ISSN: 2688-9323

Enlightenment of EU Carbon Trading Supervision System to China

Mengxi Kuang, Bin Liu and Cairui Deng

Anhui University of Finance and Economics, Bengbu, 233030, China

Abstract

The European Union is the first region in the world to start the carbon market and carry out carbon trading supervision, and it has rich practical experience in dealing with climate change. Since the launch of the EU carbon market in 2005, in order to cope with the expanding market volume and increasingly complex market environment, the EU has continuously optimized and improved the carbon trading regulatory system from the aspects of regulatory system, regulatory authorities and regulatory matters, which has played an important role in enhancing the confidence of market participants, forming a safe and efficient trading environment and ensuring the healthy operation of the market. At present, China is at a critical stage to achieve the goal of "double carbon", and has launched the largest carbon market in the world. It is urgent to establish and improve the carbon trading supervision system with China characteristics. On the basis of analyzing and summarizing the relevant experience of EU's carbon trading supervision system, this paper puts forward some suggestions to improve China's carbon market trading supervision.

Keywords

Peak Carbon Dioxide Emissions; Carbon Neutrality; EU Carbon Market; Carbon Trading; Transaction Supervision.

1. Introduction

The carbon emission trading market is generally based on the "total control and trading" system. The total greenhouse gas control targets are distributed to enterprises included in the carbon market management in the form of carbon emission quotas (hereinafter referred to as "quotas"), allowing enterprises to trade quotas, and requiring enterprises to pay the quotas equivalent to their emissions to the competent authorities in each cycle to fulfill their performance obligations[1]. The carbon market guides the optimal allocation of carbon emission reduction resources through the price signal formed by the market mechanism, thus reducing the emission reduction cost of the whole society, promoting the investment in green and low-carbon industries and guiding the capital flow. The establishment of a clear-cut and orderly trading supervision system and the formation of an open, fair and just effective market play an important role in giving play to the role of the market mechanism and promoting the formation of a reasonable carbon price[2]. The EU carbon market is the first carbon market in the world. Since its launch in 2005, the market volume has greatly increased, and the trading environment has become more and more complex, with some risk events such as quota theft, repeated trading and false information. In order to enhance the confidence of market participants and promote the formation of a safe and efficient trading environment, the EU carbon market has implemented a series of reforms to the trading supervision system, which has played an important supporting role in ensuring the healthy and orderly operation of the market. The national carbon market was officially launched on July 16th, 2021, and has become the largest carbon market in the world[3]. Since the online trading of the national carbon market, the overall operation has been stable and orderly, and the supporting trading supervision system is gradually being established and improved. In the process of gradually

ISSN: 2688-9323

improving China's carbon market, we can learn from the relevant experience of EU's carbon trading supervision system, and at the same time, combine China's national conditions and characteristics, carry out targeted pioneering and innovation, and constantly improve the national carbon market trading supervision system[4].

2. Overview of the Development of the EU Carbon Market

The EU carbon market is the cornerstone of the EU's climate change policy, which was officially launched in January 2005. As a long-term policy tool, the EU carbon market has been implemented in stages, which has gone through three stages (the first stage: 2005-2007, the second stage: 2008-2012, and the third stage: 2013-2020), and is currently in the fourth stage (2021-2030).

The first stage is the preliminary experimental stage. The industries covered in this stage mainly focus on CO2 emission from power generation and energy-intensive industries, and almost all quotas are allocated free of charge[5]. In the absence of reliable emission data, the total amount of quotas issued in the first stage exceeded the actual emissions. Under the superimposed influence of the policy that supply exceeded demand and quotas could not be carried over to the second stage, the quota price fell to zero in 2007.

The second stage is an all-round development stage. While covering industries and greenhouse gas types, the EU has also tightened the total quota (about 6.5% lower than that in 2005), and the proportion of free distribution has slightly decreased to about 90%. However, affected by the financial crisis in 2008, the problem of quota surplus is still serious[6].

In view of the problems in the early stage, the EU carried out a lot of reforms in the third stage, including formulating a "top-down" total system, taking auction as the main way of quota allocation (auction accounts for about 57%), including more industries and greenhouse gas types, and establishing market stable reserves (MSR)[7]. Up to the current fourth stage, according to the package of climate legislation of the European Commission, in order to speed up the pace of emission reduction, the EU proposes that the total quota will be reduced at an annual rate of 2.2% from 2021 (previously 1.74%), at the same time, more targeted carbon leakage rules will be established, and innovation funds and modernization funds will be set up to finance low-carbon innovation and modernization of the energy sector.

