law, decrease the risk involved in enforcement and institutionalize sustainable finance leadership.

Conclusion

The Green Finance Strategy of the UK is a complex endeavor to incorporate the concept of sustainability in financial regulation, markets, and institutional practice. Having effective disclosure regulations, product governance and public finance instruments, the UK has made significant progress to a net-zero aligned financial system. Nonetheless, law coherence, international alignment, and enforcement systems are the realms to be improved. The taxonomy 2025 decision highlights how volatile this emerging discipline is. The future leadership of the UK will rely on the aspect of balancing domestic innovation with international

³⁰ Mobilising Green Investment: 2023 Green Finance Strategy (UK Gov't), Mar. 30, 2023.

³¹ FCA Policy Statement PS23/16, Sustainability Disclosure Requirements and Investment Labels (Nov. 28, 2023).

convergence and the aspect of assuring the credible legal structures that translate climate ambition into capital on the ground.

5. Comparative Study: India vs. UK

India's rising engagement with green finance, primarily through its 2023 issuance of Sovereign Green Bonds (SGrBs), parallels the United Kingdom's more established framework crystallized in its 2019 and 2023 Green Finance Strategies. Yet the two countries diverge sharply in their legal foundations, institutional coherence, and market maturity. The UK follows a deeply embedded and legally reinforced green finance architecture, whereas India remains largely at the stage of framework-building, with important gaps in regulatory consolidation, market depth, and investor confidence.

The UK's journey into green finance was bolstered by foundational laws such as the Climate Change Act 2008, which set legally binding carbon budgets, and by strategic policy instruments framed through the Green Finance Strategies of 2019 and 2023. These strategies articulate a mission to transform London into the world's first net-zero aligned financial center and to channel trillions into climate-aligned investments.³² By contrast, India's green finance effort has been more recent, initiated under its Sovereign Green Bonds Framework announced in the Union Budget 2022-23. This framework outlines eligibility, governance structures like the Green Finance Working Committee, and project categories, but lacks the statutory weight that defines the UK's architecture.³³

Institutional complexity and regulatory coherence form another significant contrast. In the UK, green finance is coordinated across HM Treasury, DESNZ, FCA, the Bank of England, and institutions like the Green Finance Institute, enabling aligned policy execution and systemic oversight. Tools such as the Sustainability Disclosure Requirements (SDR) give the FCA legal authority to police green product marketing and ensure that sustainability claims are substantiated.³⁴ India's regulatory structure, by comparison, remains diffuse. Responsibilities are divided across the Ministry of Finance, RBI, SEBI, and sectoral ministries. SEBI's 2017

³² Transforming Finance for a Greener Future: 2019 Green Finance Strategy (UK Gov't), July 2, 2019; Mobilising Green Investment: 2023 Green Finance Strategy (UK Gov't), Mar. 30, 2023.

³³ Apurva Kanvinde et al., The Indian green bond market: a step towards 'green financing' in a growing taxonomy, Int'l Bar Ass'n (Mar. 15, 2023); Building Bonds: The Mechanics of India's Debut Sovereign Green Issuance, Legal 500.

³⁴ FCA Policy Statement PS23/16, Sustainability Disclosure Requirements and Investment Labels (Nov. 28, 2023).

Disclosure Requirements for green debt securities, and later the broader NCS Regulations (2021), impose disclosure mandates, but there is no unified green finance regulator or legislation.³⁵

Regarding sovereign green financing, the UK quickly established market credibility with “green gilts” beginning in 2021 that raised multibillion-pound capital for clean energy, nature restoration, and flood resilience.³⁶ These instruments come complete with clear reporting and investor protections. India’s maiden SGrBs, launched in 2023, raised a total of ₹16,000 crore across two tranches and included transparency measures like use-of-proceeds tracking and CAG audits. However, market depth remains thinner, and secondary market liquidity is limited.³⁷

The UK has strong legislative support on disclosure and corporate ESG requirements with the Companies Act 2006 and FCA requirements requiring climate-related disclosures aligned to TCFD and international requirements. Recent SDR regime improvements also enhance enforcement through product labelling and advertising regulations.³⁸ India also implemented Business Responsibility and Sustainability Reporting (BRSR) among the top-listed companies, which is a step to further advance voluntary ESG reporting. Green debt security disclosures now are also regulated by SEBI and must include tracking of proceeds and statements of environmental impacts.³⁹ However, in contrast to the UK, the standards are largely self-enforcing, and non-compliance is rarely met with a penalty.

