



Green Credit Development: Current Status and Policy Recommendations in Vietnam

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Abstract

The banking industry can play a decisive role in promoting environmentally sustainable development and community responsibility investments. In that context, green credit development is considered one of the essential strategies to move closer to the "green banking" model. Although it has great potential and brings opportunities for technological innovation to the economy, currently, green credit still faces many obstacles. With the goal of green credit for sustainable development, the introduction of Directive 03/CT-NHNN on promoting green credit growth and managing environmental and social risks in operations providing credit sent a strong message about the responsibility of the banking industry towards environmental protection. Thus, the research objective is to systematize the general theoretical issues of green credit and green credit development. Analyze the importance of green credit for the banking business by surveying 150 managers related to green credit at commercial banks. Based on the research results, this study proposes some policy recommendations to support the development of green credit for commercial banks in Vietnam.

Disciplinary: Energy & Sustainability (Green Credit), Banking.

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1 Introduction

There are a lot of documents with "green" research orientation around the world, including research papers on broad issues (such as green economy, sectors/sectors of green economy, construction) green economy of each country) or research on narrow and technical problems (such as technical solutions for industry, field, activity, green project"). Besides, the foundation of these studies is the idea of the link between a green economy and sustainable development. The banks

stemming from actual needs, credit institutions worldwide are applying the "green credit" strategy to ensure their development process does not harm people and natural resources, and the ecosystem.

Duan & Niu (2011) showed that documents related to green growth, green credit, or green credit development usually approach in 3 directions: (1) green growth and mechanisms for green growth in countries around the world, financial tools to attract capital for green programs and projects; (2) the role of the financial-banking market in attracting capital for green programs and projects; (3) propose initiatives, treaties of organizations, green credit trust funds.

With the first research direction, according to Ansari & Holz (2020), financial tools for green investment purposes are divided into three separate groups: tools to raise capital directly for green programs and projects such as loans, subsidies, green stocks; tools that do not raise money directly but help reduce risks such as insurance, technical funding for green programs and projects; a group of tools to raise capital for private funds for green investment purposes".

In addition, Batrancea et al. (2020) emphasized the profound significance of green growth and the mechanism for green growth in the European Union countries. At the same time, the author also contributes to clarifying strategies and incentives, primarily focusing on market tools pointing out the essential areas in the transition to green growth.

Bos & Gupta (2019) showed that the trend of green credit growth has been developing for a long time globally with energy saving, renewable energy, and clean technology projects aiming at the dual goal of economic growth with environmental protection. Green credit is an essential solution for people, organizations, and businesses, helping to minimize the negative impacts of life and production processes on the environment and society, contributing to the development process sustainability of the economy (Chen et al., 2018). Meanwhile, on the bank's side, implementing the green credit program also helps the bank reduce bad debts, enhance financial stability and protect its brand image in the market. Thus, the authors propose some policy recommendations to support the development of green credit for commercial banks in Vietnam.

2 Literature Review

2.1 Green Credit

First of all, to better understand "Green credit," the authors would like to mention some related concepts such as green credit" is the inevitable direction of the global financial and banking industries. Besides, Migliorelli (2021) showed that green credit plays an essential role in promoting sustainable development and realizing green growth strategies. In recent years, when the issue of "green growth - sustainable growth" is becoming a matter of concern in many countries worldwide, "green credit" has also gradually become an issue that needs attention critical in commercial banks (Beck et al., 2006; Bolton et al., 2020).

It can be understood "green credit" is the credit that banks grant to projects that do not pose risks or aim to protect the environment. In other words, credits in grants, loans, and other credit

forms consider environmental impact and promote environmental sustainability (Chao et al., 2021; Anderson & Zylicz, 1999).

Green credit activity for corporate customers, made possible by the bank by creating groups dedicated to financing large-scale renewable energy, clean energy projects, debt portfolio commit to fully or partially finance the project (Xie & Liu, 2019; Uchida, 2011). Green credit activities can be loans with interest rates much lower than the market applied to customers buying green energy homes. For commercial building projects with lower energy consumption (about 15% - 25%), waste reduction, and less pollution than traditional buildings, the bank will design and deliver attractive loan agreements with green commercial building construction loan products (Chen, 2019; Wang & Wang, 2021).

