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Customers' Perception on Green Banking Practices of State Bank of India: A SWOC Analysis

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ABSTRACT

The environment and climate change are the most complicated issues the world is facing today. However, the most serious problem the human beings facing during the present days is manmade environmental degradation. Hence, there have been continuous endeavors across the globe to measure and mitigate this problem caused by human activities. Conscious people are trying to make their activities 'green' today and they are taking necessary steps for the benefits of present population as well as the posterity. Banks as responsible corporate citizens are also adopting remarkable steps all over the world to address this problem. They are adopting a variety of green banking practices so that they can make little contribution towards the environment. Green practices of banks are the efforts of the banking sector to keep the environment green and to minimize the greenhouse effects. This paper discusses about customers' perspectives on the adoption and usage of various green banking practices introduced by the banks in the state of Assam in India. It is observed that green banking practices have positive impact on the environment because adoption these practices by the customers may results saving of energy, fuel, paper, water, time as well as money. This study concludes with the statement that "green banking practices are not only feasible, they are now becoming essential".

Keywords: ATM, Eco-friendly, GCCs, Green Banking Practices, Internet Banking.

INTRODUCTION:

Banks as financial institutions are environmentally neutral. They do not impact on the environment directly much through their own internal operations. Therefore, they are considered to be in the non-polluting sector. However, they are still responsible in this aspect because the huge carbon emitted industries like steel, paper, cement, chemicals, fertilizers, power, textiles etc. that harm the fragile environment, present population and the posterity of a nation are set up with finance provided by them. Hence, banks all over the world are trying to become 'green' by adopting various green practices to make a little contribution towards the environment. A 'green bank' also called an 'ethical bank' adopts sustainable green practices from all sides; the employees, facilities, products & services, and the authority itself. Ethical banks aim to protect the environment by creating awareness among the people about environmental and social responsibility.

Green Banking Practices (GBPs) popularly known as 'Green Banking' refers to the environment-friendly initiatives taken by the banks to keep the environment green. Green banking is a component of the global initiative by a group of stakeholders to save the environment (Bahl S., 2012). GBPs usually performed through electronic devices are the environment-friendly initiatives taken by the banks which aim to reduce the use of finite natural resources. It is an effort of the banking sector to reduce the carbon footprint from their day to day banking activities and also to minimize the external carbon emission. It also aims to achieve the goal of a green economy by promoting green industries, including environmental pollution prevention projects and renewable energy development projects which are called green projects. Green projects produce environmentally and

socially responsible green products which are healthier for the planet and everyone living on it. Green banking products include: 'ATMs', 'Green Channel Counters (GCCs)', 'Mobile Banking', 'Online Banking', 'Green Mortgages', 'Green Loans', 'Green Homes', 'Green Credit Cards', 'Green Savings Accounts', 'Green Checking Accounts', 'Green CDs', 'Green Money Market Accounts', 'Remote Deposit' etc.

LITERATURE REVIEW:

As responsible corporate citizen banks believe that every small green step taken today would go a long way in building a greener future (Thombre K. A., 2011). The impact of banking services on the environment is huge because, banks consume natural resources which add to the pressure on the environment (Srivatsa H. S., 2011). Therefore, commercial banks have to adopt proactive strategies for reducing internal operation risks from environmental issues thereby realizing long-term profitability by external financing of environmentally friendly products and services (Guo H., 2005). Solving environmental problems through investment in pollution prevention or cleaner production equipment and machinery that improve industrial efficiency is a triple win for all parties: "win" for the enterprise, "win" for the bank, and certainly "win" for the environment (Dhewanthi L., 2007).

Adoption of greener banking practices will not only be useful for environment, but also benefit in greater operational efficiencies. But there has not been much initiative in this regard by the banks and other financial institutions in India. Indian banks are not taking any big initiative towards the direction of environment and they have really a big role to play (Sahoo P. & Nayak B. P., 2008, Biswas N., 2011, Prasad A. M., 2011). Only few of Indian banks have adopted green banking and financed some of green banking based projects. Moreover, there is negligible awareness of green banking among the customers, even the bank staff (Verma M. K., 2012).

However, Indian banks are now becoming more conscious on Corporate Social Responsibility (CSR) and one of the main CSR is green banking. Recognizing the warning of global warming the State bank of India has initiated urgent measures to combat the climate change by reducing the bank's own carbon footprint and sensitizing the bank's clients to adopt low carbon emission practices (Sharma, N., 2011). Moreover, the bank has set the right example for others to follow by using eco and power friendly equipment in its 10,000 new ATMs (Mishra P. & Sharma P., 2010).

Banks in India are increasingly providing services through electronic channels such as ATMs, internet banking, Tele-banking and Mobile banking. ATMs have been widely adopted but the level of adoption of other electronic banking means despite their potential are yet to pick in a big way (Joshua A J & Koshy M P 2011). Opportunities in e-banking are immense but the only need is to explore them. Among all the e-banking products, customers' satisfaction level (CSL) of ATM is highest and the number of users of ATM is also highest as compared to other services (Komal D. & Rani V. 2012). Internet banking customer acceptance among Indians depends on five variables namely perceived usefulness, perceived ease of use, consumer awareness, quality of facilities and subjective norms had positive influence on internet banking use (Sudeep S., 2006).

OBJECTIVES OF THE PAPER:

This paper is an attempt to investigate the customers' perspectives on green banking practices undertaken by the State Bank of India in the state of Assam. The main objectives of the paper are:

i) To highlight the green banking practices introduced by the banks in India.
ii) To investigate the customers' perspectives on green banking practices in Assam.
iii) To discuss the SWOC Analysis of green banking practices of the bank to know their feasibility in the present context.

