GREEN BANKING AWARENESS, CHALLENGES AND SUSTAINABILITY IN PAKISTAN

Research Study

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GREEN BANKING

1. Introduction:

The banking industry influences economic growth and development, both in terms of quality and quantity, leading to a change in the nature of economic growth. In the present era, banking sector plays a crucial role in promoting environmentally sustainable and socially responsible investment.

Environment sustainability is the design and provision of products and services that incorporate and promote waste minimization, effective use and reuse of resources. Its aim is to protect the environment for the benefit of current and future generations. According to the United Nations, sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development and preservation of environment are now recognized globally as overriding imperatives to protect our planet from the ravages inflicted on it by mankind. Various global initiatives are underway to counter the ill-effects of development that we encounter today such as carbon foot print, global warming, climate change, fickle weather, floods, droughts, pollution, high greenhouse gas emissions, etc.

Banks may not be the polluters themselves but they usually have a banking relationship with some companies/investment projects and public at large that are polluters or could be in future. Banks also contribute to ecological footprint directly and indirectly through investment/lending in their customer enterprises. As such they need to play a key role in optimizing /reducing the carbon footprint. The banking of this kind can be termed as “Green Banking”. Change is the need of the hour for survival in all spheres. Banks can provide important leadership for the required economic innovation that will provide new opportunities for financing and investment policies.

The importance of green banking stems from a number of factors. The dominant one is definitely the very role that banks are called to play in the modern economy worldwide. Banks are the main providers of liquidity and credit to the business, to the individuals and to the public sector. In this role they have enormous capacity to influence all types of actors in the economy. In this respect banks cannot stay aside of the processes that are taking place at macroeconomic policy level. For the last around 20 years, the awareness of climate change and pollution has been gaining strength due to the adverse effects from these phenomena and the increasing research activity dedicated to them. The findings of numerous research papers prove that climate change is due to human activities causing pollution. Thus the vital importance of the fight with climate change and pollution came to the forefront not only through the work of researchers but through policymakers as well.

Currently there is common understanding that efforts at all levels are needed to ensure that humanity is not to be destroyed in the near future by its own actions. This kind of thinking was reflected in the targets that many countries in the world, among which the United Kingdom, Australia, and the European Union as a whole placed on themselves with the aim to manage climate change and pollution. Macro policy has been defining specific targets at micro and macro level with the aim of attaining constraint of spreading of the already existing adverse effects from climate change and pollution. As a natural result from this banks have started to offer products and services that match the needs of the various types of economic agents. Simultaneously, banks commenced ever-widening staff awareness, public relations (PR) and marketing activities with the aim to position themselves as modern, progressive, responsible, which started to coincide more and more with being "green", i.e. showing a responsible attitude towards everything that has to do with the preservation of environment.

2. Definitions of Green Banking

There is no universally accepted definition of the term "Green Banking", although it has been widely used both in scientific and in popular literature, outlining its precise meaning and scope. For the past ten years, there are numerous scientific publications related to the importance of various aspects of green business – green marketing, corporate entrepreneurship as a means to achieving sustainable banking, etc.

2.1. Green banking is "any form of banking from which the country and nation gets environmental benefits. A conventional bank becomes a green bank by directing its core operations toward the betterment of environment."

2.2. An effort by the banks to make the industries grow green and in the process restores the natural environment."

2.3. Green banking "…indicates endorsing environment-friendly practices and reducing carbon footprint from banking activities."

Green banking is banking in all its business aspects (deposit gathering, credit disbursement, trade finance, leasing operations, mutual fund s and custodian services, etc.) which is oriented towards preservation of environment.

2.4. Green banking in its essence is actually the provision of loans, deposits and other banking products (mutual funds and other investment products, custodian services etc.) that would have positive impact on the environment. Activities such as introduction of paperless statements, electronic communication with clients, internal efforts to save energy, paper and toners, various internal campaigns targeting the building and sustaining of staff awareness vis-à-vis environmental issues green banking activities. This is true because all these efforts, though highly important for the organization and for the society, do not represent core banking practices, and could be, and are deployed in many other types of organizations, despite the fact that the latter are not banks. Green Banking means combining operational improvements, technologies and changing client habits in banking business. Adoption of Green Banking practices will not only be useful for environment, but also benefit in greater operational efficiency, a lower vulnerability to manual errors, fraud, and cost reductions in banking activities. The term "green banking" is gaining more and more popularity in recent years all over the world. It is becoming popular part of PR strategy of many financial institutions, but apart from that behind the advertisement there are initiatives and efforts within the banks to justify it.

