



INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES



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ISSN: 2222-6990

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To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v12-i12/15894> DOI:10.6007/IJARBSS/v12-i12/15894

Received: 04 October 2022, **Revised:** 05 November 2022, **Accepted:** 25 November 2022

Published Online: 08 December 2022

In-Text Citation: (Rahman & Mohamad, 2022)

To Cite this Article: Rahman, L. A., & Mohamad, M. (2022). Climate Change Risk: The Need for Green Banking. *International Journal of Academic Research in Business and Social Sciences*, 12(12), 1162 – 1170.

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Vol. 12, No. 12, 2022, Pg. 1162 – 1170

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Climate Change Risk: The Need for Green Banking

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Abstract

If environmental degradation and global warming are not adequately handled, rising sea levels, warmer oceans, and melting glaciers may become more common or extreme. Every stage of the value chain in the lifecycle of a product or service, including extraction, processing, manufacturing, consumption, and waste disposal, contributes to climate change. These activities imposed physical and transition risks that can negatively affect businesses, the environment, and the overall economy. As the banks see climate change could affect their clients and financial outlook, the adoption of green banking is necessary to ensure that they integrate climate risk analysis when deciding to finance or invest in activities that potentially harm the environment. This paper intends to conceptualise the notion of green banking, which has gained traction in both industrialised and developing countries over the last few decades. The study focuses on the risk of climate change, as well as present practices of the adoption of green banking. The qualitative study utilises the descriptive approach and analysis based on a review of previous literature. The findings of this study are beneficial for banks who want to implement or have already implemented green banking, as a better understanding of green banking will improve the banks' reputation, accountability, and profitability.

Keywords: Climate Change, Risk, Green Banking, Issues, Challenges.

Introduction

Natural disasters all around us portray the reality of climate change. In 2021, the world witnessed climate-related catastrophes, including floods in China and Europe, wildfires in Greece, heatwaves in the Pacific Northwest, and floods and monsoon variations in India. The primary causes are understood to be extensive and rapid industrialization, destructive deforestation, as well as significant fossil fuel consumption (Omar et al., 2021). The harm ultimately had an impact on economic growth as well as business and community

health. According to the UN Environment Programme (UNEP), The expense of adjusting to the consequences of climate change will climb to \$140-300 billion per year by 2030 and rise to \$280-500 billion another twenty years onwards. Climate change also placed the banking sector at risk. Based on the report, 70% of central banks and regulators consider that financial stability is at stake because of climate change, thus suggesting including climate considerations in stress tests for banks and other financial institutions (Donoghue, 2021).

Climate change comes with a variety of risks. Climate change affects people in several ways, including decreased access to food and clean water, rising disease rates, hunger, and poverty (Kamran et al., 2020). Apart from that, the ongoing trend of extreme weather results in economic and financial risk to many businesses, households, and governments. Although the ecosystem has been severely affected by climate change, business needs to utilize natural resources for development purpose and the generation of profit. As the bank is a financial intermediary between depositors and borrowers, it is also involved directly and indirectly in environmental pollution. Due to internal banking procedures and client behaviour, this exposed the banks to the danger of climate change. Banks are physically sensitive to the expenses and damages connected with extreme weather events and natural disasters. In addition, banks may experience transition risk resulting from innovations in connection with the shift to a low-carbon economy. Apart from that, banks may face regulatory risks brought on by government initiatives and rules to reduce carbon emissions and fight climate change. For example, the banks have potentially gotten fines or penalties from relevant authorities due to environmental contamination and may face legal action, which would result in paying unnecessary litigation costs or compensations payment (Javadi & Masum, 2021; Omar et al., 2021).

As the risk of climate change is increasingly alarming, the regulator and policymaker should be proactive in mitigating the risks. The Paris Agreement, established in 2015, seeks to enhance the effectiveness of the global response to the issue of climate change by keeping the rise in the average world temperature substantially below two degrees Celsius above pre-industrial levels. By imposing appropriate financial flows, an improved capacity-building framework, a new technology framework, and an improved capacity-building framework, the agreement intends to strengthen nations' ability to handle the impacts of climate change. Rudebusch (2021) has listed several initiatives taken by financial regulators to combat climate change. For instance, The Bank of England has released information about an upcoming climate risk stress test with a 30-year time horizon applicable to most U.K. banks and insurers. Following the footsteps, the central banks of France and the Netherlands also conducted similar examinations. In terms of disclosure, countries such as the United States, Switzerland, France, United Kingdom, New Zealand, Australia, China, Japan, Hong Kong, Singapore, India, and South Korea require large companies, banks, and insurers to disclose the climate- and biodiversity-related risks in their annual financial reports.

