

“Green Banking- A Study on Select Banks in India”

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Abstract

The Green Banking is known as digital-banking and it is also called ethical banking, which aims to save the Nature as well as decrease the Global warming and carbon emission from its operation. Thus, it is the responsibility of every human as well as the institutions in the world to contribute the green economy so that it leads to sustainable development of the economy. The current study is regarding to understand the role of banks in the sustainable economic development. It is also including the role of Indian Government, corporate and commercial banks in India. The study is based on the secondary data collected from the various websites, reports of RBI, and Journals, etc. The finding of the study is that the banks are making strategic plan for a long term and taking green initiatives by creating awareness among the customers. The concept of green banking is the new in India and it has been adopting by the Indian banks in many ways such as online banking, mobile banking, green loans, E-statements, ATM's etc. They have been providing their services to the customers 24*7 over 365 days.

Key Words: Green Banking, E-Statements, Carbon footprint, Green economy.

Introduction:

According to the current scenario the Sustainable development has emerged as a new instance of development that over-exploits the natural environment for economic prosperity. The simple way to achieve sustainable development is to allow the markets to work within the framework of cost efficient regulations and economic instruments. The banking sectors are one of the major economic agents which are influence on the overall industrial activity and economic growth of the country. Banking sector is one of the major sources of finance for commercial projects which leads to economic growth of the country. Therefore, the banking sector plays a crucial role in promoting sustainable development of economy. The Banking sector is generally considered as eco- friendly in terms of radiation and pollutions. Therefore, the banking sector can play a mediatory role between the sustainable economic development and environmental protection. The “Green banking” refers to the banking business which aim is to reduce the external carbon emission and internal carbon footprint from its operations.

However, the banking and financial sectors are not directly affected by the environmental humiliation, because of strict environmental rules and regulations imposed by the capable authorities across the world. So that industries would have to follow the rules and regulations to carry their business. In the case of failure to carry out that, it would lead to close of their business. The importance of Green Banking in India is increasing rapidly through the artificial intelligence and the economic development and industrial sector is playing an important role in that. However, the Indian industries are facing environmental control challenges, in the form of decreasing pollution and carbon emission. So that the government has been trying to address the issues and framing environmental legislations as well as encouraging industries to follow environmental practices, and they derive competitive advantage over their competitors by producing eco-friendly products and services.

Importance of Green Banking:

In the present scenario many of the companies are following certain rules and regulations to face environmental problems and additionally educate the new market opportunities. The following are the Importance of green banking:

- ✚ Green banking makes use of online transaction.
- ✚ Adopt environmental standards for future generation.
- ✚ Giving more importance to eco-friendly factors.

RBI guidelines about Green Banking:

The Reserve Bank of India (RBI) has established Institute of Development and Research in Banking Technology (IDRBT) for the purpose of rating the green efficient banks in India. Under the rating system, both infrastructures and functions should be considered. IDRBT has found the term of Green Rating as “Green Coin Rating system”. The primary function of the bank is not only accepting the deposits but also they have taken care of environment.



Review of Literature:

Jha&Bhome (2013):

They are determined that the digital banking is a good way to protect the environment and reduce the carbon footprint from its banking operation. Thus, it is the responsibility of every human as well as the institutions in the world to contribute the green economy so that it leads to sustainable development of the economy. The concept of “Green Banking” is refers to that they have to save the environment along with that it has to improve the performance of the bank in the form of digitalization.



Rajesh&Dileep (2014): From their study they are found that the best way to reduce pollution and save the environment aiding sustainable economic growth is possible through the Green banking activities and also they are found that if any bank is giving loans for projects, then they must checking the environmental risks and issues regarding that project.

Ahuja (2015): Gave an overview of literature review about green banking, for making the conceptual framework. She identified problems in the execution of the green concept, where from her review, she identified customer education and she creates awareness among the customers and the Private and public sector banks are able to implement the concept Green banking in a suitable way. Later she explores the green initiatives by SBI to describe green banking.

Rahman&Barua (2016): Managed to study Bangladeshi’s banks to identify what is the position of country as a whole in implementation of the green banking concept. They studied 42 banks, and their study discovered that most of the banks are

Performing poorly except the foreign banks, for that they identified the reasons like high implementation cost, low awareness, too new idea / concept for embedding first, Management Priorities. It was recommended that Bangladeshi Banks should organize awareness campaigns, programs for Board, customers in order to motivate them for green initiatives which will be useful to develop the better green practices around the globe.

