

## **CHALLENGES AND ISSUES OF GREEN BANKING IN ISLAMIC AND TRADITIONAL BANKS OF PAKISTAN**

*Desafios e problemas do green banking nos bancos islâmicos e tradicionais do Paquistão*

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### **ABSTRACT**

This study investigates the current challenges and issues in adopting green banking activities in Pakistan's banking sector, especially in Islamic banks, due to their close link with green and ethical banking. A total of 26 interviews have been conducted (19 green banking officers and seven heads of the Shariah department) via a semi-structured questionnaire. The study reveals eight factors in priority order, causing hindrance in implementing green banking in Pakistan. These are lack of awareness, knowledge and skills, the culture of adoption to change, lack of pressure, lack of incentives, lack of legal power, culture, and infrastructure. Among the four green banking areas, interviewees have identified environmental risk management as the most challenging area. Most banks have demanded revision in green banking guidelines with legal power and incentives. The study is the first literature that identifies the problems in priority orders with reasons and after-effects. This study supports Jeucken's and Chapra's green and Islamic banking models, respectively. The study will help formulate the policy for revising green banking guidelines and environmental laws in Pakistan. The study will further help in achieving Maqasid-e-Shariah in Islamic banks.

**Key Words:** Green Banking, Pakistan, Islamic Banks, Traditional Banks.

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## DESAFIOS E PROBLEMAS DO GREEN BANKING NOS BANCOS ISLÂMICOS E TRADICIONAIS DO PAQUISTÃO

*Challenges and issues of green banking in Islamic and traditional banks of Pakistan*

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### RESUMO

Este estudo investiga os desafios e questões atuais na adoção de atividades bancárias verdes no setor bancário paquistanês, especialmente em bancos islâmicos, devido à sua estreita ligação com os bancos verdes e éticos. Foram realizadas 26 entrevistas (19 oficiais bancários verdes e sete chefes do departamento de Shariah) por meio de um questionário semiestructurado. O estudo revela oito fatores em ordem prioritária, causando obstáculos na implementação de bancos verdes no Paquistão. São falta de consciência, conhecimento e habilidades, cultura de adoção para mudar, falta de pressão, falta de incentivos, falta de poder jurídico, cultura e infraestrutura. Entre as quatro áreas bancárias verdes, os entrevistados identificaram a gestão de riscos ambientais como a área mais desafiadora. A maioria dos bancos tem exigido revisão nas diretrizes bancárias verdes com algum poder legal e incentivos. O estudo é o primeiro da literatura que identifica os problemas em ordens prioritárias com razões e efeitos posteriores. Este estudo apoia os modelos de Jeucken e Chapra de bancos verdes e islâmicos, respectivamente. O estudo ajudará a formular a política de revisão nas diretrizes bancárias verdes e nas leis ambientais no Paquistão. O estudo ajudará ainda mais a alcançar Maqasid-e-Shariah em bancos islâmicos.

**Palavras-chave:** Green Banking, Paquistão, Bancos Islâmicos, Bancos Tradicionais.

## INTRODUCTION

The global change in the environment poses a severe threat to people's life, wealth, and intellect on this planet. As per the latest World Health Organization's (WHO) report, the estimated annual death rate caused by environmental changes is over 150,000 people (World Health Organization, n.d). The rate is accelerating every year. A report issued by WHO claimed that between the years 2030 to 2050, climate change is estimated to cause around 250,000 additional deaths per year (WHO, n.d). The direct damage will cost around 2-4 billion USD per year by 2030. The situation needs urgent actions from governments, agencies, organizations, and regulatory authorities to change this adverse condition.

Financial institutions, especially banks, are strategically positioned to develop a green culture to protect this ailing planet (Miah et al., 2020). Banks can adopt a people, planet, and profit policy and bound customers by imposing various restrictions to adopt green activities (Verma, 2012). Banks deal with various industries in providing financing such as textile, cement, chemical, and paper, producing carbon up to the atmosphere's unsafe level. Therefore, banks can reduce these sectors' carbon profile by imposing loan-sanctioning restrictions on sectors that threaten the atmosphere. On the contrary, banks can take various actions for the green environment, such as discounted loans for ecological projects like wind and solar panels. These programs might increase some operating costs primitively. However, green products can create a marketplace position that will enhance banks' profitability by expanding their operations into untapped financing areas. Besides, banks can take different measures, such as developing internal environmental risk assessment models, risk avoidance lists, and rating criteria. It will help to know the environmental vulnerability of investments and financing projects. Apart from this, banks can adopt a paperless banking environment, resource efficiency, and waste reduction measures on their own for reducing their impact (State Bank of Pakistan, 2017). That is why governments and regulators emphasize designing guidelines and policies to enable banks and financial institutions to deal with this particular market. However, the current studies deal mainly with conventional banks in technologically advanced countries, while Islamic banks' role, especially in developing countries, cannot be ignored.

As per the Islamic banking bulletin issued by the State Bank of Pakistan (SBP), the Islamic banking industry's share is increasing every year. For example, it is 17% (assets) and 18.70% (deposits) in 2021 (15.30% and 16.90%, assets and deposits respectively, in 2020). The branch network also increased to 3583 branches (3274 in 2020), with year-over-year growth of 32% and 29.70% in assets and deposits, respectively (SBP, 2021). The growing demand for Islamic banking and the close link of Islamic banking with green banking (Julia & Kassim, 2019; Qureshi & Hussain, 2020) provide Islamic banks with a tactical position. Therefore, Islamic banks can play a leading role in this planet's safety and provide a platform for promoting green banking activities.

Pakistan is among the 12 countries (Independent News Pakistan, 2018) from Asia and the second most polluted country in south Asia (World Population Review, 2021), causing a severe environmental threat due to industrial pollution (Arab News, 2020). In Pakistan, around 128000 people die from climate change (Junaidi, 2019). Though various banks have shown their leadership in financing green or climate projects, many banks' green portfolios are still minimal (Park & Kim, 2020). As per the SBP financial stability report, renewable energy financing is only 3.01% by development finance institutions (DFI). A report issued by the U.S. Department of State, the current share of renewable energy is only 2-3% (U.S Department of State, 2019). According to SBP, banks in Pakistan have already disbursed a significant amount of loans to the environmental risk sector, and this amount is still increasing (TABLE 1). Also, many banks have got the green bank's status worldwide, such as the First Green Bank, the Connecticut Green Bank, and the New York Green Bank. However, these advancements related to developed countries and developing countries like Pakistan are far behind. There is no Green traditional bank nor Green Islamic Bank. Even there is no fully green branch of any bank. Therefore, it is vibrant to investigate the current issues and problems with green banking to make and implement policies and strategies on time for the banking sector of Pakistan, especially for Islamic banks. This study aims to achieve these objectives.

