Research on the Connotation, Mechanism and Practice of Green Finance based on the Analysis of Big Data

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Abstract. With the national economy development under the background of computer, China's per capita income continues to increase, which also strengthens the prosperity of China's financial industry. However, the rapid economic growth is based on the plunder of natural resources, which has caused great damage to the natural environment. Therefore, we must be responsible for the environmental pollution, which requires financial institutions to pay close attention to and prevent the financial risks caused by potential environmental pollution, which is the fundamental purpose of the green finance development. Britain, Japan, the European Union and other countries have carried out a variety of attempts, which requires our country to continue to learn and accumulate green finance. China's banking industry has issued a series of green financial policies, which need our financial institutions to pay more attention to. In practice, green finance has encountered many problems. Based on the operation mechanism of green finance, this paper puts forward some problems.

Keywords: Green Finance, Connotation, Mechanism, Practice, Big Data

1. Introduction

With the deepening of the sustainable development, green finance (hereinafter referred to as GF) has become an important part of global financial activities, which has gradually become an important topic in the financial industry\textsuperscript{[1]}. Based on the above background, China will gradually implement the hard constraints of energy conservation and emission reduction, which will gradually promote the construction of resource-saving and environment-friendly society. In the new situation, GF has become an important way of sustainable development, which has become an innovative environmental economic policy. Since 2007, China's green credit policy has begun to develop, which has become an important opportunity for domestic banking credit. Financial institutions should actively respond to green financial policies, which will better carry out enterprise transformation. In 2014, the United Nations Environment Programme established the "design sustainable financial system" project team, which is an exploration of the close combination of financial system and sustainable development. Therefore, IFC actively
promotes the GF time, which has become a pioneer in developing GF, such as the Central Bank of Brazil. At present, the concept of GF has been gradually promoted around the world, which has become an important prerequisite for promoting GF in China[2].

2. Connotation and necessity of GF

2.1. Connotation of GF

GF has many titles, such as sustainable finance, environmental finance, ecological finance, etc. At present, there is still no authoritative definition of GF. By summarizing various definitions of GF, this paper gets three meanings. First, GF is a part of green economy, which is a way to protect the environment and save resources through green financial instruments. Second, financial institutions focus on supporting green industry and environmental protection industry through loan policies and loan methods, which will promote the transformation of economic development mode and industrial structure transformation and upgrading[3]. Third, the business operation of financial institutions needs to fully reflect the "green". By focusing on environmental pollution and protecting the ecological environment, we can promote the sustainable development of economy and finance.

2.2. Mechanism of GF

The source of "GF" is to strengthen corporate social responsibility, which can promote energy conservation, emission reduction and sustainable development. The mechanism of GF is complex, which has direct and indirect factors. Incentive and restraint. The mechanism of GF is mainly divided into five aspects, as shown in Figure 1.

![Figure 1. Mechanism of GF](image)

Through technological innovation, corporate behavior, public investment, entrepreneurial orientation and correction of market failure, GF can play a direct and indirect role. Through GF, we can promote the energy conservation and emission reduction of enterprises, which will strengthen the sustainable development of enterprises. On the other hand, through the government procurement of environmental protection innovation technology will be integrated into the social environment, which will affect the energy conservation and emission reduction of enterprises. By optimizing industrial upgrading, we can promote the way of environmental protection industry, which will have a positive impact on energy
conservation and emission reduction. By correcting market failure, GF can avoid market failure, which will have a direct positive effect on energy conservation. Through energy conservation and emission reduction, GF can promote sustainable economic development, which will reduce the risk of economic operation.

2.3. The necessity of GF

First, GF is an inevitable requirement to promote sustainable economic and social development and undertake social responsibility[4]. According to the duration, scale, residual amount and risk of the enterprise, financial institutions can optimize the allocation of funds, which will complete financial services efficiently and quickly. Through the implementation of green credit business, we can promote the sustainability of capital flow, which will promote the sustainable development of society. Second, GF is an urgent need to strengthen the internationalization of China's banking industry. At present, environmental pollution and resource shortage have risen to global politics and economy, which will affect the development of human society. By accelerating environmental protection, we can achieve sustainable economic and social development, which will enhance the development of GF. GF can improve the risk management ability of financial institutions, which will reduce the potential environmental risk of financial institutions. By actively promoting green credit, we can limit the environmental protection of high pollution and high energy consumption projects.