In summary, according to the author, it can be understood that "green credit" is only the credit that the bank grants for production and business projects that do not pose risks or for environmental and social protection.

2.2 Green Credit Development

There is no unified definition of "green credit development" in the banking sector. The goal of "green credit development" is towards (1) Restructuring and perfecting the green credit institution at commercial banks and encouraging the development of credit operations that invest effectively in energy and resources with high added value (Aizawa & Yang, 2010). (2) Search, appraise, and invest in green projects that use natural resources more efficiently, reduce the intensity of greenhouse gas emissions, and contribute to an effective response to climate change. (3) Improving people's living standards, building an environmentally friendly lifestyle by creating many jobs from projects with green credit capital (Akihisa, 2008; Weng et al., 2015). (4) Contribute to hunger eradication and poverty alleviation without paying dearly for the over-exploitation of natural resources such as minerals, water, forests, air. (5) Helping developing countries achieve economic and social benefits, such as clean and sustainable energy development; food security (Chen et al., 2018; Liu et al., 2015).

Green credit development is an increase in green credit outstanding in the structure of customers for Borrowing at a bank combined with the development of more green credit products, and at the same time, increasing the quality of green credit. Green credit development increases the proportion of green credit outstanding at the bank. Besides, the authors have a complete concept of green credit development (Singh et al., 2020; Xie & Zhang, 2021).

2.3 The Role of Green Credit in the Economy

Benefits for commercial banks: Green credit brings significant benefits to businesses implementing economic development projects and benefits the sustainable development of the banking system, helping commercial banks limit: (1) Credit risk: reducing bad debts, enhancing financial stability. (2) Reputational risk: protect the reputation in the market because the social

environment helps the community (3) Legal risks: minimizing legal disputes when related to projects with risks to the social environment (Yu et al., 2018; Zhang et al., 2021).

Green credit makes a vital contribution to environmental protection and climate change fight. Xiaowei et al. (2021) showed benefits to the economy: (1) Green credit impacts economic activities, and green credit also plays an essential role in the environment - society. (2) Green credit is a vital tool for capital accumulation and concentration, thereby helping to accumulate and focus on applying environmentally-friendly technology in production. (3) Green credit helps regulate capital sources, stabilize the money market, balance the development of national economic sectors, and transition to a sustainable green economic structure (Zhou et al., 2021; Xu et al., 2018).

Therefore, green credit policies are an essential solution to direct the economy towards the goal of green growth. Green credit activities bring significant benefits in growth, economic development, improvement of people's living standards, and environmental protection.

3 Method

The data collection methods used in the study include: Literature review of previous studies
Methods of document research, survey, and data collection are used to collect information about the theoretical basis, previous research works, select documents suitable to the research problem, inherit the research project is ideal for the research object set out.

This method is often used to identify existing knowledge on a given topic and methods useful for analyzing this topic (Hair et al., 2021); check how other researchers have done research on this topic and come up with results, thereby helping to formulate appropriate research questions. An extensive review of relevant and other scholarly literature helps lay the groundwork for the research's theoretical framework. It opens the door to building a broader theoretical basis for data analysis.

In the research paper, the authors review the documents of previous studies applied to build the green economy's conceptual framework, especially the development of green credit.

Interview: Interviews are an effective method of gathering information for research questions and one of the most important sources of information for case studies. In the case study, the authors conducted interviews as "Intentional conversations" and played an essential role in understanding the views (Hair et al., 2021). Goals of the respondents, stakeholders, participating actors, thereby helping to collect information for a defined purpose, contributing to being closer to reality than other data collection methods. To conduct an accurate assessment of measures to support the development of green credit for banks, the authors conducted interviews with 150 bank managers related to green credit. In addition, the authors also conducted a survey of some officers and employees at the bank to give a visual view of the bank's green credit development activities (Hair et al., 2021).

These interviews have helped the authors better understand the achievements and orientations of green credit development at Vietnamese commercial banks. The results of the interviews are summarized, supplemented, and presented in the research results section. The

interview results are used as a basis for analysis and recommendations on the feasibility of policy proposals applied to green credit development and to make reasonable recommendations, adjustments, and supplements (Hair et al., 2021).

