# **Green Finance: Literature Review**

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## Abstract:

The article introduced green finance, green banking, green credit cards. We carry out an overview of the previous researches on the related topic, thereby making recommendations on the important role of sustainable development of the national economy based on green finance and green banks in Vietnam. *Keywords:* Green finance, green banks.

## **1. Introduction**

Green finance is a proponent that combines money and business with environmentally friendly behavior (Hasen et al, 2017, p.1). Contrary to traditional financial activities, green economy emphasizes environmental benefits and provides greater attention to the environmental protection industry (Wang and Zhi, 2016, p.311). Green finance is to increase level of financial flows (from banking, micro- credit, insurance and investment) from the public, private and not-for-profit sectors to sustainable development priorities. A key part of this is to better manage E&S risks, take up opportunities that bring both a decent rate of return and environmental benefit and deliver greater accountability. According to UN Environment Programme, green finance could be promoted through changes in countries' regulatory frameworks, harmonizing public financial incentives, increases in green financing from different sectors, alignment of public sector financing decision- making with the environmental dimension of the Sustainable Development Goals, increases in investment in clean and green technologies, financing for sustainable natural resource-based green economics and climate smart blue economy, increase use of green bonds, and so on. Green banking plays an important role in green finance. Through banking industry is always considered as environment-friendly but at present the substantial use of energy (lighting, air conditioning, computing), small space, unplanned building, ignoring in-house greenness considerably increased the carbon footprint of banks. Green banking avoids usage of paper as much as possible and relies on online/electronic transactions for processing so that we can get green credit cards and green mortgages.

According to Chen et al (2018, p.571), banking is the key sector that can play an intermediary role between economic development and environmental protection. Considering internal operations, banks do not affect the environment severely through emission and pollution, but their external impact on the environment through their customers' activities is substantial. As the providers of finance, banks can be strict and impose restriction to the business initiators to adopt environment- friendly projects and socially responsible investment to ensure the sustainable environmental condition. Moreover, banks can provide loan at a lower rate and other incentives to industries for adopting green technologies which will have a lasting positive effect on the global environment.

According to Tran Thi Thaitnh Tu and Nguyen Thi Phuong Dung (2017), the result of a survey that was undertaken in June 2012 by State Bank of Vietnam (SBV) of 54 commercial banks, it was found that for 91% of them, there exists no clear policy at the banking level on the green growth, whereas 35% do not gain knowledge about the definitions of environment and social issues. In particular, 89% admitted that the SBV's regulations still lack the management of social environment in financial industry. Generally, among Vietnamese banks there is a lack of experience of new technologies, which causes them to get into trouble with new energy credit such

as the bias about risk appraise on green projects.

### 2. Literature review

### 2.1. Development of Green Finance

Green finance is initiated following change of economic models when countries shift from the traditional "brown" economy to the eco-friendly economy (Tran Thi Thanh Tu et al, p.13). Theories on economic development prove that sustainable development of any country or territory is closely linked to environmental stability and use of alternative raw materials. However, such a shift in the economy requires a substantial amount of resources because application of green technologies and renewable energy is often more expensive than normal technologies in many cases. Therefore, mobilization of resources for green economy development has become a topic of great interest when green economy was initiated – supposedly starting in the 1970s after the energy crisis. Specifically, a number of crises occurred following the energy crisis and dissolution of the socialist system in the world. According to Jin (2010), around 90 economic crises occurred at an increasingly serious level from the 1970s to early 2000s, resulting in the need for economic model change: from the model heavily depending on natural resources to the eco-friendly one. Moreover, environmental protection also became a big issue when countries had to face adverse consequences of fast and furious economic growth mostly based on exploitation of non-renewable or long-term- renewable raw materials. As sustainable economic growth requires a great attention to environmental protection in all countries including developing ones, it is important to invest in green economy. Meanwhile, this closely relates to green finance, i.e. source of funds and use of funds.