Judicial engagement with climate accountability highlights another point of departure. Courts in the UK have imposed statutory duties: in *Plan B v. The government of India*, through the Secretary of State in the Department of Transport, was found guilty of failing to fulfill carbon budgets as laid out in the Climate Change Act which the government found unlawful and this upheld legal accountability.⁴⁰ Cases involving green finance frameworks or SGrB

³⁵ Disclosure Requirements for Issuance and Listing of Green Debt Securities, SEBI (2017); SEBI (Issue & Listing of Non-Convertible Securities) Regulations, 2021 & 2024 amendment adding blue/yellow bonds.

³⁶ Green gilt sale raised over £100 bn (Sept. 2021), Wikipedia, “Green bond” article.

³⁷ Apurva Kanvinde et al., *The Indian green bond market: a step towards ‘green financing’ in a growing taxonomy*, Int’l Bar Ass’n (Mar. 15, 2023); *Building Bonds: The Mechanics of India’s Debut Sovereign Green Issuance*, Legal 500.

³⁸ FCA Policy Statement PS23/16, *Sustainability Disclosure Requirements and Investment Labels* (Nov. 28, 2023).

³⁹ Disclosure Requirements for Issuance and Listing of Green Debt Securities, SEBI (2017); SEBI (Issue & Listing of Non-Convertible Securities) Regulations, 2021 & 2024 amendment adding blue/yellow bonds.

⁴⁰ Reuters commentary on UK court ruling that government breached Climate Change Act (2024).

misappropriations, even though the government is active in environmental jurisprudence (e.g., establishing the right to a clean environment under Article 21), have not been adjudicated by the India judiciary, yet, reflecting the infantilism of this jurisprudential discipline.

Even though both nations present their own challenges, market infrastructure and legal reinforcement of India are the primary obstacles. Difficulties in the form of the absence of a national green taxonomy, low involvement by the retail investors and the possibility of greenwashing through the loosely set eligibility requirements in its SGrB framework exist. The main issues that regulators in India are considering are taxonomies and facilitating structures, e.g. the better issuance of ESG bonds and the introduction of so-called yellow and blue bonds, but an entire market ecosystem remains developing.^{41, 42} On the one hand, the UK is grappling with changing energy security demands (as reflected in a policy change, such as the postponement of the petrol/diesel vehicle ban to 2035) and geopolitical risks that could impact the investor confidence.

India can learn various things based on the UK model in the comparative light. One, it is possible to incorporate legally binding climate goals to increase perennial confidence and legal responsibility. Second, centralizing a regulatory platform or coordinating body of green finance may repeat the role of the UK in integrated oversight. Third, mandatory and heavy disclosure and assurance systems such as ESG audits and verification standards would enable investor trust. Lastly, market infrastructure such as enhanced bond markets, green asset registries, and investor education will have to be built out gradually as scaling green finance.

In summary, while the UK's green finance system is defined by longevity, regulation, and clarity, India remains in the process of building credibility, legal coherence, and market momentum. A hybrid model—leveraging India's renewable growth potential and demographic dynamism informed by the UK's regulatory depth—could offer an effective template for other emerging economies crafting sustainable finance ecosystems.

6. Challenges and Way Forward

Although there is a growing momentum in green finance and the use of sovereign green bonds

⁴¹ Building Bonds, Legal 500; SEBI amended framework includes blue and yellow bonds (2024).

⁴² Disclosure Requirements for Issuance and Listing of Green Debt Securities, SEBI (2017); SEBI (Issue & Listing of Non-Convertible Securities) Regulations, 2021 & 2024 amendment adding blue/yellow bonds.

in India and the UK, a number of challenges inhibit the growth of the sector and its successful implementation of its potential to solve climate change and sustainability challenges. Lack of standardization of green finance instruments and disclosure mechanisms is one of the main challenges. Even though the use of such frameworks as the Green Bond Principles (GBP) and Climate Bonds Standard presence, the two frameworks are not universally implemented and hence present a level of uncertainty to investors on the environmental performance of projects financed through the two instruments. In India regulation of green debt securities has been approached by the Securities and Exchange Board of India (SEBI), but the lack of a universal global taxonomy of green projects tends to lead to the problem of greenwashing, in which investments are deemed green but do not deliver any detectable benefits to the environment. Equally, in the UK, though the Green Finance Strategy focuses on climate risk disclosure in line with the Task Force on Climate-Related Financial Disclosures (TCFD), enforcement tools are not robust and so, it is difficult to hold corporations responsible in regard to climate-related pledges. The other major problem is whether green projects are financially viable. Green infrastructure, renewable energy initiatives and climate adaptation initiatives tend to have long gestation time and capital requirements that discourage investors who want to make money within a short time. Furthermore, an additional factor of concern in the developing world such as India is on the affordability of green technologies and the necessity of concessional financing in order to make such projects economically viable. The issue of currency risks also makes things more challenging in issuing international green bonds, particularly where funds are raised in foreign currency and then revenues are collected within a specific country, putting issuers at a risk of fluctuations in the exchange rate.

