
FOSTERING GREEN FINANCE FOR ECONOMIC DEVELOPMENT & SUSTAINABILITY OF A NATION

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ABSTRACT

Green finance is a phenomenon that combines the world of finance and business with environmentally friendly behavior. Green finance refers to the inception of sustainable development projects, environmental friendly products & policies or ethical concerns that encourage financial investment to stimulate more sustainable economy. Green lending has increased substantially over recent years as a result of efforts to boost renewable energy, sustainable agriculture, green industry & ecotourism. This paper shows the trend of the refinancing projects for green growth which reduces greenhouse gas emissions and air pollutant emissions significantly. The challenges for achieving a green transformation to a low-carbon economy are high; aligning the financial sector with sustainable development will be a key element for economy to succeed. In this paper an attempt has been made to describe green financing of commercial banks to protect human being from environmental disasters.

Keywords: Green Financing, Carbon Intensity of India, Socially Responsible Investments (SRIs) of Banks, Sustainable Finance Policies of India, Green Lending by Risk Management, Lending & Investment barriers.

INTRODUCTION

Green Financing becomes essential part not only in business but also in environment science from 21st century onwards. Green financing is a proponent to preserve the planet that combines money & business activities in an environmental friendly behavior. Green financing can contribute to transistors for the efficient & low-carbon industries; that can increase & improve the lives of people in a consistent way with sustainable development. Green financing is the principle of green credit to produce pollution treatment facilities such as grant loan to enterprises & institutions who are developing new energy resources, green goods production, ecological agricultural production etc. at concessionary low interest rates in order to achieve environmental protection & economic development.

Green finance covers the improvement of the areas of environmental degradation, such as, air pollution, water pollution and scarcity, infringement of rivers, improper disposal of industrial medical and house-hold waste, deforestation, loss of open space and loss of biodiversity. It must be eco-friendly and can contribute to poverty alleviation. 'Green Banking is an umbrella term referring to practices and guidelines that make banks sustainable in economic, environment, and social dimensions. It aims to make banking processes and the use of IT and physical infrastructure as efficient and effective as possible, with zero or minimal impact on the environment.' 'Green Banking' focusing on reduction in paper usage as well as saving transaction time. This is a pioneering concept which would save both paper and time resources. Referring to exploitation of resources beyond replaceable limits, the banker said: "It is because of our arrogance over science and technology that we have forgotten our wisdom and balance that is important to protect nature. If we do not maintain it (the balance), it will be a catastrophe of our own making."

Green finance thus involves making investments in environmentally sustainable products & projects which aims improvement of the areas of environmental degradation such as air pollution, water pollution & scarcity, industrial pollution, infringement of rivers, improper disposal of industrial medical & house-hold waste, deforestation, loss of open space & loss of biodiversity. It must be planet-friendly, ecological & can contribute to poverty alleviation. It also includes green investments such as stocks, exchange traded funds & mutual funds of the companies whose operations aims at improving the environment.

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OBJECTIVES OF THE STUDY

In this paper, I would like to describe green financing to the businesses as an essential part of the sustainability of organizations, society & nation. The objectives of the study are as follows:

1. To study the recent developments in the financial world.

2. To study the financial & business policies for reducing the impact of environmental degradation.
3. To study the kind of green financial products & services being offered by Indian banks.
4. To create awareness & importance of green financing among businessmen & general people.
5. To understand the green financing practices that support environment friendly projects resulting environmental benefits.

METHODOLOGY OF THE STUDY

The research is the descriptive and analytical nature based on the secondary data of the researches on green financing. Secondary information has been collected from literaturereviews, various work-paper, banks' websites, journals and articles. I have taken an attempt to intimate the readers, academicians & students about green financing. Every society need green finance for the eco-friendly business to make the earth as a living place while protecting natural resources.

REVIEW OF LITERATURE

The existing literature in this area emphasizes upon the role of Green Banking in promoting environmental sustainability through its eco – friendly strategies and practices.