The EU carbon market developed strongly from the beginning. In the first stage, the trading volume increased from 321 million tons of carbon dioxide equivalent (tCO2e) quota in 2005 to 1.1 billion tCO2e in 2006 and 2.1 billion tCO2e in 2007. According to the Review Report of Global Carbon Market in 2021 issued by Luft, the turnover of EU carbon market in 2021 reached 12.2 billion tons quota (about 683 billion euros). In the process of continuous market development, there are also some risk events in the EU carbon market, such as quota theft, repeated trading, misleading investment with false or wrong carbon market information, etc. The EU carbon market transaction supervision is facing many challenges, so the EU constantly improves and perfects the carbon market transaction supervision system to better ensure the stable and effective operation of the carbon market.

3. The EU Carbon Trading Regulatory System

Since the opening of the EU carbon market, derivatives such as quota spot and quota futures have been traded almost simultaneously, and the scale of derivatives trading such as quota futures is much higher than that of spot trading. Derivatives such as futures, while hedging and realizing the function of price discovery, also maximize the use, dispersion and transmission of credit risk. Therefore, in the initial stage of the EU carbon market, derivatives such as quota futures were mainly included in the scope of financial instruments, which were regulated by

ISSN: 2688-9323

Directive2002/92/EC and Directive 2003/6/EC. As for the supervision of spot trading of quotas, the EU relies on the Directive 2003/87/EC issued in 2003. Because the Directive focuses on the allocation, transfer and settlement of quotas, it does not regulate the activities related to spot trading of quotas, so the EU lacks regulatory measures to deal with the risk events related to spot trading of quotas. To this end, the Council of the European Union and the European Parliament jointly adopted the revised Directive on Financial Market Instruments (Directive2014/65/EU) and Regulation (EU) No.596/2014 on June 12, 2014, and made it clear that the spot quota will also be included in the transparent and strict financial supervision from January 2018.

At present, the EU carbon market quota spot and derivatives trading, the primary market and the secondary market are all subject to the trading supervision system including the Financial Market Instruments Directive and the Anti-Market Abuse Directive, mainly including:

1. Financial instrument supervision system. According to the official definition of financial instruments in International Financial Reporting Standards (IFRS), financial instruments refer to contracts that form one party's financial assets and other parties' financial liabilities or equity instruments. The EU carbon market supervision system for financial instruments mainly includes the Financial Instruments Market Directive (MiFID2) and the Financial Instruments Market Supervision Directive (MiFIR). Among them, MiFID2 focuses on clarifying emission quotas as financial instruments; MiFIR focuses on the subject of supervision, the scope of supervision, the transparency of emission quota trading, the post-transaction disclosure of emission quotas of investment institutions, and the settlement of derivatives. Therefore, the supervision system of financial instruments is the core supervision system of carbon trading in the EU.

2. Market abuse supervision system. Market abuse refers to the behavior of trading subjects that infringe on market integrity and investor confidence through insider trading and market manipulation. The supervision system of EU carbon market against market abuse mainly includes Market Abuse Supervision Directive (MAR) and Market Abuse Criminal Sanctions Directive (CS-MAD). Among them, MAR focuses on the common regulatory framework of insider trading, illegal disclosure of insider information and market manipulation to ensure the integrity of the EU carbon market and enhance investor protection and confidence; If insider trading, illegal disclosure of insider information and market manipulation constitute criminal offences, CS-MAD will define the corresponding criminal acts.

3. Other regulatory systems. In addition to financial instruments supervision system and market abuse supervision system, other supervision systems of EU carbon market mainly include Anti-Money Laundering Directive (AMLD), Capital Requirements Regulation (CRD/R), Final Settlement Directive, etc., which are clarified from the aspects of anti-money laundering, capital requirements and settlement.

4. Implications for Carbon Trading Supervision in China

4.1. Establish and Improve the Regulatory System for Carbon Market Transactions

With the goal of "double carbon" as the basic guide, we will make overall consideration of industry and regional development, industry and energy structure, economy and energy security, strengthen the top-level design of the national carbon market, and promote the promulgation of the Interim Regulations on the Administration of Carbon Emissions Trading as soon as possible. On this basis, we will further refine the supporting system of the national carbon market transaction supervision, dynamically adjust the transaction management rules in the Carbon Emission Trading Management Rules in combination with the specific operation situation, and further improve the risk prevention and control management mechanism. At the

ISSN: 2688-9323

same time, the Interim Measures for the Administration of Voluntary Emission Reduction Trading of Greenhouse Gases will be revised and promulgated as soon as possible, and the basic management system of the voluntary emission reduction trading market and the rights and responsibilities of all parties involved will be established, so as to co-ordinate the carbon emission trading market and the voluntary emission reduction trading market. While studying and exploring the regulatory system of carbon forward, carbon futures, carbon options and carbon swap, it deeply analyzes the impact and requirements of the implementation of the Futures and Derivatives Law on the supervision of carbon financial transactions. In addition, a penetrating supervision system should be formulated and implemented to effectively supervise the market and stop illegal activities with the help of information and data supervision technology.

