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Advancing Sustainable Economies Through Green Banking: A Systematic Review

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Abstract

Global attention is now beginning to focus on environmental protection given the increasing rate of global warming. This study aims to examine the practice of green banking where its execution can help in accomplishing the goal of sustainable development and economic sustainability. This study analyzes the role of banking in the implementation of green banking in terms of financing, assortment of green banking products and reporting. Green banking innovation in the banking industry means balancing economic success with social and environmental responsibility. This research utilizes a systematic literature review related to green banking and its link to economic sustainability that includes articles published from 2018 to 2024 to ensure the findings are relevant. The results of this study are expected to affirm the importance of green banking practices in connection to making economic sustainability and contribute to raising awareness of the importance of observing the environmental impacts of bank financing.

Keywords

Green Banking, Sustainability Performance, Economics Sustainability, Social Sustainability Social, Environmental Sustainability

1. Introduction

As the people of the world become more aware of the creditable environment and global warming, the banking system today has a considerable responsibility to foster green banking (Dewa, 2023). Banks are only starting to incorporate social, environmental and governance (SESG) factors into the value propositions to reduce environmental costs for negative externalities while promoting the economic development (Aguado-Correa et al., 2023).

It is going beyond simple funding of green projects, green money, green bonds, and other sustainable business approaches for the transformation of banks (and other financial institutions) toward sustainable and low-carbon economies (Akomea-Frimpong et al., 2022). Furthermore, in line with the exile literature, financial technology (fintech) also contributes to scaling up green finance and improving better environmental risk management (Arinnis et al., 2022; He et al., 2024).

Numerous researches reveal that green banking strategies can advantage the upgrading of the image and reputation of the banks as well as help in achieving the goals set under the SDGs at both the international and the domestic levels. For instance, green finance was essential for the decrease of pollution and achievement of sustainable development in Vietnam (Mariam et al., 2021; Nguyen et al., 2024). Some developed countries such as India have used green bonds and other instruments to support carbon mitigation projects though there's an implementation gaps (Damodaran & Van Den Heuvel, 2023; Handoko et al., 2024).

However, there are several important issues that have not been solved, first, connected with the problem of green washing, in this case some of the banks were charged of the provision of the misleading data about their environmental policies without actions behind it. This also points to the need for transparency of green banking measures in supporting suitable sustainability pledges (Galleta et al., 2024; Amirudin et al., 2024).

This research applies scholarly articles on green banking and economics sustainability, which are published from 2018 to 2024 to promote timely research results. As the findings of this study, it is believed that this study will affirm that green banking practices are significant in supporting the creation of economic sustainability, and in increasing the awareness of banks to calculate the environmental cost of its funded projects.

2. Literature Review

2.1. Green Banking

Green banking is the banking practices that improve the sustainability of green approaches in financial and investment solutions (Prameswari et al., 2024). In various literatures, the concept encompasses a range of strategies that include green financing, carbon footprint reduction, and funding for projects that support a green economy (Khasanah & Sasana, 2022; Mir & Bhat, 2022). Green banking means that banks discuss only those projects that would not harm the environment or, on the contrary, can benefit it in some way. The analyzed journals indicate that green banking can be achieved by minimizing the use of papers, integrating state of art-technologies, and investing in environmental conservation such as; renewable energy and waste management (Choubey & Sharma, 2022; Piñeiro-Chousa et al., 2022).

According to a study in Bangladesh, green banking has advanced through regulation by the central bank to empower commercial banks to be more proactive in adopting environmental policies that have a positive effect on society and environments (Ullah, 2020; Asif 2021). Several studies have found that the implementation of green banking in various countries, including India and Vietnam, provides benefits such as improved image and public trust as well as contributions to the achievement of Sustainable Development Goals (SDGs) (Li & Chen, 2024; Nguyen et al., 2024). Green banking is also often associated with efforts to achieve Sustainable Development Goals (SDGs) particularly in providing clean energy and mitigating climate change (Rahman et al., 2023). A study in India highlighted the importance of green bond issuance as a source of financing for clean energy projects (Damodaran & Van Den Heuvel, 2023). In addition, research in Taiwan highlights the important role of green process innovation and adoption of green financial technologies in improving banks' sustainability performance (Liu et al., 2023).