Dr. LoluruNagarjuna (2015) studied the investment avenues of green finance by way of green stocks and green debt which would add to the goodwill of the companies and increase the market price of the shares thus contributing to the objective of financial management. He suggested that the finance officers of banks must take into consideration the importance of environmental aspects in each of its policies and products due to growing demand for green commodities. This can be done by development of Green Indices.

Sharifi& Hossein (2015) studied the growing importance of green banking in Indian public sector banks. It was found that green banking is a time saving and cost reducing practice. But it faces challenges in form of security issues to the customers, lack of training of bank employees, geographical barriers, etc. However, there exists an increase in scope of green banking practices as more consumers are becoming internet technology friendly. The authors suggested evaluation of green finance projects, LEED certified buildings and training programs for building awareness among the bank employees as measures to improve green banking initiatives.

Nath, Nayak et al. (2014) attempt to study the green rating standard given by RBI, the World Bank's environmental and social norms and the initiative taken by bank in adopting green practices. Green Rating Standard is known as Green Coin Rating. Under this banks are evaluated on the basis of carbon emissions and amount of recycling activities. World Bank has formed environmental and social norms for financial institution. These norms provide ways to reduce environmental impact. Banks are required to do Environmental Impact Assessment, Annual Reporting and adopt sustainable technology. If the Indian banks want to achieve some position in global economy then they have to act as good corporate citizens.

Sudhalakshmi and Chinnadorai (2014) concluded that green mantra is essential for emerging economies like India. Every step taken today will mean a better global environment in future. Therefore, banks are required to include their green aspect in the lending principle. Indian banks are running behind time in adoption of this green phenomenon. Serious steps are required to be taken in this regard.

Yadav Rambalak& Pathak Govind (2014) analyzed that Public sector banks have taken greater initiatives in this regard. In private sector banks only ICICI bank has been pro- active in using green data centers, using energy efficient alliances, promoting pollution control measures, giving preferences to evaluation of green financing projects along with the basic practices of paperless banking, recycling etc.

ChandichalShilpa& Dr. MisraSheelan (2013) recognized that the banks are realizing the importance becoming responsive to the environmental and social factors to achieve sustainability in banking decisions. It emphasized on quality improvement tools of e – CRM based Website services, Six Sigma, Business Process Re-engineering which would help the banks to implement paperless banking services.

Choudhury et al. (2013) highlighted the final challenge with two main objectives, the maximum benefits facing the strategic aspects of Green Banking. They advised that banks will play active role in green environment and to actively adopt environmental aspects of banking and to change the client's practice of banking business. The use of appropriate environmental technology and management methods will not only be suitable for the environment, but will provide benefits as a more effective functioning.

Dr. JhaNishikant&Bhome Shraddha (2013) conducted an empirical study on steps taken to go green, to check the awareness of bank employees, associates and general public on green banking issues by primary data

collection. The researchers found that online banking, green loans, power saving equipments, green credit card, use of solar and wind energy and mobile banking were the widely adopted banking strategies.

D. Khandewal (2013) explained the concept and benefits offered by “green bank” in his paper. He also studied the Green banking practices IndusInd bank, ICICI bank, IDBI bank, HDFC bank, SBI and Yes Bank. It also suggested tips for green banking by way of online banking, waste management, clean and hygienic environment, green banking in rural branches, green credit cards and green loans.

Rajput, Kaur et al. (2013) found that there is a small group of banks in India that lead in environmental aspect. Response of Indian banks towards international initiative for environment is sluggish. In the United Nation Environment Programme Finance Initiative there is no single Indian signatory. Using factor analysis they conclude that risk of failure of business to peers and lack of RBI mandates are the obstacles to moving towards sustainability. The gaps in India are the awareness and consciousness on the environmental issues. Carbon Disclosure Projects- India requires public disclosure of emissions.

Bahl (2012) highlights the means of creating awareness about Green Banking to ensure sustainable growth. Garrettt’s ranking technique is used to analyze the most significant strategies in respect of Green Banking. If the goal is to attain sustainable development this can be achieved only through creating awareness and imparting education. Among the internal sub systems emphasis should be given to publications, newsletters so as to create awareness and effective means for external sub systems are event meetings, media and websites. A proper formulated green policy guideline is needed for effective Green Banking.