The history of green finance relates to public expenditure since investment in green finance is not a preferred option by the private sector due to its long-term tenure and high risks (Joseph, 1995, p.214). As a result, most of countries focus their resources on development of alternative and supplementary products in the early stage, mostly using the State budget. Financial resources are first directly allocated to research funds of universities, then followed by the state capital re- lending model to mobilize participation of stakeholders in the market at a later stage. However, it is worth to keep in mind that while this model is considered a special resource for green economy development, state capital is not enough to cover all aspects of such development (Phan Thi Thu Ha, 2005, p.52). Main reasons include: (1) State budget must be reserved for normal expenditure – the largest proportion of the State budget expenses; (2) as eco-friendly projects are part of investment expenditures, they are often listed and granted appropriate budget allocations. At the same time, as these projects have low profitability in a long-term investment period, they are considered unrealizable by investors with high influence at parliaments (Jin, 2010) and thus subject to expenditure cut; and (3) As a large proportion of public expenditure is for aid to developing countries (United Nations, 2014), funding for green economy is mobilized from the private sector due to decreased allocation in State budget.

Green finance in the private sector mainly comes from corporations and businesses and notably from banks. Specifically, in case there are not enough resources for green growth or researches of green products, governments often contract businesses for such researches or businesses will conduct researches first and then sell results to governments (Xavier, 2010, p.11). In order to conduct successful researches, businesses first have to spend their own funding for market researches or mobilize from investment funds. However, as financial market develops, these products are promptly listed in the stock market. When businesses borrow from the banks or venture capital funds, loan contracts become goods for free transaction in the market. At this time, banks and venture capital funds sell their loans, investments and re-funding portfolios including securitizing loans for green projects in the stock market (listed as green economy activities). Two main purposes for selling the portfolios include (1) bridging gaps in the financial market when businesses find that they are difficult to access to funding and small banks and funds do not have enough funding; (2) turning of capital and gaining huge profit from the market (Chris, 2009; Oseo, 2009). As a result, green finance products of commercial banks in the market are very diverse – such as insurance, long-term loans, debt finance, asset backed securities. These products are then restructured into more sophisticated ones including venture loans, venture funds, partial risk

assurance mechanism, damage reserve and re-insurance. However, this also results in a number of issues in the financial market (green finance market): (1) many banks and venture funds go bankrupt following global financial crises after maintaining high-risk investment portfolios based on confidence in "risk appetite" under international standards (such as Basel II by that time) (Rudolf, 2010; Edward & Javier, 2010); and (2) Businesses are not only subject to risks of market change (i.e. risks with unexpected consequences) but also pressure of debt payment to banks. Therefore, the public-private partnership (or PPP in short) becomes an alternative source for green finance.

Joseph (1995) believes that PPP is an integral part of economic development in any country in order to make use of cheap funding from the government to help businesses implement green investment projects. In order to create green finance for businesses to invest in environmental protection projects or new business opportunities, the government would need to provide part of the funding and establish certain mechanisms for capital development of business – for example, commitments in land clearance or post-investment incentives. Nevertheless, this source of green finance is facing challenges – especially in transitioning countries as businesses are still facing a lot of obstacles by mechanisms issued by the Government (Tran Thi Thanh Tu et al, 2018).

Development of green finance not only goes with growth of its funding source but also promotes related issues, such as legal framework and business culture. Specifically, in order to create green finance, governments have to ensure sustainable development of this funding source through legal framework on environmental protection and investor protection. At the same time, the development of "corporate social responsibility" idea also increases support to green investments and helps businesses access to credit for green investment – Oseo (2009). Development of green finance also helps creating new credit tools in the market and access to new credit management methodologies in the world. Specifically, new credit tools are created by commercial banks such as bank guarantee, long-term loan, asset backed securities, venture loan, start-up loan, etc. These tools not only help businesses develop but also promote financial market growth and effective operation of credit institutions (Edward & Javier, 2010, p.5).

In addition, it is important to understand relevant definitions when analysing green finance development.

## 2.2. Green Finance, Green Credit, Green Banking and Sustainable Banking

Paul (2000) believes that green growth goes with economic growth and sustainable environment. This means GDP increase with ecosystem protection, contributing to health protection and improvement of living standards. This definition is initiated by UNESCAP (2012), emphasizing that green growth is an ideal strategy for maximizing economic production while minimizing damages to the environment. Green growth is a proper approach to economic growth, aiming to reduce poverty and ensure sustainable environment. This methodology focuses on substantial growth, mainstreaming environmental protection as an incentive for economic growth. As part of green growth strategy, green finance is a topic of great interest in many countries including Vietnam. In order to understand "green finance", it is worth to look into the concepts of green credit, green banking and sustainable banking as well.