Such problems are compounded by institutional capacity constraints. In India, the institutions and municipal authorities at the level of state might not have the technical capability to develop and execute the green projects and monitor it at the same time. This disconnect makes the projects less bankable and restricts the access to the international markets of green finance. Conversely, although the UK has fairly developed institutions, the regulatory framework that has emerged as a result of Brexit has produced ambiguities over cross-border green investments and how its green finance policies align with European standards. Social and political, e.g. opposition to carbon taxes, energy transition costs and competing development priorities, also act as barriers to mainstreaming green finance. There is still little public awareness of the need to finance climate, particularly in emerging economies resulting in low demand of green financial products outside institutional investors. Moreover, both the COVID-19 pandemic and

global economic slowdowns have moved the priorities of governments towards short-term economic recovery and not long-term environmental viability, limiting fiscal space to pursue green efforts.

To address these challenges and move forward, a multipronged approach is required. First, harmonizing green finance taxonomies at the international level can improve transparency and prevent greenwashing, enabling investors to make informed decisions. Collaborative efforts between institutions like the International Capital Market Association (ICMA), the European Union, and national regulators could lead to globally accepted standards for green bonds and sustainability-linked investments. Second, governments must create strong policy incentives such as tax credits, guarantees, and interest subventions to attract private capital toward green sectors. India, for instance, could expand its sovereign green bond framework to include blended finance models where public funds de-risk private investments. The UK, with its advanced financial markets, can serve as a hub for innovative green finance instruments such as green securitization and transition bonds, supporting emerging markets through climate-aligned capital flows. Capacity building at the institutional level is equally essential, requiring training programs, technical assistance, and digital tools to improve project design and monitoring capabilities. Moreover, integrating climate risk assessment into mainstream financial decision-making through mandatory disclosure norms would ensure that environmental risks are priced into investment choices, thereby steering capital toward sustainable assets.

Finally, achieving long-term success in green finance demands strong political will and global cooperation. Both India and the UK should leverage platforms like the G20, COP summits, and multilateral development banks to align climate finance flows with the Paris Agreement goals. Public participation through green savings schemes, retail green bonds, and awareness campaigns can democratize green finance, ensuring that it is not limited to institutional actors alone. By strengthening regulatory frameworks, fostering innovation in financial instruments, and enhancing institutional capacities, both countries can overcome existing barriers and pave the way for a robust, transparent, and inclusive green finance ecosystem that supports the transition toward a low-carbon and climate-resilient future.

7. Conclusion

The analysis of green finance initiatives and sovereign green bonds in India and the UK reveals

a clear convergence of objectives—both jurisdictions seek to integrate environmental sustainability into financial systems while promoting economic growth. However, their approaches differ significantly due to variations in economic maturity, legal frameworks, and institutional capacities. India's framework, though recent, shows remarkable potential with the launch of sovereign green bonds in 2023 and the Reserve Bank of India's regulatory support. In contrast, the UK presents a more mature model, combining stringent disclosure norms, green taxonomies, and comprehensive climate-related financial risk regulations.

Comparatively, India still faces challenges in harmonizing legal provisions, ensuring investor confidence, and addressing the lack of standardized definitions and monitoring mechanisms for green investments. Conversely, the UK's well-structured regulatory ecosystem demonstrates how clear policy directions and mandatory reporting obligations can accelerate green capital mobilization.

The study highlights that future progress depends on strengthening the legal enforceability of climate finance commitments, enhancing transparency in green bond proceeds utilization, and adopting global best practices such as the EU Green Taxonomy and Task Force on Climate-related Financial Disclosures (TCFD) recommendations. Additionally, bilateral collaborations between India and the UK on climate finance could lead to mutual learning, technology transfer, and capacity building, ultimately contributing to achieving the targets under the Paris Agreement and the Sustainable Development Goals.

In essence, green finance is no longer an option but a necessity. For both India and the UK, the path forward lies in aligning financial regulation with environmental imperatives while fostering innovation, ensuring accountability, and enabling private sector participation. Only then can green finance truly become a transformative tool for achieving a low-carbon, climate-resilient future.

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