3. Problems in GF practice

3.1. Imperfect Green Financial Standards

At present, the mechanism of GF in China is still not perfect, which requires us to constantly improve the standard. There are three main problems. First, the management system has not been straightened out. Second, the internal incentive and restraint mechanism of enterprises is insufficient. Third, the information communication mechanism needs to be improved. Green financial standard is a comprehensive and principled work guidance, which requires us to formulate detailed implementation rules. However, there is still a lack of specific green credit guidance catalogue and environmental risk rating standards in China, which will be difficult to evaluate the guidance standards[5].

3.2. Lack of good market atmosphere and policy environment

At present, China's GF policy is still reflected in promoting energy conservation and emission reduction and other short-term goals, which will well achieve credit. However, China's financial management department has not yet assumed the responsibility of GF concept, which requires us to actively introduce the international advanced GF concept. Therefore, grass-roots financial institutions do not know the latest situation and trend of GF in developed countries, which will increase the risk of environmental pollution. In addition, in terms of information collection, the government lacks the release mechanism of information on environmental violations. Therefore, financial institutions can only obtain information about environmental violations of relevant enterprises through media reports. This information asymmetry is more common, which will slow down the development of GF.

4. Measures to expand the healthy development of GF
4.1. Promote the internationalization of China's GF standards

Through "one belt, one road" and "Asian investment bank", China can promote the internationalization of China's GF standards. One belt, one road initiative was proposed by one belt, one road, by President Xi Jinping in 2013 when he visited Indonesia and Kazakhstan. The strategy of "one belt and one road" has become a new pattern for China's opening up to the outside world, which will achieve regional economic integration. In 2014, 21 countries signed the memorandum on preparing for the establishment of the Asian infrastructure investment bank (AIIB), which will support infrastructure connectivity among Asian countries. One belt, one road and Asian investment bank will deepen the internationalization of China's GF standards, which will exacerbate the ecological environment risks. Meanwhile, one belt, one road, is the key to building green ecosystems in China. In the construction of one belt, one road, we should adhere to the principle of "eco - operation, co construction and sharing", which will truly transform into the common good of all countries.

With the integration of the concept of ecological civilization, we can strengthen ecological and environmental protection measures, which will inject new vitality into regional environmental cooperation. Therefore, China must strengthen the green standard of financial services, which will become the bridgehead of the internationalization of green financial standards in China. Through the "one belt, one road" financial services, China can promote capacity building in the field of GF, which will promote the perfection and internationalization of China's GF standards. In addition, China should strengthen cooperation with transnational banks. By learning modestly, China can promote the sustainable development of GF, which will form a new GF rule to control the source of environmental pollution[6].

4.2. Innovative green financial products and services

China's financial institutions must innovate green financial products and services, which can strengthen the market guidance of GF. China's financial institutions should speed up the issuance of green bonds. By issuing green financial bonds, commercial banks can not only increase the relatively stable medium and long-term capital sources, but also invest the raised funds in energy conservation and emission reduction projects and ecological environmental protection projects by means of credit. Green financial bonds include green corporate bonds, green corporate bonds, green project bonds and green asset securitization. Financial market regulators should open up a "green channel". By shortening the approval time and simplifying the approval procedures, financial institutions can improve efficiency. At the same time, financial institutions should establish supporting innovative models, such as "green bond guarantee", "green bond project guarantee insurance", etc. China should encourage insurance companies to actively develop and implement green insurance products, which will establish an effective linkage mechanism. By guiding the limited social funds to flow to the green industry, the relevant government departments should set up the green industry fund. The fund sources should include the government financial allocation, the collection of enterprise pollution fees, the establishment of environmental protection tax, private capital, etc.

5. Conclusion

All members of financial institutions in China should set up a correct concept of GF, which will better penetrate into environmental factors, so as to truly implement the "green" spirit in every work. Through
the financial services one belt, one road, we can promote the capacity building in the green financial field. By promoting the internationalization of China's GF standards, we will provide a huge impetus for the global sharing of China's GF development achievements, which will vigorously promote the development of China's GF.

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