## 2.2.1. Green Finance

In the study "Mapping of Green Finance Delivered by IDFC Members in 2011" of Hohne et al (2012), green finance is a broad concept, covering financial investment in projects relating to eco-friendly products and policies on sustainable development. Specifically, Lindenburg (2014) defines that green finance includes both public and private finance, focusing on investing in green products and services such as protection of landscape and biodiversity, etc., to minimize damages to the environment or climate change risks. In addition, green finance might be understood as a finance instrument to implement public policy, specifically, to encourage initiatives to mitigate environmental pollution or support for relevant projects.

Similarly, Zadek & Flynn (2013, p.1) in their study "South-Originating Green Finance: Exploring the Potential" reckon that green finance is often used for green investment. However, they also agree that, in

practice, scope of green finance is more comprehensive, including green investment expenditure such as costs for project preparation and land acquisition.

Jin (2010, p.2) looks at the definition of green finance by its components: (1) support to green businesses and technologies; (2) development of green finance products and investors; (3) considering environmental impacts during loan assessment; (4) effectiveness of activities causing environmental wastes. Green finance might apply to various products and areas, reflecting in 3 types, namely green infrastructure, green industry and business, and green capital market. In these cases, green business finance includes green projects, securities, venture funds, investments in environmental protection technologies. Similarly, World Bank (2010) defines that green finance relates to establishment, distribution and use of funds for environmental protection, preventing climate change, reducing toxic chemical emission, aiming to achieve social-economic sustainable development without any damage to the environment.

For the purpose of analysing green finance in banking sector, Pricewaterhouse Coopers Consultants (PwC) (2013, p.15) defined green finance as financial products and services, under the consideration of environmental factors throughout the lending decision making, ex-post monitoring and risk management, provided to promote environmentally responsible investments, technologies, projects, industries and business.

In a nutshell, it is possible to conclude that green finance means finance only those projects and businesses which protect or less deteriorates the environment. In a wider sense, whether its funding resource comes from the public or private sector, green finance must support initiatives relating to (1) environmental protection, i.e. environment improvement, creating new products or livelihood; (2) poverty reduction; (3) improvement of infrastructure closely linked to environmental protection and social security.

### 2.2.2. Green Credit and Green Banking

As green credit is a form of credit, it is worth to look at credit definition. Rose (2013) defines that in a broad sense, credit includes activities relating to debts and future debt payment of the principal and interests. Accordingly, credit also includes deposits as they create future debts of receiving parties. However, this definition is considered too broad and must be interpreted in a more succinct way. Consequently, credit can be literally interpreted as a loan granted by an organization to another organization upon commitments of repayment of the principal and interests. Both Rose (2013) and Casu (2015) agree with this definition, considering that credit is listed as asset of an organization. Furthermore, it is worth to consider the definition of bank credit in which banks grant or commit to grant a loan to their clients upon the latter's commitments of repayment of the principal and interests. In the Law on Credit Institutions of Vietnam 2010, credit is also interpreted in this way.

In brief, definitions of credit (literally) include (1) granting or committing to grant a loan by an organization; (2) to a certain client; (3) with commitments of repayment of the principal and interests, i.e. such credit is granted not free of charge.

As part of credit, green credit is often looked as financial resources to support activities relating to environmental protection or climate change. These financial resources often go under governmental or environmental funds. However, as financial resources from the State budget are disbursed in the form of credit, they often go through commercial banks, i.e. from green banking to green finance.

Therefore, it is important to understand the definition of green banking. First of all, Rose (2013) believes that banks meet requirements for deposit insurance.

This view has been codified in the United States where all responsibilities belong to deposit insurance. However, in Vietnam, it is interpreted that banks must provide all banking services, namely 3 services relating to receiving deposits, granting credit and payment (National Assembly, 2010). As a result, as part of banking system, green banks must meet requirements for above-mentioned services and must have legal status.