One of the reasons why the understanding and usage of the term green banking is not related to the core banking activities is that these practices are comparatively easy to put in place, and banks use the information on them for PR purposed. At the same time the implementation of product lines targeting the specific and wide-raging environmental needs, required huge efforts inside the bank, level of education and awareness especially among corporate and risk officers, and last but not least, a lot of time for implementation. Another important hurdle for the fast deployment of such kind of products and services is the fact that oftentimes they are related to accepting higher financial risks on the part of the banks, or/and lower interest rate margin, and in certain cases, even customer attrition (due to increased requirements from the customers which are required to ensure that they operate in an environmentally-friendly way). Also, this is against the interests not only of the bank as a whole but also of the individuals who are supposed to sell those products and services, and whose bonuses depend on the income they have generated.

3. Concept of Green Banking

The concept of Green banking is to promote environment friendly practices and reducing carbon footprint from banking activities. This comes in many forms viz., using online banking instead of branch banking, paying bills online instead of mailing them, opening of commercial deposits and money market accounts in online banks etc.

Green banking refers to the efficient and effective use of computers, printers and servers to optimize the use of energy and waste-less paper. One of the important ways in which banks can implement green banking is by promoting the use of online banking among customers. Online banking helps reduce paperwork and the need to travel to bank branches. This positively impacts the environment. This facility is beneficial for banks, as it reduces operational costs and increases efficiency.

This concept of “Green Banking” would be mutually beneficial to the banks, industries and the overall economy. Green banking will also ensure the greening of the industries but it will also facilitate in improving the asset quality of the banks in future.

4. Factors Effecting Environment and Green Banking

Green banker is a socially responsible banker, while green banking is an environmental banking which helps protect environment although it has high adoption cost. Also green banking and Islamic banking are interlinked as Islam support natural resource savings, cleanliness, and social responsibility are also the motto of GB. Regarding the effective green banking strategies, banker seems that reducing paper saving is the appropriate strategy followed by the sponsoring tree plantations. Following are some of factors which may affect environment.

4.1. Carbon footprint

Carbon footprint is a measure of an organization’s or entity’s impact on the environment in terms of the amount of greenhouse gases produced, measured in units of carbon dioxide equivalent.

4.2. Global warming

Global warming is a measure of rising average temperature of Earth’s atmosphere and oceans and its projected continuation. In the last 100 years, the Earth’s average surface temperature increased by about 0.80C (1.4 F) with about two-thirds of the increase occurring over in the last three decades. Most global warming is caused by increasing concentrations of greenhouse gases produced by human activities such as deforestation and burning fossil fuels.

4.3. Climate change

Climate change is the change in temperature and weather patterns due to certain human activity like burning fossil fuels. The changes include global average air and ocean temperature, widespread melting of snow and ice and rising global sea levels. Therefore, a common thread running across all these initiatives is the focus on reducing the demand for fossil fuels by implementing the 3R's viz. Reduce, Reuse and Recycle.

5. Characteristics & Features of Green Banking

Depending on the state, a green bank may conform to a variety of forms, utilize many different public funds, and create a diverse array of financial products. Banks may utilize financial tools such as long-term and low interest rate loans; revolving loan funds, insurance products and low-cost public investments or it may design new financial products. Ultimately, all green banks will exhibit several common characteristics:

- Stimulate demand by covering 100% of the upfront costs with a mixture of public and private financing.
- Leverage public funds by attracting much greater private investment for clean energy and markets.
- Recycle public capital so as to expand green investment and leave taxpayers unharmed.
- Scale-up clean energy solutions as fast as possible, maximizing clean electricity and efficiency gains.

6. Evolution of Green Banking

The concept of Green banking was founded in 2009 in the state of Florida. Based in Eustis and Clermont, Florida, USA, First Green Banking is a customer-driven community bank providing personalized service, localized decision- making and proven technology by promoting a positive environment that is acceptable to the community.

State Bank the central bank of Pakistan has introduced Green Banking Guidelines (GBGs) and has given banks and development finance institutions a year to implement them. Recent Green Banking initiatives include a push for solar powered ATM'S , paper less banking for customers, clean energy projects and the building of Wind mills in rural Pakistan.

