JDI
JOURNAL OF DEVELOPMENT AND INTEGRATION
TẠP CHÍ PHÁT TRIỂN VÀ HỘI NHẬP
Số 75 (2024) 68-74 | jdi.uef.edu.vn

Experience in developing green banking activities

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K E Y W O R D S

Sustainability,
Carbon,
Central bank,
Commercial bank,
Green bank.

A B S T R A C T

This article aims to explore green banking activities being implemented in other countries and propose solutions for Vietnamese commercial banks. To accomplish this goal, the author presented models of India, Malaysia, Indonesia, China, and Bangladesh. The study employed a qualitative approach. The results show that for effective implementation, there needs to be synchronized policies from the central bank or governing body and commercial banks. The results also show that there are two groups of activities that banks can deploy depending on the bank's capacity. Two groups of activities include direct activities and indirect activities.

1. Introduction

It was in the US state of Florida in 2009 that the green banking model was first introduced (Zhixia et al., 2018) and has contributed to environmental protection. Since then, green banking has become a commonly used phrase to refer to sustainable banks. This model quickly became a banking model of global standards, widely accepted by society, contributing to protecting the world from environmental harm (Pramanik et al., 2009).

Sustainability is ensured by green banking since it doesn't harm the environment. Moreover, risk management and environmental management are synonymous. Since it eliminates a lot of risks, this is crucial for banks and the economy. Green banking helps banks enhance their asset quality going forward in addition to guaranteeing that their operations are environmentally friendly (Akanksha & Meenakshi, 2023).

This model also improves the bank's reputation by showcasing its environmental commitments and lowering operating expenses by using less water, energy, and stationery. Through the use of technology, the green banking model also helps to increase employee productivity and efficiency. Risks are reduced by installing environmentally friendly equipment (Sharma & Choubey, 2022).

According to the United Nations' request, countries need to reduce emissions and promote environmental protection solutions. The world banking industry, as an important capital provider for businesses, has certain strategies for implementing green banking. In Vietnam, the State Bank has also issued several important documents as a basis for implementing this banking model. However, due to limitations in experience and knowledge, there are still some banks that have not implemented much or not effectively (Kỳ Phong, 2023).

To provide information to Vietnamese commercial banks about green banking activities being carried out

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https://doi.org/10.61602/jdi.2024.75.09
Received: 19/10/2023; Revised: 19/11/2023; Accepted: 26/11/2023
ISSN (print): 1859-428X, ISSN (online): 2815-6234

in some countries, this article has presented models of countries such as Bangladesh, China, Indonesia, Malaysia, and India. The authors then go on to offer suggestions on how Vietnamese commercial banks can implement suitable green initiatives to support sustainable development.

2. Literature Review

2.1. Green bank

Green banking is often used to refer to two aspects of banking operations. The first aspect involves minimizing environmental impacts such as saving energy, water, waste treatment, and management. The second aspect involves indirect impacts on the environment such as increasing support for environmentally friendly projects and renewable energy (An & Pivo, 2020).

This banking model focuses on improving banking operations through applying technology and creating systems and processes that improve customer experience (Chitra & Gokilavani, 2020). Due to such characteristics, green banking is also known as socially responsible banking, sustainable banking, or ethical banking (Zhixia et al., 2018). Green banking activities have the following characteristics:

- Reduce environmental pollution through automation and providing online banking services;
- Always be aware of creating a harmonious atmosphere inside and outside the bank;
- Prioritize credit for investment projects that take into account environmental issues;
- Always pay attention to green growth and sustainable development;
- Promote green awareness in service provision.
- This banking model helps promote community responsibility and ethics.

Green banks make an effort to conduct daily business while taking both internal and external sustainability into account. The green banking model offers the following advantages in the banking sector:

- Effective use of bank resources;
- Reduce carbon emissions in all bank branches and headquarters;
- Increase goodwill or improve brand image;
- Easily make lending decisions for some projects that are harmful to the environment;
- Introducing new technology in banking operations to ensure quick customer service and increase worker productivity;
- Create awareness among stakeholders, helping them carry out business activities that consider environmental factors.

Due to the benefits that this model brings, many countries are also having policies to promote the development of green banking activities. Based on the capacity and characteristics of each country, these activities are being implemented at different levels.