Two popular schools of thought on green banking include:

Firstly, green banking is understood as sustainable banking. Initiated by Imenson & Sim (2010), this point of view believes that sustainable banking is only achieved if investment decisions are made on a big picture, bringing benefits to consumers, social and economic development and environmental protection. As a result, there is a close link between banking and social, economic and environmental issues. Sustainable banking is only achievable if banks' interests are closely related to social development and environmental. This school of thought is supported by macroeconomists.

Secondly, green banking is interpreted as professional banking operations to encourage environmental protection and low carbon emission such as encouraging clients to use green products and services, applying environmental standards in granting capital or preferential credit for projects in low CO2 emission, renewable energy or granting funds to the poor, etc., (UNESCAP, 2012). Accordingly, banking services are closely attached to commitments to environmental protection or loans for green businesses. Nevertheless, SOGEISID (2012) believes that a green bank is not purely a social enterprise but must act as a traditional bank with additional services to investors and clients as well as services for the benefit of the community and environmental protection. Consequently, this school of thought believes that while operating as a normal commercial bank, a green bank must also meet requirements on sustainable economic-social development and environmental protection (such as environmental improvement, reduction of greenhouse gas emission, or poverty eradication, etc.), such services are considered green credit.

In brief, regardless of whether green credit is initiated by businesses, banks or governments, it should not only follow the general rule of repaying of both principal and interest but also aim to solve environmental or social issues.

#### 2.2.3. Sustainable banking

Currently, there is no common conception of sustainable banking development but common view on sustainable development only. This view, therefore, will be approached in terms of sustainable development from different objects in the economy.

Regarding the view of bank owner (such as an investor), sustainable banks are those meeting the requirements of the investor and being directed to maximizing the owners' interests (Rose, 2013; Casu, 2015). Such view makes the banks mainly aim at profit when they develop sustainably, leading to the international views that banking system shall be monitored, that is to comply with certain standards (for example, Basel II, Basel III) to stabilize the entire system, avoid the breakdown under the dominance effect in the industry. The view is highly appreciated by financial researchers, but it is necessary to consider additional social responsibility of enterprises.

Regarding the view of social responsibility, the bank not only acts as a normal business but should be associated with the panorama also. From this point of view, the bank should take common actions, towards the interests of the community, the environment, the economy and the society. When the bank owner's interests are attached to other benefits such as the environment and society, in the future, the finance users will have closer relationships with the bank (Imenson & Sim, 2010). Before the global financial crisis, issues related to sustainable development in this direction were not placed seriously (Tran Thi Thanh Tu et al., 2017), especially in developing countries, because of trade-off between environmental protection and economic growth goals. However, after 2008, most countries had to reconsider the issue. Issues related to sustainable development, business responsibility, social responsibility - ethics - environment were reviewed at a higher level. Therefore, green banking emerged as an ideal model for the bank in the future, and the foundation for sustainable development.

In this paper, the author will use the second perspective to approach bank development in a sustainable way.

## Main types of Green Credit

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Basically, green credit must respond to all types of credit, so there are two main types of green credit as follows:

First group - lending activities. This group basically consists of lending activities related to environmental protection and poverty reduction.. Lending activities related to environmental protection involve credit products such as solar project financing program, working capital financing program to help develop green products, loans for purchase of equipment for investment in manufacturing noise- pollution control products, capital investment in financial assets. In addition, there are a number of lending activities related to environmental protection such as loans for the use of environment-friendly equipment, for building energy-saving houses, for pollution control systems, for projects using renewable energy and for energy- saving projects (Tran Thi Thanh Tu et al., 2017, p. 86).

Furthermore, in terms of loan products, it is necessary to pay attention to the loans provided to people in rural areas. This group tends to target the poor. Therefore, these credit products only focus on lending small amounts to women as the main target object, and through groups - teams. Another part, under the Government's orientation, is provided to farm households to develop their own economy, mainly related to environment-friendly models such as VAC model or recycling of garbage-related products. However, because the target object is the poor, this product group is obviously not attached special importance in developed countries, but only in developing and underdeveloped countries.

Second group - credit products excluding loans, namely guarantee, factoring, discounting, financial leasing, or card-related activities. Basically, this product group is given on the basis of loan product group, and develops similarly to loans.