PURPOSE BEHINDGREEN FINANCE

India in its “*Intended Nationally Determined Contribution*” for the time period 2021-2030 has set the following targets:

- To reduce the emissions intensity of its GDP by 33 to 35 percent by 2030 from 2005 level.
- To reap approximately 40 percent cumulative electric electricity established capability from non-fossil gas primarily based energy assets by means of 2030 with the assist of transfer of era and coffee fee global finance consisting of from Green Climate Fund (GCF).
- To create an additional carbon sink of 2.5 to 3 billion tons of CO2 equivalent through additional forest and tree cover by 2030.

Carbon Intensity of India

(CO2 Emissions (Kg per 2010 US \$ of GDP)

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
CO2 Emission	1.24	1.21	1.17	1.14	1.10	1.07	1.06	1.13	1.16	1.04	1.04	1.08	1.03	1.05

Source: World Development Indicators (December 2017)

Integrating environmental and social considerations into lending decisions and product design is only a first step in making the financial systems instrumental in funding the required transformation towards a green economy in the region. The funding of energy efficiency, renewable energy and sustainable infrastructure requires new concepts and new financial instruments which are adapted to local circumstances.

Sustainable Finance Policies in India

2007	Corporate Social Responsibility, Sustainable Development and Non-Financial Reporting – Role of Banks
2011	Ministry of Corporate Affairs: National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business
2012	Securities and Exchange Board of India (SEBI): Annual Business Responsibility Reporting
2014	SEBI: Infrastructure Investment Trusts (InvIT) Regulations
2015	Reserve Bank of India: Priority Sector Lending – Targets and Classification Indian Banks Association: National Voluntary Guidelines for Responsible Financing
2016	SEBI: Guidelines for the Issuance and Listing of Green Bonds
2017	SEBI: Disclosure Requirements for Issuance and Listing of Green Bonds

Source: Compiled from the Information of Sustainability Disclosure of RBI & SEBI

Green Banking Practices of Top Leading Indian Banks

SBI	<ul style="list-style-type: none"> • Introduction of Green Channel Counter (GCC) facility at their branches in 2010 to promote paperless banking and expand it to all the branches. • Collaboration with Suzlon Energy Ltd. to employ wind power as an alternative to thermal power in some branches of Gujarat, Tamil Nadu and Maharashtra by setting up of wind mills. • It became member of Carbon Disclosure Project to undertake environmentally sustainable banking practices. • Interest charged at concessional rates on green projects to encourage reduction of greenhouse gas emissions.
PNB	<ul style="list-style-type: none"> • The bank exercises green building practices like energy efficient lights, immediate repair of any water leakages, printing on both sides of paper, promoting rain water harvesting and extensively using renewable sources of energy for electricity generation. • Granting of loans to projects being approved by the Pollution Control Board ensuring compliance with the social and environmental safeguards including rehabilitation and resettlement of people affected by project.
BOB	<ul style="list-style-type: none"> • It gives sanction to those projects which are permitted by the Pollution Control Board and also they are not extending finance to environmental hazardous substances. • It extends loans to projects which values the use of wind energy and solar energy to earn carbon credits.
ICICI	<ul style="list-style-type: none"> • Offering green products and services of Insta banking and concessional auto loans to the customers purchasing cars using alternative sources of energy. • Green Communications includes promoting paperless banking through encouraging online fund transferring, filing of e-returns, making of e- FDs, online bill payments, demat trading etc.
HDFC	<ul style="list-style-type: none"> • Setting up of 20 solar ATMs and replacing the batteries in ATM with Lithium – ion batteries. • The bank is accepting the projects which are rated by Energy stars and have a prior approval of Central pollution Board. • Implemented a refinance scheme for small, medium and micro enterprises energy saving projects.
Axis	<ul style="list-style-type: none"> • The head office at Mumbai has been converted into platinum LEED certified Green Building. • Ten solar based ATMs installed in Coimbatore under Independent ATM Deployment (IAD) Model. • Waste management & prevent emission of greenhouse gases. • It started using water from rain water harvesting and water treatment plants, made furniture from the recycled materials.

