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Green Banking And Sustainability – A Comparative Study Of Public And Private Sector Banks In India

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Abstract: Green banking mainly focuses in promoting environment-friendly practices and reduce carbon footprint from the day-to-day banking activities. Each and every small ‘Green’ step taken by banks would go a long way in building a greener future. Presently, banks encourage their customers to subscribe for e-statements and other electronic formats of communication to reduce paper consumption. It is an important step taken by banks towards converting Indian economy into a sustainable digital economy. Through this paper, the researcher tried to find out the steps or ways adopted by banks to go green. The Study would also try to examine whether there is any significant difference between the banks in relation to implementation of green banking initiatives. An emphasis will also be made in order to find out the various challenges faced by banks in implementing the green banking initiatives.

Keywords- Bank, Green, Sustainability

I. INTRODUCTION

The Indian banking sector has undergone significant transformation during the decade 2010–2020, marked by reforms aimed at strengthening financial inclusion, enhancing digital infrastructure, and aligning with global sustainability commitments. Within this reform trajectory, *green banking* emerged as a strategic response to the dual pressures of environmental responsibility and competitive innovation. Green banking refers to environmentally sustainable practices adopted by banks to reduce their carbon footprint, promote resource efficiency, and finance eco-friendly projects.

The Reserve Bank of India (RBI) played a pivotal role in encouraging banks to integrate sustainability into their operations. Circulars on corporate social responsibility, energy-efficient practices, and environmental risk management gradually pushed banks toward adopting green initiatives. Simultaneously, India’s commitments under the National Action Plan on Climate Change (NAPCC) and the Paris Agreement (2015) reinforced the need for financial institutions to align with broader climate goals. These regulatory and policy frameworks created a fertile ground for banks to embed sustainability into their core strategies.

Public and private sector banks, however, approached green banking differently. Public sector banks, such as the State Bank of India and Punjab National Bank, largely adopted green practices as compliance measures, focusing on government-led schemes and financing renewable energy projects. In contrast,

private sector banks like ICICI, HDFC, and Axis Bank leveraged green banking as a branding and innovation tool, introducing paperless services, green bonds, and eco-friendly branch designs. This divergence highlights the importance of comparative analysis in understanding the motivations and effectiveness of green banking initiatives across ownership structures.

Despite progress, banks faced challenges in implementing green banking, including high costs of technology adoption, limited customer awareness, and the absence of standardized reporting frameworks. The decade 2010–2020 can thus be seen as a transitional phase in which Indian banks moved from traditional compliance-driven operations toward integrating sustainability into digital and financial inclusion reforms. Against this backdrop, the present study seeks to (i) identify the methods adopted by banks for implementing green banking initiatives, (ii) examine whether significant differences exist between public and private sector banks in their implementation strategies, and (iii) explore the challenges faced by banks in embedding sustainability into their operations.

Global Perspectives on Green Banking

Scholtens (2009) argued that banks play a crucial role in promoting sustainability by directing funds toward environmentally responsible projects, noting that financial institutions act as “gatekeepers” for sustainable development. Jeucken (2001) highlighted how European banks began integrating environmental risk assessments into lending decisions, setting early benchmarks for green banking practices. Weber (2014) emphasized the rise of green finance instruments (green bonds, sustainable loans) as tools for banks to align profitability with environmental responsibility. These studies show that globally, green banking was framed as both a risk management strategy and a competitive advantage.

Indian Studies on Green Banking

Bahl (2012) conducted one of the earliest reviews of green banking in India, stressing that awareness among customers and employees was still low, and banks needed to integrate sustainability into their core operations. Singh & Singh (2012) examined the role of Indian banks in promoting environmental sustainability, finding that public sector banks were slower to adopt green practices compared to private banks. Jain & Jain (2013) analyzed green banking initiatives in India, noting that private banks like ICICI and HDFC were early adopters of paperless banking and energy-efficient branches. Nath, Nayak & Goel (2014) studied the challenges of green banking in India, identifying high implementation costs, lack of awareness, and regulatory gaps as major barriers. Sharma & Sharma (2015) highlighted the importance of corporate social responsibility (CSR) in driving green banking initiatives, especially in public sector banks. By 2018–2019, comparative studies (e.g., Rajput & Kaura, 2018) began to show statistically significant differences between public and private banks in terms of adoption, with private banks being more proactive.