HYPOTHESES OF THE STUDY:

The following working hypotheses have been formulated and tested throughout the study:

1. H_0: Customers adopt green banking practices irrespective of age group.
   H_1: Use of green banking practices is influenced by the age group of the customers.
2. H_0: There is no significant relation between the level of computer literacy of the customers and adoption of online banking.
   H_1: Customers use Online Banking according to the level of computer literacy.

METHODOLOGY:

Study Area: The field survey for the present study has been conducted in the state of Assam in India. The bank that has been selected for study is State Bank of India (SBI), the largest commercial bank in India. The bank has been occupying major part of the banking services in terms of volume of operations and branch network, and also playing the role of leader in the field of green banking practices in India.
Collection of Data: The study has incorporated both primary and secondary data. Primary data have been collected by distributing questionnaires among the customers having Savings Bank Accounts in the SBI. Data have also been collected from the Zonal as well as local head offices by conducting personal interviews with different officials of the bank. To collect necessary primary information 900 questionnaires have been distributed among the respondents using convenience method of sampling. Out of them 486 duly filled in questionnaires have been obtained and these are the base of this study.
Research Instruments: Questionnaires were the survey instruments used in this study. The questionnaires were designed with the mixture of close and open ended questions. Some questions were also designed on five points Likert Scale with 'Strongly Agree' dictating the highest level of believe, and 'Strongly Disagree' as the highest level of disbelieve.
Secondary Data: Secondary information have been collected from different relevant Books, Journals, published Reports of the State Bank of India, Reserve Bank of India and other reliable agencies. Information also has been collected from different websites for the study.
Size of the sample: As per the 'Sample Size Table' available at research-advisors.com the size of the sample for this study has to be 384. However, in response to our distributed questionnaires, 486 respondents have responded and all these respondents have been included in the study. Since the green practices that are adopted by different branches of the SBI are as per the specific directions of the authority as well as the Government, our respondents can be regarded as homogenous in nature. So the selected sample has clearly represented the population.
Technique of analysis of Data: The collected data have been processed and analyzed by applying the software SPSS (Statistical Package in Social Sciences), Version-16. Tabulation and creation of graphical presentation have been done wherever found appropriate. To draw inferences on hypothesis framed, descriptive statistical tools such as Chi-square test has been used.

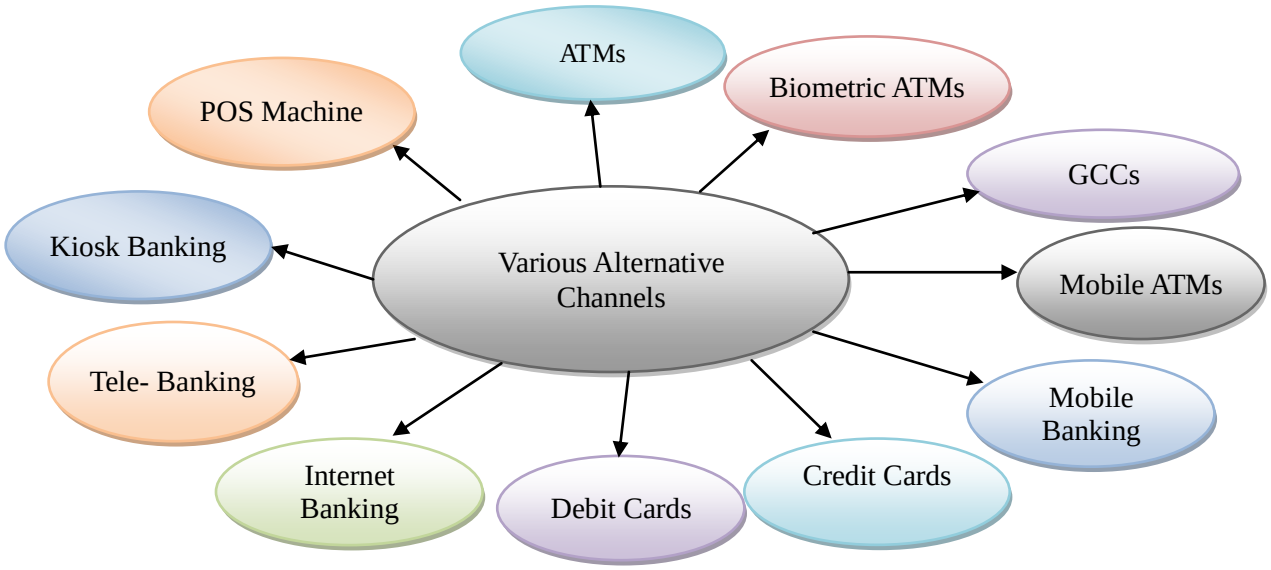
NEED OF THE STUDY:

Banks in India are playing a vital role towards sustainable development by introducing various green banking practices. Adoption of these green banking practices by the customers will result savings of energy, fuel, paper and other natural resources. Though, many studies have been made in the field of green banking globally but there have been very few studies done in India, especially in Assam. The researcher realizes that no study has been carried out on environmental aspects of various green banking practices introduced by the banks in Assam. Therefore, it is the high time to carry out study on green banking practices to make the people aware about their benefits to the users as well as the environment. Such study will surely help the banking sector, customers, policy makers and the society as a whole.

Green Practices Through Alternative Delivery Channels in India:

The recent developments in Indian banking technology have transformed banking from the traditional brick-and-mortar infrastructure to a system supplemented by number of alternative channels which resulted win-win situations to the customers, the banker and the environment. At present people in India need not go to the bank branches physically to perform their banking transactions, they can do that through these alternative banking delivery channels away from the bank branches. ATM is the most popular banking delivery channel and the extraordinary success of ATMs had made the banking sector courageous to develop more innovative alternative delivery channels such as Internet banking, mobile banking, green channel counters, kiosk banking, credit card, debit card, etc.
At present, as shown in Fig-1, banks in India have launched various alternative channels for their customers to reduce the carbon footprint from their internal banking activities. These banking practices have tremendous positive impact on the environment. Besides they are also beneficial to the customers as well as the bankers.

