Indian Banking Sector towards a Sustainable Growth: A Paradigm Shift

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Abstract

Many countries are changing their approach because of turbulence in environmental issues like weather shocks, climate change, cost of fossils and fuels to basic infrastructure and industrial planning, desire to design more sustainable, resilient pathways to economic growth and are taking Green steps. This environmental turbulence is not giving any corporate any option to initiate the green and sustainable practices rather it is the need of today. Banks can provide important leadership for the required economic renovation that will provide new opportunities for financing and investment policies as well as portfolio management for creation of a strong and successful low carbon economy. The main objective of this paper is to deeply understand how Indian banks are responding to environmental turbulence and to provide an overview of their action in view of green banking adoption, awareness, drivers, challenges and gaps etc by a structured questionnaire supported by secondary data and reports published. The results reveal that there is a small group of banks in India that are leading the sector in tackling climate change, mapping of carbon footprints internally and externally. Internationally, there are several initiatives underway but the response of Indian banks is tardy and sluggish especially in internationally consistent disclosures and environmental protocols, which not only can spur innovation but also helps in pinpointing risk and also generate opportunity. This trend is clearly exhibited in major international initiative UNEP FI there is no single Indian signatory and only eight Indian signatory in CDP-India including HDFC Bank Ltd, IDBI Bank Ltd, IndusInd Bank Ltd, IDFC, Reliance Capital, State Bank of India, Tata Capital Ltd, Yes Bank Ltd. Main reasons and challenges faced by Indian banks which are shown by factor analysis include 'Risk of failure of business to peers' and 'Lack of RBI mandates' as main barriers to adopting sustainability. Main drivers for employing environmental and sustainable issues are environmental and social pressure from society, improved brand reputation, opportunities for innovation, The main gaps Identified by the Indian Banks requiring directives from regulatory bodies include awareness.
and consciousness on sustainability issues, international guidelines and frameworks, Sustainability reporting - formal frameworks and lucid and clear policies pertinent for banks operating in India, training and development of relevant skills within bank employees so that they can use in core banking operations. Clear policies, Formal information sharing and dissemination platforms, proper guidance can really diminish the unpleasant impacts of operating activities.

**Keywords:** Green banking, corporate social responsibility, sustainable development, low carbon economy, portfolio management, traditional banking.

**Section 1 Introduction**

Climate change is a noteworthy concern for India. But while the effects of climate change are increasingly a risk to the health, economy and the environment of the country, economists are also recognizing that there are financial rewards from controlling climate change and developing a low carbon economy. Banks can provide important leadership for the required economic transformation that will provide new opportunities for financing and investment policies as well as portfolio management for the creation of a strong and successful low carbon economy. Environmental awareness has spread like fire because we have started to see and feel the manifestation of global warming in the form of dramatic changes in weather conditions and our ecology. Each one of must understand these climate changes and its looming effect and do our bit to better the environment i.e. an excellent endeavours are needed for creating greener tomorrow. As a responsible part of the society we must by our processes, operations, people, facilities, and people must reduce the carbon footprints and preserve and conserve the environment. "Green" as a marketing communications platform is gaining a lot of attention. Every brand will have to become green to some extent because the response to climate changes is critical to the survival of future generations. Taking the environment and climate change into consideration in what we do is important. So too is extending that sentiment to some of the more unlikely facets of our daily lives. Banking and finances is probably one of the area as you might not think you can do anything about, but there's a surprising amount that you can do to ensure that your money and finances are being managed in a green, ethical way. As green initiatives sweep across the globe; more and more financial institutions are taking note and taking action.

