



Green Initiatives: A Comparative Study of Select Banks in India

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Abstract

The process of globalization has transformed the entire world. It has made drastic impact on human intellectual abilities, psyche, society and natural environment. It has created an innovative form of global society which puts forward its concerns about environmental degradation. As a result business organizations and corporations have started modifying their operations to incorporate environment friendly measures. Many new concepts have been adopted as suitable measures. Green banking is one of them. Green banking is a paperless banking process. It focuses on the twin goals – reduction of carbon footprints and environmental sustainability. It reduces the use of paper, power, and energy. This paper proposes to explore the concept of Green banking and its scope in India in the making of our environment human-friendly and enriching our economic productivity. The research is primarily based on secondary data having qualitative analysis. The findings indicate that there is a pressing need to create awareness about green banking and to implement green banking to the maximum possible extent in today's business world of innovative technologies in order to enrich sustainability and to make our environment human friendly. The main objective of this paper is to study the role of green banking in enhancing environmental sustainability by analysing the operations of the ten largest banks in India, selected on the basis of their market capitalizations as of August 2019 i.e. before being merged. The paper also attempts an analysis of the engagement of the banking sector in green banking activities. The findings indicate that there have not been many initiatives in this regard by the banks in India though they play an active role in India's emerging economy. Therefore, this paper endeavors to suggest possible policy measures and initiatives to promote green banking in India.

Keywords: *Green Banking, sustainable development, Indian banking industry, public sector, market capitalization.*

Introduction

In the spontaneously progressing world of the 21st century, global warming has become a buzzword that appears constantly across the economic, political, and environmental activities. Primarily caused by greenhouse gas emissions produced by human activities, global warming has now resulted in rapid and major climate change across the world. Moreover, it has led to an increased vulnerability to natural disasters in many countries. India's encounters with regular natural disasters across the country remind us that India remains one of the most vulnerable countries in terms of exposure to natural disasters and to the aftereffects of global warming and climate change. Though we cannot prevent natural disasters, we can reduce our vulnerability through strategic policy actions that can arrest the threats of natural disaster and minimize the damages. Banks are strategic actors in this regard as they can play a crucial role in driving sustainable development in many ways. In general, their activities seem to be environment friendly. The internal operations of the banks do not have a considerable impact on the environment in terms of emission and pollution. However, there might be an external impact on the environment through their customers' activity. For instance, when banks provide loans for different projects, some of these projects may not be environment friendly. Thus banks may indirectly cause environmental depletion. Hence banks have to take up the responsibility of ensuring economic development through environmental protection by promoting environmentally sustainable and socially responsible investments. This practice of banks is known as 'green banking'. The main objective of green banking is to use financial resources in favor of both the society and the environment. They provide finance to many projects which ensures the economic growth of the country along with environmental sustainability. The concept of green banking first emerged in the western world and today it is being practiced all over the world. However, it has only been introduced recently in our country. Today, banks have turned their attention to eco-friendly operations as they envisage reducing the carbon footprint from their normal banking activities. This shift from conventional banking activities to green banking activities is driven by banks' responsibility towards society and the environment. Of the several modes of green banking activities, green finance is a significant one. Green finance is financing that helps to boost resource-efficient and low carbon industries which has no or very minimal negative impact on the environment. Another financial service introduced as part of green banking is the online banking service. Online banking puts emphasis on less paperwork activities, less mail, and less driving to

branch offices which in turn will have a positive impact on the environment. There will also be a significant reduction in costs as bulk paper overload and bulk mailing fees will be reduced. Banks will neither require expensive branch banking nor would they have to hire customer service representatives. Online banking will make banks more efficient and profitable. Today people have become more conscious. People want to conduct business with those who are responsible, who would perform their duties properly, and who would provide them better facilities. Different green banking products are being promoted by the banks like ATM booths, SMS banking, Credit Card, and Debit Card.

LITERATURE REVIEW

Dr. Rashmita Sahoo (2019) advocated that E-CRM (Electronic Customer Relationship Management), that is using electronic devices in attracting, maintaining, and enhancing customer relationships with the organization, has a crucial role to play in banking operations. With the widespread use of the Internet, E-CRM can significantly enhance the efficiency and effectiveness of communication and relationship management between organizations and customers. Labor-intensive business activities across industries and in government sectors are being vastly replaced by computers, information technology, and networking these days. Dr. P. Raja & M. Muthaiyan (2019) state that Green Banking entails the promotion of environmental-friendly practices and reduction of the carbon footprint generated through activities which may have contributions from banking events. It involves promoting those activities of the banks' clients engaged in industrial or commercial activities that maintain a balance between what they extract from the environment and what they put back in. These come under the category, as mentioned earlier, of external dimensions. The internal dimensions come in diverse forms: reduction of the footprint through activities within the bank such as using online banking instead of branch banking, disbursing bills online instead of mailing them, promotion of mobile banking, opening up Certificate Deposits and money market accounts through online banking, as an alternative to large or multi-branch banks, encouraging or incentivizing customers to use the nearest local branch than making them drive large distance by burning fossil fuels, etc. Grace Ibe-enwo, Nicholas Igbudu, Zanete Garanti, and Temitope Popoola (2019) argue that from the perspective of relationship marketing the scope of Green banking practice is limited. Keeping in mind the importance of loyalty to managers in the banking industry, as well as the significant assertion in the call for greater sustainability performance from banking organizations by customers, their study explores the impact of customers' perception of green banking practice on bank loyalty. It

