

## Problems in China's Carbon Finance Market and Countermeasures

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### Abstract

The Carbon finance is an important mechanism innovation of financial system in response to climate change which supports the low carbon economy development. Most of the countries in the world carry out carbon trading actively. With the reform of china's financial system, the financial structure of our country is in the constant change. Carbon finance has gradually become a new force in the financial system in China. But many problems still exist influenced by the financial environment, financial policy and other factors. In this paper, firstly, we show the conception of Carbon finance, and then we analyze the problems existing in the Carbon finance market and state the factors. Finally, we put forward some of the suggestions and countermeasures which are suitable to the development of Carbon finance market in China which are Based on the analysis of the problems.

**Key words:** Carbon finance; China; Financial policy

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## 1. INTRODUCTION OF CARBON FINANCE MARKET

### 1.1 Conception of Carbon Finance Market

Carbon finance market, known as the carbon trading market, it is the result of "Kyoto Protocol", in which the

amount of carbon emissions and reductions has become a scarce valuable products. It would also include the elimination of any barriers to trade in financial services that would inhibit the development of a worldwide market for carbon. Each country has a carbon emission according to its national conditions (quota), but the actual emissions may have higher or lower than the quota. This difference makes the carbon trading market supply and demand, the countries whose carbon emissions is less than the quota can sold excess amount to the countries whose carbon emissions is greater than the quota countries.

### 1.2 Participant in Carbon Finance Market

The main market in carbon emissions, including: provider of intermediaries, the final user, regulatory agencies and other market participants. The providers include project developers, abatement costs low emission entity, international financial organizations, carbon funds, banks and other financial institutions, consulting, technology development and transfer business etc.; the final users include the emission limited countries confined by "Kyoto Protocol", the emissions limited the enterprise confined by EU ETS, limited enterprise confined by the Regional Greenhouse Gas and personal; Other participants include the fund companies, securities companies, insurance companies, credit Rating firm and individual speculators.

### 1.3 Classification of Carbon Finance Market

From a legal point of view, the carbon finance market can be divided into two types:

a. Forced trading carbon finance market. The government as the organizer and manager of carbon dioxide emission reduction assigned to regular emission limit to each participant. The participants can only develop production activities within the limit and the excess emissions may be punished. In order to avoid economic penalties excess emissions, caused by the emission quota, enterprises need to buy emission rights from those firms with excess quota. This kind of carbon finance market,

which is to achieve the mandatory emission reduction requirements and produce, is called forced trading carbon finance market.

b. Voluntary trading carbon finance market. Based on considerations of social responsibility, brand building, the future environmental policy changes, some enterprises initial mutual agreement on greenhouse gas emissions by internal protocol, adjust supply and demand through the quota trading regulate in order to achieve agreement. That's the voluntary carbon trading market based on its transaction mechanism.

## **2. ANALYSIS OF THE PROBLEMS IN CHINA'S CARBON FINANCE MARKET**

With the rapid development of economy, the Carbon Finance Market of China has made a big progress, not only in the scale and level of the industry but also in the competitiveness. But compared with other developed countries, many problems still exist influenced by the financial environment, financial policy and other factors.

### **2.1 Lack of Legal Policy Support System and Lags in the Construction of Carbon Transaction System**

Laws and regulations related to carbon trading environmental law haven't been included in the environmental law in China and we still lack details of laws and regulations on carbon emissions trading, which should regulate the behavior of participates in the carbon finance trading. The laws and regulations concerning the connotation of carbon emissions and the definition of property rights, emission rights trading rules, trading rights and obligations of both parties to the transaction disputes, solutions and the emissions trading pilot are urgently to be improved. Although in 2012 the China government has issued one standard in operation and management of Clean Development Mechanism projects as the legislative norms of carbon emissions in China, which played an important role, after all that's just the administrative regulations and the narrow scope of its application and low legislation level gradually exposed with the rapid development of China's carbon trading market, and it is difficult to meet the development needs of the market. Meanwhile, in China, we haven't regulated the emission cap and the exact quota, so the enterprise couldn't buy the driving permits directly, most of the transaction happened only among some environmentally conscious buyers which result in the market desolate so that we can not form a unified national quota payment system. The consequence of lag carbon market system construction is that we are unable to form a complete industry chain around the carbon industry, and for the lack of carbon pricing power which is controlled by foreign, we can't carry out the innovation of carbon finance business which should rely on the carbon finance system.