7. Scope of Green Banking

The scope of green banking, as understood by most authors, could be delineated on the basis of the activities of the banks related to the environment. These activities could be divided into two groups, related to the two types of aspects and hence the two types of impacts on the environment: direct and indirect ones.

7.1. Direct Impact on Environment

The direct aspects and consequently – impacts - are related to the usage of resources by the banks for the purpose of its operations – electricity, oil, heating, paper, toners, and others, and the waste related to their consumption, where relevant.

7.2. Indirect Impact on Environment

According to the opinion of the authors, the indirect impact is actually the important one and to them the attention of the bank management should be concentrated. Indirect impacts are related to all kinds of activities through which banks can indirectly have influence on the environment. Under this category fall:

- The relations with the clients of the banks and the conditions which the banks place on them in return for granting loans and other services as well as
- The staff awareness, PR and marketing activities that the bank organizes which have direct relation to the environment.

8. Environmental Risk Indicators

Green banking implies not only the creation of green products, but also the incorporation of environmental indicators in the risk assessment and control process. This requires the existence of a pertinent environmental risk management procedure, where the following need to be defined:

- Environmental risk assessment method
- Importance of environmental risk assessment outcome for the loan approval
- Environmental risk follow-up upon loan disbursement
- Measures that are going to be taken by the bank in case the client proves to fall out of compliance with the environmental requirements of the bank related to his risk performance
- Roles and responsibilities related to environmental risk management in the bank
- Reporting to the top management on the exposure the loan portfolio has to this risk, etc.

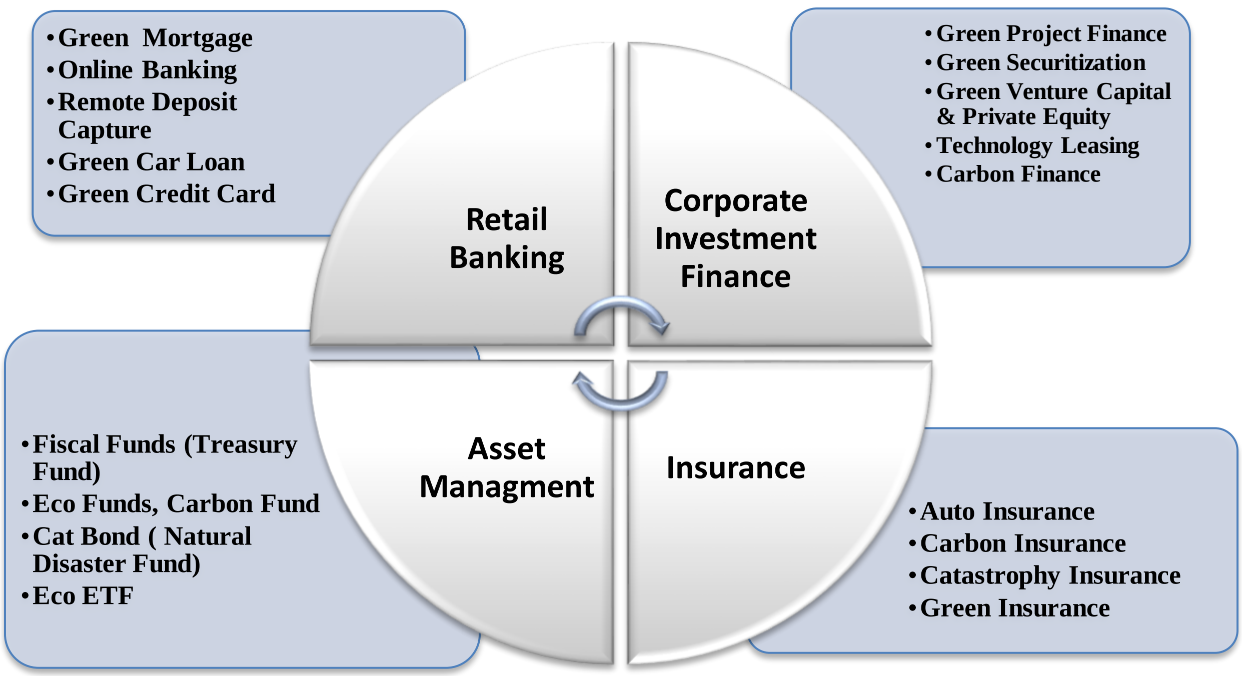
By the implementation of such a procedure, the bank, even if it does not support a line of green products, actually act as a green bank, because it places specific requirement on its client to abide by certain environmental criteria. In such a way, depending on the strictness of these criteria, the bank has the power to restrict access to finance to polluting industries and to give preferential terms to businesses that are environmentally-friendly.