also explores the impact of the mediating of green image and bank trust in the relationship between green banking practice and bank loyalty. Md. Miraj Hossain (2018) asserts that the concept of green banking has transformed into a buzzword in the financial and banking sector and among the common people of the world over the last few decades. In Bangladesh the future of green banking seems to be very promising. A host of green products and services are being offered gradually and many more are also expected to be introduced in the future. It is expected that some innovative services like Green excellence awards and recognitions, Green rating agencies, Green investment funds, Green accounting, Green insurance and disclosure would be functional shortly. The proper implementation of green banking would be a helpful measure in keeping a check on the polluting industries. The expectation for the future is that the banks shall act as a guardian as well as a mediator towards the economic transformation and create a platform that would create many opportunities for financing and investment policy and contribute towards the creation of a low carbon economy. Md. Shahidullah (2017) posits that green banking refers to banking practices that cultivate environmentally responsible financing practices and environmentally sustainable internal processes. Mohamed Motahar Hossain (2017) explains green banking in two ways. Primarily, the emphasis of green banking is on transformation of internal functioning of banks towards a green approach. It means all the banks should practice appropriate ways of utilizing energy from renewable sources, automation and other measures to minimize carbon footprint from banking activities. Moreover, the banks need to become environmentally responsible by offering loans to encourage clients involved in green projects. Mohamed Tajul Islam (2015) defined Green banking as banking that promotes eco-friendly banking practices and reduces carbon footprints from banking activities. As per RBI (IRDBT, 2014), green banking aims at making internal bank operations, physical and IT infrastructure as trenchant as achievable, while also creating the least effect on the environment. 'Green Coin Ratings' have been introduced to Indian banks as green rating standards. Under this rating system, banks are evaluated on the basis of carbon emissions from their operations and on the amount of reprocessing, replenishment and reuse material being adopted in their building decor and in the systems used by them like computers, servers, networks, printers etc. They are also being judged by the number of green projects financed by them and the awards or recognitions given to borrowers for turning their businesses more environmentally sustainable. Generally, Green Banking includes sustainable banking, ethical banking, green loans, green credit cards, mobile banking, online banking, etc. International Institute for Sustainable Development (2012) evaluates Green Banking as a concept that is a smart way of thinking with a vision for

the future sustainability of our Earth. Suresh Chandra Bihari (2011) stated that corporate social responsibility (CSR) emerges intending to defend the environment. Banks can be categorized as ecofriendly by the nature of financing they provide to a project which has environmental implications.

Objectives

- To study the green banking concepts, their interpretation, evolution and application in Indian context.
- To identify and comprehensively analyse the various initiatives taken toward green banking and environmental sustainability by scheduled banks in India
- To make a comparative study on the evolution and the use of Green banking products by scheduled banks in India

Research methodology

This is an exploratory research and hence the methodology is based on literature review and secondary data. The research took place in two phases: The first phase comprised of an up-to-date literature review on Green Banking and sustainable development in the banking sector that identified results and suggested future steps. The second phase involved data collection about Indian banks through secondary published sources. Secondary published sources were the reports on Green Banking and other related information published on the banks' as well as other internet sites, which primarily consisted of annual reports of different banks. This study mainly uses secondary data from published sources such as journals, reports, bank websites, RBI. The study is confined to ten scheduled banks (State Bank India, Bank of Baroda and Punjab National Bank, Canara Bank, Bank of India, Union Bank of India, Central Bank of India, IDBI, Syndicate bank and Indian Bank) which were selected on the basis of their market capitalization as on August 2021. (*Market capitalization* indicates the overall market value of a company's outstanding share stock. Market Capitalization or *market cap* is calculated by multiplying the total number of a company's outstanding shares by the current *market price* of one share).

Table: 1 (Profile of selected scheduled Banks as on March2019)

Banks	Market Capitalisationas on 2019August(crores)	Branches as on 2019March	Customers as on 2019August(crores)
SBI	Rs. 254,708.41	26340	43
BANKOFBARODA	Rs. 36,890.12	5474	7.8
PUNJAB NATIONAL BANK	Rs. 30,801.07	7000	11
CANARABANK	Rs. 17,381.12	6310	8.27
BANK OF INDIA	Rs. 22,545.23	5500	NA
UNION BANK OF INDIA	Rs. 11,001.22	2054	5.7
CENTRAL BANK OF INDIA	Rs. 8,128.06	4,886	
IDBI	Rs. 20,655.91	2000	NA
SYNDICATEBANK	Rs. 8,400.05	4063	NA
INDIAN BANK	Rs. 9,398.14	3000	NA
TOTAL	Rs151284.49		

Sources: Annual reports of R.B.I 2019

The emerging trend of “green banking”

The concept of Green Banking is steadily transforming the banking sector by making technological advancement, operational improvements and changing client habits. It involves promoting environmental-friendly practices and reducing the carbon footprint of banking activities. Green Banking is not only a Corporate Social Responsibility (CSR) (Narwal, 2007) activity of an organization, but it is also about making the society habitable without any considerable damage. The government of India has issued guidelines to banks for green initiatives. The government has involved all the public banks as well as regional rural banks in order to implement green initiative nationwide. All the banks are asked to:

- Increase use of electronic payment
- Increase the use of Core Banking solution
- Increase the use of video conferencing
- Offer centralized payment system.