Fig-1: Alternative Banking Delivery Channels in India



ATMs in India:

The most notable innovation on the banking technology is the usage of the Automated Teller Machines (ATMs). ATM is a computerized telecommunications device that provides the customer of a bank with access to financial transactions in a public place without the need for a cashier. The Current and Savings Bank account holders of a bank with sufficient minimum balance may be issued an ATM card. This facility is available round the clock. Therefore, the delivery channel revolution can be said to have begun with the introduction of ATM in the early 1970s which was first installed by Barclays Bank in the United Kingdom. However, Chemical Bank in New York was the first bank to have an ATM, in 1969. But their widespread deployment wouldn't come until the 1980s (Siebenmark J., McClatchy Newspapers, 2012).

The HSBC Bank is the first bank in India to offer ATM facility in 1987. Presently, almost all the banks in India are offering this facility. Table-1 shows the number of ATMs deployed by the scheduled commercial banks in India in various locations.

Table 1: Number of ATMs of SCBs at Various Locations as at end-March 2012

Bank group	Rural	Semi urban	Urban	Metropolitan	Total
Public sector banks	6,673	15,135	19,213	17,172	58,193
	(11.5)	(26.0)	(33.0)	(29.5)	(100.0)
Nationalised Banks	3,383	6,800	10,186	10,681	31,050
	(10.9)	(21.9)	(32.8)	(34.4)	(100.0)
State Bank Group	3,290	8,335	9,027	6,491	27,143
	(12.1)	(30.7)	(33.3)	(23.9)	(100.0)
Private sector banks	1,937	7,520	11,525	15,097	36,079
	(5.4)	(20.8)	(31.9)	(41.8)	(100.0)
Old Private Sector Banks	523	2,025	1,876	1,347	5,771
	(9.1)	(35.1)	(32.5)	(23.3)	(100.0)
New Private Sector Banks	1414	5,495	9,649	13,750	30,308
	(4.7)	(18.1)	(31.8)	(45.4)	(100.0)
Foreign Banks	29	22	268	1,095	1,414
	(2.1)	(1.6)	(19.0)	(77.4)	(100.0)
Total	**8,639**	**22,677**	**31,006**	**33,364**	**95,686**
	(9.0)	**(23.7)**	**(32.4)**	**(34.9)**	**(100.0)**
Growth over previous year	(20.7)	(25.4)	(28.9)	(32.4)	(28.4)

Note: Figures in brackets indicate population group-wise percentage share of total ATMs of each bank group.

Source: Report on Trend and Progress of Banking in India 2011-12, Operation and Performance of Commercial Banks, November, 2012.

Mobile Banking in India:
Over the last few years, the mobile and wireless market has been one of the fastest growing markets in the world and it is still growing at a rapid pace. Therefore, mobile banking can be regarded as 'the delivery channel of the future'. This is because it offers portability and convenience to the user. It is just like having a bank in the pocket (K.C. Chakrabarty, Deputy Governor, RBI). The mobile banking market in India is of a very recent origin. India has more than 700 million mobile subscribers, but only 240 million individuals have bank accounts. Of the households without a bank account, 42% have at least one mobile phone (RBI database). The number of transactions using mobile banking in India as shown in Table-2 has gone up by 68.86% while the amount has increased by 102.65% taking into consideration the period from August 2011 to May 2012.

Table 2: Mobile Banking Transactions in India

Months	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apl-12	May-12
Volume (in No.)	1981924	2055003	2245138	2319145	2670488	2844938	2799554	3123105	3178405	3346743
Value (Rs. in Lakhs)	13646.43	14645.99	16069.41	17391.72	19798.48	19090.45	19604.17	23253.21	23456.78	28654.54

Source: MEDIANAMA, website- http://www.medianama.com

Internet Banking in India:
Introduction of Internet banking facility has brought remarkable change in the Indian banking system. ICICI Bank kicked off online banking way back in 1996. After ICICI Bank, Citibank, IndusInd Bank and HDFC Bank and Timesbank (now part of HDFC Bank), were the early ones to introduce this technology in 1999. Gradually, other banks like Axis Bank, Deutsche Bank, Federal Bank, IDBI Bank, Punjab National Bank, Standard Chartered Bank, Bank of India etc. started offering this service. Today almost all the banks whether private or public even foreign banks are offering online banking services to their customers.

Other Delivery Channels in India:
Telephone Banking: Telephone banking is a service provided by a bank that enables customers of the financial institution to perform banking transactions over the telephone, without the need to visit a bank branch or ATM. To access telephone banking, the customer would call the special phone number set up by the financial institution, and enter on the keypad the customer number and password. Tele-banking is a good medium for customers to make routine queries and also an efficient tool for banks to cut down on their manpower resources.
Credit Cards: Credit card, a post paid card is almost equivalent to the loan sanctioned by the bank to its customer on the principle of 'use first & pay later' up to the specified amount of credit as per the agreed terms of sanction. The cardholder can use the borrowed funds up to the pre-sanctioned limit and pay by monthly repayments to the bank. A credit card is linked up with their bank account enabling them to make payments. The State Bank of India is taking major part in issuing credit cards among the public sector banks.
Debit Cards: Debit card, a prepaid card where the cardholder uses his own money from his bank account on the principle of 'pay first & use later' up to the daily specific limit. Whenever someone makes purchase or withdraws cash using debit card his account is debited with the exact amount of purchase. As on 31st July 2012, there were 291458300 ATM-cum-Debit Cards of all banks in India. Out of that the SBI has issued 96960000 cards to their customers (RBI Database).
Point of Sale Machines: A Point of Sale (POS) terminal is popularly known as swiping machine issued to a merchant establishment to facilitate cashless sale of goods and services by the swiping debit, credit or pre-paid cards.