9. Elements of Risks Evolve in Implication of Green Banking

The reason behind Banks hesitation of doing GB is because at present many industries have medium or high environmental risks, and some of the most lucrative industries are actually the polluting ones. The banks do not wish to deprive themselves of the income these industries have the potential to generate. To mention a few the oil industry is polluting, the extracting industries are polluting, almost all kinds of processing industries are polluting. If banks restrict access to finance those industries, where could they compensate the lost income from? And also, this would pose serious problems to these industries as they would experience problems finding funds for their operation. Another important side effect from restricting access to banking funds could possibly be the increased difficulty for those industries to tap alternative sources of funds for example by issuing securities. The fact that banks are not willing to finance certain activities gives signals to the market that these activities pose risks or are not reliable and this might make investors cautious buying such securities or they could withdraw funds already invested in such securities.

10. Green Banking Financial Products:

Green banking helps to create effective and far-reaching market-based solutions to address a range of environmental problems, including climate change, deforestation, air quality issues and biodiversity loss, while at the same time identifying and securing that benefit customers. Some of Green banking financial products includes: Green mortgages, online banking, remote deposit capture, green car loans and green credit cards. Following grid shows different Green banking opportunities for banks to work in different categories.



10.1. Green Mortgages:

In general Green mortgages also known as Energy Efficient Mortgages (EEM'S), provide retail customers with considerably low interest rates compare market rates for clients who purchase new energy efficient homes or invest in retrofits, energy efficient appliances or green power. Banks can also choose to provide green mortgages by covering the cost of switching a house from conventional to green power, as well as include this customer benefit when marketing the product.

10.2. Online Banking:

Online banking, also known as internet banking, e-banking or virtual banking, is an electronic payment system that enables customers of a bank or other financial institution to conduct a range of financial transactions through the financial institution's website.

10.3. Remote Deposit Capture:

Remote deposit capture (RDC) is a system that allows a customer to scan cheques remotely and transmit the cheques images to a bank for deposit, usually via an encrypted Internet connection. When the bank receives a cheque image from the customer, it posts the deposit to the customer's account and makes the funds available based upon the customer's particular availability schedule. Banks typically offer Remote Deposit Capture to business customers rather than to individuals.

10.4. Green Car Loans:

Many green car loans encourage the purchase of cars for below market interest rates, which demonstrate higher fuel efficiency.

10.5. Green Credit Cards:

A green credit card allows cardholders to earn rewards or points which can be redeemed for contributions to eco-friendly charitable organizations. These cards offer an excellent incentive for consumers to use their green card for their expensive purchases.

11. Green Banking Opportunities:

A Green Bank requires each of its functional units and activities to be Green- environmentally friendly and help to improve environmental sustainability. Several opportunities are available for banks to go green their functional units and activities. Key amongst them are:

11.1. Green Banking Services

Banks are developing new products and services that respond to customers demand for sustainable choices. Following are some of the options that banks should offer to their customers:

- Electronic and mobile banking facilitates customers to perform most of their bank needs anytime, anywhere.
- Automatic payments reduce the need to write and send cheques by mail.
- Paperless statements, product information guides and annual reports to customers and stakeholders.
- Offering and promoting mutual funds that focus investment in 'Green' companies.
- Credit cards and debit cards can be used while making the payment of various expenses without carrying money.
- Mobile banking is used for performing balance cheques, account transactions, payments, credit appliances etc., via mobile phone or Personal Digital Assistant (PDA).

11.2. Supply Chain Management (SCM)

SCM is the management of the flow of goods and services. It includes the movement and storage of raw materials, work-in-process inventory, and finished goods from point –of- origin to point-of-consumption. Interconnected or interlinked networks, channels and node businesses are involved in the provision of products and services required by end customers in a supply chain.

- Adopt techniques and plans to minimize inventory and wasted freight.
- Adopt networked design using a carbon foot print.