Indian banks are way behind the schedule in comparison to global trends, as far as the concept of Green Banking is concerned. None of the Public Sector Banks or the Private Sector Banks has adopted ‘equator principles’ of risk management framework for determining, assessing and managing environmentally and socially risk projects. Nevertheless, RBI has advised banks to incorporate social as well as environmental considerations in their business processes. The RBI has also advised the banks to put in place an appropriate plan of action for sustainable development. However, all this is voluntary on the part of the banks. Green banking has the potential to transform the Indian economy.

Green Banking Products and Services

There is a greater scope of Green Banking in India as constant planning and efforts have been laid in the field. The economy of the country especially the banking sector has been working to prevent further environmental loss by reducing carbon emissions. The banking sector has thoroughly built its strategy keeping in mind six major factors i.e., the 3Cs and the 3Ps. The 3Cs stand for Cost, Control and Customer Service while 3Ps stand for Profit, Planet, and People. The 3Cs form a significant part of banking operations, and with the help of Green Banking, they can be achieved by the companies. Green Banking promotes online transactions, and it is the best way to enhance better customer services. The customers can access all the services provided by the bank from a remote location. They can also access important information through laptops or even through smartphones. It can also bring about better customer service and satisfaction as well as a cost reduction for the banks. Thus, Green

Banking has huge advantages for the banks as well as for society. Green Banking primarily has twin objectives; one is promoting environmental practices through the introduction of Green Banking Financial Products and Services and the second is reducing carbon footprints on the environment from banking activities.

Table: 2 Trends of Green Banking Products, Progress and Challenges

Green banking products	Nature and character	Progress in Indian banking system	Challenges
E-statement rather than a paper statement for customers	An e-Statement is an electronic mail notification sent to the client's e-mail address to view in UBT go. The e-Statement replaces the existing paper statement, providing an instant access to the client's account details.	Almost all the banks both public sector and private sector banks have the facility to provide e-statement month-wise. For this customer has to register his or her email id or mobile no in their respective banks. Every bank also has an SMS facility to provide transaction statements.	The E-statement issued is an elective service provided to the account holders. There is no compulsion from the bank's side. Though it has successes in urban areas but not so successful in rural areas customers.
Green Channel Counter	The GCC aims at providing our Customers with a simple, secure and quick way of executing daily Banking transactions. It enhances Customer ease as there is no need to remember the 11-digit account number or carry passbook, fill in pay slips / withdrawal forms, etc. Only the ATM cum Debit Card and PIN of the customer is essential	The Bank had introduced the 'Green Channel Counter'(GCC) service on State Bank Day on 01.07.2010 at 57 select branches of the Bank across the country. This was a trailblazer move taken by the Bank for changing the traditional method of paper-based banking. Such a card-based Green Banking aim to decrease paper usage and save transaction	The banks have to encourage and educate the customers to use online banking which will help the bankers to save energy, money and time. Simultaneously, it will assist the banking sector to go for paperless work.

	to recognize him along with his account details.	time.	
Cash Deposit Machine	No more standing in queues and filling forms to deposit money. A Cash Deposit Machine (CDM) allows the customer to deposit money with just your debit card or account number. Instant money credit anytime of the day throughout the week is one of the most remarkable features of Cash Deposit Machine	Cash deposit machines are the recent trend in IT most wanted technology too. Though all the banks have installed CDM but still there is a suggestion for all banks to join to convert their ATMs to CDM. While 14 banks are already operating on the Interoperable Cash Deposit network, it is further expected by NPCI that approximately 30,000 ATMs of top banks could instantly updated into interoperable deposit machines with the help of the IDRBT-developed mechanism, without any significant hardware upgrades,	There is really a hurdle for people in many locations, particularly in rural areas, where customers may not have their bank's branch in proximity. Though there could be one or two branches of other banks, customers will not be able to deposit cash in the CDMs of those banks.
Green Finance	Green financing or financing for sustainable and renewable projects is gaining huge significance globally and among the investors for making investment in a	Approximately \$2570 million funds will have been dedicated by various financial institutions till 2019 for financing various green initiatives. Major banks such as SBI, YES bank and Indus	The development of green financing faces many challenges including false compliance claims, non-standard definitions of what constitutes green loans, and maturity mismatches between

