Physical Education, Health and Social Sciences

https://journal-of-social-education.org

E-ISSN: 2958-5996
P-ISSN: 2958-5988

ESG Adoption: Pathways Toward a Greener Financial System

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DOI: https://doi.org/10.63163/jpehss.v3i2.303

Abstract:
The study conducts a critical review of the development of ESG (Environmental, Social, and Governance) ideology in the context of the global banking industry. It examines the literature to systematically review the integration of environmental and social sustainability in the banking model. Green Banking is studied as a subset of the ESG ideology. Based on the existing literature and Green Banking policies & guidelines, the various dimensions of Green Banking are highlighted. Own Impact Reduction, Green Business Facilitation, and Environmental & Social Risk Management (ESRM) are discussed as part of Green Banking adoption. The study critically analyses the Pakistan banking industry by reviewing the Green Banking adoption journey. The study can provide important insights towards ESG and Green Banking adoption, especially to banks in developing countries.

Keywords:
ESG, Environmental, Social, and Governance, Green Banking, Sustainable Banking, Pakistan Banking Industry

1. Introduction

Banking in any economy is much more than just another industry; rather, the banking industry may be viewed as the engine driving a country's economy. It functions as the facilitator, capital & service provider, guide and sometimes even as an elixir for a struggling economy, as depicted by the resilience, adaptability, and excellent service provision of the banking sector during the COVID-19 pandemic. Banking for any economy is the pivotal point, or the axis on which the wheel of the country's economic sectors revolves, and this industry has been playing this role for a long time.

With time, the role of the banking industry in the minimization of environmentally damaging business practices became evident. The banking industry can be considered the backbone of a country's economy through the provision of capital (Debnath & Roy, 2019; Maghrabi & Tayachi, 2021). It has been realized that sustainable economic development could not be accomplished by a country without the adoption of sustainable business practices by the banking industry (Buranatrakul & Swierczek, 2018; Rehman et al., 2021a). Banks have an important role in an economy's sustainable development and therefore must integrate sustainability into banking strategies, policies, and procedures (Khairunnessa et al., 2021a; Shafique & Khan, 2020).

The inculcation of the sustainable development ideology in banking philosophy was based on the attainment of environmental and social sustainability in the surrounding community or a wider region of impact, while simultaneously achieving economic prosperity (Shailaja, 2021a). The relationship between the banking industry and climate change is one of interdependence. The banking industry is the needle of the compass that determines the direction a country's economy is heading. If this needle is collaborated towards sustainable social, environmental, and economic development, the country will also be able to achieve sustainable economic development (Park & Kim, 2020).

2. Literature Review

The alarmingly increasing global climate change threatens sustainable living for both developed and developing countries, requiring rigorous efforts from every area of the economy, especially the banking industry. During the past few decades, the banking industry has been focused on socially responsible initiatives as part of the bank's Corporate Social Responsibility (CSR) ideology. Currently, the focus has shifted towards environmental consciousness as part of the core banking ideology due to the realization of the role the banking industry is playing in global climate change and environmental degradation (Bruno & Lagasio, 2021). The journey of the banking industry has evolved through the various stages of environmental and social responsibility, including a number of important banking ideologies being implemented currently in the global banking industry.

2.1 Environmental, Social, and Governance (ESG)

The Environmental, Social, and Governance (ESG) was an important development in the global banking industry. It synergistically integrates the aspects of environmental & social sustainability with the governance of sustainable development within the banking industry (Joel & Shan, 2022). The environmental aspect is concerned with the minimization of the bank's direct adverse environmental impacts that may stem from the unsustainable resource utilization or paper-intensive daily banking operations. The other area of environmental sustainability within a bank is connected with the bank's financing portfolio (Trahan & Jantz, 2023).

The Social aspect of ESG involves inculcating socially responsible business practices and initiatives as part of the core banking ideology. It is connected with the impact of banks on society (Tettamanzi et al., 2022). This ESG dimension involves the creation of social sustainability through fostering financial equality, financial literacy, creating safe & healthy working conditions, and other corporate social responsibility initiatives (Pollman, 2024). The bank's vision, policies and procedures regarding environmental & social sustainability are included in the Governance dimension of ESG. It oversees strategic decision making, resource allocation, monitoring & control, stakeholders' rights, and disclosure requirements (Muller et al., 2025).