However, it is worth to overview the differences between loan and non-loan credit products. Regarding bank guarantee, this is a credit activity that forms off-the- balance-sheet items, banks can use their credibility to secure payment for their clients' debts (of course, these clients' debts shall be listed in the green credit portfolio - similar to loans). If a client fails to pay the debt, the bank will pay on behalf of the client, then it is similar to bank loan. Regarding discounting and factoring, banks buy debts and advance to the sellers – the beneficiaries of receivables first, thus, the sellers will sooner have capital for business. Banks then recover the debts from the buyers. Regarding financial leasing, banks buy fixed assets forming their clients' green investments, then the clients will pay gradually.

The second group also include card-related activities, which include two main forms: debit and credit cards. These activities are promoted through spending and use of cards, aimed at increasing access to financial services.

Nonetheless, not only the banks, but also the Government, investment funds or other credit institutions may do the same activities mentioned above in accordance with relevant laws.

## **3.** Conclusions

Sustainable development is an important goal that Vietnamese Government aims for in the process of economic construction. During development, Vietnam has experienced a rapid growth (the period of 2008-2012), with the rate at about 7% per year, the environment-related issues were also trade-off (Ngo Thang Loi et al, 2012). In order to reduce the pressure of rapid development and turn to sustainable development, the Prime Minister (2012) said: "Green growth must serve the interest of the people... should be made by the people, for the people, contributing to creating jobs, reducing poverty and improving people's material and spiritual life". In order to grow green, green finance is an extremely important requirement in the economy.

In terms of macro-economy, the role of green finance in Vietnam can be seen in the opportunities it brings to the economy. Firstly, since a large part of green investments are for infrastructure development, by encouraging environment-friendly technologies in infrastructure construction, green finance helps developing countries in general and Vietnam in particular avoid the model "growing first, cleaning thereafter" and reduce

the expenditure for resolving environmental consequences of normal technology. Secondly, low-carbon economic growth has become inevitable for more and more countries under the pressure of climate change and other environmental and economic crises, the countries with complete green finance system will have more competitive advantages than the others because enterprises and organizations participating in the green finance system become "greener" and thus, attracting more investors. Thirdly, when encouraging all economic sectors to create and use of alternative resources and technologies, governments increase their economic prospects by facilitating new markets that have great potential for employment creation (Tran Thi Thanh Tu et al., 2017, p. 44).

In a narrower sense, the role of green finance in sustainable growth of Vietnam can be seen through that of green credit as follows:

Firstly, green credit promotes the implementation of environmental protection measures, creates naturefriendly products and economic stability (SOGEISID, 2012). From 2012 to the end of 2017, the funding from the Government, banks and private sector were used for most items relating to green growth and sustainable growth (GSO, 2018). Thanks to the funding, the projects involving solar power, wind power and tidal power are being completed, replacing hydropower and thermal power. In addition, the programs and projects through ODA re-lending (from governments as well as international financial institutions) have supported the process of environmental rehabilitation in Vietnam, including the projects for rehabilitation of river and lake environment of big cities, and projects for construction of plants and factories developing environment-friendly fuel sources. Also, these funding have helped localities build high-tech zones (i.e. information technology, biotechnology, environmental technology) in Hanoi, Ho Chi Minh City, Da Nang and Binh Duong, contributing to implementation of Vietnam's environmental protection strategies.

Besides, the development of credits helps speeding up the consumption of organic goods and clean food for people. Due to considerable number of products created, it will inevitably accelerate the supply of food consumption chain stores as well as environment-friendly goods, and reduce the pressure on the consumption of goods relating to brown economy.

Secondly, green credit itself promotes the process of creating green credit products (UNESCAP, 2012). When banks implement activities related to green credit development, their client's demand for capital also changes according to the change of products or services. Therefore, traditional credit products can hardly meet the different requirements of the market. Accordingly, it will form groups of products and services that can cover green banks, i.e. new green credit products.