Green Banking Practices of the SBI in India:
State Bank of India, as the largest commercial bank in India 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, the bank has installed 10 windmills with an aggregate capacity of 15 MW in the states of Tamil Nadu, Maharashtra and Gujarat and they have planned to install more windmills in near future. The bank also supports the green initiatives of its clients and offers them finance on priority and at concessionary rate of interest. The bank has introduced a scheme known as 'Green Homes'. Under this scheme, the bank is offering concessions such as reduced margin, softer interest rate and zero processing fees on home loans for environment friendly residential projects rated by the Indian Green Building Council (IGBC). The bank has also launched a loan product called 'Carbon Credit Plus' to finance the future Clean Development Mechanism (CDM) projects.

Moreover, the bank has launched its 'Green Banking Policy' and decided to run ATMs on solar energy to reduce their power consumption. The recent green banking initiatives of the bank also include paperless banking for customers, clean energy projects and the building of windmills in rural India. The bank intends to bring down its carbon footprint and to save energy through several green banking practices namely Green Channel Counters, Automated Teller Machine (ATM), Cash Deposit Machine (CDM), Internet Banking, Mobile Banking, Green Self Service Kiosks, Green Home Loans, Green Projects Loan, Rain Water Harvesting Projects in the Bank Offices, etc.

Table 3: Expanding foot prints of the SBI through Alternate Channels

		Mar '11	Mar '12	Mar'13
Branches	No. of Group Branches	18,266	19,193	20,325
	No. of SBI Domestic Branches	13,542	14,097	14,816
	No. of Overseas Offices	156	173	186
ATMs	No. of ATMs of the Group	25,005	27,286	32,752
	No. of ATMs of SBI	20,084	22,141	27,175
	Average hits per day	285	285	262
Debit Cards	No. of Debit Cards (in lakh)	728	910	1,104
Internet Banking	No. of Customers (in lakh)	62.57	89.63	100.3
	No. of transactions during the FY (in lakh)	1,437.46	2,610.32	4,205.00
Mobile Banking	Registered Mobile users (in lakh)	10.13	36.45	66.2
	No. of successful financial transactions (in lakh)	49.30	190.65	358.9
	No. of Non financial transactions (in lakh)	95.23	317.72	NA
Merchant Acquiring	No. of POS Terminals	5078	10,673	65,514
	No. of Transactions (in lakh)	2.6	10.2	90.4
Contact Centre	No. of registered customers (in lakh)	9.96	15.31	NA
Alternate Channels	Percentage of total transactions on alternate channels	27.7	33.3	35.7

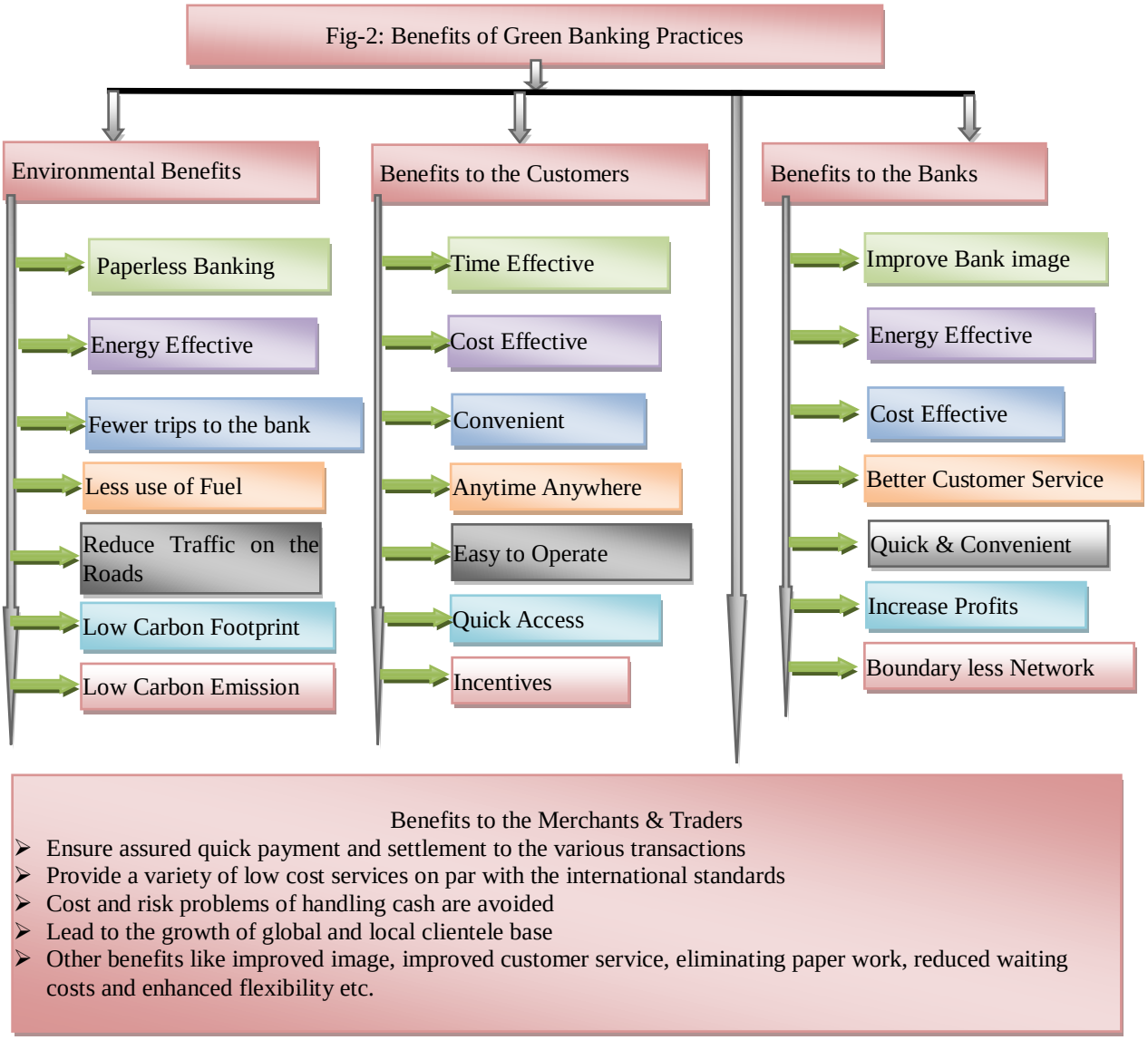
Source: SBI Annual Report 2011-2012/Analyst Presentation FY 2012-13 p 51