The inculcation of the sustainable development ideology in banking philosophy was based on the attainment of environmental and social sustainability in the surrounding community or a wider region of impact, while simultaneously achieving economic prosperity (Shailaja, 2021b; Tu & Dung, 2017). Sustainable banking is a broader concept comprising both the social and environmental aspects as opposed to the more focused environmental approach of Green Banking. It focuses on the environmental, social and governance dimensions of banking operations to promote sustainable development in society. To adopt the principles of sustainable banking, the majority of the banks focused on implementing various social initiatives and paid less attention to environmental issues (Bowman, 2010; Goyal & Joshi, 2011a; Khairunnessa et al., 2021b). The reality was that the banking industry was also adversely impacting on the natural environment, both directly and indirectly (Bukhari et al., 2020a; Meena, 2013; Rubel et al., 2021).

2.2 Green Banking

Increased stakeholder concerns regarding the adverse environmental impacts of banking activities have exerted pressure on banks to 'Go Green' (Bukhari et al., 2020c). The global realization of banks' potential impact on the natural environment led to an increase in the adoption of environmentally friendly banking policies and practices. Banks have a pivotal role to play in the 'Go Green' philosophy, and a number of banking ideologies, when aligned and synergized with the daily banking operations, have the potential to not just transform the banking industry but the whole economy into a green economy. Green Banking is an emerging ideology that is a major subset of sustainable banking (Bukhari et al., 2023).

In the current global banking scenario, Green Banking is an evolving concept that integrates the concept of environmental sustainability with current banking activities (Herath & Herath, 2019; Sarma & Roy, 2020). It focuses on the reduction of a bank's direct and indirect carbon footprint through the sustainable use of various resources, such as paper and electricity, and expanding the bank's green financing portfolio (Gomase, 2020; Kaur & Kaur, 2018). In the current times, the global economic and energy crisis is adding to the already escalated environmental problems (Fashli et al., 2019), especially in developing countries like Pakistan. Green Banking is being recognized as the banking philosophy that can assist banks in maintaining the balance between economic and environmental sustainability (Bukhari et al., 2022). The basic goal of Green Banking is to protect the planet's ecosystem while ensuring economic sustainability (Linh et al., 2019; Shafique & Khan, 2020). The status of Green Banking Adoption varies in developed and developing economies owing to various contextual factors (Jafar et al., 2021a). Owing to the increased global climate change and greenhouse effect awareness, the 'Go Green' concept has gained momentum in both developed and developing countries (Iqbal et al., 2021; Park & Kim, 2020). The regulatory authorities of countries are playing an important role in the green transformation of the financial systems (Khairunnessa et al., 2021b).

The majority of countries have opted for one route out of the three commonly followed strategic routes towards Green Banking Adoption (Park & Kim, 2020). According to the SBN, the first Green Banking Adoption has been termed as the 'regulatory approach' since it is led by regulatory guidelines that make Green Banking mandatory to adopt for every bank in the country. This approach has been used by countries like Bangladesh, China, Indonesia, Morocco, Peru and Vietnam. Another approach is the 'industry-led approach' which involves Green Banking Adoption through voluntary green policy and practices by the individual banks, which are guided by the country's central bank's voluntary guidelines. This path of Green Banking Adoption can be observed in countries like Colombia, Ecuador, Kenya, Mexico, Mongolia, Turkey and South Africa. The last approach is termed as the 'collaborative approach' that combines some features of the first two approaches, i.e., policy and industry-led approach. It involves the voluntary adoption of Green Banking by individual banks in the country, which are later reinforced through regulatory actions by regulators, such as in the case of Brazil and Nigeria (SBN-IFC, 2015).

Banks can play a pivotal role in ensuring the adoption of the 'Go Green' ideology across all industrial sectors through Green Banking Adoption. Green Banking is a holistic banking ideology encompassing and transforming various dimensions and operations of the banks.

Figure 1: Green Banking Adoption Model

i. Own Impact Reduction

In most countries, the banking industry is one of the largest users of electricity and paper due to the vast network of branches and back offices. This creates a substantial adverse natural environmental impact due to the daily business operations of the banking industry (Jafar et al., 2021b). Thus, Own Impact Reduction is an important component of Green Banking Adoption in which a bank decreases its carbon footprint through reduced resource utilization and the adoption of eco-friendly banking practices such as green buildings, green information technology, green human resource management, green operations, paperless banking, etc. (Gomase, 2020; Shailaja, 2021a). The adoption of Green Banking involves rethinking, redesigning, and restructuring the bank's vision, strategic objectives, resource utilization and business operations. It is not a one-time activity; rather, it is a continuous process involving all aspects of the banking operations to undergo a green transformation in line with the 'Go Green' ideology (Redwanuzzaman, 2020).