II. STATEMENT OF THE PROBLEM

The Indian banking sector transformed significantly between 2010 and 2020 through reforms in financial inclusion, digitalization, and sustainability. Within this context, green banking emerged as a key initiative to reduce environmental impact and promote sustainable development. Despite RBI guidelines and India’s global commitments, adoption has been uneven. Public banks largely treated green banking as compliance, focusing on renewable energy financing, while private banks pursued innovation through paperless services, green bonds, and eco-friendly infrastructure. Challenges such as high costs, weak reporting frameworks, and low customer awareness persist. Few studies provide decade-long comparative analysis, leaving critical gaps for policymakers and regulators.

III. OBJECTIVES OF THE STUDY

The study focuses on the following objectives:

- a) To find out the methods adopted by banks for implementing the green banking initiatives.
- b) To examine whether there is any significant difference between the banks in relation to implementation of green banking initiatives.
- c) To find out the challenges faced by banks in implementing the green banking initiatives.

IV. RESEARCH METHODOLOGY

This study adopts an exploratory research design, relying primarily on literature review and secondary data analysis. The research was conducted in two distinct phases. In the first phase, a review of existing literature on green banking and sustainable development in the banking sector was undertaken, with particular emphasis on identifying practices, outcomes, and future directions in the Indian context. The second phase involved the collection of secondary data from published sources, including annual reports, sustainability disclosures, and information available on official bank websites and other relevant online platforms. For comparative analysis, three public sector banks and three private sector banks were selected based on their highest profit earnings. This sampling approach ensured that the study focused on leading institutions with significant market presence, thereby providing meaningful insights into the adoption and implementation of green banking initiatives across ownership structures.

V. RESULTS AND DISCUSSION

The recent development in Indian banking technology have transformed traditional banking system towards a more inclusive one incorporating the interest of customers, the bank and the environment. Now-a-days, banking operations can be carried out through various banking delivery channels away from the bank branches. The following are the main ways of banks for attaining sustainability-

- A) Go Online- Online banking helps in conservation of natural resources. It saves paper, energy and expenditure of natural resources. It also helps customers to save money by avoiding late payments and also save their time.
- B) Use of green checking accounts- customers can check their accounts on ATM. They can avail services including online payment, debit cards and online statements. Banks should promote green checking by giving some incentives to customers by giving higher rate of interest, waiver or discount in fees etc.
- C) Mobile banking- By using it customer can check balances, transfer funds or pay bills from the phone. It also helps to save time and energy of the customers. Most of the Indian bank introduced this paper-less facility.
- D) Use of green credit cards- Some of the banks introduced green credit cards. The benefit of using green credit card is that banks will donate funds to an environment friendly non-profit organization from every rupee you spend on your credit card to a worthwhile cause of environment protection.
- E) Use of solar and wind energy- Using solar and wind energy is one of the noble cause for going green. SBI has become the first bank in the country to venture into generation of green power by installing windmills for captive use.

Biswas (2011) revealed some strategies for the adoption of environmental management in the banking sector-

- A) Banks should do Environmental Impact Assessment (EIA) in which they design the environmental system to evaluate the risk involved before investing in different projects.
- B) They should adopt the Annual Reporting System (ARS) in which they prepare an annual report on environmental risk guidelines for every project they invest or finance,
- C) They should adopt environmentally sustainable technologies which minimizes risk, saves cost, and enhance the banks reputation.
- D) Banks should begin implementing procedures like assessment of environment risk, environment

audit, management and assessment of loan follow up and credit requirement before investing in different projects.