4.2. Clarify the Responsibilities of the Relevant Departments of Carbon Market Transaction Supervision

The national carbon market was launched on July 16th, 2021, and the first performance cycle was successfully concluded on December 31st, 2021. At present, the Department of Climate Change of the Ministry of Ecology and Environment is specifically responsible for the construction and management of the national carbon market, which consists of five institutions: the Comprehensive Department, the Strategic Research and Coordination Department, the Domestic Policy and Compliance Department (Carbon Emissions Trading Management Office), the International Policy and Negotiation Department, and the Foreign Cooperation and Exchange Department. According to the Provisional Regulations on the Management of Carbon Emissions Trading (Revised Draft) publicly solicited by the Ministry of Ecology and Environment in March, 2021, the competent department of ecology and environment in the State Council is responsible for formulating the technical specifications of carbon emissions trading and related activities nationwide, and supervising, managing and guiding the national carbon emissions trading and related activities together with the competent departments of development and reform, industry and information technology, energy and other departments in the State Council.

In order to further clarify the responsibility boundary of the Ministry of Ecology and Environment for the supervision of carbon market transactions, it is suggested to speed up the promulgation of the Interim Regulations on the Management of Carbon Emissions Trading, clarify the division of responsibilities of the competent ecological and environmental departments at all levels, build an accountability mechanism for illegal transactions, increase the handling of illegal transactions, support the supervision and management of the carbon market by the national carbon emissions trading institutions, and improve the trading rules system of the carbon market. In addition, the Ministry of Ecology and Environment should also strengthen communication and contact with other competent departments in the State Council, such as development and reform, industry and information technology, energy, etc., clarify their respective regulatory scope, explore the establishment of an inter-ministerial joint regulatory mechanism, and establish a permanent regulatory body when necessary to jointly supervise carbon market trading activities.

4.3. Give Full Play to the Self-Regulatory Functions of Trading Institutions

Trading institutions perform self-discipline management functions by formulating and implementing business rules, which has the advantages of voluntariness, professionalism and flexibility. Because the formulation of business rules by trading institutions can not only make up for the shortcomings and limitations of the formal legal system in terms of formulation procedures and rules content, but also give play to the advantages and functions of the self-discipline management of trading institutions, many regulatory authorities have entrusted some trading systems and related norms to trading institutions by means of explicit

ISSN: 2688-9323

authorization by law. Article 5 of the Measures for the Administration of Carbon Emission Trading (Trial) states that "the national carbon emission trading institution is responsible for organizing the centralized and unified trading of carbon emission rights throughout the country". According to the relevant announcement of the Ministry of Ecology and Environment, before the establishment of the national carbon emissions trading institution, Shanghai Environmental Energy Exchange Co., Ltd. will undertake the specific work of opening, operating and maintaining the national carbon emissions trading system account. According to the existing management regulations, the national carbon emission trading institution (Shanghai Environment and Energy Exchange) has the function of organizing transactions, but there is no corresponding authorization or regulation on how to organize transactions and how to assist the regulatory authorities to carry out transaction supervision.

In the construction of the national carbon market trading supervision mechanism, it is suggested that the Ministry of Ecology and Environment should supervise the national carbon market trading activities in a unified way, and the national carbon emission trading institution (Shanghai Environmental Energy Exchange) should perform self-discipline management functions, formulate trading rules and regulations, organize and standardize market trading behaviors, do a good job in information disclosure and management, and maintain the healthy development of the trading market under the guidance of the Ministry of Ecology and Environment.

References

[1] Modern Trade Industry,2023,44(02):42-44.DOI:10.19311/j.cnki.1672-3198.2023.02.015. trading markets. Advances in Climate Change Research 10, 30-46.

[2] Huang, L.Q., Li, F.C., 2022. Product rollover strategy and emission reduction with intertemporal carbon emission regulation versus consumer supervision. Environmental Science and Pollution Research 29, 26524-26538.

[3] Pan, X.F., Pu, C.X., Yuan, S., Xu, H.T., 2022. Effect of Chinese pilots carbon emission trading scheme on enterprises' total factor productivity: The moderating role of government participation and carbon trading market efficiency. Journal of Environmental Management 316.

[4] Shen, Y.B., Liu, J.L., Tian, W., 2022. Interaction between international trade and logistics carbon emissions. Energy Reports 8, 10334-10345.

[5] Yang, Z.H., Li, S.J., Zhou, Y.P., Wang, Q., Liu, Q.Z., 2012. Clean Development Mechanism and Carbon Trading Market Construction in China, 2nd International Conference on Energy, Environment and Sustainable Development (EESD 2012), Jilin, PEOPLES R CHINA, pp. 1500-+.

[6] Zhao, X.G., Zhang, Y.Z., 2018. The System Dynamics (SD) Analysis of the Government and Power Producers' Evolutionary Game Strategies Based on Carbon Trading (CT) Mechanism: A Case of China. Sustainability 10.

[7] Zhu, R., Long, L.Y., Gong, Y.H., 2022. Emission Trading System, Carbon Market Efficiency, and Corporate Innovations. International Journal of Environmental Research and Public Health 19.