11.3. Enterprise Resource Management (ERM)

ERM is a category of business-management software, typically a suite of integrated applications that an organization can use to collect, store, manage and interpret data from many business activities, including product planning, purchase, manufacturing or service delivery ,marketing and sales, inventory management, shipping and payment.

- It facilitates paper less transactions.
- Adopt techniques for workforce and parts optimization as well as intelligent device management.

11.4. Customer Relationship Management (CRM)

Customer relationship management is an approach to managing a company's interaction with current and future customers. It tries to analyze data about customers history with a company, to improve business relationships with customers, specifically focusing on customer retention, and ultimately to drive sales growth.

One important aspect of the CRM approach is the systems of CRM that compile information from a range of different communication channels including a company's website, telephone, email, live chat, marketing materials, social media, and more. Through the CRM approach and the systems used to facilitate CRM, businesses learn more about their target audiences and how to best cater to their needs.

11.5. Sourcing & Procurement:

In business, the term sourcing refers to a number of procurement practices, aimed at finding, evaluating and engaging suppliers for acquiring goods and services. Outsourcing is the process of contracting a business function to someone else, select vendors for sustainability rating for their products, services and operations.

11.6. Product Life Cycle Management:

In industry, PLC is the process of managing the entire lifecycle of a product from inception, through engineering design and manufacture, to service and disposal of manufactured products.

- Design and offer banking products & services in such a way that consume less resources and energy and thereby reduce carbon foot print.
- Implement effective systems for product end- of- life management that have minimal impact on environment.

11.7. Opportunities in Agricultural Sector of Pakistan

The opportunities for financing environmentally friendly activities exist in almost all sectors and sizes of businesses and households. For example,

a) The agricultural clients may be financed for farming techniques based on lesser use of chemical fertilizers & pesticides, efficient water usage, drought resistant and water resistant crops etc.
b) The consumers may be financed for installation of energy and water efficient equipments in households etc.
c) The SMEs may be financed for modern resource efficient technologies as alternatives to traditional technologies etc.

d) The corporate clients may develop and produce equipments for resource efficiency and waste disposal etc.

11.7.1. Water Conservation in Agriculture: The banks/DFIs should explore ways and means to encourage optimal usage of renewable water resources and adoption of modern efficient agriculture water management techniques (Drip/Trickle Irrigation System & Sprinkler Irrigation System) through their working capital and term finance facilities to farm and non-farm sector activities in line with the Guidelines for Efficient Agriculture Water Management Financing issued by Agricultural Credit & Microfinance Department of SBP.

12. Challenges of Green Banking

While adopting green banking practices, the banks would face the following challenges:

12.1. Reputational Risk:

If banks are involved in those projects which are damaging the environment they are prone lose their reputation. There are few cases where environmental management system has resulted in cost saving, increase in bond value.

12.2. Diversification Problem:

Green banks restrict their business transaction to those business entities who qualify screening process done by green banks. With limited number of customers they will have a smaller base to support them.

12.3. Start-up Phase:

Many banks in green business are very new and are in start-up phase. Generally it takes 3 to4 years for a bank to start making money. Thus it does not help banks during recession.

12.4. Credit Risk:

Credit risk arises due to lending to those customers whose businesses are affected by the cost of pollution, change in environmental regulation and new requirements of emission level.

12.5. High operating cost:

Green bank requires talented and experienced staff to provide proper services to customers. Experienced loan officers are needed, they give additional experience in dealing with green business and customers.

13. Green Banking Strategies

Green banking activities involve two major approaches i.e., green transformation of internal operation and environmentally responsible financing.

13.1. Green Banking through internal operations:

It means all bank should adopt green banking activities in their day to day operations. These include adopting appropriate ways to use renewable energy, automation and minimizing their carbon footprint. In the past few years, all the banks have incorporated paperless technologies in their internal operations to help the environment as well as provide their customers efficient and better services. In their day-to-day business operations, banks ordinarily generate carbon emissions through the usage of paper, electricity, stationary, lighting, air conditioning and electronic equipment. Green banking internal operations include on line account opening, online banking, mobile banking, net banking, electronic fund transfer as well as the use of ATM, cash and cheque deposit machines, credit and debit cards, e-statement SMS alert, mini image statement etc.