Objectives:

-  To identify the various initiatives taken by the select banks in India.
-  To identify the Green Banking strategies.

Hypothesis:

The Green banking initiatives are taking by the public and private sector banks in India, whether they have positive correlation or not.

Research Methodology:

The study is based on the secondary data which has been collected from various research journals, and websites of the respective banks. The banks undertaken for the study were two public sector banks that is SBI bank, PNB bank and two private sector banks, HDFC bank and ICICI bank. These banks were selected under the study because of this banks were resulting highest profits as per the RBI report “Report on Trend and Progress of Banking in India” in the year 2022-23.

Chart – I: Select Banks for the study

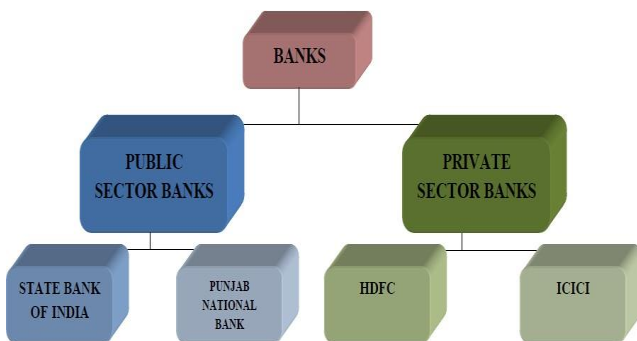


Table No. 1: Top Performing Banks on the basis of Profit

Public Sector Banks		Private Sector Banks	
Banks	Total Assets	Banks	Total Assets
State Bank of India	₹36.80914 trillion	ICICI Bank	₹929,652 crore
Punjab National Bank	₹774,949 crore	HDFC Bank	₹1,189,432 crore

Source: RBI “Report on Trend and Progress of Banking in India” 2022-23.

Modal for carbon emission calculation:

Calculations of Emission Reductions:

Emission Reductions			
Energy Consumption Baseline	$E_{BL,1}$	[kWh]	42,016,041
Energy Consumption Project	$E_{PJ,1}$	[kWh]	10,801,995
Leakage	LE_1	[kgCO ₂]	0
Grid Emission Factor	$EF_{CO_2, ELEC}$	[kgCO ₂ /kWh]	0.85
Emission Reductions	ER_1	[tCO₂]	26,532

Source: RBI "Report on Trend and Progress of Banking in India" 2022-23.

$$ER_v = (E_{BL,v} - E_{PJ,v}) * EF_{CO_2, ELEC} - LE_v$$

Where:

ER_v Emission reductions of interval v

$E_{BL,v}$ Energy baseline

$E_{PJ,v}$ Energy project

$EF_{CO_2, ELEC}$ CO₂ emission factor for displacement of electricity

LE_v Leakage emissions of interval v

Energy Consumption Baseline:

Baseline means the study of the GLS lamps and its average daily operating hours before their replacement and then the overall consumption of energy by GLS lamps will be calculated as Energy Consumption Baseline.

Energy Consumption Baseline			
Duration of Monitoring Interval 1	d_1	[d]	250
Average of 60 W GLS replaced over full MI		[pcs]	598,816.40
Average of 100 W GLS replaced over full MI		[pcs]	22,393.10
Cross Check Correction Factor	CF_1	[-]	0.9509
Average operating hours Baseline	μ_{BL}	[h]	4.631
Energy Consumption Baseline	$E_{BL,1}$	[kWh]	42,016,041

Source: RBI "Report on Trend and Progress of Banking in India" 2022-23.

FORMULA:

$$E_{BL,v} = CF_v * \sum_{i=1}^n [P_i * \mu_{BL} * d_{k,v}]$$

$E_{BL,v}$ Energy baseline in MW of interval v

CF_v Correction factor for distributed CFLs.