2.2. Green banking activities are being implemented in some countries

2.2.1. Bangladesh

In Bangladesh, the green banking strategy is implemented systematically. Green banking is implemented not only for commercial banks but also for central banks (Zhixia et al, 2018). Green banking activities carried out at central banks are divided into two groups including direct activities and indirect activities. For direct activities, the central bank has specifically implemented the following:

- Use resources such as electricity, water, gas, fuel, and paper... the most effective way: install a solar energy system; Use LED light bulbs...;
- Deploying online bidding, online recruitment, automating professional activities through core banking modules, treasury management modules, and market infrastructure modules;
- Change the way to destroy damaged money by shredding.

For indirect activities, the central bank has implemented the green banking strategy through supporting policies, mechanisms, and guidelines for commercial banks. The Bank has issued policy guidelines on green banking. The policy guidelines are applied in three phases. The first stage is to develop management policies, integrating environmental risks into core risk management, starting with internal environmental management, applying green finance, green marketing initiatives, and launching a climate risk fund. The second phase is the integration of industry-specific environmental policies, green strategic planning, establishment of green bank branches, and publication and reporting of green banking activities. In the final phase, banks present details of their green banking activities in their green banking reports. Banking activities have been gradually integrated into bank operations:

- Support for policy and guidance: the bank has released several guidelines for its green bank operations,

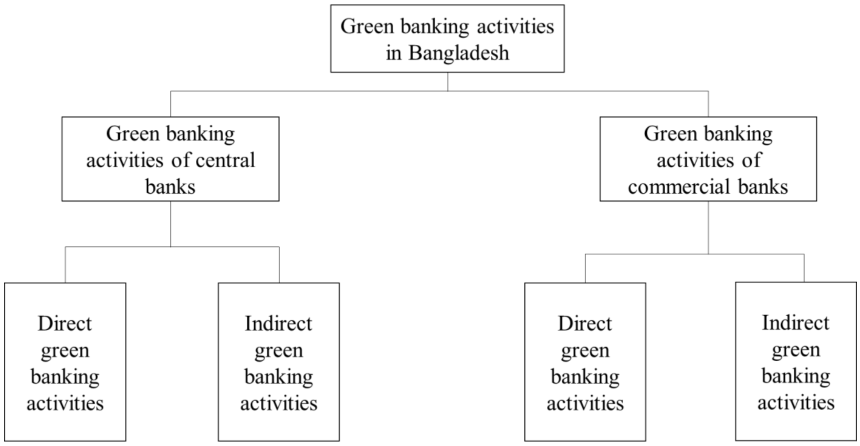

Figure 1. Green banking activities in Bangladesh

Source: Zhixia et al., 2018

being the first central bank in the world to have a clear vision for promoting green banking to protect the environment. As an intermediary, the Central Bank also suggests to commercial banks that they open Letters of Credit (L/C) to finance solar energy projects and install wastewater treatment plants in industrial parks.

- Encourage commercial banks to refinance interest rates so they can fund “green” or ecologically friendly projects like biogas installations, solar power plants, and renewable energy generating units. Another is the use of new, effective energy production processes in wastewater treatment plants.

Green banking reporting: all commercial banks must report their green banking activities every quarter as per the template provided by Bangladesh Bank. Developing and implementing policies, budget allocation and use, environmental risk assessment, green finance, and use of climate risk funds.

Based on the green banking strategy and guidelines of the Central Bank of Bangladesh, commercial banks develop plans and schedules for implementation. The implementation of banks is also divided into two groups of activities including direct activities and indirect activities:

- Allocation and use of budget for green banking strategy: according to Central Bank guidelines, all banks are required to allocate a significant amount to green banking. This budget is classified into Financial Fund, Green Investment, Climate Risk Management Fund, Green Training and Development Fund, and Green Marketing Fund. Through these financing strategies, the bank has indirectly contributed to environmental protection.

- For direct green banking activities, the bank has focused on developing online banking, Internet, and mobile banking; Promoting mobile banking channels; Improving and expanding ATM services of banks nationwide; Using solar energy at branches, transaction offices, and ATMs. In addition, commercial banks also focus on raising awareness and motivating employees and consumers about green banking.

2.2.2. Malaysia

The green banking initiative of commercial banks in Malaysia is implemented towards two activities: direct activities and indirect activities. For direct activities, the bank has carried out the following activities (Maybank Sustainability Report, 2021):

- Gradually eliminate the use of paper. The paperless strategy is implemented by digitizing all internal processes. Nearly 136,570 kg of important documents were recycled by banks in Malaysia and Singapore.