13.2. Green Finance

Finance refers to banks that provide financial assistance to environmentally responsible projects. The purpose is to provide financial assistance to green technology and pollution reduction projects to reduce external carbon emissions. The bank support industries that are resource efficient and emit low carbon footprint. Priority is given to financing eco-friendly business activities and energy efficient industries such as waste water treatment plant, waste disposal plants, bio-gas plants, renewable energy projects, hybrid car projects and so on.

13.3. Environmental Management by Banking Institutions

Now a day, most of the commercial lending process in different parts of the world scrutinizes projects with a set of tools by incorporating environmental concerns in their day-to-day business. The financial institutions should encourage projects which take care of the following aspects while financing them.

There should be an Environmental Impact Assessment (EIA) of each project recommending the measures needed to prevent, minimize and mitigate the environmental negative impact before financing the projects. While investing or funding the projects, the financial institutions should assess the sensitive issues like vulnerable groups; involuntary displacement etc and projects should be evaluated in terms of environmentally important areas including wetlands, forests, grasslands and other natural habitats.

Banking institutions need to evaluate the value of real property and the potential environmental liability associated with the real property. Therefore, the banks should have right to inspect the property or to have an environmental audit performed through the life of the loan.

Banks also need to monitor post transaction for the ideal environmental risk management program during the project implementation and operation. There should be physical inspections of production, resources, training and support, environmental liability, audit programs etc.

The next round of evaluation includes loan structuring, credit approval, and credit review and loan management. Further banks have annual audits, quarterly environmental compliance certificate from the independent third party and also from the government.

Further the banks can introduce green bank loans and products like:

- Investing in projects related to recycling, farming, waste disposal through reduced interest rates on loans to home owners for installing a solar energy system.
- Providing option for customers to invest in environmentally friendly banking products.
- Investing in resources that combine ecological concerns and social concerns.

14. Measures to Encourage Green Banking:

Banks are responsible corporate citizens. Banks believe that every small “GREEN” step taken today would go a long way in building a greener future and that each one of them can work towards better global environment. The purpose is to provide cost efficient automated channels and to build awareness and consciousness of environment, nation and society. Green banking is really a good way for people to get more awareness about global warming; each businessman will contribute a lot to the environment and make this earth a better place to live. Until a few years ago, most traditional banks did not practice green banking or actively seek investment opportunities in environmentally-friendly sectors or businesses. Only recently have these strategies become more prevalent, not only among smaller alternative and cooperative banks, but also among diversified financial service providers, asset management firms and insurance companies.

- Educate through the bank’s intranet and public websites.
- Construct a website and spread the news.
- Participate in events and communicate through press.
- Setup outlets to promote Green business.
- Carbon foot print reduction by mass transportation and energy consciousness.
- Impart education through E- learning programs.

15. Green Banking Promote Financing in Pakistan

Before pondering over any questions related to green finance, it is important to explore the background about what has happened during the past three decades in this field. Ecological inequality has produced emissions of carbon dioxide and greenhouse gases in an imbalanced manner. This has created various environmental issues. This ecological inequality is believed to be the result of rapid industrialization across the world especially with reference to heavy industrial zones of a varied nature. Pakistan has also witnessed various environmental issues because of its growing population, unplanned urbanization, intensive energy consumption in the presence of lower production form of transformational technologies and poor waste management. These environment and climate issues are also causing serious health problems; including air pollution and lack of availability of hygienic water. Such risks — which are increasing — are getting bigger in the absence of precautionary measures taken by the concerned authorities.

In terms of minimizing the impact of all the above issues and to improve individual quality of life, the concept of green finance was initially introduced in the United Kingdom in 2009. Firms fulfilling the requirements associated with safeguarding the environment obtained funds from banks and DFIs which were referred to as green financing. This state of financing helped reduce the emission of carbon dioxide and other greenhouse gases. In pursuit of these useful financing modes, the regulators of other developed countries focused on these developments with a view to formulate green banking policies, in a more effective and efficient way for achieving the desired results within their countries.

16. State Bank of Pakistan Issued Green Banking Guidelines

To move closer to international standards, the State Bank of Pakistan (SBP) issued Green Banking guidelines in October 2017. Consequently, the minimum guidelines were issued chiefly centering around and emphasizing the role of financial institutions in fulfilling their responsibilities through provisioning financing to transform the economy into a climate resilient and resource efficient one. The broad objectives include:

- **a)** The development of green banking policies
- **b)** The adaptation of financial mechanisms that can allow banks/DFIs to finance in environment friendly industrial sectors
- **c)** The incorporate green banking practices in an internal control framework
- **d)** The introduction of green exposure limits, which would entail budgets with exposure limits on all those industries paving ways for hazardous environment.