In this regard, previous studies mainly concentrated on a few features of green banking, for example, paperless banking processes and facilities, green credit policy, reporting issues of green banking, sustainability reporting quality, policies and strategies for financing green projects, and determinants of environmental performance (Miah & Rahman, 2017; Cui et al., 2018; Ghosh et al., 2018; Sachs et al., 2019; Permatasari et al., 2020; Rahman et al., 2020). In addition to the above, previous studies mainly concentrated on traditional banks.

Yet, this study is different from previous studies in many ways. First, this research is based on Pakistan's green banking guidelines 2017. Secondly, the study focuses mainly on Islamic banks. Thirdly, as opposed to the previous studies such as Alam et al. (2017), Ghosh et al. (2018), Sahoo and Nayak (2007), Biswas (2011), and Ullah (2013), which mainly relied on literature reviews, this study based on real-time data. Fourthly, this study identifies the factors hindering green banking adoption in Pakistan and provides their priority order for addressing problems with limited resources. Therefore, this research identifies the issues and challenges of green banking for Pakistan's Islamic and traditional banks. It will provide a suitable policy for a cleaner and safer Pakistan. Further, this research will provide a policy to help accomplish Maqasid-e-Shariah for the Islamic banking industry.

## **1 LITERATURE REVIEW**

Banks in Pakistan are far behind in relation to neighbouring and other countries in green banking activities. For example, in Bangladesh, Bangladesh's central bank has introduced green banking guidelines (GBG) in 2011 (Bangladesh Bank, 2011). In China, a green credit policy was introduced in 2011 by the ministry of environmental preservation (Aizawa, 2011). In 2015, the United Arab Emirates (UAE) decided to implement a green agenda (Ryszawska, 2016). Similarly, the United States (U.S.) green banking act was introduced in 2009 to introduce green banking (Alam et al., 2017). Also, Malaysia follows a green technology financing scheme under government supervision (Chua & Oh, 2011). Banks in Pakistan still need more effort to be on par with other neighbouring countries. In this regard, SBP has issued green banking guidelines in 2017.

### **1.1 Green banking**

There is no widely accepted definition of green banking (Alexander, 2016), and the defining criteria vary from country to country. Likewise, SBP has defined green banking as promoting environment-friendly activities that help banks and their customers identify and manage the risk that arises from the environment, reducing carbon footprint and socially adverse actions (State Bank of Pakistan, 2017). It can also be defined as socially responsible banking due to banks' social responsibility towards protecting the environment (Kaeufer, 2010). In this sense, green banking is similar to ethical or responsible banking that covers environmental protection while providing excellent banking services (Bihari, 2010). Responsible banking shows a strong commitment of banks towards sustainable development by performing social responsibility as an essential part of banking. Hence, green banking can be a sub-area of sustainable banking due to environmental and social dimensions (Dufays, 2012).

### **1.2 Sustainability**

In 1987, the World Commission on Environmental Development, commonly known as the "Brundtland Commission," has officially launched the sustainable development movement. The movement was initiated by describing the definition of sustainable development. As per this commission, sustainable development is termed as "meeting the present needs in such a way that capabilities of coming generations are not compromised in meeting their own needs" (United Nations, 1987). After a few years in 1992, the movement further manifested in the United Nations conference on development and environment commonly known as "Earth Summit Brazil." Soon after the earth summit, many world leaders have been seen in conferences, programs, and activities showing their efforts to reduce the carbon footprint and reduce the earth's temperature. However, the movement got prime attention in 2015, when 195 nations joined their hands at the Paris Climate Conference (COP21). This conference is the first legally binding climate agreement (European Commission, 2015). After one year of the conference, the movement gained focal popularity when 175 nations signed the agreement to make this movement binding until 2020 (United Nations, 2016).

### **1.3 Areas of green banking**

In 2017, SBP issued the "green banking guidelines<sup>1</sup>." These guidelines' objectives are multiple, ranging from environmental risk management to preserve the environment to providing finance for transforming the

economy into a resource-efficient and climate resilience one. The banks require to implement the guidelines within twelve months from the issuance. SBP has divided the guidelines into four areas. The first area deals with the roles and responsibilities. The second area deals with environmental risk management, while the third and fourth areas deal with green business facilitation and own impact reduction. Guidelines related to each area discussed above have also been provided in detail. For example, the board of directors, management, and organization's roles and responsibilities are described separately in the section roles and responsibilities. In the area of environmental risk management, the policy statement, customers' compliance assurance, rating of non-compliance customers, environmental risk management system, environmental risk management manuals, earmarking of financing, the establishment of provisions, environmental risk avoidance list, and procedures have been discussed.

Similarly, in the guidelines on green business facilitation, policy and strategy, product development, green advisory service, financing portfolio, etc., are discussed. In the last area, i-e guidelines own impact reduction. The areas such as policy statement on own impact reduction, impact reduction targets, green branches, offices, etc., have been discussed.

#### 1.4 Compatibility of green banking with Islam

Various studies described that the purpose and operations of Islamic banks are different from traditional banks, e.g. (Sadr, 1982; Siddiqi, 1983; Ahmad, 2000; Haron & Hisham, 2003; Rosly & Bakar, 2003). However, it is also pertinent to know the aims of green banking and its compatibility with Islamic banking. The aim of green banking is the conservation of the atmosphere for the sustainable usage of world resources. Therefore, green banking concentrates on managing risk related to the environment, promoting green investments and financing, and banks' impact reduction to reduce waste, optimal use of resources, and maximum use of renewable energy. All these areas of green banking are very much in line with the verses of the Quran and the Prophetic sayings (PBUM) as determined by Julia and Kassim (2019) and Qureshi and Hussain (2020). For example, waste management is linked with the protection of *wealth*. Allah says in Al-Quran:

“and eat and drink without going to excesses. For Allah does not like those who go to excess.”  
(Al-Quran 7:31).

” كُلُوا وَاشْرَبُوا وَلَا تُسْرِفُوا إِنَّهُ لَا يُحِبُّ الْمُسْرِفِينَ ”

Banks' own impact reduction is linked with the protection of *wealth*, and also, it is linked with the protection of *life* and *intellect*. The concept is described in Al-Quran as:

“And do not exceed the proper limits, for He does not love those who exceed the proper limits.”  
(Al-Quran 6:141).

