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Green Banking Initiatives and Their Effect on Sustainable Economic Growth: A Review Paper

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***Abstract**

Global economic stability is seriously threatened by resource depletion, climate change, and environmental degradation. In this regard, banks and other financial institutions are crucial in determining the paths of sustainable growth. The term "green banking" describes banking practices and offerings that take environmental factors into account, including operational greening, sustainability-linked financing, green bonds, green loans, and risk evaluations that take the environment into account. This review evaluates the ways in which green banking efforts support sustainable economic growth by combining empirical research and policy assessments. According to research, green banking may boost technological innovation, generate green jobs, mobilize funds for low-carbon infrastructure, and increase the resilience of the financial system. However, disjointed taxonomy, inadequate enforcement of regulations, capacity constraints, and the possibility of green washing limit its effectiveness. To increase impact, the study makes regulatory proposals that include third-party verification, blended finance tools, improved environmental risk training, and standardization of green finance standards. Future research avenues include comparative cross-country evaluations, behavioural studies of how borrowers react to green financial incentives, and causal studies that connect green banking to GDP growth and emissions reduction.

Keywords:

Green banking, sustainable finance, green bonds, sustainable economic growth, environmental disclosure

Introduction

The pursuit for economic growth and the pressing need to solve environmental degradation are the two challenges that define the twenty-first century. The foundations of global prosperity are in danger of being undermined by climate change, biodiversity loss, and resource depletion (United Nations, 2023). Unchecked greenhouse gas emissions have the potential to seriously disrupt global economies, with developing nations bearing a

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disproportionate amount of the burden, as the Intergovernmental Panel on Climate Change (IPCC) has repeatedly warned. As a result, sustainable economic growth—a growth model that satisfies current demands without compromising the capacity of future generations to satisfy their own—has emerged as a top worldwide policy concern (World Bank, 2022).

The financial industry is crucial in this regard. Through their lending and investment choices, banks, the primary capital allocators, shape the course of economic activity. Banks can act as accelerators for a green transition by directing financial resources toward ecologically conscious enterprises and restricting financing for environmentally damaging activities (Jeucken, 2010; Weber, 2017). This change in the opportunities and responsibilities of the financial sector is reflected in the rise of green banking.

The significance and application of green banking

The term "green banking" describes how environmental factors are incorporated into banking operations, products, and risk assessment procedures. This includes lowering operational paper use, promoting energy-efficient infrastructure, funding renewable energy projects, and including environmental risk into credit evaluations (Biswas, 2011). Green banking, which was first thought of as a component of corporate social responsibility, has developed into a strategic necessity as a result of market opportunities in the expanding green economy, investor demand for environmental, social, and governance (ESG) performance, and regulatory challenges.

Green banking's development as a market force and policy

Following the global financial crisis of 2008, sustainable finance gained popularity as a strategy for enhancing economic resilience. Since then, international accords like the UN Sustainable Development Goals (2015) and the Paris Climate Accord (2015) continue to emphasize the necessity of matching financial goals with environmental ones. Environmental hazards are now incorporated into supervisory frameworks by regulatory authorities, such as

central banks and securities regulators, which acknowledge them as financial risks (Network for Greening the Financial System, 2021).

Connections to long-term, steady economic expansion

Green banking has several ways to support long-term, steady economic growth:

• Green infrastructure capital mobilization: Banks may boost industries with significant growth and job potential by lending money for clean transportation, sustainable agriculture, and renewable energy (OECD, 2020).

• Innovation in technology: Funding for green technology promotes the study, creation, and marketing of eco-friendly products.

• Risk mitigation: By lowering exposure to industries affected by climate change, environmental risk inclusion in lending improves the stability of the financial system.

• Market signalling: By implementing green policies, banks inform customers and investors about the sustainability of sustainable practices over the long run, which affects the behaviour of the market as a whole.