GREEN BANKING INITIATIVES BY VARIOUS BANKS IN INDIA

Green banking initiative by Indian banks includes both public sector banks and private sector banks. Public sector banks are those where majority stake is held by the government and private sector banks are those where majority stake is held by the private shareholder. In this study, the researchers have taken three public and three private sector banks of India.

Public Sector Banks

State Bank of India (SBI) - SBI has become the first bank in the country to venture into generation of green power by installing windmills for captive use. As part of its green banking initiative, has installed 10 windmills with an aggregate capacity of 15 MW in the states of Tamil Nadu, Maharashtra and Gujarat. SBI had launched Green Channel Counter (GCC) facility at their branches in 2010 to change the traditional way of paper based banking (SBI, 2014). The bank had also collaborated with Suzlon Energy Ltd for the generation of wind power for selected branches by setting of windmills in Gujrat, Tamil Nadu and Maharastra (Business Standard, 2014). It has become a signatory to the Carbon Disclosure Project in which they undertake various environmentally and socially sustainable initiatives through its branches spread across the length and breadth of the country (WWF-INDIA, 2014).

Punjab National Bank (PNB) – According to Corporate Social Responsibility Report, PNB had taken various steps for reducing emission and energy consumption. PNB is conducting Electricity Audit of offices as an energy conservation initiative and maintained a separate audit sheet for assessing the impact of green initiatives taken by them. The bank had organized more than 290 Tree Plantation Drives. It started emphasizing on green building practices such as energy efficient lights, immediate repair of water leakage, printing on both sides of paper, mater censors for lights, fans, etc. The organization had signed a 'Green Pledge' with Ministry of New and Renewable energy under which they had set up the butterfly park at the compound of Guruvayur temple which houses 18 types of medicinal plants. The organization had sanctioned nine wind energy projects with an aggregation limit of 185.81 crore and they were also awarded with a second prize for 'Best Wind Energy Power Financer' by wind power India 2011.

Bank of Baroda – According to the recent annual report of BOB, they had taken various green banking initiatives such as: -While financing a commercial project, BOB is giving preference to environmentally friendly green projects such as windmills, biomass and solar power projects which help in earning the carbon credits. The organization had made considerable changes in their lending policy, i.e. it is compulsory for industries to obtain 'No Objection Certificate' from the Pollution Control Board and also, they are not extending any finance to environmental hazardous industries which are using ozone depletion substances. The bank had taken several technological initiatives such as compliance with e-business guidelines, use of internet banking, mobile banking to promote paperless banking and also increasing the installation of ATMs in most of uncovered areas to reduce the petrol or diesel consumption in travelling and helps in maintaining a clean environment. The bank is also promoting measures for pollution control and environmental conservation.

Private Sector banks

ICICI Bank Ltd – ICICI bank had adopted 'Go Green' initiative, which involves activities such as green products/offerings, green engagement and green communication with customers as per ICICI Bank: - The bank is offering green products and services like Insta-banking which is a service that gives convenience to the customers to do banking anywhere and anytime through internet banking, mobile banking, IVR banking, etc. This reduces the carbon footprint of the customers as they do not require the physical statement or travel to the bank branches. They are offering 50% waiver on processing fee of auto loans on the car models which uses alternate sources of energy like the Civic Hybrid of Honda, Tata Indica CNG, Reva electric cars, Mahindra Logan CNG versions, Maruti's LPG version of Maruti 800, Omni and Versa and Hyundai's Santro Eco. The bank had reduced the processing fee for the customers who are purchasing homes in LEED certified buildings.