” وَلَا تُسْرِفُوا إِنَّهُ لَا يُحِبُّ الْمُسْرِفِينَ ”

Environmental risk management and green business facilitation are linked with protecting *life*, *wealth*, and *intellect*. These concepts are highlighted in Al-Quran and Ahadith as:

“Spend in the Way of Allah and do not cast yourselves into destruction with your own hands; do good, for Allah loves those who do good” (Al-Quran 2:195).

” وَأَنْفِقُوا فِي سَبِيلِ اللَّهِ وَلَا تُلْقُوا بِأَيْدِيكُمْ إِلَى التَّهْلُكَةِ وَأَحْسِنُوا إِنَّ اللَّهَ يُحِبُّ الْمُحْسِنِينَ ”

“The world is beautiful and verdant, and verily God, be He exalted, has made you His stewards in it, and He sees how you acquit yourselves” (Muslim: 258).

“A man asked the Prophet (SAW), ‘Oh the Messenger of Allah! Should I leave my camel (without tying it) and put trust (depend) on Allah (Tawakkal ‘alAllah) or should I tie it then depend on Allah? He (the Messenger of Allah) said, “Rather tie it and then depend on Allah” (Tirmizi: 2517).

## 1.5 Theories of green and Islamic banking

Jeucken’s green banking model (Jeucken, 2004) is among the most relevant theories that describe the green banking adoption process. As per this theory, banks adopt green banking in different phases. In the first phase, banks usually behave defensively and consider all environmental laws as threats and costs to banks’ businesses. In the second phase, they try to adopt a preventive strategy, identify all potential costs; and adopt green banking due to political and interest groups’ pressure. Banks adopt an offensive strategy in the third phase and see green banking as a new opportunity to explore a new market for investments and lending. In the last stage, banks adopt sustainability, which focuses on qualitative conditions to make all internal and external activities sustainable.

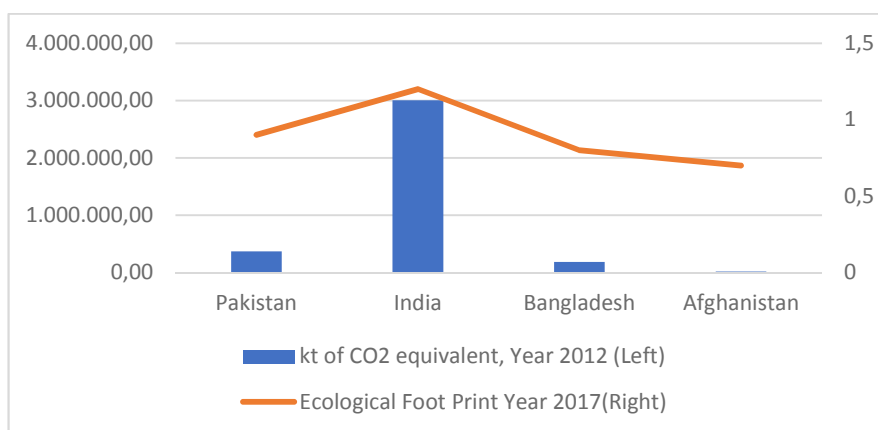
Similarly, the theory of change at the sectoral, institutional, and integrated level in green banking describes transforming the whole banking structure towards green banking. The sectoral level requires the supply and demand of green banking products. Due to the lack of a regulatory framework at the institutional level, banks hesitate to undertake green initiatives due to the banking industry’s highly regulated nature (Park & Kim, 2020). However, as opposed to Jeucken’s model and theory of change framework, Islamic banks’ objective theory is different. Islamic banks’ objective is not solely profit-driven; rather, endorsing Islamic norms, values, and welfare of all stakeholders must be a priority of Islamic banks (Chapra, 2016). That is why complying with Shariah requirements is an essential obligation that must be fulfilled by Islamic financial institutions (Ningsih, 2020).

## 1.6 Ecological facts about Pakistan (Need of green banking)

The importance of environmental preservation is vibrant for Pakistan because, as per the environmental performance index 2020, Pakistan is in the 142<sup>nd</sup> position with a score of 33.1 (Denmark is number 1 with a score of 82.50) (Environmental Performance Index, 2020).

Figure # 1 describes the emission profile of four countries in the region. India is the largest polluter in the region, followed by Pakistan, emitting 369,734.58 kt of co2 Equivalent. The four countries also fall under ecological footprints greater than biocapacity (biocapacity debtors’ country)

**Figure 1 - Total greenhouse gas (GHG) discharges and Pakistan’s environmental footprint with neighbouring countries**

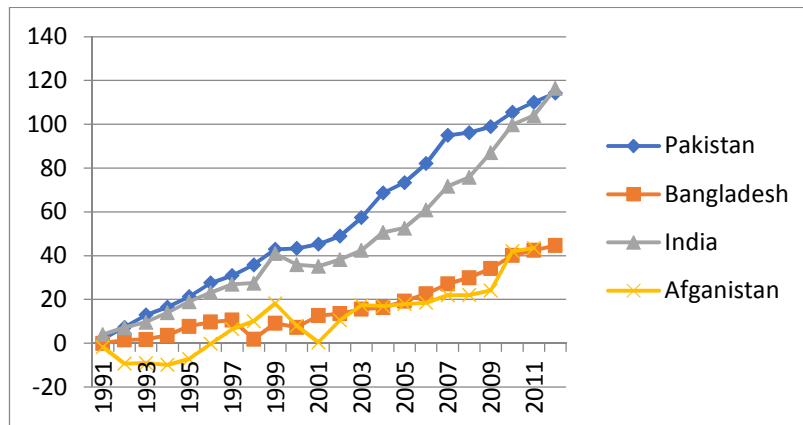


Source: Greenhouse Gas Emission (World Bank, n.d), and Global Footprint Network (Global Footprint Network, 2017)

Figure 2 exemplifies the differences in GHG radiation by neighbour countries from the bottom year, 1991. It indicates that from the end of 2012, GHG emission around Pakistan has been escalating gradually. From 1991 to 2012, the changeover in GHG discharge was significant for Pakistan. Nevertheless, due to the rise in economic activities, emission has increased rapidly since 2001, especially hydrocarbon-associated activities.