In order to inculcate the Own Impact Reduction aspect of Green Banking, bank branches maintain resource consumption records and monitor them through various 'environmental performance evaluation' initiatives to reduce the direct carbon footprint of the bank branch' daily operations. It also includes various green practices such as recycling and resource conservation measures, such as double-sided printing and avoiding resource wastage (Cholasseri, 2016; Malsha et al., 2020). Eco-friendly transformation of banking operations can be achieved with Information and Communication Technology (ICT) and the bank's green infrastructure, aiming towards net-zero impacts on the environment (Bukhari et al., 2021a). The focus of Green Banking is on the de-materialization and decarbonization through various practices and processes (Khan & Szegedi, 2019). The practice of rewarding or compensating bank employees through monetary and non-monetary incentives for eco-conscious initiatives and achievement of pro-environmental goals is also an important part of Green Banking Adoption that can be achieved through green Human Resource Management (Nasir, 2020; Qureshi & Hussain, 2020a).

ii. Green Business Facilitation

Banks can play an imperative role in creating a green revolution across the customer base by launching green products and services. The eco-friendly business portfolio of the bank is directly related to the decline of adverse environmental impacts (Mulla & Nobanee, 2020). Green Business Facilitation involves the development of green products and services and green lending for various customer and business segments, including the agricultural sector, small and medium enterprises, the retail segment and infrastructural projects (SBP, 2017).

Globally, the banking industry has developed a large portfolio of green products and services to reduce the bank's indirect adverse environmental impact. Some examples of green products include the provision of green home equity loans or green mortgages, green auto loans, green construction loans, green insurance options, green account opening (Bouteraa, 2020; Verma & Sharma, 2020), green bank cards and bio-degradable ATM cards (Amir, 2021; Gomase, 2020), self-service cheque book printers, multi-function self-service Kiosks and cash deposit machines (Cahyadin et al., 2019; Gaikwad, 2020). Banks can also play their role in the development of a country's bond market through various bonds such as green bonds, blue bonds, sustainability bonds, climate bonds, gender bonds, social bonds, etc. Similarly, Islamic banks can also contribute to the creation of a green economic system by issuing Green and Social Sukuk for various sustainable development projects since Islamic banking ideology is in synergy with the concept of environmental and social sustainability (Bukhari et al., 2025).

i. Environmental & Social Risk Management (ESRM)

Banks can play one of their most important roles in green economic transformation through Environmental & Social Risk Management (ESRM), resulting in fostering the economic transition towards more resource-efficient and low-carbon industries. Green Banking prioritizes financing to industries that promote eco-friendly and environmental protection activities. Under the Green Banking ideology, banks finance green and eco-friendly projects to aid the minimization of indirect carbon emissions (Akomea-Frimpong et al., 2021; Al-Sheryani & Nobanee, 2020). It enables the banking industry to mobilize finances for eco-friendly investments without damaging the natural environment and living standards of the surrounding community (Goyal & Joshi, 2011b; Shafique & Khan, 2020). The banking industry also needs to minimize the financing of a project that may have potential adverse effects on the environment to uphold its commitment to Green Banking Adoption (Ullah & Mia, 2020).

Banks can widen the financing portfolio through financing environmentally and socially sustainable projects, climate change mitigation and climate change adaptation projects. Some green financing projects may include alternative energy generation, green construction, climate-smart agriculture, waste disposal plants, brick manufacturing through the zigzag kiln, green vehicles, and green supply chain management (Akomea-Frimpong et al., 2021; Al-Sheryani & Nobanee, 2020), water conservation, waste treatment plants such as biogas plants, waste-to-energy conversion units and recycling units (Afridi et al., 2021; Bukhari et al., 2021a; Ullah & Mia, 2020). The objective of green finance is to ensure that Environmental & Social Risk Management (ESRM) is integrated into banking. The bank's ESRM comprises of several components, including the Environmental Risk Avoidance List, Environmental Due Diligence, Environmental Risk Rating, Environmental Risk Monitoring, Environmental Risk Reporting documentation, monitoring, and control mechanisms operations (Mumtaz & Smith, 2019a; Sarma & Roy, 2020).

3. ESG Adoption in the Pakistan Banking Industry

A country's banking industry holds a unique position in the economy since this sector has a broad market knowledge base regarding all the other industries. The banking industry has one of the widest branch networks, client bases and can shift customer behaviour towards eco-friendly investments and products (Park & Kim, 2020). Currently, the performance of the global banking industry concerning environmental sustainability initiatives is still in its early development stage (Miah et al., 2021). In the context of developing countries, organizations may be reluctant to adopt green management practices due to high costs and adverse economic conditions (Ahmed et al., 2020).