Insofar as the green finance emphasizes bringing in “green technology” it requires a huge investment in new projects, which would restrict the amount of capital projects that could be considered green

In order to apply the above guidelines, a question arises as to what aspect does green banking promote financing in Pakistan or is the concept of green banking even a helpful tool to use to mitigate such environmental hazards to a minimum level? To make the economy green, borrowers can obtain financing from the banks with a view to meet the requisite conditions outlined to make ecological improvements or at least to not harm the environment. The movement towards a robust green banking program in Pakistan is still in its infancy and it is going to be challenging for both the lenders (supply-side) and borrowers (demand-side) to implement green policies due to the lack of the desired expertise in this developing industry.

16.1. International Finance Corporation (IFC) of the World Bank Group Support Green Banking in Pakistan

The International Finance Corporation (IFC) of the World Bank group will support 'green banking' in Pakistan as part of IFC's commitment to helping countries' transition to green, low carbon and sustainable economies.

"Green banking is vital to reduce the vulnerability of the financial sector to environmental risks and provide financing to make economies more resource-efficient and climate resilient," said IFC's Senior Manager for Pakistan.

"Our aim is to leverage our global experience to assist Pakistan's central bank in building capacity of the banking sector in green banking practices," he said.

IFC is a global leader in green banking, providing both advisory and investment support to financial sector regulators and intermediaries in building their green banking business.

Over the last two decades, IFC has worked on more than 200 projects with 150 financial institutions in 15 countries, and provided nearly $5.7 billion in financing, including developing green banking business models and issuing green bonds.

The State Bank of Pakistan is also part of the IFC-supported Sustainable Banking Network, a global community of financial sector regulatory agencies and banking associations from emerging markets committed to advancing sustainable finance in line with international best practices.

Pakistan is a priority country for IFC. Over the last three years, IFC has ramped up its investments and advisory services work in the country with current investment commitments of $1.2bn to support the development of Pakistan's private sector, especially in power and infrastructure, and boost access to finance for micro, small and medium enterprises.

17. Supply and Demand Side of Green Financing

Under the present circumstances, it's going to take substantial amount of time and effort to promote financing under green policies. However, both the supply and demand side of green finance may take the necessary measures to promote a green and substantial economy. Other stakeholders like the Ministry of environment, the Ministry of Law and the State Bank of Pakistan need to ensure that the rules associated with green banking are implemented in a true spirit of the Law. Similarly, the role of financial institutions in developing green banking policies is to evaluate borrowers to promote green banking and established products that meet the buyers financing needs. Overtime, it is hoped that green finance will help society to improve the environment and to reduce ecological inequality.

17.1. Supply Side

Explicitly, the supply side refers to banks and DFIs that may formulate their green policies to evaluate the demand side (borrowers) to determine if they comply with green financing requirements. To this end, various concerns may be registered.

1) Primarily, these organizations are operating at an fancy stage and are working to develop green banking policies
2) Secondly, from a developmental perspective, the banks will have to ascertain how the green finance mechanism will apply to all banks and DFIs in the implementation phase of green financing (i.e. whether in full forms of disclosure or partial within the phase).
3) Thirdly, the financial institutions may have to build the required capacity to monitor the industrial projects over the life of financing. Moreover, to evaluate whether or not a business is meeting the environmental regulations.
4) Fourthly, financial institutions may hire experts to monitor and assess the financing proposals thereby resulting in increase in the costs that banks incur.
5) Lastly, green banking policies aim to raise fund under different financing instruments (green IPOs and green bonds) for which the method of raising capital is yet to be fully articulated.

17.2. Demand Side

The demand side of the equation suggests that existing but potential borrowers may follow the terms of the new financing scheme to promote a green environment. To obtain funds by an alternative segment of green finance, various issues are to be kept in mind.