	project	Bank has committed to contribute 12.91%,10.20% and 9.30% of total finance respectively.	long-term green investment and relatively short-term interests of investors,
Provides Green Services (i.e. Green deposit, Green mortgages and loans, Green credit cards,)	Now-a-days banks are encouraging green loans for the development of real estates to ensure the safety, durability and warmth. Installing energy efficient upgrades can save you up to 30% on energy costs and reduce both your energy use and carbon footprint	YES BANK, KSBC and destutche are India's largest private sector Bank, announced the launch of the first-ever green deposit product on World Environment Day today. Other banks are now taking initiatives for green deposits.	It is basically for the big and large companies looking for inclusion of sustainability agenda into their treasury activities. Companies with limited opportunities for investment in environmentally beneficial projects Companies who prefer investing their surplus cash in deposits rather than in marketable securities
Issuance of green bond	A green bank's bonding authority allows debt investors to secure a steady stream of payments from an institution with a low risk of default. In return, it obtains funds that it can immediately invest in clean energy sectors.	As per the latest reports by RBI on "Trend and Progress of Banking in India (2018-19)", India stands at second spot for being largest issuer of green bonds among the emerging markets with an issuance of approximately \$7.7 billion in 2012-2018.	The high cost of debt capital is one of the major obstacles in the investment in green projects. A few of the reasons for high cost of debt can be high interest rates, short maturity period and non-existence of non-recourse debt.
Green checking accounts	Customers can check their accounts on ATMs or special touch screens in the	. Almost all the banks both private and public sector banks in India have initiated	Though it is less time consuming for a customer to check their accounts online

	<p>banks. This can be commonly termed as green checking of accounts. This service benefits the environment by making more use of online banking facilities like online bill payment, debit card transactions, and online statements. Banks should promote green checking by giving some incentives to customers by giving higher rates of interests, waiver or discount in fees etc.</p>	<p>green checking accounts. According to RBI data of 2019 there are 136098 ATMS installed by public sector banks and 63340 ATMS installed by private sector banks.</p>	<p>but still not free from problems. It faces problems like high operating costs which are charged by the banks. Basically, for the rural customer and illiterate customer it is very difficult to access the green checking accounts.</p>
E-lounge	<p>This new age initiative by the bank is a one stop banking facility for all its consumers depending upon their requirements. It will provide banks' customers with Cash Deposit, Withdrawals, Cheque Deposits, Internet Banking, and Pass Book printing among others all under one roof without any manual interference.</p>	<p>There are almost every bank both public and private sector banks in India have opened E-lounge branches. There are around 13086 E-lounge branches opened by above 10 largest banks of India as of 2019 march.</p>	<p>Cyber security is one of the most critical challenges faced by stakeholders of the digital payment ecosystem. With more and more users preferring digital payments, the chances of getting exposed to cyber security risks such as online fraud, information theft, and malware or virus attacks are also increasing</p>
Green Infrastructure	<p>Green infrastructure includes IT infrastructure (Data</p>	<p>The difference has installed Solar. It is the largest deployer of solar ATMs and</p>	<p>India is only putting \$100-110 billion annually into infrastructure</p>

	<p>Centers), green buildings with sufficient natural lighting and air, generating electricity for their own use and waste recycling plants for recycle their own waste. Green infrastructure may also be considered Self Service Passbook Printers, Kiosks (Multi-Function Kiosks and Self Service Kiosks), Cash Deposit Machines and Contact Centre etc. It facilitates reducing the bank's internal carbon footprint.</p>	<p>saving more than 2000 tons of CO₂ per year ATMs. Bank has undertaken energy efficiency measures like up-gradation of AC, real time monitoring of temperature and pressure, energy efficient IT equipment selection, energy efficient CFL and LED lighting and solar powered UPS etc.</p>	<p>development which requires innovative approaches. Issuing green bonds overseas is one such approach in realizing the goal of creating a clean environment. The government can do well by setting up a Green Investment Trust, an agency for green financing, to fund the green infrastructure projects of the country. The trust can tap the green funds abroad and channel the same towards the green projects in India, including clean transportation. The financial incentives in terms of low-cost funds will trigger infrastructure investments in clean transport.</p>
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Source: Compiled from different articles

Table: 3 Green Banking Initiatives by Indian Banks as on 2019

BANKS	GREEN BANKING IMPLEMENTATION YEAR	NO OF ATMS MACHINES ON AUGUST 2019	Bank wise ISSUED OF CARDS	INSTANTANEOUS E-LOUNGE	CASH DEPOSIT MACHINES	TOTAL AMOUNT SPENT ON GREEN BANKING (2019) (crores)

SBI	2007	60000	316263253	2200	7658	77,769
Bank of Baroda	2008	13400	41940800	1055	1406	16393.43
Punjab National Bank	2009	10,681	73613373	4	NA	15785.31
Canara Bank	2011	9395	28147061	182	182	14235.65
Bank of India	NA	7423	59717057	255	255	12617.66
Union Bank of India	1996	7000	16603141	236	1041	9971.61
Central Bank of India	NA	4808	19562798	254	1061	6637.68
IDBI	2011	3900	12201426	58	58	6422.23
Syndicate Bank	2003	4345	7998027	40	472	6225.57
Indian Bank	NA	3381	14240397	NA	1043	5607.76
Total		2,02,072	8,582Lakh			

Source: Annual reports of different banks

State Bank of India

As per RBI data, State Bank of India manages 50.81% of the country's total ATM transactions with a market share of 28.73 %. Nearly, 36% of the financial transactions by SBI are routed through ATMs/ADWMs. On an average, over 1.40 crore transactions per day are routed through the Bank's ATM network. The Bank had launched the 'Green Channel

Counter'(GCC) facility on State Bank Day (01.07.2010), at 57 select branches of the Bank throughout the country. This was an innovative step taken by SBI towards changing the traditional way of paper based banking although in a limited way, to card based 'Green Banking' aiming on decrease in paper use and also saving transaction time. Every day nearly 8.20 lakh transactions are being trailed with the help of GCC. The bank's innovative product 'YONO Cash' which enables card less, paperless withdrawals at 'YONO cash Points' (ATM) was launched pan India. The YONO Cash offers card less, fast, convenient, and safe cash withdrawal service at nearly 19,601 ATMs throughout the country.