- In addition, banks have raised awareness and reduced carbon emissions. Banks have carried out awareness programs and campaigns using posters, banners, electronic newsletters, and other regular media on environmental cleanliness.

- Waste management: all waste is handled responsibly, with effective collection, recycling, and treatment systems in place, all monitored by licensed contractors to ensure compliance with government regulations. Banks also hire experts to properly dispose of outdated electrical equipment.

In terms of indirect actions, the bank has initiated numerous policies and carried out indirect environmental protection projects. The bank has specifically engaged in the following endeavors:

- Invest in green and environmentally friendly financial projects;
- Reduce carbon emissions;
- Providing capital for energy projects;
- Support innovation through funding waste-to-energy projects.

2.2.3. India

India is the world's fourth largest carbon emitter and signed the Paris Agreement in 2016, accepting the need to reduce carbon emissions by 30-35%. India's central bank has made it mandatory for banks to allocate 40% of their lending to sectors deemed socially important, including agriculture and small and medium enterprises. For green projects, the central bank has also relaxed regulations so that commercial banks can mobilize capital from abroad (Akanksha & Meenakshi, 2023).

The Securities and Exchange Board of India released guidelines for the issuance of green bonds and the requirements for listing them at the beginning of 2016. In addition, the Indian Parliament passed the Companies Act in 2013 to encourage green financing, requiring big businesses to donate at least 2% of their average net profits to ethical endeavors. corporate social responsibility to safeguard the sustainability of the environment, fight poverty, and encourage proper hygiene and health care. The government has set up specialized funds, such as the textile industry upgrading fund, credit-linked capital support program, and leather tanning modernization program, to incentivize businesses to transition to more environmentally friendly production practices.

The two activities that the green banking strategy for commercial banks focuses on are direct and indirect. In terms of direct operations, the bank works on the following initiatives (Mir & Bhat, 2022):

- Green transaction counters: banks have switched from paper-based banking activities to green transaction counters in some of their locations.
- Green Marathon: some banks organize annual marathons, and each participant will receive a sapling to plant after finishing the run for a green city. In addition, most of the materials used in organizing the marathon are environmentally friendly. The main objective of this marathon is to raise awareness about the essential need to adopt green practices.
- Solar-powered ATM: The main goal of this initiative is to significantly reduce carbon emissions and improve carbon emissions. To save energy, some banks have implemented effective time management systems, automated systems, and efficient lighting systems next to ATMs.
- Annual report in electronic form: another activity that contributes to environmental protection is the distribution of electronic annual reports to shareholders.
- Initiatives to develop retail banking and digital banking: some banks have promoted this activity to raise awareness and multi-channel banking to promote the green banking model.

The bank also indirectly implements green banking activities by sponsoring investment projects and granting short and long-term credit.

- Support green and environmentally friendly financial projects;
- Greenhouse: Greenhouse is another important program launched by the State Bank of India to promote a low-carbon society. The bank has extended credit to those interested in green projects, supported by Leadership in Energy and Environmental Design (LEED) India, Indian Green Building Council (IGBC), and Terigriha from Teri-BCSD India. These are the green building certification agencies in India. The bank offers home loans at 5% margin discount and 0.25% interest without processing fees;
- Financing rooftop solar projects;
- Long-term loans for targeted and environmentally related projects;
- Invest in green bonds.

2.2.4. China

In China, the green banking strategy is also implemented synchronously by the central bank and commercial banks. China's central bank has required banks to make mandatory information disclosure and classify what constitutes 'green' lending. People's Bank of China (PBOC) also allows risk weighting for 'green' assets based on empirical evidence of lower risks such as lower bad debt ratios for green loans (Durrani et al., 2020).

Additionally, the PBOC has introduced a green refinancing policy that permits commercial banks to borrow money at preferential interest rates from the PBOC using green bonds or loans as collateral. The capital obtained will subsequently be transferred to other banks. Green companies take out loans again. The China Securities Regulatory Commission (CSRC) and PBOC have jointly released guidelines on green bond verification activities in China, which define the term "green" and specify necessary information, verification techniques, and reporting requirements.

In addition, PBOC also issued circulars on "Strengthening supervision and management of term of green bonds" and "Requirements to disclose information on green bonds". These require quarterly disclosure of green benefits as well as detailed information on violations of environmental standards.