2.2. Sustainability in the Banking Sector

Sustainability within the banking sector refers to the capacity of financial institutions to contribute to sustainable development without environmental and social harm. Several journals identify that green banking plays an important role in reducing environmental risks caused by traditional economic practices (Akomea-Frimpong et al., 2022). Sustainability here includes three main aspects: environmental, social and governance (ESG). By integrating these three aspects, banks can support more inclusive and socially and environmentally responsible development, which has become a global trend in bank policies in various countries (Putranti et aal., 2020; Khairunnessa et al., 2021).

Sustainability in the banking sector involves social, environmental, and governance aspects, better known as Environmental, Social, and Governance (ESG). Research shows that banks that adopt ESG standards tend to perform better in the long run and gain the trust of investors and other stakeholders. The reviewed studies highlight the importance of sustainability transparency and disclosure, which helps to reduce risk and enhance bank reputation (Liu et al., 2023; Rahman et al., 2023). In addition, sustainability is considered a critical strategy in the confront of increasingly pressing worldwide environmental challenges, such as climate change and natural resource consumption (Hadi, 2023).

Many banks around the world have started to respond to stakeholder and regulatory pressures to implement sustainability practices, which include environmental risk management and social impact assessment in credit decisions. In Europe, in particular, banks are facing pressure to support the transition to a low-carbon economy, provoking them to engage more in sustainable finance. Research in Italy shows that increased compliance with ESG factors improves banks' relationships with customers as well as their financial stability (Ferretti et al., 2024). In Indonesia, awareness of sustainability by banks is increasing, and many institutions have started to direct financing to projects with positive social and environmental impacts, which helps them better manage environmental risks (Anis et al., 2023).

2.3. Sustainability Performance in Banking Sector

Sustainability performance in banking is measured based on the extent to which banks successfully implement practices that support sustainability, both in terms of financial and environmental impacts. Several studies have shown that banks' adoption of supportability principles regularly contains a positive impact on their financial performance and social reputation. This can be achieved through improved operational efficiency, higher customer loyalty, and reduced costs related to environmental risks (D'Apolito et al., 2024; Grijalvo & García-Wang, 2023).

The analyzed journals show that banks that implement sustainability principles often show improvements in their financial performance and social reputation. This is due to several factors, including operational efficiency, increased customer loyalty, and reduced costs related to environmental risks (Al Mulla & Nobanee, 2020; Mahale & Hebar, 2023). Research in China shows that the application of financial technology (fintech) can promote more efficient distribution of green credit, which enables better green credit risk assessment and optimal resource allocation (He et al., 2024).

Banks in India that implement green banking show improvements in their asset quality and operational efficiency, which contributes to long-term financial stability (Mir & Bhat, 2022). Moreover, green banking not only helps banks improve reputation but also improves environmental performance through renewable energy projects and carbon emission reduction (Kothiyal, 2023). On the contrary, some studies also show that green banking practices can face challenges such as greenwashing, where banks claim environmentally friendly practices without substantial real actions (Galleta et al., 2024).

3. Methods

This research used a systematic literature review to draw conclusions. A systematic literature review collects all relevant prove that fits the pre-defined qualification criteria to answer the research questions. We adopted the PRISMA model, an approach determined from healthcare studies where there's a got to provide clinical practice rules and advise clinical decision-making under established methodological approaches and associated protocols (Galleta et al., 2024).

Table 1. PRISMA Model Flow Stages

Level	Information
Identification	At this point, analysts define the research question and search for relevant studies. The search process must be systematic and thorough, consolidating well-defined inclusion and exclusion criteria.
Screening	In this stage, analysts evaluate the studies identified in the first stage for their relevance to the research question, as well as the setup inclusion and exclusion criteria. Regularly, this process starts with screening the titles and abstracts of the studies, followed by a comprehensive review of the full text of those that meet the inclusion criteria.
Eligibility	At this point, the analyst evaluates the possibility of the studies that have effectively cleared the screening stage. This assessment includes evaluating both the quality of the study and its relevance to the research question.
Inclusion	At this point, studies that satisfied the qualification criteria were consolidated into the systematic review. Data from these studies was extracted and analyzed, and the findings were synthesized and presented.