Bank of Baroda

The Bank has played a pioneering role in collaborating with these players by becoming the first PSB to establish a dedicated FinTech vertical in 2016. The Bank has turned 281 villages cashless by making available many digital products like Debit card, Mobile Banking, Internet Banking, UPI, BHIM QR, BHIM Aadhar, POS machines, etc. While financing a commercial project, BOB gives preference to environmentally friendly green projects such as windmills, biomass and solar power projects etc. which contributes to carbon credits.

Punjab National Bank

PNB has undertaken many green initiatives throughout the period. Recently it has launched "PNBONE" which allows its customers to perform major banking requirements through the application 24*7 throughout the clock anywhere anytime without visiting any branch. Apart from this it has also launched various initiatives to reduce paperwork like green pin debit card, missed call services, mobile banking etc.

Canara Bank

Providing Solar Street Lights and Tree Guards to Dehra Village, Panipat (Haryana) has been a prominent aspiration of Canara Bank. A Tree Plantation Project was initiated through National Institute of Oceanography, Chennai (TamilNadu). The bank has around 21.86 lakhs registered users under the new version of Mobile Banking and their Net Banking users have increased to 61.87 lakhs as on March 2019. Their Digital Branch - CANDI, was started at Bangalore, Chennai, Delhi and Mumbai with fully automated facilities and robotic assistance for customers to open accounts and to do transactions themselves.

Bank of India

Bank has issued e-transaction advice to corporate customers for reduction in paper usage as well as encourages electronic statements among retail customers. Various green initiatives such as distribution of tree saplings and awareness creation among society have been undertaken by the bank. Around 52 lakh customers have registered for online banking systems of the bank. The bank has already installed 255 bank deposit machines or bunch notes accepting machines all over the country.

Union Bank of India

While marking its centenary year celebrations on August 15, 2019, Union Bank of India renewed their commitment to Going Green and launched a series of green initiatives to reduce their carbon footprints and to create a positive impact on the environment. Some of the green initiatives taken by bank include M-Passbook which is a smartphone application that helps its customers to get banking transactional updates in an uncomplicated and reliable and timely manner. Union bank of India has 78 cashless campuses at various locations in the country.

Central Bank of India

As part of their green banking initiatives, the bank has introduced National Unified USSD (Unstructured Supplementary Services Data the NUUP service is a USSD based Mobile Banking service from NPCI using which financial and non-financial transactions can be done through mobile phones without mobile internet connection. This service is popularized as *99# by NPCI. The customers, who have registered their mobile numbers in their CIF/accounts, can avail this facility. M-PASSBOOK or Mobile based M-Passbook has also been introduced for the customers.

IDBI

IDBI is the only private bank selected for the study. IDBI Bank leads the pack when it comes to environmental banking in India and has been active in this field for over 20 years now. To support and encourage the energy saving projects especially for micro, small and medium scale enterprises, the bank has initiated a refinance scheme. IDBI introduced Green PIN - a paperless PIN generation solution – wherein IDBI Bank Debit Cardholders can securely

generate their debit card PIN through ATM, IVR, Internet Banking channel, SMS and Missed Call facility. The bank also introduced “Pay Apt” which enables the customer to make "one click payment" directly from her smartphone. It has some really efficient features which enable customers to opt for cashless transactions in their day-to-day transactions.

Syndicate Bank

The Bank has taken steps towards implementation of “Green initiative in Corporate Governance” by allowing paperless compliances through electronic mode. As on 31-03-2019 60.91% of the Bank’s transactions were done through non-branch channels. The Bank also introduced Synd Collect, which provides a hassle-free online Collection/Payment facility to the customers under tie-up arrangement with payment gateway aggregator M/s Pay U & M/s. Bill Desk.