The approach to green banking or sustainable banking as it is also known varies from organization to organization. Green banking as a term covers several different areas, but in general refers to how environmentally friendly your bank is, and how committed to green policies these institutions are. As green initiatives flounce across the globe, many banks are taking note of this and taking action. Green banking is like a normal bank, which considers all the social and environmental/ecological factors with an aim to protect and conserve the natural resources of the environment. It is also called as an ethical bank or a sustainable bank. They are controlled by the same authorities but with an additional and extended agenda toward taking care of the Earth's environment/habitats/resources. In the wake of the financial crisis a new
type of banks is budding. Banks with societal principles. Banks that apply morality of sustainability and responsibility to their business model, products and operations. As Socially Responsible Corporate Citizens (SRCC), banks have a major role and responsibility in enhancement of governmental efforts towards substantial reduction in carbon emission. Bank’s participation in sustainable development takes the form of “Green Banking”. Green banking is the bank in its business activities primarily in the provision of credit, has applied the principles of sustainability (people, profit planet). Green banking has morphs and begins to become a real movement, many large multinational banks are really accelerating the green banking movement by changing their products, philosophy and drive to sustainability across borders. Many environmental friendly practices have paved their path on the path of sustainable development like Green financing. It is the provision of credit/financing by banks to businesses that have met the requirements/environmental regulations. Environmental protection and sustainable ecological balance have surfaced as momentous themes of the twenty first century as escalating number of “green” technologies are ruling their mode into the various functional areas including banking. In an economy characterized by rising globalization industries and firms are leap to be affected by stern environmental policies. Quality of assets of banks and its profitability is affected by environmental policy impacts. Thus banks are finding it very indispensable for them to go green and play a pro-active role to take environmental and ecological aspects as part of their lending principle, which would vigor industries and other categories of borrowers to direct themselves towards better environmental management, procedure of appropriate technologies and suitable management systems. The new generation banks are having a missionary zeal to protect the planet. This is done by them both as a part of their corporate social responsibility and as a drive towards socially and ethically responsible banking. They are gradually coming to realize that there is an immediate need for a shift from ‘Profit, profit and profit’ motive to ‘planet, people and profit’ orientation for sustainable development in the long run. In fact, the concept of socially responsible banking has grown considerably with the dawn of twenty first century with the growth in green movement and surfacing of a novel generation of environmental activists.

Green banking involves endorsing and embedding environmental and social responsibility but providing excellent banking services. Green banking is also called as Ethical banking. Ethical banking starts with the aim of protecting the environment. Ethical banks consider all the factors before considering a loan - whether the project is environment friendly and has any implications in the future. India is also one of the fastest growing countries in terms of emission of green house gases. Delhi, Mumbai and Chennai are among the ten most polluted cities of the world. Some of the major industries in India that cause significant amount of pollution include, Primary Metallurgical Industries, Paper and pulp, Pesticides/insecticides, Fertilizers, Chemicals/Pharmaceuticals, Textile, etc. For these industries, the banking sector is the major source of finance. Hence the role of the banks in controlling the environmental damage is extremely important. One of the most important activities of banks is the dispensation of credit. In this context proper scrutiny of the investment projects from the environmental angle, before financing, is extremely important for the banks. The governments across the globe are highly concerned about the climate change problems. This may lead to capping of green house gas emissions by the different industries. For, this, the companies will have to adopt stringent
regulations. It will also require investments in new and efficient technology and emission reduction methodology. The banks can thus provide innovative financial products and capacity building measures to the companies. SIDBI, one of the principal lenders in the MSME sector has committed itself to achieve sustainability by incorporating Environmental and Social (E&S) aspects in its core business. The bank requires the company to obtain an NOC (No Objection Certificate) of ‘Consent to Establish’ from the respective State Pollution Control Board before the enterprise takes up the implementation of the project. This is stipulated as a precondition before sanctioning the credit. Green banking can be efficiently implemented through the use of technology. A bank can make improvement in the operational area by replacing the daily courier service with scans and electronic delivery. Employees can be sent pay checks and reimbursement checks electronically to save paper. Implementation of online banking system can also lead to an increase in customer convenience, reduction in the costs incurred by the banks and an improvement in the banking performance.