We used the following principles and procedures to select and collect literature reviews. We used Science Direct, Google Scholar and Scopus websites as the main search engines and three online databases to form a collection of primary research articles with open access articles. The articles and publications selected for this study were limited to 6 years prior to this study i.e. those published in the period 2018 and 2024. This measure was used to ensure that the results of this literature review are relevant to the current situation. The purpose of this selection was to screen studies related to green banking, green banking financing products and economic sustainability. The concept of sustainability includes three interconnected dimensions: environmental, social, and financial. The concept of environmental sustainability relates to the conservation and improvement of natural resources, which include water, biodiversity, air, and land (Xie et al., 2023; Raihan, 2024).

Table 2. Stages of the Systematic Literature Review Process

Level	Information
Identification	Keywords were strategically applied to accurately identify the objectives of this study, namely green banking and sustainability performance. The keywords used for construction are detailed as follows: "green banking"; "sustainability performance", "economic sustainability"; "social sustainability"; "environmental sustainability" (n = 639)
Screening	Criteria considered in limiting articles and publications: 1. Articles published between 2018 to 2024 2. Articles written in English 3. Articles with a green banking theme 4. Articles are within Economy Field (n = 47)
Eligibility	The process began with screening abstracts related to the research theme and continued with screening and identification of studies. (n = 29)
Inclusion	Selected articles were read thoroughly and analyzed for further development in this study. (n = 10)

Table 1 illustrates the process carried out at each stage of the systematic literature review in this study, while Table 2 appears the number of publications considered from the beginning organize to the final organize and the number of publications that will be analyzed advance in this study. A total of 639 publication samples were obtained in the identification process stored in several publication databases using certain keywords listed in Table 1. The number was then narrowed down to 48 publications that met the criteria considered in the selection stage. The publications obtained in the selection stage were then reviewed with a focus on the abstract to filter out publications related to the research theme and 29 publications were obtained. The final stage obtained 10 publications to be continued in accordance with the research objectives related to green banking and the concept of the three pillars of sustainability from John Elkington (1994) namely economic sustainability, social sustainability and environmental sustainability. The publication sample was then analyzed to answer the research objective of explaining how green banking practices can be applied to create sustainable development.

Table 3. Publications Processed for Systematic Literature Review

Author	Method	Object Research
Galleta et al. (2024)	Literature Review	Scientific articles from Web of Science dan Scopus between 2013 and 2023
Akomea-Frimpong et al. (2022)	Literature Review	Scientific articles between 1990 and 2019
Aguado-Correa et al. (2023)	Quantitative	Banking Entity in Spain supervised by the European Central Bank
He et al. (2024)	Quantitative	Banking entities in China
Rahman et al. (2023)	Qualitative	Banking entities in Bangladesh and India
Nguyen et al. (2024)	Quantitative	Banking entities in Vietnam between the period 2015 to 2020
Damodaran & Van Den Heuvel, (2023)	Quantitative	Green bonds data from banking entities in the Indian free market for the period 1 January 2019 to 14 December 2019
D'Apolito et al. (2024)	Quantitative	Italian MSME entities registered in 14 regions during the period 2017 to 2021
Grijalvo & García-Wang, (2023)	Qualitative	Global commercial banking entity
Anis et al. (2023)	Quantitative	Banking entities listed on the Indonesia Stock Exchange for the period 2010 to 2020

4. Results

Table 3 shows the scientific articles or publications that were processed to develop the results and discussion in this study. Examples of these publications provide an explanation of the understanding of green banking practices that result in sustainability.

Table 4. Publication Categories Based on the 3 Pillars of Sustainability Concept

Pillars of Sustainability	Related Journals
Economic Sustainability	(Akomea-Frimpong et al., 2022); (Nguyen et al., 2024); (Damodaran & Van Den Heuvel, 2023); (Grijalvo & García-Wang, 2023); (He et al., 2024)
Social sustainability	(D'Apolito et al., 2024); (Anis et al., 2023); (Rahman et al., 2023)
Environmental Sustainability	(Galleta et al., 2024); (Aguado-Correa et al., 2023a); (Akomea-Frimpong et al., 2022)

The publications that have been selected and categorized in table 4 above are used to interpret the results and draw conclusions for this study on how to build the concept of the three pillars of sustainability through green banking, which is explained as follows:

4.1. Green Banking and Economic Sustainability

Green banking practices integrate environmental considerations into banking industry activities to promote sustainability and economic benefits. Akomea-Frimpong et al., (2022) states that environmental assurance, climate change, social inclusion, and sustainability remain noticeable worldwide concerns, with developing interest in these regions inside the banking sector in recent years. The review conducted indicated that bank managers and employees recognize the importance of advancing green finance to achieve a competitive edge in the industry. Additionally, banks can enhance financial inclusion and introduce innovative financial products to promote economic sustainability.