In China, green banking activities are implemented systematically and have a long-term strategy. Green banking activities are carried out through channels such as credit channels, private investment through bond issuance, focusing on green technology and exploring integrated services. To implement these activities effectively, Chinese commercial banks have focused on building institutions and a workforce knowledgeable about green banking and establishing effective information exchange and disclosure mechanisms with environmental protection agencies.

China's commercial banks have primarily gotten their capital from government funding sources. Furthermore, banks have taken the proactive measure of diversifying their capital sources by incorporating investment funds from individuals, businesses, and other entities. Banks have implemented financing requirements like the following to oversee and run their green banking operations:

- Select priority intervention areas: funded projects must meet one of five green indicators, which are used to evaluate green technology projects in China. These indicators include reducing greenhouse gas emissions, increasing natural resource recovery, protecting or improving the natural environment, protecting or improving biodiversity, and promoting environmental sustainability;
- Target domains: traditional energy, renewable energy (solar, offshore and onshore wind, hydropower, waste, and biomass), as well as advanced technology sectors such as power grids smart, biofuels, low carbon transport, energy efficiency, and tidal technology;
- Business model: prioritizes "value-driven" development projects that combine government guidance, market profits, and green public welfare.

2.2.5. Indonesia

Indonesia has sought to position itself as a leader in the green finance market through promoting green finance. In Indonesia, the central bank is not the agency that implements green banking activities, but the Financial Services Authority (OJK) is the organization that manages and is responsible for this segment. In 2014, OJK launched a sustainable finance roadmap that includes a comprehensive plan to promote sustainable finance. The roadmap includes both medium-term (2015-2019) and long-term (2015-2024) plans for the financial services industry. The purpose of this roadmap is to promote sustainable development through government, industry, and key international organizations (Durrani et al., 2020).

Due to Indonesia's high energy demand, the sustainable finance program is set to promote energy conservation as well as finance new and renewable energy sources. Other focus areas that the program also targets include agriculture, the processing industry, general infrastructure, and micro, small and medium enterprises.

In July 2017, OJK required banks to develop action plans for sustainable financing and green finance risk reporting. This further helps the development of the green finance sector and sheds light on which banks are funding industries.

In 2018, Indonesia was the first country in the world to issue Sukuk green bonds. The proceeds have been invested in renewable energy projects, public transport, low-carbon buildings, water and waste management. The Indonesian government has sought to streamline existing regulations to relax administrative requirements and make it easier for provincial governments to finance infrastructure projects, which has spurred the development of the municipal green bond market.

To support sustainable growth, the Indonesian Government has implemented several solutions to promote green infrastructure financing, improve public-private partnership (PPP) regulations, and improve public-private partnership (PPP) regulations, develop a plan to provide subsidies and enhance credit for PPP projects, and establish Indonesia's internal credit rating scorecard system as well as the Indonesia Infrastructure Guarantee Fund.

Commercial banks have internal green banking initiatives in place, such as green office initiatives, waste reduction and energy efficiency initiatives, holiday activation of certain machines, turning off lights during breaks, and lowering the amount of excess electricity used for all unit operations. Recycled water can be used for a variety of tasks, including laundry, air conditioner cooling, and plant watering. Minimize the amount of paper used in all work units by actively using email to communicate information and schedule internal meetings, reduce the amount of plastic used in all work units, digitize public ministry tools and documents for stakeholders, and divide office waste into two or three categories: hazardous, non-hazardous, and/or organic.

3. Research methods

The research method used in the article is qualitative. The author gathers information and synthesizes it from secondary sources like books, newspapers, and magazines. The countries selected for analysis are Bangladesh, China, Malaysia, Indonesia, India, and Bangladesh because they have made some progress and achieved some success in their green banking endeavors, and the aim is to provide lessons for Vietnamese commercial banks. Certain enhancements made by these banks might fit in well with the ways Vietnamese commercial banks operate.

4. Results and discussion

Recognizing the importance of the green banking model, the State Bank of Vietnam signed a commitment to implement the 2030 Agenda for Sustainable Development at the United Nations Summit, signing the Paris Agreement; At the same time, the National Strategy and Action Plan on green growth has been developed. To implement these commitments, the State Bank has issued several documents such as Decision No. 1604/QD-NHNN dated August 7, 2018, on “Green banking development project in Vietnam”, Circular No. 17/2022/TT-NHNN dated December 23, 2022, guiding the implementation of environmental risk management in credit granting activities of credit institutions and foreign bank branches.