Pakistan, a developing country, is fighting on various battle fronts including natural environmental degradation, natural resource depletion, climate change, food shortage, energy and water shortage and rising pollution levels. In the case of developing countries like Pakistan, the Small and Medium Enterprises (SME) depict lesser willingness and ability to adopt environmentally friendly business practices. This situation is worsened by a low level of Green Banking awareness among bank employees, therefore, making it difficult for them to guide the clients towards green financing options (Javeria et al., 2019; Mumtaz & Smith, 2019b; Qureshi & Hussain, 2020b).

Pakistan is following a phase-wise approach towards Green Banking Adoption. This means that the banking industry will adopt Green Banking in some phases. Each phase consists of various green initiatives related to Green Banking Adoption (Rehman et al., 2021b). The State Bank of Pakistan has taken several initiatives in this regard, including the issuance of the Green Banking Guidelines in 2017 (Bukhari et al., 2021b; SBP, 2017), Guidelines for Efficient Agriculture Water Management Financing (Khan & Szegedi, 2019), Financing Scheme for Renewable Energy (SBP, 2019, 2020) and Environmental & Social Risk Management Implementation Manual (SBP, 2022). In 2021, the Securities and Exchange Commission of Pakistan (SECP) also issued green bond issuance guidelines. These guidelines have been developed for the issuance of a green bond to initiate green finances for climate change projects and other investors requiring financing for eco-friendly projects (SECP, 2021). Currently, the SECP has issued the IFRS S1 & S2 Disclosure Guidelines, and the Pakistan Green Banking Taxonomy is also being drafted for implementation (SECP, 2025; MOCC, 2025).

Leading the country into the ‘Go Green’ revolution will prove to be a win-win situation for all industrial sectors since a huge untapped potential exists in Pakistan in the form of green investments. According to research, green investment equaling approximately US$ 40 billion is required by Pakistan to reduce its greenhouse gas emissions by 20% by the year 2030. Furthermore, the country requires an additional US$ 7 billion to US$ 14 billion annual green investment to adapt the country’s industries and infrastructures accordingly (Kiani, 2020; The News, 2021). A potential of approximately US$ 4 billion exists in the development of the country’s eco-friendly blue economy (Basit & Alam, 2020). In the power sector, the country needs green financing of approximately US$ 24.500 billion for alternative energy projects. Similarly, the country’s water and sanitation sector require green financing of approximately US$ 55 billion by the year 2030. Green investment potential exists in the development of Pakistan’s digital infrastructure, which is critical for the green transformation of the country’s economy. A green investment of approximately US$ 34 billion in digital infrastructure development is present to be captured through green financing (Brollo et al., 2021; The News, 2021).

Similar investment potential exists for the Pakistan banking industry as well, which can simultaneously benefit all the other connected stakeholders. According to the Government of Pakistan, approximately US$ 96.200 billion investment potential is available for banks through financing projects for attaining various UN-SDGs 2030, focusing on environmental sustainability, clean energy generation, clean water, sanitation facilities, etc. (Bukhari et al., 2023; Sheikh, 2021). Attractive green financing opportunities have been identified in alternative energy generation, green vehicle manufacturing, green construction, water conservation projects and eco-tourism by the country’s government. Recently, the Prime Minister of Pakistan directed the conversion of all federal government buildings to solar energy (Alize Fatima, 2022). This will create a large potential for banks in financing this transition towards renewable energy. The current situation of climate change in Pakistan, being manifested in the form of catastrophic floods and smog, is also an opportunity for developing the country's green economic sectors through climate-resilient and climate adaptation financing (Bukhari, 2019).

4. Conclusion

All over the world, the banking industry is in a strategic position to play a pioneering role in initiating and fostering the green revolution. Adopting the ideology of ESG can have a wider impact on other economic sectors by facilitating the simultaneous achievement of economic, environmental, and social sustainability. In the current time, almost all economic sectors are under constant pressure to adopt eco-friendly and socially responsible business practices. Safeguarding the economic stability of a country is one of the primary responsibilities of the banking industry. They can play an instrumental role in guiding, supporting, and leading the country's economy on the path of sustainable development. The banking industry can play its part in solving the worsening environmental issues by offering eco-friendly banking solutions. The environmental protection and sustainable development of the future generation of Pakistan depend on ESG adoption.

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