A shift to green banking is ultimately vital to prevent physical harm and associated financial instability. Stakeholders began to understand that banks' client contributes to environmental deterioration and the depletion of natural resources. Banks were therefore under pressure to lessen their negative environmental impacts through financing activities. A thorough review of the working paper is essential before making financing and investing decisions. Internally, to lessen the impact of banking activities on the environment, banks are also urged to use renewable energy sources, automation, and other pollution prevention measures (Bukhari et al., 2019). Putting in place "green banking" is still in its development stages among developing nations. Numerous issues and challenges were highlighted and

brought to the attention of the banks, regulatory authorities, and policymakers. In a nutshell, this study emphasizes the risk posed by climate change. The study makes an effort to explain why banks are under pressure to adopt green banking practices. The discussion and conclusions make up the last section.

Climate-Related Risk

Climate refers to the average of the various weather conditions in the location on the globe where we live. According to past observations, the climate can be described as the anticipated temperature, rainfall, and wind conditions. Contrarily, climate change is a long-term alteration of either the average climate or the variability of the climate (Ani et al., 2022; Sissakian et al., 2022). Stern (2007) contrasts this by defining climate change as a collection of problems and difficulties affecting the economic, environmental, social, and moral realms.

Natural catastrophes that are exacerbated by climate change can seriously interrupt people's daily lives, harming the environment and impeding economic development. Not only that but the agricultural system's crop and livestock production is also impacted by climate change, leading to food crises in some developing nations like Nigeria and Fiji (Ani et al., 2022). In terms of health issues, less access to clean food and water and excessive heat threaten human health. This is supported by the study conducted by Patel et al (2022) reported that India, Africa, and other lower-income countries are vulnerable to heat as these countries experience a lack of access to safe drinking water or air conditioning. Apart from that, living in rural or densely populated metropolitan areas contributes to the factor.

For many businesses and corporations, climate change affects core business activities and decreases a company's profit and value. Banking industries have no exception to this climate change risk. Physical risk and transition risk are the two types of climate change risk that have been extensively discussed by prior researchers related to the banking industry (Hansen, 2022; Rudebusch 2021; Campiglio et al., 2018). Physical risk imposes uncertain economic costs and financial damages from real climate-related threats and increasingly catastrophic extreme events. For instance, rising sea levels and more severe storms put low-lying coastal real estate and public infrastructure in physical danger, and hotter temperatures pose long-term hazards to human health, worker productivity, and food supply (Rudebusch, 2021). According to Li et al (2016), the insurance industry is most affected by physical risk since it must reimburse for losses and damage to insured assets. However, if these risks are not covered by insurance, losses for their lending institutions might come from the worsening in the afflicted people's and companies' financial sheets (Campiglio et al., 2018). Not forgotten, the government also suffers the financial burden to spend on the cost of deploying emergency response teams, evacuating impacted individuals, repairing infrastructure assets, and investing in preventive measures (Omar et al., 2021).

Transition risk, on one hand, refers to uncertainty about how future policy and technical advancements will address climate change as it develops (Hansen, 2022). Changes in legislation, technology, and physical risks are some of the elements that influence transition risk. As costs and opportunities emerge, the value of a wide range of assets may need to be reevaluated (Li et al., 2016). The changes in consumers' tastes and preferences also contribute to the transition risks (Rudebusch, 2021). However, it remains unclear how much exposure to these physical and transition risks has been examined. As a result, the regulators are crucial in determining if climate risk management is legitimate through transparency policies and in promoting bank disclosure of climate-related information.

The banks are also subjected to reputation risks and loss of public trust as the bank triggers the client's environmentally harmful activities (Cholasseri, 2016). Besides the government, banks are the traditional financiers of infrastructure thus, either directly or indirectly, exposed to the risks emanating from financing or investing in projects that fail to meet sustainability standards (Li et al., 2016). In response to this risk, the bank should create a compiled code of corporate practices to use green initiatives to organise and manage the environmentally friendly practices of banking operations, according to (Saeudy et al., 2021). This code would serve as an internal organizational guide to control reputational risks and reestablish public trust through practices like green lending and borrowing policies and the commercialization of social and environmental investments. Based on the abovementioned risk, it is clear that climate change imposed significant risk on the banking industry. The adoption of green banking is just in time to improve its reputation and restore credibility by encouraging banks to engage in sustainable activities that integrate environmental protection, social responsibility, and financial gain into their banking operations.

Green Banking

The idea of green banking was first developed in 1980 at the Dutch-based Triodos bank, which pioneered environmental sustainability in the banking industry. The bank established a green fund in 1990 to finance environmentally friendly initiatives. This project inspires other banks across the world to develop green banking. As a result, the first green bank commenced its operations in Mt. Dora, Florida, in the United States in 2009 (Shaumya & Arulrajah, 2016). According to Ullah (2013), the term 'green' encompasses a wide range of ethical, social, and environmental aspects. Green in the context of banking refers to the environmental effects, environmental stewardship, and environmental performance of the banks' operations. It is a transition from a traditional or conventional bank to a green bank by focusing its main operations on protecting the environment (Lalon, 2015). While Bouteraa et al (2020) define green banking as environmentally responsible behaviour in all aspects, including implementing eco-friendly procedures within the bank and considering the environment while funding and investing in a commercial project. Green banking is also known as an environmental-friendly bank, ethical bank, sustainability bank, ESG (environmental, social and governance) bank, climate banking and eco-friendly banking (Melvin, 2022).