Indian Bank

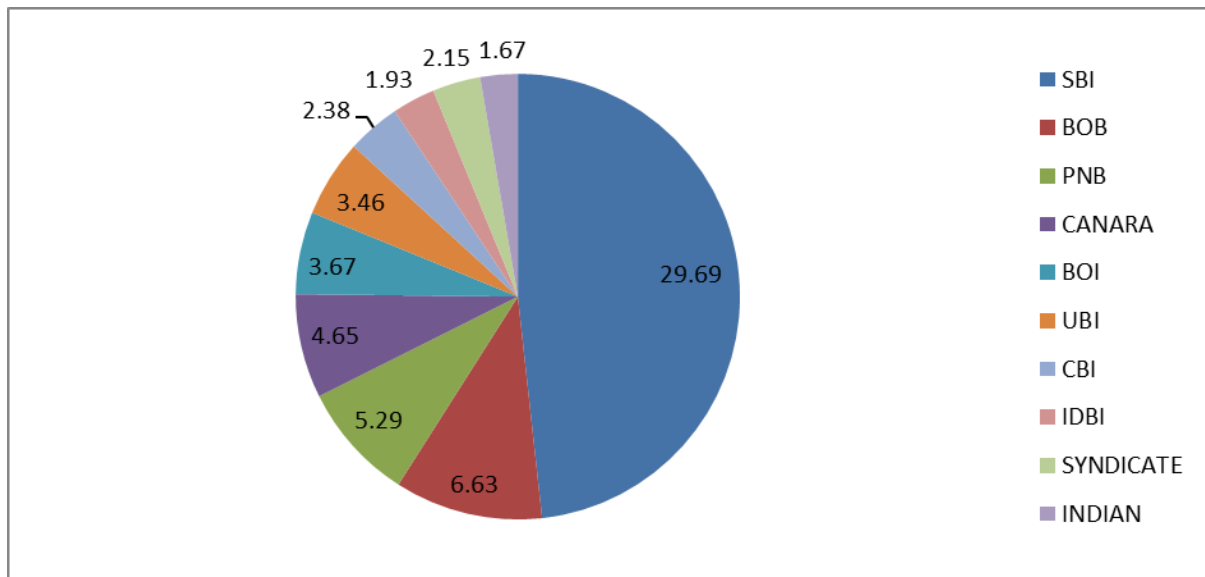
Total number of ATMs increased to 2849 as on 31.03.2019 from 2846 as on 31.03.2018, which includes 653 offsite ATMs, 5 mobile ATMs. It was claimed by Indian Bank on 31.03.2019 that it has 1043 BNAs including 43 off site BNAs. Passbook Kiosks have been installed at 481 locations as on 31.03. 2019. The bank stands fifth among all Banks in ATM transactions while Mobile Banking Transactions recorded a 4-fold increase. Indian bank remains the highest Rupay Platinum card issuer among all banks.

Table4: The banks issued debit cards and Installed ATMS

BANKS	No of debits card’s issued (%)	ATM’S Machine installed (%)
SBI	36.85	29.69
BOB	4.89	6.63
PNB	8.58	5.29
CANARA	3.28	4.65
BOI	6.96	3.67
UBI	1.93	3.46
CBI	2.28	2.38
IDBI	1.42	1.93
SYNDICATE	0.93	2.15
INDIAN BANK	1.66	1.67

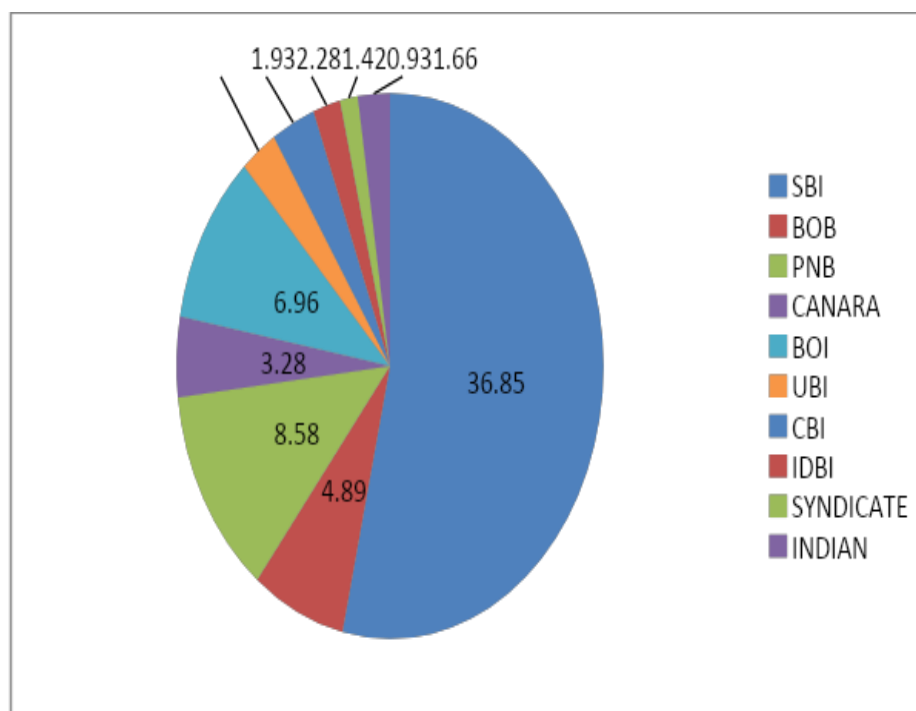
Resource: Authors Analysis

Figure: 1 (ATM'S MACHINE INSTALLED) BY BANKS AS ON 2019 (%)