The direction of data processing from survey results: Data processing direction is processed by SPSS 20.0 software to quantify important points through mean and standard deviation. The scale in this study is based on theory and tested scales of previous research. Through qualitative research, the authors adjusted the scale to suit the context of the study, cultural characteristics, and conditions of the banking industry in Vietnam (Hair et al., 2021).

The scales of all observed variables are built on the respective Likert scale of level 5 (according to the increasing level of agreement): 1: Completely disagree; 2: Disagree; 3: No opinion, wondering whether to agree or not (neutral); 4: Agree; 5: Agree (entirely correct statement). Qualitative analysis shows that the questions in the scale used for research are straightforward to understand. Each question reveals a different aspect of the component. The criterion (observed variable) has a concordance between the scale and the requirements that measure the theory and the actual situation of the banking industry (Hair et al., 2021).

After completing the survey, the authors checked the collected forms for completeness of the information. Based on logic, questions that are not reasonable are eliminated, along with surveys that lack a lot of information. Then proceed to encrypt, input, and clean the data before conducting analysis. Data were cleaned and entered into SPSS 20.0 software for further analysis. The results of histological statistics are applied in the study and serve as a scientific basis for proposing policy implications (Hair et al., 2021).

4 Result and Discussion

Aware of the importance of green credit, in Vietnam, according to Directive No. 03/CT-NHNN dated 24 March 2015. The State Bank of Vietnam has requested commercial banks to promote green credit for projects with high targets clearly on environmental protection, encouraging environmentally friendly business activities.

The phrase "green credit" has become more familiar to the financial and banking world in recent years. Statistics show that green credit in Vietnam in 2015-2020 has grown. According to the 2020 Environmental Performance Ranking. of the World Bank in Vietnam. After Vietnam joined the World Trade Organization (WTO), the economy faced significant pressure from member countries.

The concern was that domestic goods could not compete with international products has posed an urgent requirement to expand and improve domestic products' quality actively.

However, improvements in quality need to go hand in hand with transforming and upgrading operating models to meet environmental standards in the right direction of the economy's sustainable development in the new era. Currently, most domestic enterprises are in a state of capital shortage because of limited budget supply. Resources for green finance are becoming desperately needed. The scale: published figures show that green credit outstanding has steadily increased over the years based on Figure 1.

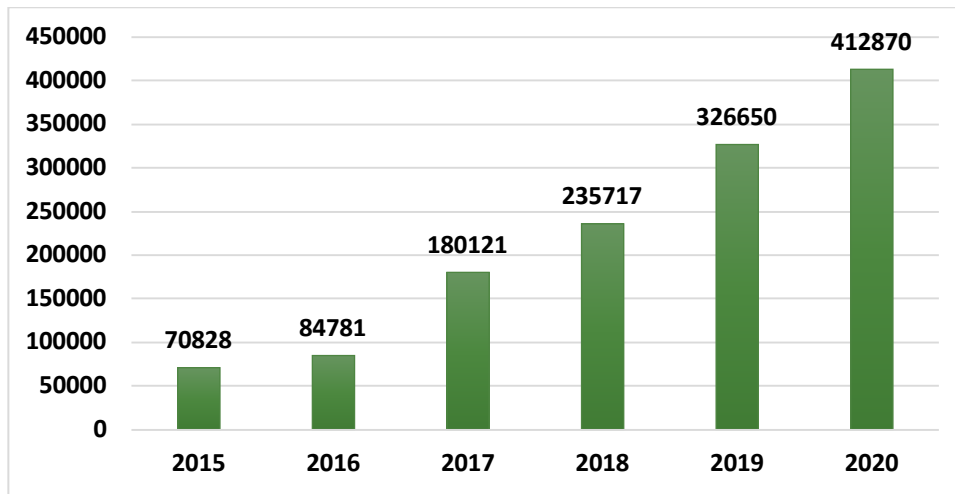


Figure 1: Green credit development from 2015 to 2020 (Billion VND).