1) First of all, insofar as the green finance emphasizes bringing in “green technology” it requires a huge investment in new projects, which would restrict the amount of capital projects that could be considered green.
2) Secondly, to understand and apply the new scheme of financing, firms will have to obtain the expertise of professionals to help the firms to comply with the regulations both in obtaining funds and the utilization thereof in a judicious way.
3) Thirdly, on account of varied business dynamic over a period of time, especially in case of a decline in business activities, it may be challenging for the firms to recoup any loss in their capital investments in absence of the guidelines in the provisions of green finance that explicitly deal with these issues.
4) Fourthly, in terms of nature and size of industrial units, It is important to determine how smaller firms may be able to participate in the green financing movement because their resources may be limited.
5) Last, but not least, the majority of firms do not have complete understanding of green banking policies. SBP, being the regulator, has to organize and conduct workshops about the current design and state of green policies.

18. Development and Sustainability of Green Financial Products and Services

Until recently, most traditional banks did not practice green banking or actively seek investment opportunities in environmentally-friendly sectors or businesses. These strategies are more prevalent among smaller alternative banks, cooperative banks, diversified financial service providers, asset management firms and insurance companies. In order to develop, sustain and resolve issues in Green Finance the following points can be taken into consideration by various Financial Institutions, Business Organizations and also by the Governments of various countries:

- Provide strong government assistance such as sufficient tax incentives to investors for green growth.
- Verify Green technologies and Green companies through Government Committees.
- Build Public Consensus to develop Green Finance.
- Construct tailor-made financial support system to meet needs of Green Companies at different development stages.
- Provide strong Government support at an initial stage.
- Attract Financial Institutions to take on active roles as the Green Company enters mature stage.
- Establish infrastructure for Green Finance.
- Require financial institutions to address environmental concerns: fiduciary and lender‘s liability on environment.
- Reflect environmental factor into credit rating and accounting procedures.
- Introduce Green Business Certification programs, which are specific to industry, technology, business type and size
- Promote green company ratings.
- Train professionals for research, review and investment to provide green financial services-introduce professional training programs and promote expertise.
- Initiate Green Financial Consumer Education to promote awareness of-
  - The need for Green Growth.
  - Green bubble, environmental risk, and other key issues.
- Develop New Products that Integrate Environmental Factors into Existing Products.

19. ZTBL Green Banking Policies:

The Bank is committed to align and develop its products/services and operations to facilitate green banking operations for reducing environmental impact and change its setup to conserve resources and to facilitate the process of green culture in the organization.

1. The Bank would establish risk management procedures to identify, assess, mitigate and monitor environmental risks arising from operations.

2. The Bank would allocate funding resources for green business facilitation having direct or indirect impact on improving the carbon foot print and be more resource efficient.

3. The Bank would setup its branches and offices in such a way that its operations use minimum energy and other resources leading to own impact reduction having minimum impact on the environment.

20. ZTBL's Ongoing Green Banking Practices:

Paperless Banking Operations

The implementation of paperless banking requires the Bank to identify the need and types of documents which are to be stored electronically, go through a planning process for deciding the data storage disks, scanners, Optical Character Recognition (OCR) applications, data storage file structures, searching/retrieval applications and data encryption/backup planning etc.

Renewable Energy based ATMs

The Bank may take measures to convert its ATMs (not yet installed) to solar or other renewable energy sources provided it is financially plausible conversion.

21. Green Banking Plan of Implementations of ZTBL in Future:

Renewable Energy Based Branches/Offices

In addition to the green branches/offices, the Bank may deploy, if financially plausible, renewable energy based equipments in its 'non green' branches/offices to reduce its reliance on fossil fuels/ grid electricity.

Resource Efficiency Measures

The Bank should take, where viable, measures to adopt resource efficiency in its branches/offices similar to the ones adopted in its green branches/offices. These measures should, in fact, facilitate the Bank to identify and designate green branches/offices in a gradual manner.

Waste Reduction

The Bank can adopt practices to reduce waste (paper, packaging, plastics, electronic equipment, print cartridges, etc.) and recycle these materials.

22. Conclusion:

Possible policy measures and initiative to promote green banking in Pakistan has become the need of the hour. In a rapidly changing market economy where globalization of markets has intensified the competition, banks should play a pro-active role to take environmental and ecological initiatives. The banking and financial sector should be made to work for sustainable development. As far as green banking is concerned, Pakistan banks are running behind time and it is the need of the hour to think it seriously for the sustainable growth of the nation. Green Banking concept will be beneficial for both the banking industries and the economy. Not only "Green Banking" will ensure the greening of the industries but it will also facilitate in improving the asset quality of the banks in future.

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