**Figure 2 - Total GHG gas discharge of Pakistan with four neighbours  
 (% of change from 1990)**



Source: World Bank

**Table 1 - Banking sector financing including Islamic banks to environmentally risky sectors**

Sector	The year 2019	The year 2020	Increase %
	Rs Million (September)		
Printing of newspapers etc.	6,562	8,019	22.20
Textile	926,140	1,060,926	14.55
Manufacture of tobacco products	889	1,129	26.99
Construction of buildings	56,842	72,836	28.13
Manufacture of wood and products of wood	4,395	4,610	2.89
Manufacture of cement, lime, and plaster	164,153	181,760	10.72
Mining and quarrying	63,031	79,663	20.88
Consumer automobile	213,501	232,396	8.85
Ship breaking and materials recovery	16,713	22,582	35.11

Source: SBP, 2020

## 1.7 Empirical research in green banking

The literature on green banking and finance primarily focuses on green banking's importance. Researchers mainly stress that green initiatives are essential for banks and ecological aspects, and environmental protection should be a part of banks' lending processes. They highlighted many reasons for adopting green banking. For example, due to globalization, green banking is essential. It protects the environment, has compatibility with Islam, provides the opportunity to develop green products, helps control businesses spreading pollution, increases the customers, and enhances the legality of the businesses (Islam & Das, 2013; Masukujjaman et al., 2015; Julia et al., 2016; Alam et al., 2017; Sekreter, 2017; Chen et al., 2018). Apart from this, green banking has a significant impact on the environment. It increases the worth of assets of banks, influences the performance of companies, has a direct impact on sustainability, and result in the reduction in the amount of non-performing loans (Thombre, 2011; Bhardwaj & Malhotra, 2013; Deka, 2015; Miah & Rahman, 2017; Shetty & Unnikrishnan, 2017; Cui et al., 2018). Therefore, it is essential to establish prospects for green ventures for attaining sustainability targets. It is crucial to create environment-friendly products such as green bonds and strategies such as green fiscal policies, developing green banks and green central banks, etc. (Sachs et al., 2019). Then successful execution will make banks capable and confident to face new challenges such as the societal and ecological manner of conducting their foreign businesses (Aizawa & Yang, 2010). Further, banks that adopt green banking practices can improve brand image and get technical assistance from the central bank (Lalon, 2015). The nonperformance of fiduciary responsibilities creates reputational risk (Grassa et al., 2020).

Therefore, in a state of non-compliance with green guidelines, Islamic banks can confront reputational risk (Nath et al., 2014). Besides, many banks face controlling risks related to credit and liability, low quality of assets, and long-run return rates. To tackle these issues, banks need to be proactive in going green (Sahoo & Nayak, 2007). Therefore, the focus on profit, profit and only profit now shift towards people, planet, and profit (Verma, 2012). Still, the approach is not very active in financial institutions, and many studies show that the level of compliance with green banking guidelines is deficient in banks, e.g., (Sahoo & Nayak, 2007; Biswas, 2011; Zhang et al., 2011; Masukujjaman & Aktar, 2013; Ullah, 2013; Bal et al., 2014; Chowdhury & Dey, 2016; Sachs et al., 2019).

Apart from the importance, the second group of researchers concentrates on factors for adopting green banking. The literature shows that in commercial banks, policy guidelines, the need for loans, stakeholders' influence, ecological, economic, and legitimate factors affect environment-friendly banking enactment (Fayez et al., 2013). Therefore, the success of green credit policy execution is based on the compilation and distribution of ecological data, technological support, and monetary rewards for banks. According to Millat et al. (2013), banks show a positive attitude towards green banking implementation due to economic factors. However, the lack of standardized reporting guidelines is an obstacle to the consistency of reporting. The central bank is a stakeholder. Therefore, banks follow the central bank's instructions (Hossain et al., 2016). That is why some banks claimed that to speed sustainable development, green banking policy required a modification because compulsory rather than voluntary green banking can create a difference (Ghosh et al., 2018).

However, as opposed to the above, few studies focused on green banking' issues and challenges, especially in Islamic banks. Most of the studies focus on conventional banks. For example, according to Deka (2015), there are some challenges in green banking adoption, for example, greater operating cost, lack of specialization, ability, and expertise, and lack of literacy concerning green banking in clienteles. Moreover, due to financial constraints, banks lack the resources to implement measures to control environmental issues (Pereira & Filipe, 2021). According to Bal et al. (2014), there is a lack of risk management, clear disclosure of environment-related facts, observing, and capability building. The main obstacles in credit policy implementation are many highly polluting and energy-consuming industries, vague policy details, unclear standers, and the absence of environment-related information (Zhang et al., 2011). According to Sachs et al. (2019), because fossil fuels dominate energy ventures, it can be a threat in accelerating the green energy required to fulfil the energy, climate, and new air related goals. They further claimed that creating green projects' related opportunities are necessary to achieve sustainable development goals. Developing green bonds and products, ecological and green central banks and commercial banks, and fiscal policies for the green environment is necessary.

The literature also shows that although there is some degree of awareness for ecological issues, the reaction toward protecting the environment is low (Jahamani, 2003). The level of green banking is low and needs policy guidelines because only a few small banks employ worldwide recognized green principles. There persists deficiency in forming a comprehensive system for risk management, fair display of ecosystem-related data, and capability building (Bal et al., 2014). Moreover, the type of bank also plays a role in adopting green banking. For example, private commercial banks maintain some extra funds for eco-friendly projects, and the propensity to finance these projects is also growing (Hoshen et al., 2017). However, most banks require the central bank to issue guidelines for implementing green activities (Miah & Rahman, 2017). Therefore, due to the high importance of the green banking area and the relevant lack of research in the field, the information regarding issues and challenges in green banking implementation in developing economies like Pakistan and Islamic banks will add value to the present literature and help regulators formulate suitable policies to accelerate green banking.

## 2 METHODOLOGY

The topic is new and still not addressed in Pakistan. Therefore, a qualitative exploratory research methodology is adopted (Creswell, 2009). Being motivated by Ferdous (2013), a semi-structured questionnaire was devised (APPENDIX) to ask bankers about the issues and challenges they have faced while practically implementing green banking. Interview questions were theoretically written based on green banking guidelines and drafted in standardized format in a semi-structured interview guide. Each interview question is designed to deal with only one issue. Therefore, the interviewees are best positioned to understand the question and provide the best answer. At present, 26 banks are operating in Pakistan, out of which 5 are full-fledged Islamic banks, and



19 are traditional banks. The data has been collected from individuals who know the issue (Sue & Ritter, 2012; Rahman & Ahmad, 2016; Rahman & Miah, 2016). Therefore, only green banking officers are selected as interviewees. In addition, green banking is closely linked with Maqasid-e-Shariah, which is the objective of Islamic banks (Julia & Kassim, 2019; Qureshi & Hussain, 2020). Therefore, heads of the Shariah department, who have knowledge about the issue and have direct involvement in the banking operations, are also selected. A total of 26<sup>ii</sup> interviewees were selected by convenient sampling, at least one from each bank (Table 2) (Miah et al., 2020). The interviews were conducted in 2020. Follow up interviews are also conducted afterwards as and when required. Interviews are conducted until saturation is achieved (Yip & Bocken, 2018).