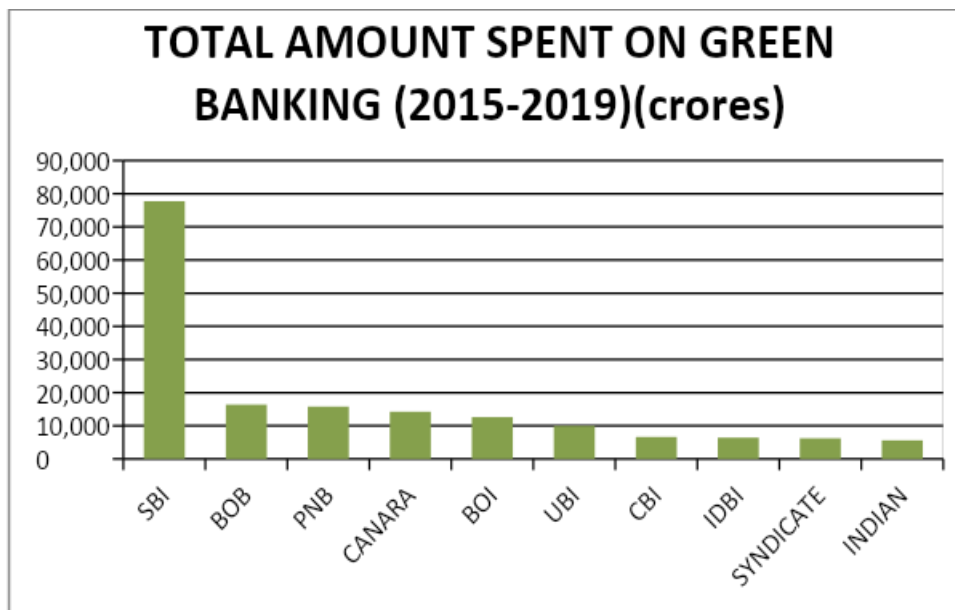
SOURCES: Authors Analysis

Figure: 2 No. of debit Cards issued by banks as on 2019 (in Percent)



Source: Authors Analysis

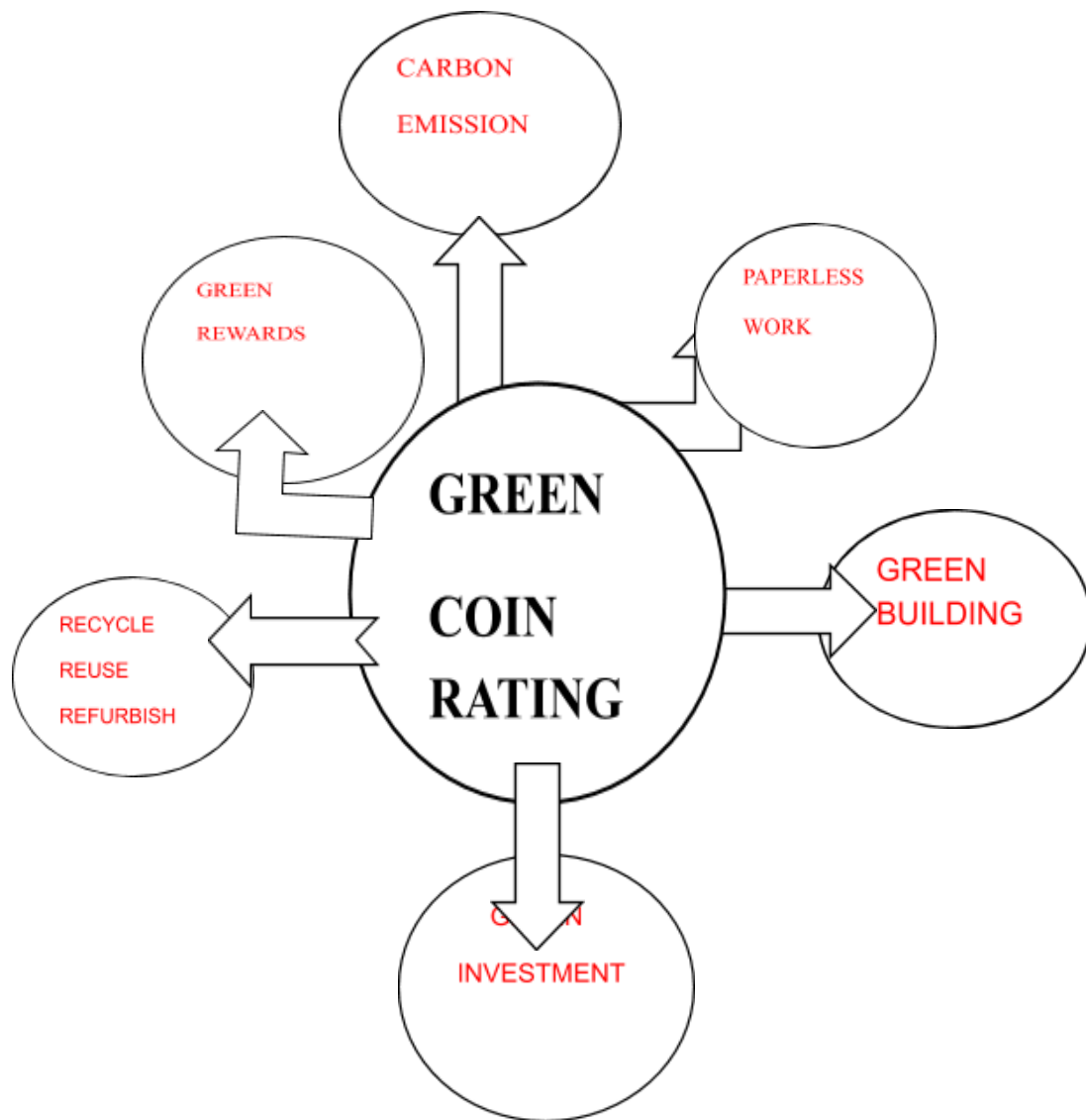
Figure: 3 Total amount spent on Green Banking