Paperless Green Channel Counters (GCCs):

On 1st July 2010, in connection with its 204th 'Birth Day', the State Bank of India has introduced an important paper savvy green banking practice called 'Green Channel Counters'. The bank has made available this paperless banking service through its 7052 branches spreading every corners of the country with on an average 100,000 transactions daily as on 31st March, 2013 (SBI Annual Report 2012-13). This unproblematic paperless banking facility can provide comfort in transacting at branches as they need not fill up any pay-in-slips or draw cheques for depositing or withdrawing money from their accounts. This noble facility would be a game changing move in the banking industry as it will resulting reduces of process time by swiping the SBI Shopping cum ATM Card on a device available at the Single Window Operator's (SWO) counter. At the Green Channel Counter, there is a Point of Sale Machine (POS), on which the customer swipes his/her card. Through GCCs three types of transactions viz. cash deposits, cash withdrawals and funds transfer can be done up to Rs. 40,000. It is an endeavor to offer easy transactions to senior citizens, especially a large number of pension accountholders who still prefer branch banking and guide them to the use of plastic cards.

Benefits of Green Banking Practices:

Adoption of green banking practices create win-win situation for all participants. Adopting GBPs are not only helping the environment, but also getting benefited themselves by saving time and cost. It also results greater operational efficiencies, a lower vulnerability to manual errors and fraud, and cost reductions for the banks (Barry C and Murchie J, 2009). The following figure discusses about the four dimensional benefits of green banking practices:



RESULTS AND DISCUSSION:

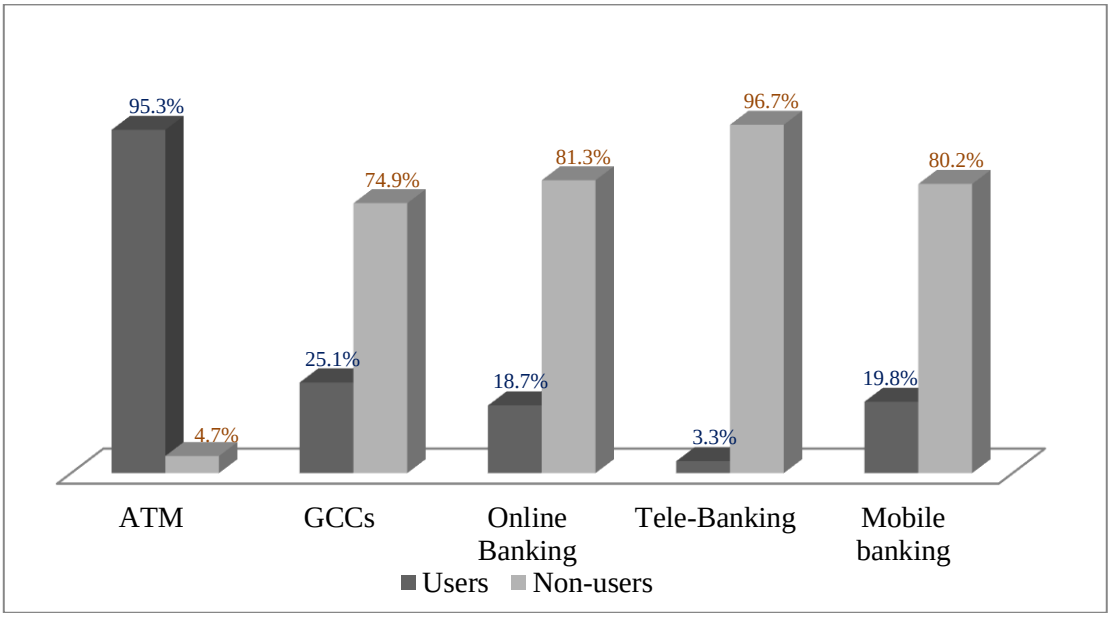
Although the banks in Assam have introduced various alternative banking delivery channels through which the customers can do banking transactions without visiting the bank branches physically, the frequency to visit the bank is still high. As much as 93 percent of respondents still visit the bank branches for various banking transactions. Majority of respondents visit bank branches for deposit and withdrawal of money. This study reveals that people are not yet fully aware about GBPs. Majority of the respondents have not even heard about it. It is observed that there is lack of knowledge even among the employees of the SBI so far as the various green practices are concerned.