Most of the banks' head offices, green banking offices, and central Shariah departments are located in Karachi. Therefore, to save time and costs, interviews are conducted through email and telephonic recorded calls described by Bolderston (2012) except for one face-to-face interview. Different methods of interviews are applied because some respondents feel comfortable in writing and some in describing (Burns, 2010). Apart from this, email interviewing has some advantages, such as being able the researcher to respond to the new direction of the respondents rather than sticking to the interview schedule (James & Busher, 2006). This may also allow researchers and respondents to participate in their own space, pace, and time (James, 2016). The method of interviews was on the respondent's choice. Follow-up interviews are also conducted to verify transcriptions, corrections, and explanations through telephonic calls (Yip & Bocken, 2018). For ethical consideration, written consent has been obtained through email and telephonic recorded calls before initiating the interviews (DeJonckheere & Vaughn, 2019). In addition, interviewees were informed about the study's objectives in advance. For tackling anonymity, names of the banks and interviewees are replaced with codes as described in Notes of Table 2. The data collected through interviews have been edited and transcribed to bring it in a uniform pattern to ensure reliability and validity. Thematic analysis is applied to the transcribed data to gain an in-depth understanding of green banking (Boyatzis, 1998). Three major themes have been developed during thematic analysis based on patterns obtained through interviewees' answers to analyze data. The major themes were the problems in green banking, the causes behind these problems, and their consequences. Under each theme, different codes and sub-codes have been defined as per the proceedings of the interviewees. Afterwards, analyses were carried out based on the identified codes and sub-codes under each theme.

**Table 2 - List of 26 Respondents**

Name of Bank	No of Interviews	Department	Job Title	Type of Interview
Bank 15-I/ SSIB-21	2	Green Banking & Shariah Compliance	Green Banking Officer & Head Shariah Compliance	Telephonic Recorded
Bank 16-I/ SSIB-23	2	Green Banking & Shariah Compliance	Green Banking Officer & Head Shariah Compliance	Email & Telephonic Recorded
Bank 17-I	1	Green Banking	Green Banking Officer	Telephonic Recorded
Bank 18-I/ SSIB-25	2	Green Banking & Shariah Compliance	Green Banking Officer & Head Shariah Compliance	Telephonic Recorded
Bank 18-I	1	Green Banking	Green Banking Officer	Face to Face Recorded
Bank 05-T	1	Green Banking	Green Banking Officer	Email Interview
Bank 03-T	1	Green Banking	Green Banking Officer	Email & Telephonic Recorded
Bank 13-T	1	Green Banking	Green Banking Officer	Telephonic Recorded
SSTB-20	1	Shariah Compliance	Head Shariah Compliance	Telephonic Recorded
Bank 11-T	1	Green Banking	Green Banking Officer	Telephonic Recorded
Bank 06-T	1	Green Banking	Green Banking Officer	Email Interview
Bank 07-T/ SSTB-24	2	Green Banking & Shariah Compliance	Green Banking Officer & Head Shariah Compliance	Telephonic Recorded
Bank 10-T	1	Green Banking	Green Banking Officer	Email Interview
Bank 09-T	1	Green Banking	Green Banking Officer	Email & Telephonic Recorded

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Bank 01-T	1	Green Banking	Green Banking Officer	Email Interview
Bank 04-T/ SSTB-26	2	Green Banking & Shariah Compliance	Green Banking Officer & Head Shariah Compliance	Email & Telephonic Recorded
HBL	1	Green Banking	Green Banking Officer	Email Interview
Bank 08-T	1	Green Banking	Green Banking Officer	Telephonic Recorded
Bank 14-T	1	Green Banking	Green Banking Officer	Telephonic Recorded
Bank 02-T/ SSTB-22	2	Green Banking & Shariah Compliance	Green Banking Officer & Head Shariah Compliance	Email & Telephonic Recorded
Total	26			

Notes:

Code	Bank -T	Bank -I	SSIB			SSTB		
Meaning	Traditional Bank	Islamic Bank	Shariah Bank	Scholar	Islamic	Shariah Bank	Scholar	Traditional Bank

### 3 RESULT AND ANALYSIS

#### 3.1 Issues and challenges of green banking

This section presents the factors, issues, and challenges in priority order, causing problems in adopting green banking.

##### 3.1.1 Lack of awareness in banking sector and corporate companies (factors)

Lack of awareness or environmental knowledge hinders the sustainability of renewable energy resources (Yadav et al., 2020) and significantly impacts green purchase intentions (Lavuri & Susandy, 2020). As indicated in Figure 3, 81% of the interviewees believe that lack of awareness is the primary reason behind the low implementation of green banking in Pakistan. In this, the majority, that is, 100% is from Islamic banks, 79% are from the traditional banks, and 71% are from Shariah scholars. The results are reported in Figure 4.

Studies such as Aragonés-Beltrán et al. (2017) indicate that stakeholders' identification is vital for their influence in the project and its success. Each stakeholder has capacities, interests, and expectations related to the project (da Costa Filho et al., 2021). In the initial discussion, the interviewees have identified different stakeholders that need awareness, such as the general public, bank employees, customers, industries, and corporations. In further discussion, most respondents say that lack of education and cultural values are the two most important factors causing a lack of awareness in the general public, banks, and industries. A further discussion with the interviewees reveals two major reasons for the lack of awareness among bank employees and industries. These are the lack of extensive workshops and awareness campaigns.

Further probing the phenomenon identifies that lack of education and cultural values are further hurdling in mass or intensive campaigns for training workshops, seminars, and conferences. Therefore, most respondents have demanded the mass scale or intensive awareness companies for green banking. When interviewees were asked to describe the consequences of lack of awareness, they have pointed out diverse opinions. For example, an interviewee opined that the lack of awareness in banks leads to a lack of understanding and direction. Other interviewees opined that the lack of awareness among the general public fails to identify environmentally friendly pros and cons. An interviewee also underpins the lack of awareness among industries failing to convince customers of green banking. Therefore, resulting in the non-compliance of environmental regulations across the nation. Summing up the discussion, a Shariah scholar highlighted that all of these issues are directly or indirectly causing a reduction in the Islamic banking business.