The Review's Objective

The goal of this review is to present a thorough knowledge of the relationship between green banking activities and sustainable economic growth. It accomplishes the following goals by combining intellectual frameworks, empirical research, and policy advancements:

1. To describe green banking and its main tools.
2. To look at the legislative and policy structures that promotes green banking.
3. To pinpoint obstacles to successful execution and make policy suggestions.

Research Methodology

Study is based on secondary data which has been collected from various sources i.e. papers, articles, websites etc.

Review of Literature

Environmental economics, policy studies, and finance have all taken an interest in green banking. An early paradigm that positions banks as facilitators of sustainable development is presented by Jeucken (2010). Empirical research examines the impact of green lending on banks' risk profiles and financial measures (e.g., Das, 2021; Li & Wang, 2023). Green finance environments at the national level are described in institutional reports from the Climate Policy Initiative (2024) and the World Bank (2022). Emerging oversight on climate-related risks is highlighted by regulatory evaluations from international organizations (TCFD, European Commission) and central banks (RBI, 2023).
There are still few systematic empirical evaluations of the macroeconomic impacts of green banking, despite a wealth of conceptual literature. A lot of research is still descriptive or case-based. To give a comprehensive evaluation, this analysis incorporates policy papers, institutional frameworks, and peer-reviewed research.

The Green Banking Conceptual Framework

Meaning and Scope

From lending to environmental risk management and organizational footprint reduction, green banking is the integration of environmental goals into financial organizations' internal operations and portfolio (Biswas, 2011).

Important Tools

• Green loans: Funds given especially for projects that would benefit the environment, such sustainable agriculture, energy-efficient infrastructure, or renewable energy. To encourage adoption, several programs provide subsidized interest rates (OECD, 2020).

• Sustainability-linked loans (SLLs): These loans tie loan conditions, usually interest rates, to

the borrower meeting predetermined sustainability performance targets (SPTs), including certifications or carbon reductions (LMA, 2021).

• Green bonds: Debt instruments that only use the money rose to fund or refinance ecologically friendly initiatives. One example is the USD 650 million green bonds that the State Bank of India issued in 2018 in accordance with the Climate Bonds Standard (SBI, 2018).

• Green deposits and savings: Banks designate customer deposits for green investment initiatives, together with the related environmental effect statement (RBI, 2023).

• Environmental risk in credit appraisal: Frameworks for credit evaluation that take into account both physical and transitional environmental and climatic risk when making lending decisions(NGFS,2022).

• Operational greening: The internal sustainability initiatives of banks, such as waste minimization, energy efficiency, and paperless services that support a more comprehensive ESG positioning.

Practices of Green Banking in Developed and Developing Nations

Developed Markets

Green finance frameworks are institutionalized in advanced markets:

• The EU's Taxonomy Regulation allows for uniformity by defining sustainable activities. Transparency and classification are required by the Green Deal and Sustainable Finance Disclosure Regulation (SFDR) (European Commission, 2021).

• Financial institutions must now report on climate risks as a result of the UK, New Zealand, and Japan incorporating TCFD recommendations into their regulations (TCFD, 2017).

Developing Markets

Although still in its infancy, green banking is expanding in emerging markets:
• The Green Deposits Framework (2023) and SEBI's green bond disclosure standards, which have been added to the RBI's voluntary recommendations for green financing, are followed by banks in India (RBI, 2023; SEBI, 2022).

• A thorough Green Banking Policy was adopted in Bangladesh in 2011, mandating that banks provide at least 5% of all loans to green industries (Bangladesh Bank, 2011).

• In response to increased regulatory scrutiny, China mandated green bond disclosures and created green finance pilot zones in a number of provinces (PBoC, 2022).

Policy Support and the Regulatory Framework

• Global frameworks: TCFD, NGFS, and the EU Taxonomy promote alignment in the banking sector; the Paris Agreement and SDGs set environmental targets (NGFS, 2021; EU, 2021).