P_i Power rating of the replaced GLS bulbs i used before replacement

μ_{BL} Average baseline operating hours per day

$d_{k,v}$ Days of operation of each distributed CFL k in monitoring interval v derived from

$Date_{START,v}$, $Date_{END,v}$ (and $Date_{i,k}$ in first monitoring interval)

Green Banking Strategies of Selected Banks in India:

- ✚ Creating awareness among the customers regarding environmental issues and their impact.
- ✚ Conducting the energy audit to know the equipment's purchases and dispose regarding the Green banking.
- ✚ The Green goals should be SMART (Specific, Measurable, Attainable, Realistic, and Timely) regarding reduction of carbon footprint in environment.
- ✚ Developing and implementing the green policy for the purpose of measurement the performance of the banks in terms of decreasing their environmental negative impact.
- ✚ Encouraging, and motivating the employees to follow the green path and to come up with their own ideas.
- ✚ Evaluating the performance regularly to check the trade trends and new developments. Because the revised the green policy as needed.
- ✚ Promoting the environmental policy, actions, and goals in order to protect the Nature and decrease the carbon footprint from its banking activities.

The Green Initiatives by the Select Banks

State Bank of India (SBI):

Nationalised in the year 1955 as per the Banking regulation act 1949, SBI is currently the largest banking sector in the form of market capitalisation. The bank has 24,000 branches which are located in rural and semi-urban areas. The present chairman of SBI is Mr. Rajnish Kumar. The SBI had formulated a Green Banking Policy in the year 2007 to provide solution to the issues of global warming and climate change.

Green Banking Initiatives by State Bank of India:

- ✚ The State Bank of India launched 'Green Channel Counter' (GCC) facility on first July 2010 at 57 select branches spread across the country and also the same was expanded to quite 5000 branches in order to avoid the paper use.

- ✚ As a part of its Green banking initiative, SBI put in 10 windmills with a mixture capability of 15 MW.
- ✚ The bank has been promoting project loans to its customers at concessionary interest rates to cut back greenhouse emission (GHG).
- ✚ SBI has conjointly launched a loan product to facilitate direct finance to project developers for the purpose of carbon emission reduction (CER) assets.
- ✚ SBI promoted the carbon revealing project for the purpose sake of environmental concern and safety.

Punjab National Bank (PNB):

Punjab National bank is India's second largest public sector bank in India. Supported in 19 May 1984, the bank has over 7,036 branches and it also serves over 8.9 crore customers across the country. The present chairman of PNB is Ms.Sunil Mehta. Punjab National Bank had formulated a Green Banking Policy in the year 2002 to provide solution to the issues of global warming and climate change.

Green Banking Initiatives by Punjab National Bank:

- ✚ The PNB develop the concept Green Banking policy by finishing transformation into Core Banking Solutions (CBS) in its activities.
- ✚ A specific Green audit should be conducted by the bank to access the impact of assorted Green banking initiatives enforced within the bank.
- ✚ The PNB has developed guidelines for supply of term loan to business units and industries.
- ✚ The PNB has sanctioned 9 commercial projects of wind energy to develop the renewable supply of energy.
- ✚ The PNB has developed the concept of e-solutions as a part of their activities.
- ✚ The bank has introduced "Green practices and policies" to conserve natural resources.

Initiatives of Private Sector Banks in India:

HDFC (Housing Development Finance Corporation)

The HDFC Bank is the largest bank in India as per the Market Capitalization. It was nationalized in the year 1994. The bank has more than 5,500 Branches all over the country. It was the primary firm to receive associate degree 'In Principle' approval from the banking concern of India (RBI). The present chairman of HDFC is Mr. Deepak Parekh. The bank introduced the Green Banking Policy in the year 2008 to provide solution to the issues of global warming and climate change.

Green Banking Initiatives by HDFC Bank:

- ✚ Promoting electronic transaction advices for the customers and encouraging them to avoid the use of physical printouts.
- ✚ Conserving energy and replacing conventional lighting options with Compact Fluorescent Lamps (CFLs).
- ✚ The Renewable Energy initiatives like Project of 20 Solar ATMs.

ICICI Bank

ICICI Bank is India's largest private sector bank in terms of Market Capitalization. The Bank has a network of 4,882 branches over all in the country, and it has a presence in 17 countries, including India. ICICI Bank had formulated a Green Banking Policy in the year 2010 to provide solution to the issues of global warming and climate change. The present chairman of ICICI is Mr. Girish Chandra Chaturvedi.

Green Banking Initiatives by ICICI Bank:

- ✚ ICICI Bank offering 50% waiver Loans on Auto and cars for the purpose alternate mode of energy.
- ✚ ICICI bank offering loans to customers who purchase homes in Leadership in Energy and Environmental style (LEED) certified buildings.
- ✚ The ICICI Bank additionally working with the various innovations to get clear solutions for their problems.