Figure 1 shows that experiences worldwide show that green growth projects often face difficulties from mobilizing capital because the State can only meet a small part. The rest is capital owned or mobilized from other sources, another channel. Therefore, this "land" brings many sustainable benefits to credit institutions (profit, prestige, etc.), businesses to borrow capital, and the community. This factor is also a functional space that commercial banks need to pay attention to, especially in increasingly active liquidity and capital input. Up to 80% of retail banks think that the State Bank should have guidelines on environmental risk management, see Figure 2.

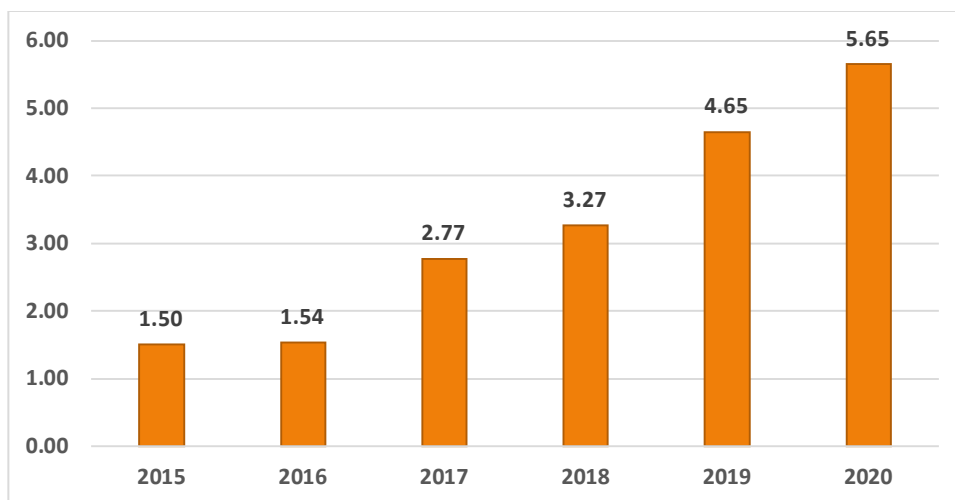


Figure 2: Green credit/total credit from 2015 to 2020 (%), Vietnam.

A survey on the perception of Vietnamese commercial banks on social and environmental risk management was conducted in 2019. Results showed that up to 60% of retail banks do not know any guidelines or criteria on ecological and social risk management in the financial industry. Figure 2 shows that green credit activities have only been initially interested in deploying by some commercial banks because the benefits of becoming a green bank are not clear.

In 2020, Regarding the structure of outstanding loans by term, medium, and long-term credit balances accounted for 76% of green credit excellent, in which interest rates for short-term green loans range from 5-8%/year, medium, and long-term loans term from 9-12%/year.

By 2020, credit growth in the "green" sector leads with a growth rate of up to 35%, higher than other priority sectors such as agriculture and rural areas (16.2%), small and medium enterprises. SMEs had 15.0%, or export (3.8%). This result shows that more and more capital from banks is flowing into green projects. From the statistics of the State Bank, currently, about 29% of green projects have their credit appraisal process developed by banks, and 25 banks have developed a process for assessing environmental and social risks in internal regulations. Some banks have even attached "green" credit to their marketing strategies and development orientation.

According to recent surveys and studies, the term "green bank" is still entirely new in Vietnam despite the orientation. Most traditional commercial banks had considered not ready to provide green financial products and services to investors. Some banks have implemented specific e-banking products and services such as BIDV, Vietinbank, Sacombank, Techcombank, MB... However, in reality, in Vietnam, green credit products have not been popularized yet have not been strategized at commercial banks.

Table 1: Descriptive statistics from surveying 135 managers from 20 commercial banks in Vietnam

Contents	References	N	Min	Max	Mean	SD
Developing policies on green credit and propagating and raising awareness about green credit	(Singh et al., 2020; Xie & Zhang, 2021)	135	1.00	5.00	3.489	0.953
Increase mobilized capital, limit bad debt	(Xie & Liu, 2019; Uchida, 2011)	135	1.00	5.00	3.482	0.913
Coordinate with Funds to implement green credit activities and Staff training	(Zhou et al., 2021; Xu et al., 2018)	135	1.00	5.00	3.000	1.058
Improve technology level, modernize the bank	(Akihisa, 2008; Weng et al., 2015)	135	1.00	5.00	2.933	1.045
Building a legal framework for green credit	(Chen et al., 2018; Liu et al., 2015)	135	1.00	5.00	3.067	0.994

Table 1 shows that the test results are good with a sample of 150 managers related to green credit from 20 commercial banks in Vietnam, but 135 samples were processed. These results indicated Mean and SD. The deviation is essential, and managers agree with the five recommendations below.