In this backdrop the main objective of this paper is:
The main objective of this paper is to deeply understand how Indian banks are responding to environmental turbulence and to provide an overview of their action in view of green banking adoption, awareness, drivers, challenges and gaps

To achieve the objectives of the study the research paper is divided into following Sections, Section I i.e. the present section gives the basic insights of green banking, climate change, international initiatives and its adoption in Indian banking sector followed by Section 11 which gives detailed review of literature, Section III gives description of data and methodology used to achieve the objectives of the study. Section IV gives Analysis and Interpretations of the results, followed by summary, conclusions and recommendations in section V. References are contained in the last section.

Section 2 Review Of Literature

This section gives an overview of the research studies conducted in India and abroad in the field of green initiatives and sustainable development. Amaeshi Kenneth M. et al in their paper titled "Financial Exclusion and Strategic Corporate Social Responsibility: A missing link in sustainable finance discourse?" examined the apparent opposing implications of financial exclusion for financial institutions in developing countries, firstly as a socio-economic factor having undesirable impacts on the profitability of the firm and secondly as a strategic source to alleviate possible risk of unkind regulatory policies to fight financial exclusion. They argued that financial institutions in developing economies can help to reduce poverty and social exclusion and fill in a gap in sustainable finance discourse by reducing financial exclusion. Hitt, Keats and DeMarie (1998) put forth that in 21st century organization success would depend upon exercising strategic leadership, building dynamic core competencies, developing human capital, effectively utilizing new manufacturing techniques and implementing novel organization structures and culture. So, there is a need to review the responsibilities of banks so that changes of 21st century can be successfully controlled. Jeucken (2001) compared 3 world regions Europe, North America and Oceania for the period 1998-2000 on the basis of
environmental and annual reports of banks and analyzed some important differences between regions, countries, and banks with regard to sustainable banking. The results showed that a defensive position towards the environmental issue is adopted by 53% of the banks and a large number of banks are unaware of the role that they can play for sustainable development. Sahu and Rajasekhar (2005) addressed some questions regarding bank credit to the agricultural sector and analyzed the data on the total outstanding credit provided by the scheduled commercial banks to the agricultural sector during 1981-2000 to find out the impact of closure of rural bank branches on the provision of agricultural credit. They concluded that the agricultural sector is uncared for due to the profit-oriented norms of the commercial banks and stipulation of credit subsidy decrease the supply of credit to agriculture sector. Lyne, Nielson, and Tierney (2009) analyzed 10,000 Multilateral Development Banks (MDBs) loans from 1980-2000 and found that social lending for health, education, and safety nets is significantly risen after 1985 and the social policy preferences of great powers' remained somewhat stagnant from 1980-2000. They expressed that International Organizations like MDBs need a full reproduction of possible member-state coalitions which includes the preferences of all member states and not just major powers. McMichael (2009) questions the new image of banks arguing that 'new wine in old bottles' will continue to supply prosperity rather than ‘feed the world’ and maintain its agricultures, especially at a time when land is being commandeered for luxury foods and bio-fuels, neither of which feed the poor. Paradoxically, the replica of poverty relics the key foundation of legitimacy of the banks. Burgess and Pande (2005) analyzed the role of a big state-led bank branch expansion program in India on rural poverty between the period of 1977 and 1990. By using deviations and regression analysis they found that branch expansion into rural unbanked locations in India considerably decreased rural poverty. Leire San Jose et al, in their paper, “Information Transparency as a Differentiation Factor of Ethical Banking in Europe: A Radical Affinity Index Approach” analyzed the prime differences between ethical banking and the rest of funding organizations i.e. banks, saving entities, credit cooperatives. They proposed an index, ‘Radical Affinity Index’ to provide a contrast among the funding organizations, which focused essentially on the responsibility of lenders with regard to the decisions on the final use of funds and the index makes it possible to compare the classification of banking groups metrically.