Table-4: Adoption level of selected Green Banking Channels

Various Green Banking Channels	Users	Non-users	Percentage of users
ATM	463	23	95.3 %
GCCs	122	364	25.1 %
Online Banking	91	395	18.7 %
Tele-Banking	16	470	3.3 %
Mobile banking	96	390	19.8 %

Sources: Primary Data

Fig-3: Adoption level of selected Green Banking Channels



Source: Primary Data

ATM is the most popular alternative banking delivery channel whereas, Tele-banking is the least used banking practice. The fast growing mobile subscribers is the main cause of less use of telephone banking. Customers are now adopting SMS banking over Tele-banking. This study reveals that people are more concern about the security while using various green banking practices.

Table-5 shows that male respondents are more users of various green banking practices. Respondents belong to higher age group are less users of them. There is significant relation between income range of the respondents and use of GBPs. The respondents belong to higher income group are the more user of GBPs. Employment status wise it is seen that respondents getting regular monthly income are more users of GBPs. This study also reveals that higher the educational qualification of the respondents greater is the tendency to use various green banking practices.

Table-5: Category wise users of various Green Banking Practices

Categories		User of ATM			User of GCCs			User of Online Banking			User of Tele-Banking			User of Mobile Banking		
		User	Non-user	% of User	User	Non-user	% of User	User	Non-user	% of User	User	Non-user	% of User	User	Non-user	% of User
Gender	Male	297	14	95.5	84	227	27.0	63	248	20.3	14	297	4.5	65	246	20.9
	Female	166	9	94.9	38	137	21.7	28	147	16.0	2	173	1.1	31	144	17.7
Age Group	18-30 years	161	6	96.4	47	120	28.1	29	138	17.4	9	158	5.4	37	130	22.1
	30-40 years	118	3	97.5	25	96	20.7	27	94	22.3	5	116	4.1	28	93	23.1
	40-50 years	96	3	97.0	31	68	31.3	22	77	22.2	1	98	1.0	17	82	17.2
	50-60 years	72	6	92.3	17	61	21.8	12	66	15.4	0	78	0.0	13	65	16.7
	Above 60 Yrs	17	5	77.3	1	20	4.8	1	20	4.8	1	19	4.8	1	19	4.8
Income Group	0-15,000	143	17	89.3	23	137	14.4	13	147	8.1	3	157	1.9	17	143	10.6
	15,000-30,000	180	5	97.3	48	137	25.9	42	143	22.7	11	174	5.9	42	143	22.7
	30,000-40,000	75	2	97.4	25	52	32.4	18	59	23.4	1	76	1.3	14	63	18.2
	40,000-50,000	21	1	95.5	9	13	40.9	7	15	31.8	2	20	9.1	11	11	50.0
	More than 50,000	42	0	100.0	17	25	40.5	15	27	35.7	0	42	0.0	12	30	28.6
Employment Status	Permanent Employed	269	7	97.5	85	191	30.8	64	212	23.2	10	266	3.6	64	212	23.2
	Employed part time	42	1	97.7	9	34	20.9	11	32	25.6	1	42	2.3	15	28	34.9
	Self employed/ Professional	80	7	92.0	20	67	23.0	13	74	14.9	4	83	4.6	13	74	14.9
	Unemployed/ Students	55	5	91.7	6	54	10.0	2	58	3.3	0	60	0.0	3	57	5.0
	Retired person	17	3	85.0	2	18	10.0	1	19	5.0	1	19	5.0	1	19	5.0
Educational Level	Up to X	22	3	88.0	5	20	20.0	2	23	8.0	0	25	0.0	0	25	0.0
	Up to XII	78	11	87.6	13	76	14.6	3	86	3.4	0	89	0.0	6	83	6.7

Categories		User of ATM			User of GCCs			User of Online Banking			User of Tele-Banking			User of Mobile Banking		
		User	Non-user	% of User	User	Non-user	% of User	User	Non-user	% of User	User	Non-user	% of User	User	Non-user	% of User
	Graduate	194	7	96.5	52	149	25.9	41	160	20.4	9	192	4.5	50	151	24.9
	P G	134	2	98.5	38	98	27.9	37	99	27.2	5	131	3.7	30	106	22.1
	Ph D	22	0	100.0	9	13	40.9	3	19	9.1	0	22	0.0	5	17	22.7
	Others	13	0	100.0	5	8	38.5	5	8	38.5	2	11	15.4	5	8	38.5

Source: Primary data

TEST OF HYPOTHESES:

The variables of hypotheses that formulated were qualitative in nature; hence, they are tested with Chi-Square test.

1. H_0: Customers adopt green banking practices irrespective of age group.
   H_1: Use of green banking practices is influence by age group of the customers.

Age group of the respondent * User of at least one green banking practice Crosstabulation				
Count		**User of at least one green banking practice**		**Total**
		User	**Non-user**	
Age group of the respondent	18-30 years	162	5	167
	30-40 years	119	2	121
	40-50 years	96	3	99
	50-60 years	73	5	78
	Above 60 years	17	4	21
Total		**467**	**19**	**486**

Source: SPSS output from Primary Data

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.325[a]	4	.003
Likelihood Ratio	10.640	4	.031
Linear-by-Linear Association	7.331	1	.007
N of Valid Cases	486		

Source: SPSS output from Primary Data

Conclusion:

The calculative value (.003) is less than .05 (p value); therefore we reject the null hypothesis at 5% level of confidence. Obviously, it is found that use of Green Banking Practice is influenced by the age group of the customers. Respondents belong to lower age group are more users of green banking.

2. H_0: There is no significant relation between the level of computer literacy of the customers and adoption of online banking.
   H_1: Customers use online banking according to the level of computer literacy.