GREEN FINANCIAL PRODUCTS & SERVICES IN INDIA

Green Bonds: Green bond is a debt instrument which has characteristics similar to that of a standard coupon bond but the difference is only that the issuer of this bond utilizes the proceeds from this bond in energy efficient projects relating to renewable energy, emission reduction, reforestation, etc. SEBI has proposed new norms for the issuance and listing of green bonds in 2016. Exim Bank of India has issued a five-year US\$500 million green bond in 2015.

Green Insurance: Green insurance schemes are those schemes which provide risk cover at a low premium and enhanced coverage for green products to minimize the impact of climate change, thereby fostering good corporate behavior. HSBC collaborated with Allianz to provide its customers with green reinvestment insurance.

Green Loan Schemes: Green loan schemes are the financing schemes offered by commercial banks and financial institutions at concessional interest rates directed towards providing support to investment in energy efficient projects. IREDA has launched loans and raised \$91 million for renewable energy using bond issue in 2013.

FUTURE SCOPE OF GREEN FINANCE

In India a Council on Climate change under the supervision of Prime Minister was constituted in 2007 and reconstituted in 2014 for adaptation and mitigation of climate change. It has launched various programs like National Action Plan on Climate change, Jawahar Lal Nehru National Solar Mission, National water Mission, National Mission for Enhanced Energy Efficiency, National Mission on Strategic Knowledge for Climate Change, National Clean Energy fund. Other programs like Auto Fuel vision and Policy 2025, Expert groups on Low Carbon Strategies, etc. In 2015 the Green Climate Fund set up under the framework of the United Nations Framework Convention on Climate Change (UNFCCC) has accredited NABARD as National Implementing Entity (NIE) to finance clean energy projects in India. The recent government policies and initiatives which have increased the scope of Green financial products in India are as follows:

- India's National Action Plan on Climate Change recommended that country should generate 10% of its power from renewable energy resources by 2015 and 15% by 2020. Of India's installed power generation capacity of 2, 55,012.79 megawatt (MW), renewable power has a share of 12.42% or 31,692.14 MW which shows that there exists a huge scope for investment in this sector.
- The Ministry of New and Renewable Energy (MNRE) has revised its targets for energy capacity to 1, 75,000 MW till 2022, comprising 1, 00,000 MW solar, 60,000 MW wind, 10,000 MW biomass and 5,000 MW small hydro. These revised targets demand a huge investment. Since, the sanctioned budget would not suffice so MNRE has asked the public and private sector financial institutions such as Power Finance Corporation (PFC), Rural Electrification Corporation (REC), Indian Renewable Energy Development Agency (IREDA), IFCI Ltd, SBI Capital Markets ltd and ICICI bank ltd to raise funds.
- The finance ministry has increased the clean energy cess on coal by Rs.100 per metric ton to fund clean environment initiatives. The government has also proposed the use of renewable energy resources in railways sector. It includes use of CNG in train operations, setting up of water recycling plants, use of solar energy to illuminate coaches, station buildings and platforms. There is also a proposal to change the design of locomotive cabin to reduce the noise level.

CONCLUSION

Banks hold a pioneer role in an economic system which affects production, business and other economic activities through their financing activities. In the last two decades of the 20th century and the beginning of the 21st century green financing has started Global warming creating numerous problems in the economy due to greenhouse gas emissions. Banks hold a pioneer role in an economic system which affects production, business & other economic activities through their financing activities. Therefore, they must ensure protection of the environmental pollution while financing a new project or providing working capital to the existing enterprises. Eco-friendly & energy efficient business activities such as waste management, watershed farm development (farm pond), green housing, habitat-rain water harvesting, renewable energy, cultivation of biofuels, agroforestry, energy from biomass etc. will be given preference in financing by bank with the aim of reducing carbon footprints. It can be concluded that India has a great potential to create a green infrastructure needed for green finance by overcoming the barriers and creating awareness among the corporate citizens.

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