The implementation of green banking supports economic growth. Nguyen et al. (2024) examined the impact of green banking financing on sustainable economic development in Vietnam. The focus of this study is on the contribution of green financing in supporting economic growth while paying attention to and managing environmental risks and pollution mitigation resulting from the industry financed by the bank. Damodaran & Van Den Heuvel (2023) evaluated the low carbon value chain of industries in India and the role of green financing from banks in funding climate impact mitigation projects. This shows the importance of economic sustainability in supporting carbon emission impact reduction targets. Research conducted by Grijalvo & García-Wang (2023) identified sustainable business models for financing climate-related projects as a key driver of green banking profitability that also enhances long-term financial stability.

Financial technology can also improve the efficiency of resource allocation and reduce the risk of green finance contributing to economic sustainability by increasing the availability of green finance. Banks should to enhance their investment in financial technology tools, expedite the advancement of banking financial infrastructure, and proactively investigate the integration of financial technology with green credit to ensure sustainability and prepare for future competition (He et al., 2024).

4.2. Green Banking and Social Sustainability

Green banking practices are moreover required by banks in giving financing to companies. Small and medium-sized enterprises (MSMEs) that implement sustainable practices have better access to bank credit and this strengthens the socio-economic relationship between banks and small and medium-sized enterprises (D'Apolito et al., 2024). The implementation of green banking practices has been executed globally. Research from Rahman et al. (2023) highlights how green banking initiatives are implemented in Bangladesh and India. The study compared the contribution of green banking practices to Sustainable Development goals especially related to clean energy and climate action as well as significant social impacts. Green banking practices are also starting to be highlighted in Indonesia. Sustainability awareness in Indonesian banking institutions focuses on the balance of financial, social and environmental perspectives in the financing provided and the effect on benefit through operational efficiency (Anis et al., 2023).

4.3. Green Banking and Environmental Sustainability

Green banking practices integrate environmental considerations into banking industry activities to promote environmental sustainability. The study of greenwashing practices in the research conducted by Galleta et al. (2024) offers important theoretical perspectives on greenwashing within the banking industry and presents practical recommendations for tackling this challenge. It emphasizes the need for heightened awareness, transparency, and accountability to combat greenwashing and encourage responsible environmental practices in the banking sector.

Reporting on green banking practices is also a consideration that is currently important to the image of banks within the industry. Evaluation of non-financial information reported by these banks is linked to the achievement of the Sustainable Development Goals with a primary focus on environmental issues (Aguado-Correa et al., 2023). In addition, green financial products such as green financing and green infrastructure bonds are also important for environmental protection and support sustainability (Akomea-Frimpong et al., 2022).

5. Discussion

Based on the investigation conducted through the above publications, green banking, sustainability and sustainability performance shows that green banking practices are developing as a significant approach that consolidates environmentally friendly practices within the financial sector. This paper conducts a systematic review of the implementation of Green Banking and its importance to sustainability. The paper recommends that green banking practices that coordinated environmental considerations into banking industry operations generate sustainability and financial benefits. Key practices include banking products that incorporate environmental considerations. A few green financial products have surfaced in the banking sector, each including brands, terms, and conditions. In a strategic approach, banks recognize and market related green financial products to gain a competitive edge within the industry (Raberto et al., 2019; Akomea-Frimpong et al., 2022). Major challenges that arise in the implementation of green banking and sustainability include the potential for greenwashing where some banks may claim environmentally friendly practices without substantial implementation (Galleta et al., 2024). This phenomenon threatens public trust and may decrease the effectiveness of sustainability initiatives in the banking sector. Therefore, it is important to improve regulation and control instruments to ensure transparency and accountability in the implementation of environmental policies in the banking industry.

6. Conclusion

Green banking and sustainability in the banking sector play a critical role in accomplishing sustainable development goals and addressing worldwide environmental challenges. Currently, many parties in the banking industry have adopted environmentally friendly practices in terms of financing and financial technology. However, there are still some challenges to be aware of including the risk of greenwashing as well as the lack of consistent reporting standards and constraints in implementing new greener technologies. Deeper sustainability integration and the development of long-term value-oriented banking business models will be key to driving the transformation of the financial sector towards a greener and more sustainable economy.

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