Amirul Afif Muhamat et al (2010) in their research paper “The Development of Ethical Banking Concept Amongst the Malaysian Islamic Banks” have set up that “Ethical banking is a concept that is gradually receiving attention and acceptance from the depositors and investors who are not only searching for a place to save and invest their money safely, but also a place where their money will be channelled to productive activities which are free from elements that contribute to the deterioration towards standard of living and environmental aspects.” Ahmad Bello Dogarawa (2006) in his research paper “An Examination of Ethical Dilemmas in the Nigerian Banking Sector”, he expressed that banks are expected to be ethical in their operations by following the principles of integrity, impartiality, reliability, transparency, social responsibility and controlling money laundering, keeping in view the need to protect the rights and interests of countless depositors, establishment of stability and confidence in financial markets and also the requirements for economic development. Tarumoy Chaudhuri (2007) in his paper “A study of ethics in business communication in the Service industry with emphasis
on banking industry” also linked business to ethics. Green (1989) exposed that a bank is responsible towards government, customers, shareholders, staff, and the community. The long-term success and reputation of the firm is affected by the company's record and its perception of its ethics. And, its commitment to ethical behavior is tested when some conflicting and complex issues are encountered. Weber and Remer (2011) described Social Banking as a way of value-driven banking that has a positive social and ecological impact at its heart, as well as its own economic sustainability. These banks attract the interest of clients looking for safe and sensible ways to deposit their money and the conventional banks also embark on the potential of a more socially oriented approach towards banking. Weber Olaf (2010) in his research paper "Social Banking: Products and Services" presented products and services that are connected to social, environmental, ethical, or sustainable finance. There are socially responsible investment (SRI) products that could have both, positive financial and social impacts. Regarding carbon finance, conventional banks create new financial products based on the Kyoto Protocol Mechanisms and also there are products and services striving to mitigate climate change by investing in projects that reduce CO2 emissions. He also emphasized on Project finance which is connected to social banking since the launch of the Equator Principles for project finance and provide guidelines to take social and environmental aspects into account in project finance. Andreas G. F. Hoepner et al (2010) in their paper “Social, Environmental, Ethical and Trust (SEET) Issues in Banking: An Overview” gave an overview of Social, Environmental, Ethical and Trust (SEET) issues in banking. According to them, interest in the above mentioned SEET issues in banking has witnessed an extemporized or even exponential rise over the last decade through certain international initiatives like the United Nations Environmental Programme Finance Initiative; the Equator Principles; and the United Nations Principles for Responsible Investment etc. Papastergiou Angelos et al examined the issue of sustainable development of banks in Greece made an analysis of the situation, using the model of Jeucken involving the international study of 34 banks. They categorized the sustainable attitude of banks in financing risks, in product development, in environmental care, and in communication-organization and evaluated the sustainability performance based on the Jeucken’s point system. Singh Hardeep et al, in their paper "An Effective & Resourceful Contribution of Green Banking towards Sustainability" highlighted that Green banking signifies encouraging environmental-friendly practices and plummeting carbon footprint from banking activities through various acts such as – online banking instead of branch banking, opening up CDs and money market accounts at online banks, instead of large multi-branch banks etc. Analysis of the concept and need of green banking in business process gave the conclusions that to make our environment human friendly and enrich the sustainability there is paramount call for creating awareness, implementing and following green banking as much as possible in today’s business world of pioneering technologies. Thombre Kailash Arjunrao, in his paper titled "The New Face of Banking: Green Banking” tries to find out the ways to Go Green through 'Green Banking'. He examined that enormous loss of biodiversity, climatic change, environmental damage, etc. are certain side effects of today's development process. Goyal and Joshi (2011) highlighted social and ethical issues such as social banking, ethical banking, green banking, global banking, rural banking and agri-banking etc. which facilitate the achievement of sustainable development of banking and finance. They concluded that Banks can act as a socially and ethically oriented organization by disbursement of loans only to those organizations, which have environmental
concerns. Even though this can slow down the economic and industrial growth but human race cannot afford the fast pace of growth at the cost of environmental depletion. Similarly, Bihari Suresh Chandra (2011) highlighted the green banking initiatives taken by the Indian banks. He described Green banking as Ethical banking as it also aims to protect the environment. Ethical banks award loan to a company only when all the environment safety standards are followed. As banks are a major source of finance to the industrial sector, they have an important role in controlling the environmental damage, and so, they need to scrutinize the effects of their lending and investment decisions to achieve the object of sustainability. Vadde Suresh in his research paper explored the importance of green banking, green banking products and providing banks in India and also highlighted green banking strategies, green mortgages and initiatives taken by Indian banks. Sahoo Pravakar et al (2008) described banking sector as a main economic agents influencing overall industrial activity and economic growth. So, while lending to the industries, the banks should take care of the environmental and ecological aspects so that industries are forced to take in account the environmental management, use of appropriate technologies and management principles. Bahl Sarita (2012) in her paper described green banking as banking conducted in selected area and technique that helps in reduction of internal carbon footprint and external carbon emissions. The research paper highlighted the means to create awareness in internal and external sub-systems and impart education to attain sustainable growth through green banking.