HDFC Bank Ltd – HDFC bank is taking up various measures in reducing their carbon footprints in the area of waste management, paper use and energy efficiencies as per HDFC Bank: - The bank is encouraging their employees to prevent any wasteful use of natural resources and emission of Greenhouse gasses. They are reducing the use of paper through issuing e-transaction advices to their corporate customers, communicating through electronic media with their high-net-worth customers and encouraging e-statements to their retail customers. The bank is also promoting energy conservation by replacing conventional lighting with CFL, switching off all the lights after 11 pm at all the branches and establishing green data centers with state-of-the-art technologies. The organization is exploring renewable energy by setting up of 20 solar ATMs with a pilot ATM set up in Bihar, and by replacing batteries in ATMs with Lithium-ion batteries. They are also managing their waste by tying up with vendors for recycling of paper and plastic. The bank is procuring green products which are compliant with the norms of the Central Pollution Control Board and which are rated by Energy Star.

Axis Bank Ltd – AXIS bank implementing several initiatives in green banking such as per Axis Bank: -In august 2011, the bank had initiated the process of collecting all the dry waste generated from the corporate office and thirty-four branch offices in Mumbai, and recycle it to notepads, notebooks and envelopes. Till date, more than 1,00,000 kgs of paper has been recycled and converted to 12,000 notebooks, notepads and envelopes which are used at corporate office and branches of the bank; The corporate office of the bank, located in Mumbai, is designed and constructed as a Platinum LEED certified 'Green Building'; Carpooling has been initiated by a bank to reduce carbon footprint; They are also encouraging their customers to use e-statements and other electronic communications to reduce paper consumption; Annual reports are being sent through emails; the organization had initiated Independent ATM Deployment (IAD) model in which ten solar based ATM has been set up in Coimbatore circle.

CHALLENGES FACED BY BANKS

The major challenges in implementation of green banking strategy are given below:

- 1) Lower business profit base: Before giving loans, green banks screening their customers. In this way, their business limited to small pool of customers, who qualify the required environmental norms. Resultantly, they get a smaller profit base to support their business in future.
- 2) Require expertise skill: Green banks require specialized talent, skills and expertise to perform banking activities. Employees need to have knowledge and experience in dealing with green business and consumers.
- 3) Operating expenses and cost are higher: Giving loan to the clients through discounted loan rates reduces bank's profit to minimum level. Moreover, the initial cost of adopting green banking strategy is quite high. Banks also need to expertise on various activities to promote the environmental standards. Overall, such expenditures create burden for the banks particularly in short run though in long run their profitability increases through the adoption of green services.
- 4) Technological illiteracy: Technological illiteracy among the customers is considered as major obstacle for the banks in implementing green banking strategy.
- 5) Lack of environmental awareness: There is lack of environmental awareness among the customers which creates difficulties for the banks in popularizing the green banking products or services.
- 6) Infrastructural bottlenecks: Lack of proper banking infrastructure is another major hurdle in adopting green banking strategy for the majority of banks.

VI. CONCLUSION

Green banking is a smart way of thinking about business and environment, if implemented sincerely; it will work as an effective tool for achieving sustainable green growth in the economy. The banks should work collectively to gear up the green movement in our economy. The study showed that banks are taking certain initiatives to implement green banking which are similar to certain aspects and some are different. Through green banking, the banks are trying to improve the environment and promoting economic growth. Until a few years ago, most traditional banks did not practice green banking or actively seek investment opportunities in environmentally-friendly sectors or businesses. Indian banks are far behind their counterparts from developed

countries. If Indian banks desire to enter global markets, it is important that they recognize their environmental and social responsibilities. Only recently have these strategies become more prevalent, not only among smaller alternative and cooperative banks, but also among diversified financial service providers, asset management firms and insurance companies. Further, those industries which have already become green and those, which are making serious attempts to grow green, should be accorded priority to lending by the banks. This concept of "Green Banking" will be mutually beneficial to the banks, industries and the economy. Not only "Green Banking" will ensure the greening of the industries but it will also facilitate in improving the asset quality of the banks in future. There are lot of opportunities and challenges for Indian banks in adopting 'Green Banking' as profitable business. Therefore, for sustainable banking, Indian banks should adopt green banking as a business model without any further delay.

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