Sources: Annual reports of Different banks

Step taken by RBI for promoting Green Banking

Recently IDRBT 2013 has suggested the establishment of standard rating for green efficient banks and banking practices among Indian Banks. According to this rating system, both the frameworks and functions of the banks are being considered. IDRBT coined the term Green Rating Standard as “Green Coin Rating”. Banks' primary business must not be only money making, but it should also keep in mind the social and environmental factors relating to its operations. Green Coin Rating will be in line as the energy star rating given for alliances. Banks will be judged based on the rate of carbon emission out of their operations, the amount of reuse, refurbish and recycling concept being used in their building furnishings and in the systems used by them such as computers, servers, networks, printers, etc. They are being examined on the number of green projects being financed by them and the number of rewards and recognition they are paying for turning businesses green.



CRM and Green Banking

For any customer-focused industry, Customer Relationship Management (CRM) is necessary. It is a useful tool for banks to accomplish their sales and marketing goals as well as exceeding customer expectations. CRM software is a tailor made solution that helps banks implement customer-centric strategies. In any customer centric industry, Customer Relationship Management (CRM) is an absolute necessity. Bank tellers and employees can:

- Store customer data such as contact information, products used, and interactions.
- Schedule appointments, send personalized emails, and respond to social media posts.
- Update customer profiles in real time with notes or new information.
- Visualize, nurture, and manage leads in their sales pipeline.
- Create reports that analyze customer behavior, marketing campaign performance, and more.

CRMs are important in every industry, but for banking in particular they can help organizations deliver more personalized customer experiences. According to a global study of financial service customers 67 percent are willing to provide more information to banks if it means they will receive new benefits and 71 percent said they would use entirely computer-generated support for their banking processes.

Table: 5:CRM and Scheduled Commercial Banks

BANKS	No. of complaints received during the year 2019	No. of complaints redressed during the year March- 2019	No. of ATMS complaints received during the year March-2019	No. of ATMs complaints redressed during the year March- 2019	No. of Awards passed by the Banking Ombudsman during the March-year2019	No. of Awards implemented during the year) March-2019
SBI	59522	33,561	13270		na	na
Bankof Baroda	9385	4,599	2015		2	2
Punjab National Bank	10791	5,839	2821	Na	Na	Na
Canara Bank	5997	3,010	1145	Na	Na	Na
Bank of India	5226	2,735	1195	Na	8	2
Union Bank of India	4523	2,169	1326	Na	Na	Na

Central Bank of India	3865	2,212	891	Na	Na	Na
IDBI	2484	1,299	471	Na	Na	Na
Syndicate Bank	1989	901	342	Na	Na	Na
Indian Bank	2334	1,320	620	Na	Na	Na
Total	1,95,901	2,02,083	Na	Na	Na	Na

Sources: RBI annual reports on banking and finance

Conclusions

This study has presented some crucial observations on green-banking which includes several limitations that need to be urgently acknowledged. Though it is evident that there are many plausible environmental and economic benefits of E-banking, the latent investments involved in it might be countered by added processes and ICT requirements. For instance, the space required for IT infrastructure and the resulting energy requirements of banks and corporate customers is a major requirement that cannot be overseen. Additionally, the generation of E-waste poses a major hurdle for these organizations. Though our end goal might be becoming a cashless economy, the sudden push to ‘go digital’ may also put an extensive strain on security and fraud control frameworks. As a digital economy, India is at a very nascent stage with great potential to evolve and innovate during years to come, especially with the rising convergence of sectors such as financial services, telecom, and information technology. However, this change will also incur its own fair share of challenges, both in the short and the long term. Cyber security remains one of the most critical challenges encountered by stakeholders of the digital payment ecosystem. With the increased number of users preferring digital payments, the chances of getting exposed to cyber security threats such as online

fraud, information theft, and malware or virus attacks are also increasing. For about half of all bank frauds in India are the result of digital payment frauds. The increasing number of frauds was also recently highlighted in the Rajya Sabha. 1,367 frauds in FY 2016-17, 2,127 in FY 2017-18, and 1,477 frauds in FY 2018-19 concerning ATM/debit card, credit card and internet banking transactions of more than 1 lakh were reported. Consequently, the Reserve Bank of India (RBI) has released some guidelines as security and risk mitigation strategy for various types of digital transactions. Moreover, various actions are being taken by the RBI in regard to securing card transactions, electronic payments, ATM transactions, internet banking, and prepaid payment instruments (PPIs). Guidelines have also been issued to limit the liability of customers on unauthorized electronic banking transactions.

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