After reviewing the studies done in India and abroad, it is very evident that many banks are putting their best endeavors to achieve sustainable development by initiating green practices. The response to this environmental turbulence is tardy. This study is a modest attempt to clearly identify the challenges, drivers and regulatory impediments to achieve sustainable development in Indian banking sector. The results of this study will help the regulatory authorities and other social groups to come out with such good policies which will help in achieving the sustainable development and incorporate these issues in core banking solutions.

Section 3 Data And Methodology

To achieve the objectives of the study a survey and personal interviews are done with some bank managers in Delhi and NCR to collect the views and actual practices of green banking in India. A detailed investigation was done to infer the awareness and pursuance of green and sustainable practices so as to know the exact road and the distance which we have to cover on the road of sustainable development. In accordance with the objective of the study the data was collected by framing a structured questionnaire taking inputs from the financial expert’s academicians, environmental experts, industrialist, business Corporates and the existing literature followed by an interview of bank managers. After collecting bank managers’ views, practices, level of awareness and in depth analysis of green practices in their internal processes, waste management and lending mechanism, some conclusions and recommendations are drawn for making rules and regulations as per international lending norms and introducing those practices which are not followed vis a vis international green practices. Reliability of the questionnaire is tested using Cronbach’s Alpha. The One-Sample T Test was performed on the to compare the mean score of a sample and KMO and Bartlett's Test Kaiser-Meyer-Olkin (KMO)
measure of sampling adequacy is used which is a measure of sampling adequacy. It is an index used to examine the appropriateness of factor analysis. High values (between 0.5 and 1.0) indicate factor analysis is appropriate. Secondary Data is collected from the sources like RBI Web Site, Inter Net, and Right to Information Act etc.

Section 4: Analysis And Interpretations Of Green Banking In India

This section clearly outlines the detailed analysis of examination of green practices and sustainable practices of Indian banks Vis-a-Vis international best banking practices.

1. International Initiatives

Internationally, there are several initiatives underway, out of which overarching initiative is the United Nations Environment Programme Finance Initiative (UNEP Fi). There are other major international initiatives also which include the Global Reporting Initiative (GRI), Collavecchio Declaration on Financial institution, London Principles etc, which have helped in increasing awareness levels as regards CSR and SD. The focal point of all these initiatives is the articulation of civil society expectation from the financial sector role and responsibility towards sustainable development. The term “triple bottom line” is coined by John Elkington to describe social, environmental, financial accounting and sustainable development. On line of these initiatives a survey of Indian banks is done, the results of which are as follows:

a) UNEP Fi: It is a major international initiative involving the financial sector in sustainable development. There are more than 200 financial institutions worldwide who are a signatory to this international initiative, but there is no single bank in India which among these signatories.

b) The Equator Principles:

The Equator Principles (EPs) are a credit risk management framework for determining, assessing and managing environmental and social risk in project finance transactions. The EPs are adopted voluntarily by FIs and are applied where total project capital costs exceed $10 million. Based on the IFC Performance Standards on social and environmental sustainability and on the World Bank Group Environmental, Health, and Safety Guidelines, the EPs are intended to serve as a common baseline and framework for the implementation by each adopting institution of its own internal, social and environmental policies, procedures and standards related to its project financing activities. Equator Principles (EPs) seem perched to make a key involvement towards sustainable project finance lending and ultimately, protect investors’ interests.