The purpose of these documents is to raise the banking system’s social responsibility and awareness of its role in protecting the environment, addressing climate change, gradually greening its operations, and directing credit capital flows that are used to finance environmentally friendly projects, encourage green consumption, production, and services, and support clean and renewable energy sources to support green growth and sustainable development. Regarding direct green banking activities, the content published in the annual reports of Vietnamese commercial banks shows that banks are promoting the building of a green corporate culture, focusing on implementing savings. Save electricity, water, paper, and office materials, encourage planting and taking care of trees in the workplace as well as consciously keep a green, clean, and beautiful working environment. Some banks also focus on reducing greenhouse gas emissions and disseminating knowledge about green banking to employees.

Regarding indirect green banking activities, although there have been positive signs of green credit growth and green banking, this banking model has not yet developed strongly in Vietnam. Some banks are considered proactive in implementation, but there are still some banks that are slow to implement. The reason is that banks are still limited in resources, knowledge, and experience (Kỳ Phong, 2023).

Furthermore, Vietnam still lacks a national green classification list that could be used as a foundation for attracting additional green funding. This also makes it difficult for commercial banks to offer green credit. Outstanding credit loans have been evaluated for environmental and social risks; as of June 2023, roughly 50% of all banks reported having conducted research and created regulations guiding the assessment of environmental and social risks. Merely 14.17% of the total outstanding debt in the economy is accounted for by associations. Commercial banks and other credit organizations primarily rely on projects and programs funded by foreign organizations like the French Development Agency, the Global Climate Cooperation Fund, and the International Finance Corporation (IFC) for their green credit needs (Đỗ Lương, 2023).

5. Solutions for green banking activities in Vietnam

It is clear from the findings of an analysis of other nations’ experiences with green banking and the state of this banking model’s implementation in Vietnam that a methodical implementation process is necessary to carry out these activities successfully. Specifically, the State Bank is the managing body, in charge of establishing advantageous circumstances and assisting banks with execution.

Onward, the State Bank must devise strategies to enhance its capabilities, create a regulatory structure, promote environmentally friendly loans and products, and take climate change into account when formulating financial policy decisions as well as cash. Guidelines on green standards in banking operations that are more precise and easily understood should be released by the State Bank; make it mandatory for banks to create a green banking roadmap; strengthen financial services that save energy and protect the environment with experienced international financial institutions and foreign banks; promote exchange and cooperation, learn from experience, introduce advanced initiatives, better promote the green banking model to meet international standards, and develop quickly and healthily.

Lending to low-carbon projects generally carries greater risks under the Basel III regulatory framework because such loans often have longer maturities, are subject to greater refinancing risks and lower liquidity, and may be subject to changes in policy. Basel's rules regarding these loans are not clear, though. China's experience with this matter is instructive, as green loans have lower capital requirements than other loan types. Introducing carbon-based capital buffers to apply to loans to carbon-intensive enterprises is an additional strategy that might be used. A different strategy that could be used is to simulate various climate scenarios and test stress. These models help evaluate the possible effects of climate change on specific companies and the stability of the financial system overall by projecting a variety of options for the shift to a low-carbon economy.

Even though the idea of green banking is not new to commercial banks, some of them still lack experience in putting it into practice. The article then suggests the following fixes for commercial banks:

- Direct green banking solution: moving towards paperless, cashless, and digital transactions through e-banking. Empirical evidence in other countries has also shown that online banking and mobile banking are the easiest ways to apply green banking. Diversify card types to reduce the burden of printing more money and reduce widespread tree cutting such as ATM cards, credit and debit cards, green money transfer cards, foreign travel cards, eZ Pay cards, gift cards gifts, smart payment cards, etc. Electronic statements are also a great solution for green banking. Additionally, banks can consider switching to renewable energy such as solar, wind, etc. to operate daily operations and ATMs.

- Indirect green banking solutions: banks need to establish strict policies and standards on sustainable finance. This may include excluding environmentally unfriendly investments. Increase funding for environmental protection projects and products, renewable energy development such as solar panels, and recycled furniture, funding for projects using low-carbon vehicles, funding housing for green buildings…. Banks should provide complete and transparent information about green banking activities. This helps customers and shareholders better understand the bank's social and environmental impact. In addition, banks should also focus on employee training, ensuring that bank employees understand green banking and can evaluate green projects and associated risks. Implementing green banking requires commitment and continuous efforts from commercial banks. Green banks not only create financial value but also contribute to social and environmental goals and help create a more sustainable economy.

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