##### 3.1.2 Lack of knowledge and skills (internal issues)

Overall, 77%, while bank-wise, 100% of Islamic banks interviewees believe that green banking is opposed mainly because of the lack of knowledge and skills apart from unawareness. In this, 86% of Shariah

scholars and 64% of respondents from traditional banks also opined in the same way. Interviewees from traditional banks are least concerned with the issue of lack of knowledge and skills for green banking. Similarly, a recent study by Qureshi and Hussain (2020) claimed that the lack of skills and knowledge leads to the lack of green product development. The results are reported in Figures 1 & 2.

Further discussion with interviewees suggests that the low level of knowledge and relevant skillset is associated with our education system. Inadequate course curriculum in educational institutions and lack of resources are the two internal issues that substantially influence knowledge and relevant skills set in Pakistani peoples. Criticizing existing university courses and programs, the interviewees stated that the courses related to green banking with particular reference to Pakistan are missing. 12% of the interviewees opined that students could get the basic knowledge of banking and organizations with current courses, but the learning process lacked the education to green banking problems. Besides, interviewees further claim that the culture of not learning is also liable for the current gap in expertise. They further opined that people in Pakistan mostly seem enough what they have. Generally, they are uninterested in gaining knowledge about new ideas. In explaining, 86% of the interviewees believe that the cause behind the lack of relevant skills set is the flawed education system. Furthermore, 25% of the interviewees believe that lack of skills can be overcome via training, but the country lacked the infrastructure to support these activities.

### **3.1.3 The culture of resistance (factors)**

A majority, 54%, of the interviewees emphasized the culture of resistance as a problem in implementing green banking. Their fundamental arguments were that culturally people rarely embrace change or new things, and this low degree of tolerance for accepting change has caused them to resist adopting green banking. In general, 60% of full-fledged Islamic banks, 57 % Shariah scholars, and 50% of traditional banks have this opinion. Traditional banks are least concerned with this issue due to being old in this business.

### **3.1.4 Lack of pressure on banks for green banking (factors)**

Overall, 50%, while bank-wise, 80% of the interviewees from Islamic banks claimed that pressure from the regulators, management, and government would only boost green banking in the absence of regulations. 57% of Shariah scholars and 36% of traditional banks have opined in the same manner. Traditional banks are least concerned with the issue of lack of pressure on banks for green banking. The results are reported in Figures 1 & 2. In further discussion, interviewees suggest three sources of pressure: shareholders' interests, pressure from the government, and SBP. The interviewees believe that these will bring significant changes to Pakistan's current green banking scenario. However, there is a lack of pressure from all three sources.

#### **1) Shareholders Interest (Internal Issue)**

The interviewees identified three reasons behind the lack of shareholders' interest in pressuring banks to adopt green banking. Namely, lack of education, lack of awareness, and short-term vision. Further, different stakeholders' involvement leads to power and interest influence identified by Scholes et al. (2002). The lack of legal power and difference in stakeholders' interests are the reasons for the low level of green banking. Furthermore, to enhance customer satisfaction, and loyalty the banks need to create and maintain brand image (Onyanacha, 2013).

#### **2) Lack of Pressure from SBP**

A recent study in Pakistan indicates that the regulator's pressure is among the significant determinants of compliance (Padda & Asim, 2019). When interviewees were asked why SBP is not pressurizing banks to adopt green banking, they provided four major reasons: lack of skills, lack of demand, banks' core activity, and lack of projects or machinery.

### 3) Lack of Pressure from the Government

The interviewees believe that there are three main reasons why the government is not pressurizing banks to adopt green banking. These are government capacity, undocumented economy, and lack of knowledge.

#### 3.1.5 Lack of incentives (factors)

Overall, 46%, while bank-wise, 60% of Islamic banks' interviewees alleged that in the absence of regulations and pressure on banks, green banking would increase if banks in Pakistan had enough incentives from the regulators, management, and government. The same arguments are supported by 43% of traditional banks and Shariah scholars, and the results are reported in Figures 1 & 2. In this case, traditional banks and Shariah scholars are equally and least concerned. Further discussions with interviewees reveal two major reasons for this lack of government incentives: the government's capacity and unstable government policies. Besides, Islamic banks suffer from higher costs, which is observed in many studies, e.g. (Beck et al., 2010; Salman & Nawaz, 2018). In this scenario, a lack of incentives will become a double bottom line for Islamic banks.

#### 3.1.6 The lack of legal power (internal issue)

The majority of the interviewees from Shariah scholars and full-fledged Islamic banks (57% and 40% respectively) and 36% of traditional banks claimed that lack of controlling nature is one of the main challenges in adopting green banking in Pakistan. A total of 42% of the interviewees favoured this claim and urged that green banking is not accelerating due to a lack of legal power. Their fundamental claim is that the banks are not so far prepared to adopt green banking until it is regulated. However, traditional banks are again least concerned with this plea among the three groups of interviewees. The interviewees showed consent in these claims and stated that their green banking projects might be easy to adopt if they have some law to curb green practices. Similar findings emerged from a recent study in Pakistan (Samad et al., 2015), where it was claimed that the penalty impact is effective in Pakistan for ensuring environmental compliance.

#### 3.1.7 The lack of compliance culture (factors)

Many studies, such as Bussmann and Niemeczek (2019); Vitolla et al. (2019); Mazzi et al. (2018), and AlKalbani et al. (2019), argued that the influence of culture has a huge impact on the level of compliance as well as human behaviour (Yunanda et al., 2019) and business world (Véras & Véras, 2011). The Shariah scholars and full-fledged Islamic banks (14% and 60% respectively) and 14% of traditional banks claimed that lack of compliance culture is another challenge in adopting green banking in Pakistan. A total of 23% of the interviewees, in general, favoured this claim and urged that green banking has not been accepted by the banks principally due to a lack of compliance culture. However, Shariah scholars are least concerned with this plea among the three groups of interviewees. For example, interviewees believe that there is a lack of clarity about ethics in Pakistan. The culture of breaking the rules prevailing in the country can influence the adoption of green banking. In summing up, interviewees opined that some culture-related aspects might dominate people's adoption decisions.

#### 3.1.8 Infrastructure (Factors)

Only 14% of the interviewees from traditional banks believe that the absence of infrastructure is a cause for the non-implementation of green banking. They argued that green banking requires converting ATMs and branches on alternate resources, which is impossible due to technological support. In further probing the problem, interviewees said that green banking requires companies to be hazardous free; this will not be feasible for companies in Pakistan because of the cost issues. Further, being in the initial stage, banks are behaving defensively and considering all environmental laws as a threat and cost to banks' businesses (Jeucken, 2004) and

referring to the green banking guidelines that require that banks have green and renewable base branches and ATMs. The interviewees claimed that this requirement is none complied with because there are insufficient resources to support this requirement in Pakistan.