Yes Bank India is one of the signatory to this international initiative and has set up a specialized investment advisory, the Sustainable Investment Banking division, which promotes investments in clean technology, renewable energy, water management, and distributed energy, especially amongst the SME sector. The Bank also acts as the Exclusive Country Advisor for a number of partnerships with foreign private equity firms, including a collaboration seeking investments
across India, Sri Lanka, Nepal and Bangladesh. Finally, the Bank has initiated a socially and environmentally responsible equity investment programme, Tatva, which is actively looking to invest equity in early-stage, small-and-growing enterprises that profitably deliver a positive ‘people and planet’ impact.

**HSBC Group**, As a part of its effort to protect the environment has established a series of environmental targets to be met on an annual basis, involving the reduction of waste, CO2 emissions, and energy and water consumption. HSBC has separate targets for data centres, paper consumption and business air travel. The purposes of the targets are to drive efficiency, reduce its operational impact on the environment and generate cost savings. Performance is measured annually, and Chief Operating Officers are accountable for environmental performance through tough targets in their annual performance scorecards. It has different point programmes aimed at improving its environmental efficiency wherever it has a presence around the world. These programmes include improving the energy efficiency of its data centres, ensuring new buildings achieve leading environmental performance standards (Argentina, Canada, China, Egypt, Hong Kong, **India**, Mexico, USA, United Kingdom), using intelligent software to automatically power down personal computers and the micro-generation of energy using solar panels and wind turbines (Brazil, France, Malta, Mexico, United Kingdom).

Hence Indian banks have yet to commit to the Equator Principles a set of environmental and social guidelines to which more than 70 banks and financial institutions worldwide have become signatories. “There is certainly a lack of awareness of the Equator Principles in India. Leading banks are vaguely conscious of the guidelines, however, the public sector is waiting to be led by the Reserve Bank of India and the private sector banks seem to only want to commit if there is regulation or financial incentive,” it is important that they recognize their responsibilities as global corporate citizens.

Banks in India have significant influence over the safeguarding of fragile social groups and environments in Asia. At this time they must seriously consider their attitudes towards responsible lending both nationally and globally.”

c) **Carbon Disclosure Project (CDP):**

Carbon Disclosure Project (CDP-India) administers annual questionnaires to major companies and related entities on behalf of 655 signatory investors and asset managers who are responsible for the management and investment of US DOLLARS 78 trillion, in order to highlight the emerging fiduciary and other risk of climate change. It requires public disclosure of (GHG) Emission and other GHG management and reduction practices and strategies for customers, thought leaders in their investment and policy decisions. Responses to the CDP disclosures are ranked and score by an authorized third party, such as PWC, E&Y, KPMG , NEXT GEN AND IBM, and key trends are reported in their reports. It has been active in India since 2008 with the help of our partners, CII-ITC centre for Excellence for sustainable development and WWF India.
Table 1: Showing Sample Of CDP Signatories Of India And Worldwide

<table>
<thead>
<tr>
<th>INDIAN-SIGNATORIES</th>
<th>INTERNATIONAL SIGNATORIES</th>
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<tbody>
<tr>
<td>HDFC BANK LTD</td>
<td>AVIVA</td>
</tr>
<tr>
<td>IDBI BANK LTD</td>
<td>BANK OF AMERICA MERRILL LYNCH</td>
</tr>
<tr>
<td>INDUSLND BANK LTD</td>
<td>BARCLAYS</td>
</tr>
<tr>
<td>IDFC</td>
<td>DEUTSCHE BANK</td>
</tr>
<tr>
<td>RELIANCE CAPITAL LTD</td>
<td>GOLDMAN SACHS GROUP INC</td>
</tr>
<tr>
<td>STATE BANK OF INDIA</td>
<td>HSBC HOLDINGS PLC</td>
</tr>
<tr>
<td>TATA CAPITAL LTD</td>
<td>JPMORGAN CHASE AND CO</td>
</tr>
<tr>
<td>YES BANK LTD</td>
<td>STANDARD CHarterED</td>
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</table>

Table 1 exhibited above shows the list of Indian and international entities which are a part of CDP signatories. The response to this international initiative is also less as only eight signatories are there till now. Banks have to think more responsibly as regards this disclosure, as this impels innovation. It not only helps in pinpoint risk but also generate opportunities.