Level computer literacy * internet bank account Crosstabulation				
Count		**Internet Bank Account**		**Total**
		Yes	**No**	
Level computer literacy	Expert	27	44	71
	Advanced	50	100	150
	Beginners	18	168	186
	Don't know how to operate computer	0	79	79
Total		**95**	**391**	**486**

Source: SPSS output from Primary Data

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	62.484[a]	3	.000
Likelihood Ratio	74.117	3	.000
Linear-by-Linear Association	58.369	1	.000
N of Valid Cases	486		

Source: SPSS output from Primary Data

Conclusion:

Since the calculative value (.000) is less than .05 (p value), therefore we reject the null hypothesis at 5% level of significance. Therefore, it is found that use of online banking is highly influenced by the computer literacy of the customers; i.e. computer literate customers generally use online banking.

This study observes that use of online banking is not influenced by the age group of the customers. Customers irrespective of all age group use online banking. This study also observes that people are aware about the environmental benefits of using GBPs. More than 80 percent of the respondents feel green banking practices are environment friendly. People feel adopting various GBPs they can save paper as well as energy. Moreover, adoption of these alternative delivery channels instead of going to the bank physically for banking transactions also results saving of time and cost.

SWOC ANALYSIS:

While interviewing the bank employees the researcher come to know that unlike traditional brick and mortar banking, green banking practices are more convenient and user friendly in nature. Adoption of these practices results saving of paper, energy, cost, and time. Particularly, Internet banking provides more facilities to the users than any other channels. However, its main inconvenience is that it needs internet connectivity. Although ATM and GCCs are more convenient, they also have got some limitations. ATM cannot be found anywhere whereas GCCs is usable only during the banking hours at the branches till date. No bill payment facility is available through these delivery channels. Moreover, it is found that no banking practices are fully secured. Even the traditional banking is also not fully secured. There may also be fear of loss and forgery of cheque. Tele-banking and traditional banking cannot be self operated and no security alerts are getting while using them. Table-6 shows the overall benefits/facilities that can be enjoyed by using various alternative channels.

Table 6: Overall Benefits/Facilities of Various Banking Practices

Benefits/Facilities	ATM	GCCs	Internet Banking	Mobile Banking	Tele-Banking	Credit Cards	Brick & Mortar Banking
Paper Savvy	Yes	Yes	Yes	Yes	Yes	Yes	No
Energy Savvy	Yes	Yes	Yes	Yes	Yes	Yes	No
Cost Savvy	Yes	Yes	Yes	Yes	Yes	Yes	No
Time Savvy	Yes	Yes	Yes	Yes	Yes	Yes	No
Convenient	Yes	Yes	Yes	Yes	No	Yes	Yes
Anytime	Yes	No	Yes	Yes	No	Yes	No
Anywhere	No	No	Yes	Yes	Yes	No	No
Cash Handling	Yes	Yes	No	No	No	Yes	Yes
Saves the records of transactions	No	No	Yes	Yes	No	No	No
Easy Transfer of Funds	No	Yes	Yes	Yes	No	Yes	No
Fully Secured	No	No	No	No	No	No	No
Self Operation	Yes	Yes	Yes	Yes	No	Yes	No
Bill Payment	Yes	No	Yes	Yes	No	Yes	No
Security Alert	Yes	Yes	Yes	Yes	No	Yes	No

Source: Field Survey

The researcher has gone through a SWOC analysis (Kaushik A. K., 2012) on green banking practices of SBI and has found tremendous strengths and opportunities along with some weaknesses. The study realizes that the bank will have to face challenges coming from the well equipped new private banks in India.

Strengths:
After analyzing the various green banking practices adopted by SBI in Assam the study founds many strength points as follows:

- Almost all of the green banking practices are time savvy. Time is the most important factor to be chosen them
- Green banking practices save cost for the customers as well as the banks
- They are user friendly and convenient
- Green banking is a type of one click banking. Transactions can be done clicking the mouse of the computer or the mobile
- Most of the green banking practices are accessible anytime-anywhere. There is no time constraint to use them. Various practices can be done even while in the flight.
- No hush no rush banking practices. Transactions can be done at home or any places
- Most of the green practices have got wider reach to the customers
- GBPs are quicker than the conventional banking practices
- Green practices have got tremendous positive impacts on the environment. Almost all the green practices are paper and energy savvy, therefore, they reduce carbon footprint.
- Financing into the renewable energy and energy generated projects the bank can reduce carbon emission
- GBPs have earned greater customer loyalty. Practices like ATM and Green Channel Counters have able to get public faith as most of the people have started using them.
- Special offers and incentives may be offer to the customers. Therefore, customers may attract to a large extent.
- Quality customer service is possible through various electronic banking practices. Better quality and quick services offered to the customers will increase their satisfaction level.
- 24 hours account access facility to the customers. It reduces the rush of the customers to the bank.
- Banks outside India are introducing various new green banking innovations. Therefore, the SBI will have the opportunity to introduce those new green practices in India as well as in Assam.

Weaknesses:
However, the green practices of SBI have got many weaknesses to the customers as well as the banks for which implementation of those practices is still lagging behind in Assam.

- The main weakness of the SBI is that they have not able to make their customers aware about the green banking practices offered to them. Lack of awareness among the general customers has caused underutilization of the green practices offered by the bank in Assam.
- Lack of sufficient infrastructure like computer, internet connectivity, continuous power supply etc. also hampered the use of electronic banking practices in Assam. Internet failure or server down problem also sometime bothered the customers using them.
- Computer illiteracy may also be the obstacle for using some selected green banking practices
- Procedure for applying for ID and password for using services related to some green banking practices takes time
- Lack of knowledge, even among the employees of SBI is also noticed
- There are some geographical barriers to be implemented some green projects like wind mill, solar plants etc. in Assam
- Unlike other parts of the country some green practices have not been introduced till date in Assam
- Implementation of newer technology is little bit complicated and costly
- Employees need training to obtain knowledge regarding various green banking practices
- Problem of security is always there in various e-banking practices
- All the banks are not equally coming forward to introduce green practices