### 3.2 The most difficult area of green banking

Overall, 58% of interviewees described environmental risk management as the most difficult green banking area in terms of implementation. This is followed by green business facilitation and own impact reduction as 19% and 8%, respectively. At the same time, 15% of the interviewees provided mixed opinions.

Bank wise, 50% of the respondents from traditional banks opined that environmental risk management is the most challenging area to adopt as a requirement of green banking. In explaining the causes, interviewees have pointed out many reasons; for example, an interviewee opined that lack of benchmarking and higher standards set by regulatory authorities create problems in obtaining documents from customers. Another interviewee opined that convincing the borrowers and different stakeholders' involvement poses difficulties in implementing environmental risk management. On the other hand, 14% and 7% of interviewees opined that green business facilitation and own impact reduction are the second and third most complex areas of green banking for implementation. In comparison, 29% of the interviewees provided mixed opinions.

80% of the interviewees said that green banking's most difficult area is environmental risk management in Islamic banks. However, they attributed this to customers' unawareness, which is hurdling in convincing customers to comply with environmental laws. Other interviewees opined that the non-standardization of internal rating tools and the process of manufacturing caused resistance from the customers and created fear of loss of business in banks.

Figure 3 - Dimensions of factors affecting green banking and their ranking

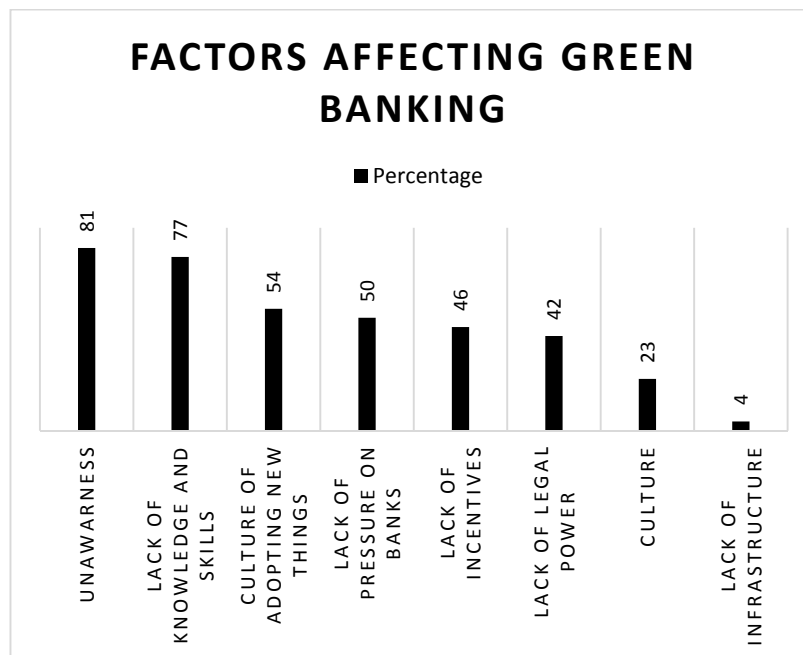
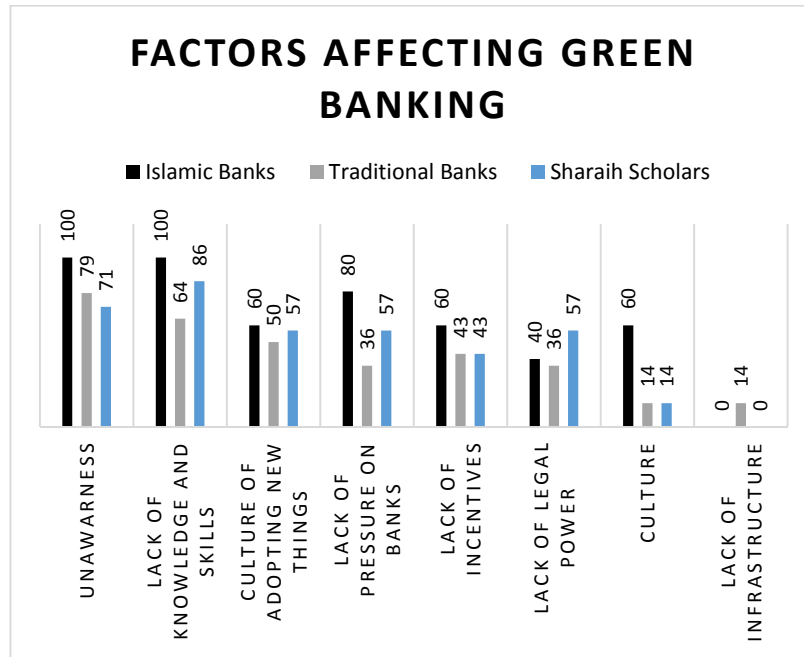


Figure 4 - Dimensions of factors affecting green banking and their ranking



### 3.3 Comparative analysis

Table 3 presents the comparative analysis of identified factors with priority order among different respondents. The results show that the priority order for identified factors is not the same between the types of banks. Lack of awareness, lack of knowledge and skills, lack of pressure, and culture of adopting new things are the top four factors hindering the adoption of green banking in Islamic banks. Unawareness and lack of knowledge and skills are the most concerned areas for Islamic banks to formulate appropriate future policies. However, lack of incentives and lack of legal power is the least concerned areas for Islamic banks. The findings support the claims of Chapra (2016) and Ningsih (2020) that suggest that promoting Islamic norms and complying with Shariah requirements must be the priority of Islamic banks, which is why Islamic bankers are least concerned with incentives and legal power to adopt green banking. The results further support the finding of Jeucken (2004), due to lack of awareness and lack of knowledge and skills, the level of green banking is not high because both these areas require a higher cost, preventing banks from remaining and acting defensively.

In contrast, the most concerning areas for traditional banks are unawareness and lack of knowledge and skills. Apart from this, the culture of compliance and infrastructure also concern areas for traditional banks only. However, these are the least concerned areas.