• International development support: To mobilize green finance and strengthen institutional capacity, organizations like the World Bank, IFC, and ADB offer guarantees, concessional loans, and technical assistance (World Bank, 2022; IFC, 2021).

• Domestic policies: Examples of localized interventions include China's green finance testing zones, Bangladesh's Green Banking Policy, and India's RBI and SEBI frameworks (RBI, 2023; Bangladesh Bank, 2011; PBoC, 2022).

Effects on Sustainable Economic Growth

Obtaining Funds for Green Infrastructure

Green banking promotes capital creation in industries with strong environmental and

economic multipliers by focusing lending on low-carbon assets such as sustainable agriculture, renewable energy, and urban infrastructure (OECD, 2020; World Bank, 2022).

Innovation in Technology

By encouraging innovation in energy efficiency, clean technology, and sustainable business models, financing green businesses boosts output and long-term growth potential (UNIDO, 2019).

Creation of Green Jobs

New job prospects are created by investments in energy-efficient construction, sustainable transportation, and renewable energy, especially in green value chains (IEA, 2023).

Stability and Resilience in Finance

Banks lower their exposure to transition and stranded asset risks by incorporating climate-related risks into credit evaluations, improving systemic stability (NGFS, 2022).

Implementation Challenges

Inadequate Taxonomy Standardization

Different jurisdictions define "green" differently, which makes comparisons difficult and raises the expense of due diligence (CPI, 2024).

Inadequate Enforcement of Regulations

The effectiveness of green finance regulation is diminished by reliance on voluntary disclosures and a lack of regulatory authority (RBI, 2023).

Limitations on Capacity and Data

Banks usually lack sector-level data, access to impact measurement tools, and expertise in evaluating environmental risks (World Bank, 2022).

Risks of Green washing

Credibility is damaged when traditional initiatives are branded as "green" without any quantifiable impact or independent third-party confirmation (S&P, 2021).

Project pipelines are few in emerging markets

Technical know-how and financially viable models are necessary for green infrastructure initiatives, although both are occasionally lacking in poor nations (ADB, 2022).

Research Limits and Prospects

• Studies of causal impact: Econometric analyses approaches that relate green banking to GDP, employment, or emission indicators are required.

• Cross-country comparative studies: Analyzing macroeconomic results, adoption costs, and regulatory strategies in various economies.

•Behavioural research: Product design can be influenced by knowledge of how borrowers react to green finance incentives or penalties.

• Taxonomy alignment studies: Assessing how standardized terminology could enhance reporting transparency and capital flows.

Policy Suggestions

1. Harmonize green finance taxonomies: To cut down on fragmentation and compliance expenses, adopt or make reference to international standards (such as the EU Taxonomy and the Climate Bonds Standard).

2. Boost regulatory enforcement: Require green finance and climate risk reporting, supported by supervisory supervision.

3. Increase capacity: Fund environmental risk analyst training, create impact tools tailored to a given industry, and encourage collaborations with development organizations (World Bank, 2022; IFC, 2021).

4. Encourage blended finance: To increase green investment pipelines and reduce banks' perceived risk, use first-loss arrangements, concessional rates, or guarantees.

5. Verify credibility with a third party: To stop green washing, demand independent audits of green financing promises.

Conclusion

One effective tool for bringing the financial industry into line with sustainable development goals is green banking. Banks may raise money for low-carbon growth, encourage innovation, and improve financial resilience by using tools including green loans, bonds, and sustainability-linked financing in conjunction with institutional capacity and regulatory advancements. Disjointed definitions, lax enforcement, capacity and data limitations, and the possibility of green washing, however, limit the impact. Policymakers and banks must work together on strong standards, capacity building, reliable reporting, and blended finance architectures in order to fully exploit the economic and environmental promise of green banking. All things considered, green banking signifies a radical change in the function of financial institutions, even though it is not a solution. Green banking has the potential to

function as a risk management tool and an accelerator for sustainable economic development if it is supported by more robust policies, standardized international frameworks, and capacity-building programs.

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