✚ ICICI Bank has extensively capitalizing by taking initiatives in the Green banking.

Based on the green banking initiatives taken up by the public and private banks, there is no much difference in the activities. The stages of the activities can also understand the table number 2.

Table No. 2: Phases of Green Banking in the top Indian banks

Sl. No.	Banks	Private/ Public	Phases of Green banking Initiatives
1.	State Bank of India	Public Sector Bank	Environmental“ Green banking”: The Second Age
3.	Punjab National Bank	Public Sector Bank	Environmental“ Green banking”: The Second Age
5.	ICICI Bank	Private Sector Bank	Environmental“ Green banking”: The Second Age
6.	HDFC Bank	Private Sector Bank	Environmental“ Green banking”: The Second Age

Source: RBI “Report on Trend and Progress of Banking in India” 2022-23.

Bivariate Correlation Analysis

The Bivariate Correlation Analysis is used to measure the degree of the linear correlation between two different variables (independent and dependent). It was used to find how closely related two variables are (e.g., Leverage and GBI).

Table 3 provides the correlation matrix for all the key variables in the analysis.

Table 3: Correlation matrix

	<i>Lev1</i>	<i>Lev2</i>	<i>SBI</i>	<i>PNB</i>	<i>ICICI</i>	<i>HDFC</i>	
<i>Lev2</i>	0.469**	1					
<i>SBI</i>	-0.008		0.086*	1			
<i>PNB</i>	-0.23**		-0.12**	-0.29**	1		
<i>ICICI</i>	0.321**		0.130**	-0.138*	0.0452	1	
<i>HDFC</i>	-0.53**		-0.29**	0.083*	0.184**	-0.246	1
<i>GBI</i>	0.319**	0.208**	-0.016	-0.09*	0.071**	-0.085	1

Source: RBI “Report on Trend and Progress of Banking in India” 2022-23.

** Correlation is significant at the 0.01 level.

* Correlation is significant at the 0.05 level.

- From the Table 3 it is observed that at (LEV1) it was observed that there is a strong negative correlation between the variables.

- From the Table 3 it is observed that at(LEV2) it was observed that there is a significant negative relation with GBI and size.
- The correlation matrix also indicated that there is a positive relationship of insider ownership with GBI while negative relationship with age and size, but this relationship is very weak, having no major influence.

FINDINGS:

- ✚ India is an energy deficit country the banks will install solar panels as an alternate energy supply in the country. They will additionally use the vehicles that consume less fuel which can save large fuel.
- ✚ The banks are giving more funds to Green projects i.e. The Bankers should remember the atmosphere problems and they should go for funding the projects they don't grime the environment.
- ✚ The banks are taking initiatives towards the concept of Green banking attention among the customers through creating awareness.

SUGGESTIONS:

- ✚ The Banks should make a strategic plan towards the Green banking in short run as well as long run basis.
- ✚ The Government of India should develop and implement the guidelines regarding Green banking activities for the purpose of environmental protection.
- ✚ The RBI should be evaluating the guideline regarding Green banking practices and policies.
- ✚ Banks will conserve energy and natural resources through the on-line transaction. Through that we can reduce expenditure.
- ✚ Customers should be aware of the Green bank accounts which are provided by the above banks which help the customers to know their revenues and expenditure.
- ✚ Banks should offer the Green Loans for the projects and for Home improvement projects. Green loans are good for energy-saving comes round the house. Notice a stronger loan

rate and save energy prices all at a similar time.

CONCLUSION:

The concept of green banking is a new in India. They should expand the utilization of environmental data in their business activities, credit extension and investment selections etc. The concept of Green banking refers the banking business which aims to save the Nature as well as decrease the Global warming and carbon emission from its operation. In the current scenario the banks are playing a pro-active role to require environmental and ecological aspects as a part of their loaning principle. As long as the Green banking is involved, Indian banks are promoting the sustainable growth of the nation. There is an enormous drawback among the banks regarding employees those who are not trained and equipped with the modern automated machine-controlled system as a results of that the results don't seem to be looking for. Thus training and development of relevant skills at intervals bank employees are vital to hurry up the reforms. RBI must play a lot of proactive role by passing the mandates, rules, laws to tackle this crucial issue of global climate change.

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