Table 3 - Comparative Analysis of Factors Hindering Adoption of Green Banking

Ranking Areas of Concern					
Islamic Bankers	Score % (Respondent)	Shariah Scholars	Score % (Respondent)	Traditional Banks	Score % (Respondent)
Unawareness	100 (5)	Lack of Knowledge and Skills	86 (6)	Unawareness	79 (11)
Lack of Knowledge and Skills	100 (5)	Unawareness	71 (5)	Lack of Knowledge and Skills	64 (9)
Lack of Pressure	80 (4)	Lack of Pressure	57 (4)	Culture of Adopting News Things	50 (7)
Culture of	60 (3)	Culture of	57 (4)	Lack of	43 (6)

**CHALLENGES AND ISSUES OF GREEN BANKING IN ISLAMIC AND TRADITIONAL BANKS OF PAKISTAN**  
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Adopting News Things		Adopting News Things		Incentives	
Culture	60 (3)	Lack of Legal Power	57 (4)	Lack of Legal Power	36 (5)
Lack of Incentives	60 (3)	Lack of Incentives	43 (3)	Lack of Pressure	36 (5)
Lack of Legal Power	40 (2)	Culture	14 (1)	Culture	14 (2)
				Infrastructure	7 (1)

**Table 4 - Summary of Green Banking Issues and Challenges**

	Factors/Issues	Reasons	After-effects
1	Lack of awareness	Lack of education and culture, lack of training, workshops, seminars, and conferences.	Lack of understanding that is unable to understand what to do. The direction is unclear, unable to identify and portray its benefits and harms, failure to convince customers, failure to create its demand and market, non-compliance of environmental regulations across the nation creating harmful environmental impacts of banks and industries, deliberate pushing the customers towards interest-based banking.
2	Lack of Knowledge	Culture of not learning, the typical mindset	Lack of awareness, lack of long-term visions
	Lack of Relevant Skill Set	Knowledge deficiency, no relevant course offering in universities, culture	Failure to understand customers' needs, failure to search and evaluate opportunities
	Shareholders Interest	Educational lacking, unawareness, and short-term vision	Low pressure on banks to adopt green banking
	Factors/Issues	Reasons	After-effects
3	Lack of SBP Pressures	Lack of projects, lack of market demand, lack of educated and skilled workforce, and lack of resources	Low pressure on banks to adopt green banking
4	Lack of Government Support	The capacity of government, undocumented economy, and lack of knowledge	Low pressure on banks to adopt green banking
5	Incentives for Banks	Lack of capacity, unstable government policies, lack of planning	Reduction of cost, high efforts, causing inconvenience, lack of encouragement, lack of customers, resistance, low acceptability
6	Incentive for Industry	Lack of capacity	Creation of demand, mass level attraction, high efforts, causing inconvenience, lack of encouragement, resistance
7	Lack of Legal Power	Lack of research work	Fear of losing the customers, pushing the customer to interest-based banking, lack of competition leads to higher rates, and less inclination of customers, less impact. Only those banks will follow that have a green policy from their principal office, lack of awareness.

## CONCLUSION

The main obstacles hindering green banking's accurate implementation are lack of awareness, knowledge, and skills, the culture of adoption to change, pressure on banks, lack of incentives, and lack of legal power,



culture, and infrastructure. For the effective implementation of green banking, priority order needs to be adopted from highly important to least important factors. The identified factors can be substituted from another factor due to the lack of feasibility of the other. The study will be beneficial in developing the future direction of green banking in Pakistan's banking industry. Significantly, green banking officers and Shariah scholars' opinions will further help revise the green banking guidelines 2017 for Islamic banks and help develop the green banking framework and green banking regulations based on Maqasid-e-Shariah for Islamic banks.

### **Recommendations for policy makers**

The findings draw many regulatory and motivational policy suggestions for Islamic banks. For example, policymakers should focus on the mass scale awareness of this issue. Currently, it is not done on a mass scale level or government level. Individually some institutions, companies, schools, and universities are doing it, but there is a need to do it at a mass scale. So, it can become part of our civic sense. There is a need to adopt a proactive approach in the automobile, mechanical, large-scale, and cottage manufacturing industries. There is a need to create awareness at the grass-root level.

Policymakers should provide incentives to Islamic banks in the form of rebates in different products. In the presence of these incentives, green banking will take some form and will flourish. Besides incentives, demand for green products should be present in the market. Without demand, green banking only includes extra checks on customers and causes hassles. Therefore, the demand for green products is necessary for accelerating green banking. Regulators are required to push the industry by providing incentives. Further, Islamic banks that meet the criteria for the definition of green should be rewarded. Rating of banks concerning green definition can create healthy competition.

The green banking guidelines need revision. The attributes must be changed as per the infrastructure of the country. Therefore, the study can help understand the needs and potential barriers to adopting green banking and identify the problem areas. The guidelines must be regularly revised to include the evolving needs and accommodate the worldwide green environment modifications.

Most interviewees argue that some attributes should be in the guidelines to deal with non-compliance banks. Regulators, therefore, set some examples by identifying and penalizing non-compliant banks. Some respondents raised concerns that penalty is the most effective way to make banks comply with green banking guidelines' attributes. Therefore, if the regulator penalizes the banks, then the level of green banking can be raised.

Ethical behaviour needs to be given special attention to incorporate the own impact reduction measures in daily banking practices. Islamic banks must provide definitions, policies, and guidelines on ethical and non-ethical standards to encourage ethical behaviour. A way of encouraging ethical behaviour is rewarding ethical practices and behaviour. Moreover, good green banking culture must be established. To achieve this, Islamic banks need to convey and underpin good green banking norms via consistent campaigns, conducting events and providing rewards at individual and group levels.

The findings reveal that Pakistan is not yet ready to adopt green banking voluntarily. Any activity to strengthen green banking standards must accompany the regulatory system, especially in the starting phase. Therefore, as stated earlier, the SBP guidelines on green banking must be revised as per the country's needs, and it must be made more comprehensive. There should be a road map to achieve some targets on a policy level by some specific date. In this way, banks, institutions, and companies can be bound to adopt green banking.

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## Appendix

### Interview Question

1. Please mention the factors you consider as major problems of green banking in Pakistan.
2. What difficulties have you faced in adopting Green Banking in your bank?
3. In which area(s) of Green Banking do you think the banks of Pakistan will find it difficult to adopt?
  - Specify the areas
  - Why?
4. How you see the market/competition challenges in Green Banking?
  - Very Challenging
  - Challenging
  - Neither very challenging nor challenging
  - Not challenging at all
  - Why?
5. What are the internal issues/challenges those influence adoption of Green Banking at your bank?
6. In our competitive global business environment, which action should policymakers take to ensure good green banking in Pakistani banks?  
Please specify \_\_\_\_\_
7. Do you have any further comments?

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i State Bank of Pakistan. Circular. Issued through IH&SMEFD Circular # 08 dated October 09, 2017

ii 5 from Islamic banks, 14 green banking officers of traditional banks and 7 head of Shariah department