### **2.2 Lack of Talent, Experience and Technology Improvement in the Domestic Carbon Market**

Domestic carbon trading professional talent is very scarce. The main reasons include: First, the carbon trading industry is an emerging industry, its theory system has not been constructed. Second, the carbon trading involves the environmental legal and financial management and other aspects, the corresponding professionals must be proficient in compound talents more professional, difficult to culture. Third, English is the language of the current carbon trading industry, CDM project from the laws and regulations of the preparation of the project design document to review all use English, for the non English speaking Chinese is undoubtedly a barrier.

In the field of carbon trading in China, there is lack of experience. Although in the global CDM market project and the number of CERs in our country have come out on top, its trading venues are almost all OTC, almost no exchange the actual operation of the project. Emission trading in the traditional environment field, although we have begun to implement emissions trading and its experimental work, but with foreign compared various pollutants, emissions trading market is still in its infancy, in addition to some government vigorously promote the project, it is through market channels for trading is very small, and commodities and financial derivatives of traditional ways, our country enter the market time than foreign late, the scale is not big enough, the market is not mature enough.

Technology is mainly manifested in difficult to obtain accurate carbon information enterprises. Accurate information on emissions of enterprises, affecting the approval, the initial allocation of link and enterprise emissions reductions approved link. Technology is not only the issue of science and technology, including inadequate management technology. In science and technology, we generally lack the related technical standards to measure corporate emissions information; on the management technology, on one hand enterprises the necessary carbon asset account, the lack of necessary data, on the other hand, we are lack of unified emissions information management system exchanges, local and national level.

### **2.3 Insufficient Demand of Carbon Trading**

If the carbon market is to be built, its trading products must have a scarcity. China as a developing country is not the "Kyoto Protocol" annex countries, not mandatory emission reduction obligations, and the Chinese government for enterprise's carbon emissions and there is no mandatory requirement, so carbon emissions will be difficult to become a market product. Voluntary purchase now domestic carbon demand mainly from individuals or units, and the economic benefits of purchasing motivation is considered less, so this model is unsustainable, carbon trading insufficient domestic demand.

In external demand, China is the main supplier of the CDM project, EU ETS is the most important demand side. But after the Durban conference, from the beginning of 2013 EU ETS third stage, just before the end of 2012 registered items, or there would be a bilateral agreement with the European Union countries, which have accessed to the EU ETS project emission reductions, and from 2013 January ban HFC-23 specific industrial gas emissions into the EU ETS, the original quota license mainly by the auction license will gradually replace. It means that, if the EU does not change the policy or the EU signed bilateral agreement, after 2013 China will face a substantial shrinking demand for CDM.

### **3. ANALYSIS OF THE CARBON FINANCE MARKET CONSTRUCTION IN CHINA AND COUNTERMEASURES**

#### **3.1 To Perfect the Legal System to Strengthen Market Supervision**

The perfect legal system can provide a good foundation for the development of Chinese carbon market. The related law system and carbon trading can be divided into three categories: one is the impact on the carbon trading system of law, mainly refers to the impact on the carbon trading system of macro and external legal policy, such as the national climate change legislation, energy saving and renewable energy law pollution control legal system of greenhouse gas emission law requires, in response to climate change countries joined the national conventions and treaties.

To improve the relevant legal carbon trading system can produce two effects: one is to promote the role, perfect legislation, greenhouse gas suitable control target, necessary and effective legal measures and way, has the deterrent force of legal sanctions, put in place strict enforcement produced positive influence; the other is to obstruct the function, if the legislation is not perfect, greenhouse gas control objectives are not clearly inappropriate, lack of measures and paths to achieve the goals, legal sanction is too weak, law enforcement is not strict, will have a negative impact. The two is needed to establish the legal system of carbon trading. The law clearly defines the emission trading system legitimacy comes from the law, but China's emission trading system has no legal provisions of the state, only provides for key pollutants may implement total amount control.

So in order to support carbon trading system, the relevant government departments have introduced the relevant legal provisions aimed at reducing carbon emissions and carbon trading, otherwise, people can not see the long-term prospect of carbon emission reduction policy trends and market, seriously affecting their willingness and determination to join the market. Three

is to regulate carbon trading laws. Carbon as a special commodity, its distribution must reflect the fair efficiency and the environmental protection principle, the need for standardization approved certification, the transfer must be highly open and transparent and fair, the management should be strictly defined for this purpose, it is necessary for the government to establish and perfect a series of standards and rules related to carbon trading.