Opportunities:
Over the weaknesses of the bank regarding the implementation of green banking practices, there are still many opportunities for the bank to implement various green banking practices in Assam. They are as follows:

- Majority of customers are not yet using various green banking practices apart from ATMs. Therefore, there is a great opportunity to cover them within the jurisdiction of those practices.
- People are gradually becoming more conscious about environmental issues. Therefore, the bank is getting heavy scope to attract them to adopt environment friendly green banking practices.
- People of Assam are now in search of cost and time savvy banking practices. They will definitely come forward to opt for these banking practices if they are made aware about the time savvy nature of them.
- People are gradually becoming more computer literate. There will more chance to increase the volume of adoption of green banking practices in Assam.
- Number of mobile and internet users is increasing day by day which is a favorable sign to the bank for spreading of the practices like online banking and mobile banking in Assam
- It is quite a new concept which is going to be popularized in the near future.
- As the largest commercial bank in India the bank has earned the faith of the people. This will help them to popularize these practices among them.
- Implementing the Financial Inclusion Programme of the Central Government of the country the bank is getting the opportunity to introduce various alternative channels in the rural areas. This will certainly help them to spreading their green banking practices among the rural people.

Challenges:

The SBI has to face great challenges coming from the new private banks especially the foreign banks. The main challenges to face by the SBI are as follows:

- Maintaining secured IT infrastructure for banking operations. Maintaining security about the customers' accounts is the greatest challenge for the bank in Assam.
- There is a dual requirement to protect customers' privacy and protection against fraud
- Data Protection and the need for a legal and regulatory framework
- To compete with the new private banks especially the foreign banks coming out with latest sophisticated banking technologies
- To be installed high cost equipments
- Working of highly complex technology
- Alternative must be there in case of failure of system
- Employees are to be trained up
- Customers are to be aware about

Going through the SWOC analysis, the present study finds various strengths of green banking practices of SBI. Time savvy, cost savvy, anytime anywhere banking, convenient, easy and quality customer services, greater reach, quicker services, positive environmental impacts, customer loyalty, easy access to information, easy online applications etc. are the strength points of GBPs. This study also comes to know some of the major weaknesses namely lack of awareness among the customers, security threats, complicated procedures, lack of knowledge among the employees, internet failure, lack of internet connection, irregular power supply, lack of computer literacy etc. which have come to the path of implementation of those practices. It is great challenge for the SBI to concentrate on the weaknesses and to reduce them into minimum numbers.

CONCLUDING REMARKS:

So far as green banking is concerned Indian banks are far behind their counterparts from developed countries. This paper concluded that green banking clearly has positive impact on sustainable development; because, doing these practices customers can save energy, fuel, paper, water, time as well as money. However, people in Assam are yet to come forward for adoption of these practices apart from ATM due to lack of awareness. Banks will have to play a vital role to literate their customers about the using procedures of green banking practices.

After observing the various strengths, weaknesses, opportunities and challenges of the green banking practices adopted by the State bank of India, this study reveals that green banking practices have got tremendous potentialities in Assam in the present context. Though there are some inconveniences (which can be overcome through a little modifications) of green banking, but they are negligible against their overall benefits. Therefore, green practices of banks are highly feasible during these days. No one can think about banking practices without banking delivery channels like ATM today. Moreover, thinking about transfer of funds other than electronic delivery channels is almost impracticable. This study concludes with the statement that "green banking practices are not only feasible, they are now becoming essential".

RECOMMENDATIONS AND SUGGESTIONS:

From the present study, the following recommendations and suggestions have emerged**:**

- **Awareness among the Bank Employees:** It can be recommended that the State Bank of India should conduct training programmes for the employees so that they can be made aware about the benefits and using pattern of various green banking practices of the bank. Gradually it will develop a green atmosphere among the staff of the bank which would further motivate the customers too.
- **Customer Education:** There should be sufficient publications both from the bankers' side and also from the government side to educate the customers about various green practices. Customers are also to be educated enough for the proper use of those green practices so that risk can be minimized. Seminar and workshops regarding this aspect should be organized and public meetings are to be arranged by the banks to make the e-banking practices familiar among customers. Banks can display video presentations at bank branches to project the user-friendliness of their green banking practices.
- **Customer Awareness Screens on ATMs:** The bank may take the opportunity to make the customers aware about the benefits of various green banking practices through the ATM, the commonly adopted alternative banking delivery channel. The bank may display some congratulating statements like 'Congrats! You have saved paper, energy, time and money by using it' on the screens of the ATMs to attract them to use such green practice. Accordingly, these types of statements may also be displayed in the computer/laptop and mobile after using Internet banking and mobile banking respectively.
- **Role of the Government:** Central as well as state governments will have to play a vital role to make the people understand the internal meaning of the popular phase "little drops of water makes a mighty ocean" related with green practices of banks. People are to be aware about the imaginary figure of fuel that can be preserved by them saving little drops of Petrol/Diesel individually while performing every single transaction through alternative channels. Moreover, the government should support the banks by guaranteeing the loan sanctioned for green projects. Then the banks will participate in green financing more than ever.
- **Easy Methods of Operation:** It is highly recommended that banks should install easy methods for operating online banking so that more customers can make use of it easily.
- **Customers are to be more Conscious:** Every action may have two sides; one is bright and the other is dark. Besides tremendous benefits the green banking practices are also having one dark side. The dark side is the fear of security problem. However, the security of adopting various green banking practices is mostly depends upon the users. Therefore, users should become more conscious while using these banking practices. They should strictly follow the guidelines given by the banks.
- **More Stress should be given on Security on Internet:** There are unethical practices of hacking of accounts of customers come to know in the news some times. It is nothing but the breach in the security of the banks on internet. The bank should take appropriate measures in order to prevent such practices.

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