2) Major Impediments and Challenges of Adoption of Sustainability Policies Faced By Indian Banks:

To clearly identify the major impediments and major uphold factors in adoption of sustainability in core banking operations factor analysis was done and KMO and Bartlett’s Test Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is used which is a measure of sampling adequacy. It is an index used to examine the appropriateness of factor analysis. High values (between 0.5 and 1.0) indicate factor analysis is appropriate. Values below 0.5 imply that factor analysis may not be appropriate. As shown in the table below: The result reveal that p value is significant and < 0.05 which shows that sample is adequate and its value is .789 which is in the acceptable limit.

<table>
<thead>
<tr>
<th>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</th>
<th>.789**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bartlett’s Test of Sphericity</td>
<td>.80303</td>
</tr>
<tr>
<td>Approx. Chi-Square</td>
<td>15</td>
</tr>
<tr>
<td>Df</td>
<td>.000</td>
</tr>
<tr>
<td>Sig.</td>
<td></td>
</tr>
</tbody>
</table>

Reliability comes to the forefront when variables developed from summated scales are used as predictor components in objective models. Since summated scales are an assembly of interrelated items designed to measure underlying constructs, it is very important to know whether the same set of items would elicit the same responses if the same questions are recast and re-administered to the same respondents. Variables derived from test instruments are declared to be reliable only when they provide stable and reliable responses over a repeated administration of the test. Cronbach’s alpha is an index of reliability associated with the
variation accounted for by the true score of the "underlying construct." Construct is the hypothetical variable that is being measured, 0.7 to be an acceptable reliability coefficient but lower thresholds are ignored. Reliability of scales which are taken is tested and the result exhibit reliability as shown the Cronbach’s Alpha i.e .776 which is unacceptable range.

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
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<tr>
<td>.776</td>
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The **One-Sample T Test** was performed on the to compare the mean score of a sample to a known value. Usually, the known value is a population mean. This value is coming to be significant i.e P-value < 0.05.

### One-Sample Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>T</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>15.755</td>
<td>30</td>
<td>.000**</td>
<td>1.41935</td>
<td>1.2354 - 1.6033</td>
</tr>
</tbody>
</table>

The **normality of data** is tested as this a mandatory thing to apply any test, The results reveal that the data is normal as basic parameters of skewness and kurtosis are well in range and limit, as shown below

<table>
<thead>
<tr>
<th></th>
<th>Valid</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skewness</td>
<td></td>
<td>-1.347</td>
</tr>
<tr>
<td>Std. Error of Skewness</td>
<td>.456</td>
<td></td>
</tr>
<tr>
<td>Kurtosis</td>
<td>.482</td>
<td></td>
</tr>
<tr>
<td>Std. Error of Kurtosis</td>
<td>.887</td>
<td></td>
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</tbody>
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The following list is tainted by major banks and is listed in order of the importance highlighted by the Indian banks. using factor analysis

**Main Reasons and Challenges Faced By Indian Banks**

- Majority of banks identified 'Risk of failure of business to peers';
- 'Lack of RBI mandates' as main barriers to adopting sustainability.
Other Reasons

- unavailability of skilled employees;
- Insufficient budgets to train employees;
- Complex reporting frameworks
- Lack of interest shown by customers and investors.

3) Main Drivers for employing Environmental and sustainable issues

The main drivers for employing environmental and social initiatives included:
- Environmental and social pressure from society
- Improved brand reputation,
- Opportunities for innovation
- Improved stakeholder relations
- Preparedness for future compliance requirements in order of majority.