Achievements: The green credit program has been integrated with legal documents such as Circular No. 39/2016/TT-NHNN dated December 30, 2016. The Governor of the State Bank had lent activities of credit institutions foreign bank branches for customers. According to statistics, outstanding green credit has increased from more than 71,000 billion VND to 340,000 billion VND in the period 2015-2020. The green credit growth rate is high, with the highest growth rate in 2017. Green credit ratio to total outstanding credit balance economic growth steadily increased from 1.55% in 2015 to 3.7% in 2020. The credit balance for green projects by the end of the first quarter of 2021 is about 335,000 billion VND, accounting for 3.6% of the total balance. The debt of the whole economy is mainly concentrated in green agriculture (more than 39%) and renewable energy (37%). The Banking Industry Development Strategy to 2025 with a vision to 2030 also encourages

commercial banks to focus their resources on green credit, granting credits to environmentally-friendly projects and business plans.

Some limitations: The lack of regulation on green economic development in the current credit-granting legislation will result in credit institutions being able to say no to business investment projects that meet the requirements of green economic development. Besides, business investment projects on demand of green growth require significant investment capital, slow capital recovery time, higher content of science and technology in green financial products. Therefore, credit institutions still focus on finding business investment projects with fast capital turnover and guaranteed capital recovery.

The current credit-granting law does not have adequate regulations on credit products for green growth. Green credit growth has only stopped at recommended measures to proactively develop green credit programs and policies to gradually increase the proportion of green credit in the credit portfolio structure of credit institutions such as i) Developing and implementing solutions to promote green credit growth to encourage environmentally and socially friendly business activities: research and development of credit products; green application, implementing credit programs with incentive policies for projects and business plans with green growth goals; ii) Improve service quality, create favorable conditions for green credit growth, pay attention to sponsor projects, production and business plans to realize green growth; iii) Focus on giving priority to granting green credit to economic sectors that conserve, develop and effectively use natural resources; use advanced scientific and technological achievements; economic and efficient use of energy; develop clean energy, renewable energy; use environmentally friendly technology and equipment, produce environmentally friendly products. Therefore, credit institutions have not invested in developing green credit products to meet the requirements of green growth in our country today. The absence of regulations on green credit products is a considerable barrier for organizations and individuals with capital needs for green growth.

Some issues need attention when developing green credit policies in Vietnam today.

First, green credit activities must be within the framework of legal regulations. However, legal documents often only provide framework provisions, few specific and detailed rules on issues related to green credit activities of banks. Therefore, learning from Korea and China, Vietnam needs clear and precise regulations on topics related to green credit. Encourage all credit institutions to provide recognition for green economic development activities, including green production and green consumption. When developing the legal framework regulating green credit-granting activities, it is necessary to pay attention to the characteristics of each credit institution to ensure the maximum participation of credit institutions in the granting of green credit. Specifically: To improve credit quality, primarily green glory, banks need to attach importance to and do well in dealing with bad debts, which is a lesson from China that Vietnam needs to apply thoroughly. Controlling bad debts will create conditions for banks to handle collaterals of outstanding debts quickly and legally and at the same time increase income. Analyze and evaluate

each overdue debt to take measures to deal with, clearly identify the responsibilities of each individual or collective giving rise to lousy debt to take steps to handle and strengthen the commitment of the debt settlement board. Apply strong measures such as lawsuits against customers who deliberately do not pay their debts.