Meanwhile, Carbon trading market supervision refers to the supervision of the main use of legal, economic and administrative means, supervision and management of the initial allocation of emission, the exercise of power, rights trading and other carbon emissions trading related problems. Initial allocation of emission rights, emission reduction certification, certified enterprises, and are determined to obtain accurate information on emissions of enterprises can. In addition, carbon emissions as a special commodity, the traditional transaction rules and regulatory system is difficult to adapt to the needs of market supervision, and carbon, carbon trading market is a credit market, legitimate source carbon credit and trading of each link in the strict justice supervision, emission test, index tracking, information disclosure liability for breach of contract, the carbon trading market directly influence the development of. Therefore, the establishment of a carbon market supervising platform is very necessary.

#### **3.2 To Expedite the Provision of Sufficient Human Resources Training**

China's carbon market is in its infancy, construction, which needs a lot of talent support system in this regard, we can accelerate personnel training through the following several aspects:

First, we should conduct a comprehensive assessment of the construction personnel system of China's carbon trading market, and on the basis of rational planning, and organize the implementation of key personnel training plan to meet basic needs, "Twelfth Five Year Plan" low carbon pilot and carbon trading pilot.

Second, we should formulate corresponding policies and standards, mobilize social forces to build perfect talent training network, making full use of the professional education and training resources, actively cultivate all kinds of talents.

Third, we should focus on the organization, implementation of the corresponding qualification assessment system important areas for future carbon trading market and ensure the healthy and orderly development of domestic carbon trading market. Four is to encourage technological cooperation and technology introduction, the introduction of talent cultivation in the cooperation in again, should encourage the introduction of talent, the introduction of talent cultivation of radiation, and create more local talents.

### 3.3 To Guide Financial Institutions Involved in the Reinforced Carbon Financial Services

Financial institutions play an important role in the carbon market, their participation in the carbon market capacity expands, liquidity enhancement, enhanced market transparency, and attract more market participants, maintaining market active. Financial institutions into the carbon market also played a mediating role, including brokers, exchanges and the trading platform, banks, insurance companies, hedge funds and a series of financial institutions. While China's carbon market in the initial stage, lack of participation of financial institutions, only a few banks emission reduction project loan financing, the carbon stock, futures and other financial derivatives are not involved in. Therefore, need to encourage the financial sector in the carbon trading efforts, actively formulate relevant policies and measures to guide financial institutions to the carbon market capital, improve market liquidity and active degree, so that the carbon market to play a greater role in energy saving and emission reduction.

We should firstly strengthen the low carbon consciousness of all kinds of financial institutions, financial institutions, at present China's participation in the carbon finance is the main commercial banks, the popularity of carbon finance knowledge, making financial institutions more aware of carbon trading hidden behind the huge commercial value, to participate in the carbon finance field; secondly the state should formulate relevant policies and carbon framework for financial markets, financial institutions to provide legal guarantee and a complete transaction platform, which can boldly into the carbon finance; in addition, also should establish related agency, the provision of advisory business of carbon finance, including transaction mode, carbon trading in trading places, approved methods, product type, policy support and other contents, make financial institutions more assured involved in carbon trading.

### 3.4 To Increase Publicity and Education to Promote Energy-Saving Emission Reduction

We should increase publicity and education, publicity through the media, classroom presentation and policy promotion, can let more enterprises voluntary carbon market trading, construction can let more people join the carbon market, but also to let the government have a correct understanding, introduction of the carbon market development policy.

To the relevant enterprises to actively promote the carbon trading, can not only improve the carbon consciousness, enhance the activity of carbon trading, also

can increase the available for trading carbon emissions. Strengthen the promotion of energy-saving emission reduction efforts, on the one hand to meet the needs of sustainable development in China, and contributes to the development of low carbon economy, on the other hand, can increase carbon emissions supply, to continue to keep China in the global carbon trading market share. Continue to promote energy-saving emission reduction and take positive measures to encourage the development of the CDM project cooperation is the fundamental policy, can provide ever fount available for trading carbon emissions carbon trading market.

## CONCLUSION

In one word, the development of Carbon finance in China plays an important role to the development of the Chinese characteristics economy; however, we has not established the real carbon trading market in China, and the market development is not balanced, the lack of talent, experience and technology required, domestic enterprises lack of awareness of emission reduction, carbon trading scanty. So we should learn from foreign experiences and lessons, combined with China's national conditions, through the evolution of regional development and function, the construction has the Chinese characteristic the carbon trading market, and through the improvement of laws and regulations, we should speed up the cultivation of talents, strengthen the financial service, increase the promotion methods, improve the level of development in China's carbon market.

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