4) The Main Gaps Identified by the Indian Banks requiring directives from regulatory bodies

The results of one to one meetings and group meetings led to the identification of some significant gaps, which require directives and commands from regulatory bodies. These include:
- Awareness and consciousness on sustainability issues, international guidelines and frameworks.
- Sustainability reporting - formal frameworks and lucid and clear policies pertinent for banks operating in India.
- Training and development of relevant skills within bank employees so that they can use in core banking operations.
- Clear policies are required to altering the present management systems to incorporate sustainability issues.
- Formal information sharing and dissemination platforms need to be defined properly.
- Guidance / workshops / training programmes for banks are necessary on CSR focus areas.

To address each of these gaps, Reserve Bank of India should come out with constructive and productive policy recommendations to facilitate and assist the evolution from the existing conventional business models towards comprehensive and sustainable practices to realize the goal of sustainable economic development.

Section 5 Summary Conclusions And Recommendations Of The Study

Climate change is a noteworthy concern for India. But while the effects of climate change are increasingly a risk to the health, economy and the environment of the country, economists are also recognizing that there are financial rewards from controlling climate change and developing a low carbon economy. Banks can provide important leadership for the required
economic transformation that will provide new opportunities for financing and investment policies as well as portfolio management for the creation of a strong and successful low carbon economy. Green banking is like a normal bank, which considers all the social and environmental/ecological factors with an aim to protect and conserve the natural resources of the environment. It is also called as an ethical bank or a sustainable bank. They are controlled by the same authorities but with an additional and extended agenda toward taking care of the Earth's environment/habitats/resources. In the wake of the financial crisis a new type of banks is budding i.e. Banks with societal principles. Banks that apply morality of sustainability and responsibility to their business model, products and operations. As Socially Responsible Corporate Citizens (SRCC), banks have a major role and responsibility in enhancement of governmental efforts towards substantial reduction in carbon emission.

In comparison to their global peers, Indian banks have largely been slow in responding to sustainability concerns and issues, despite of their exposure to associated risks and the opportunity to create new business avenues. The current preparedness of banks is not adequate to face the colossal confront of sustainability issues. Some policy recommendations of Reserve Bank of India (RBI) have to come a way forward for addressing gaps and thereby mainstreaming sustainability among banks in India as the survey results exhibit that PSBs operating in India are ill prepared as far as sustainability issues are concerned. Majority of banks identified 'Risk of failure of business to peers' and 'Lack of RBI mandates' as main barriers to adopting sustainability. The other reasons identified by them are unavailability of skilled employees; Insufficient budgets to train employees; Complex reporting frameworks and Lack of interest shown by customers and investors. The main drivers for employing environmental and social initiatives included improved brand reputation, opportunities for innovation and improved stakeholder relations and Preparedness for future compliance requirements in order of majority.

**Recommendations**

- Banks have to increase their speed in embedding the issues of climate change and act in more responsible manner as sustainable finance promotion is the call of the hour as it identifies not only the financial growth but also takes explicit account of environmental, social and governance (ESG) issues in investment process.
- On the road of CSR also the growth of Indian banks is less hence, CSR supporting measures should be strictly dealt and implemented.
- There is a complete paucity of RBI mandates which is a major bottleneck in pursuance of sustainable growth especially in PSBs operating in India.
- Environmental authorities have to be more serious and stricter about adoption of sustainability issue.
- Awareness on sustainability issues, international guidelines and frameworks needs urgent attention as this will lead to formulation of more responsible policies embedding sustainability issues. This will lead to highlighting of global efforts and will clearly exhibit where we are lacking behind and the areas which need improvement.
- Sustainability reporting is also one area which is facing paucity in Indian banking sector, more formal frameworks and clear policies are required for reporting in a sustainable way.
- There is a big problem amongst the bankers that many people are not well trained and equipped with the modern automated system as a result of which the results are not as we are looking for. Hence training and development of relevant skills within bank employees are important to speed up the reforms.
- Development of more formal information sharing and dissemination platforms can really make a difference by virtue of which important information can be shared and implemented in the system.
- Current management system needs a paradigm change to synthesise sustainable issues in the system.
- RBI has to play more proactive role by passing the mandates, rules, regulations to tackle this critical issue of climate change.

Section 6 References

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