Thirdly, green credit contributes to reducing poverty and building new rural areas in Vietnam (Le Thanh Tam, 2015, p.8). If we consider green credit as financing for the poor sector, the banking system and the Government of Vietnam have carried out many "green" activities for quite a long time. The Government has had certain implications for bringing finance to the poor by establishing microfinance institutions such as M7, TYM or CEP or separating the Bank for the Poor from Agribank to support individuals and organizations to obtain loans in the market. The Government also carries out activities to accelerate access to credit services through various methods such as providing loans through groups – teams, through organizations' branches as well as providing flexible loans. This has promoted Vietnam from the low-income group to the low-middle income group. In addition, these loans do not require security assets, so it is possible to help households in rural areas to develop appropriate economic models (typically VAC model – Garden, Pond, Pigsty/Poultry Shed) associated with environmental protection and creating livelihood for themselves

## REFERENCES

*i.* Basel Committee on Banking Supervision (BCBS) (2012), "Core Principles for Effective Banking Supervision"

- *ii.* Cam An (2015), "Ngân hàng xanh tín dụng xanh: Chặng đường còn gian nan", available at <u>https://tinnhanhchungkhoan.vn/tien-te/ngan-hang-xanh-tin-</u><u>dung-xanh-chang-duong-con-gian-nan-</u><u>248572.html</u>, accessed on Feb 18, 2019
- iii. Casu, B., Girardone, C. & Molyneux, P. (2013), Introduction to Banking, Harlow: Pearson.
- iv. Chang (2019), "Green Finance in Singapore: Barriers and Solutions", ADBI Working Paper Series No.915
- v. Chen, Z., Hossen, M. M., Muzafary, S. S., & Begum, M. (2018), "Green banking for environmental sustainability-present status and future agenda: Experience from Bangladesh", Asian Economic and Financial Review, 8(5), 571.
- vi. Chris Hewett (2009), Green Alliance Low Carbon Future, FI Investment Adviser Report, available at <u>https://www.green-alliance.org.uk/chrishewett.php</u>.
- vii. Dafermos et al. (2017), "Cross-Border Financial Effects of Global Warming in a Two-Area Ecological SFC Model", [online] Scholarworks.umass.edu, Available at: https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1261&context=ec on workingpaper
- viii. Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014
- ix. Edwards F., Javier, E. (2010), 'PPP solution the UK treasury Infrastructure Finance Unit: Supporting PPP Financing during the Global Liquidity Crisis', World Bank Institue, New York.
- *x.* European Banking Authority (2015), "Guidelines on ICAAP and ILAAP information collected for SREP purposes", EBS/CP/2015/26
- xi. GIZ (2016), "Green Financial Sector Reform in Vietnam", p.4-5, available at <u>http://gizmacro.ciem.org.vn/Content/files/2-</u> Communication%20Materials/Green%20Financial%20Sector%20Reform%20 in%20Vietnam.pdf
- xii. GSO, (2018), Statistic Data, retrieved at https://www.gso.gov.vn/default.aspx?tabid=723
- xiii. Hohne, Khosla, Fekete & Gilbert (2012), Mapping of Green Finance, IDFC members, Ecofys.
- xiv. Hoshen, S., Hasan, N., Hossain, S., Mamun, A, Mannan, A. (2017), "Green Financing: An emerging Form of Sustainable Development in Bangladesh", IOSR Journal of Business and Management, Volume 19, Issue 12
- xv. Imeson, M. & Sim, A (2010). 'Sustainable Banking : Why Helping Communities and Saving the Planet is Good for Business?', SAS White Paper Issued by SAS Institute Inc., World Headquarters
- *xvi.* International Financial Corporation (2017), "Green Finance A Bottom-up Approach to Track Existing Flows".
- xvii. Jin Noh Hee (2010), Financial Strategy to Accelerate Innovation for Green Growth, Korean Capital Market Institute Report.
- xviii. Joseph E. Stighlitz (1995), Public Economics (Vietnamese version translated by National Economics University), Sciences and Tec
- *xix. Kaeufer* (2010), *Banking as a vehicle for socio-economic development and change: Case studies of socially responsible and green banks, retrieved at <u>http://www.gabv.org/wp-</u> <u>content/uploads/SocialBanking.pdf</u>*
- xx. Kern Alexander (2016), "Greening Banking Policy", Prepared for consideration by the G20 Green Finance Study Group (GFSG)
- xxi. Le Thanh Tam (2015), 'Các trường phái cung cấp tài chính vi mô", JED, No. 218, p.1–12, Hanoi.
- *xxii.* Ledgerwood, J. (ed., 2013), The new microfinance handbook, A financial market system perspective, The World Bank, Washington, D.C.