There are two approaches to green banking practice. It first focuses on the internal green transformation of a bank. Green building, reforestation, online banking, waste management, solar panel installation on the bank's roof, use of high mileage vehicles, sound pollution reduction, webcam video conferencing instead of in-person meetings, online statements, and emailing of documents are examples of internal green initiatives (Lalon, 2015). These technological innovations can reduce carbon emissions as well as the internal carbon footprint of the banks' internal operations. Another practice relates to the banks' business where the only environmentally friendly project will be considered for loan and by supporting green initiatives and projects (Bukhari et al., 2020). In mitigating climate change and shortages of natural resources, the bank must screen the implication and risks of the clients' project to the environment and society. In the recent study by Melvin (2022), green banking products offered by the bank may include green saving accounts, green checking accounts, green certificates of deposits, online banking, mobile banking, green credit cards, and green car loan. It is technologically advanced, non-toxic, and regenerative to achieve the goal of sustainability in banking and saving the environment for a greener future.

Green banking serves several benefits and advantages. Since bank transactions go online, it eliminates the use of paper leads to cost-saving and saves trees. The automation system also simplifies the bank process and produces a quick result. By incorporating green banking, banks may boost their goodwill and reputation, customers' loyalty, and customer referrals. It also creates awareness among businesses of their social and environmental responsibilities to enable them to conduct environmentally responsible business practices and maintain their ethical standard (Rai et al., 2019; Shaumya & Arulrajah, 2016). As green banking requires continuous innovations to invent products or services that parallel new technological advancements, it could increase the efficiency of banking operations and the productivity of banks' employees (Bukhari et al., 2021; Ahmad et al., 2013). Based on the abovementioned benefits of green banking, some developed and developing countries have adopted green banking while others are still struggling to venture into this business ideology (Bukhari et al., 2021). International bodies like the International Finance Corporation (IFC) have teamed up with several regulatory bodies from different countries to ensure consistency, uniformity, and congruent green management principles in the banking sector. Support from several groups, including the government, central bank, top management, staff, and bank clients, is necessary to green the bank. The pressure and expectation from these parties could fasten the adoption of green banking to save the planet for the sake of future generations.

Discussion and Conclusion

Across the world, banks have revised their institutional culture and operating procedures in response to the 2008 global financial crisis to improve their reputation and restore credibility by engaging in sustainable activities that involve incorporating environmental protection, social responsibility, and financial gain into their banking operations. Climate change caused by man-made gases such as methane, nitrous oxide, carbon dioxide, and hydro-fluoro carbons imposed hazardous effects on agriculture, forests, water resources, and human health have been profound (Nath et al., 2014). With all sectors resuming operation after the Covid-19 pandemic, the issue of climate change became a worrying concern among the stakeholder leading them to pressure the banks to operate in an environmentally friendly manner. Thus, the adoption of green banking is necessary to find a balance between profit maximization and sustainable protection. Green banking is widely implemented either as a market-based instrument or as part of the state's command-and-control policies in the countries such as the USA, Bangladesh, India, Australia, Canada, China, and New Zealand (Pek et al., 2019). Other developed and developing countries are still in the development phase.

Despite the challenges that may hinder the growth and development of green banking, banks that are successful in incorporating social, environmental, and corporate governance factors into their commercial operations deserve appreciation. For instance, Financial Times initiate Sustainable Bank of the Year to reward banks that can find commercially viable and innovative solutions to sustainability challenges (Nath et al., 2014). In a nutshell, the effort to make green banking a reality lies on the shoulder of various parties since green banking is a useful tool for raising awareness of global warming. The government, policymaker, and central bank should provide a clear framework, rules, and regulations to govern the development of green banking. Continuous supervision and support also should be provided to ensure that banks adhere to the stated regulation and that the objectives to preserve nature are achievable. Banks' top management, on the other hand, needs to provide

sufficient training to the staff as their skills and expertise are highly important for continuous innovation to upgrade technologies so that the existing green banking practice is relevant to the current trends. The banks are responsible to raise awareness among its stakeholder of existing and latest green banking products and services while inspiring them to conduct business sustainably.

The paper highlighted the risk of climate change and the need for green banking to mitigate and combat the greenhouse gas emissions responsible for climate change. This study also discusses the pressure received from several groups to green the banking practices. For the government, policymakers, central banks, employees, businesses, and customers to understand the role and part they should play in ensuring the effective implementation of green banking surrounding its adoption has been emphasized. Finally, this paper aims to open up ideas and suggestions for future studies to fill the gap in the green banking literature.

Acknowledgements

The Malaysian Ministry of Higher Education has provided financial support under the Fundamental Research Grant Scheme.

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