Second, clarify the content of the concept of green credit. The commonly used term is the green bank in banking activities, understood in a broad and narrow sense, thereby introducing a green banking model with five levels¹⁰. It is necessary to take a step-by-step approach towards building a green bank in a bit of mind, that is, identifying specific industries and sectors that are prioritized for credit granting to form a green credit segment in credit contributing activities of credit institutions. When green credit has been shaped, it will build a green bank in a broad sense, making a sustainable development bank in which the content of environmental protection principles is clarified and demonstrated in credit granting activities. Usage is the most crucial issue that needs attention. Investments for green credit often consume a large amount of bank capital, and the payback period from these projects can be relatively slow, so increasing capital mobilization is essential.

Third, in addition to carrying out green credit activities by themselves, commercial banks can choose the second option to join or cooperate with other commercial banks to build effective operating models based on participation. Check out the Green Credit Trust Fund model. concretize the policy of "Diversifying investment capital sources for environmental protection"¹¹ so that participating credit institutions can join as a source of credit capital for green economic development in Vietnam. With this provision, credit institutions actively develop business strategies that accelerate the transition of Vietnam's economy to a green economic growth or development model. Simultaneously with the above solution, the law on credit extension should have more special provisions on the right to refuse credit for investment and production projects, which are prohibited acts according to the Law on Environmental Protection 2014. In addition to the above solution, it is necessary to study the establishment of a national green credit fund to mobilize capital for the development of green credit, such as supporting prosperity for credit institutions to lend to projects blue; guarantee for green projects to access bank credit.

Fourth, the banks that continue implementing green credit development mentioned in the author's in-depth interview are the human factor. The Government assigns autonomy to commercial banks, autonomy in lending decisions and self-responsibility, taking risks independently. The State has conditions for accessing credit capital for eco-friendly investment projects markets, such as giving preferential credits for projects related to green productions.

Commercial banks also exercise the right to decentralize branches and affiliated units and decentralize certain officials. Therefore, the risk in the professional process the moral danger of bank staff will be increased if commercial banks and branches of banks do not set up strict inspection, control, and supervision barriers closely and effectively, preventing credit risks from within. Therefore, it is necessary to regularly supervise management monitor bank staff, especially

credit officers, appraisal officers, or staff directly related to loan decisions. Besides, banks produce and use clean energy and clean products; projects to save energy, water, and fuel; reduce waste or pollution; and build and exploit renewable energy facilities (geothermal, bio-energy, hydroelectricity, wind energy, solar energy, etc.).

Finally, most green economic projects need significant capital sources and a long payback period, and at the same time, these projects also face many risks. Therefore, study additional regulations on risk provisions when credit institutions grant credit to green, environmentally friendly business investment projects. Regarding credit operations, the focus should be on lending, bank guarantee, and financial leasing. In addition, it is necessary to study and develop a coordination mechanism among credit institutions in granting green credit to ensure adequate funding for large-scale green economic development projects. At the same time, it helps minimize risks, risks for green credit giving activities. The factor of technology is always mentioned in the bank's development, especially for credit development. It is even more necessary. Step by step, transform internal governance processes, modernize infrastructure and information technology towards better support for minimizing negative impacts on the environment, providing credit services and payments in environmentally friendly fields. Research and implement incentive solutions for economic benefits combined with administrative measures to develop non-cash prices based on taking advantage of 4.0 scientific and technological achievements to green operations.

5 Conclusion

By analyzing the situation of green credit development at some commercial banks in Vietnam, the authors can see that green credit development has only been initially implemented in Vietnam. In addition to the difficulties and challenges, banks have gradually approached green credit, step by step integrating with the general trend of the world green growth - sustainable development. This result will contribute to helping the commercial banks in Vietnam are increasingly contributing to the protection of the living environment and improving competitiveness in today's integration conditions.

Green credit and green credit development, as a basis, to prove the points and recommendations. The study of measures to support the development of green credit is a complex and wide-ranging issue that needs the attention of various departments. However, in the course of the research, within the limited scope and scope of the research paper, the authors have conducted interviews with commercial bank staff to find out the public's perception and opinions about credit. The authors have provided some policy implications for Vietnam in developing green recognition through international studies. These are timely contributions in the context that Vietnam is embarking on research to develop specific policies and practical implementation in Vietnam.

6 Availability of Data and Material

All data are included in this study.

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