Legal and Policy Pathways of Carbon Finance: Comparative Analysis of the Carbon Market in the EU and China

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Abstract
There has been a financial trend in China’s carbon market. However, the legal and policy pathways in China have not specifically focused on carbon finance, which has led to some suspicions about the legitimacy and efficiency of the carbon market. China is following an ambiguous and complicated route in the financial market rules and specialized regime of the carbon market. Meanwhile, the EU has classified carbon emission allowances as financial instruments, and adopted financial market rules for all segments of the carbon market. On the basis of the financial regulation in the EU this paper will try to find an appropriate legal and policy pathway to carbon finance in China. Application and exemptions as regards financial market rules concerning different market participants and their behaviors will be suggested.

Keywords Carbon market · Carbon finance · Financial market rules · Financial regulation

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1 Introduction

Carbon finance is the term applied to the resources provided to a project to purchase greenhouse gas (GHG) emissions reduction, which represents a specific dimension of environmental finance. It explores the financial risks and opportunities associated with a carbon-constrained society.\(^1\) It anticipates the availability and use of market-based instruments that are capable of transferring environmental risk and achieving environmental objectives.\(^2\) Carbon finance refers to various financial institutional arrangements to fund projects with environmental, health and economic co-benefits by valuing GHG emissions reduction.\(^3\) The drivers of carbon finance include compliance entities, energy companies, carbon exchanges, brokers, traders, hedge funds, and venture capitalists.\(^4\) They enable the value circulation of carbon emission allowances through the auction, spot and derivatives markets.

With the impacts of participants, products and transaction methods, carbon finance broadly shows the financial nature. For instance, as the world’s first unified and compulsory GHG emission reduction trading market, the EU classifies carbon emission allowances as financial instruments in the revised MiFID II.\(^5\) In the US, the first place to establish a voluntary emission reduction trading market, carbon products mainly take the form of futures, options, and swap contracts. In China, carbon products include spot trading, forward contracts, carbon asset management, allowance pledge,\(^6\) repurchase, carbon funds, carbon bonds, etc.\(^7\)

However, carbon finance also brings financial risks, including fraud, misleading information, manipulation, transfer pricing and other incidents which have occurred in these carbon markets.\(^8\) Depending on the reality, regulations have been made regarding carbon finance.

In the early stage, the EU lacked adequate arrangements for financial supervision of the carbon market. In order to ensure the consistency and continuity of the EU Emissions Trading System (EU-ETS), the MiFID II began to apply to all segments of the carbon market. With unified supervision, the participants could trade in a transparent and protective market. The MiFID\(^9\) was revised in 2014 and 2016.

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\(^{1}\) Carbon Finance Unit (2005).

\(^{2}\) Labatt and White (2006).

\(^{3}\) Haigler (2011), p 284.

\(^{4}\) Chen (2009).

\(^{5}\) Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU. OJ L 173/349.

\(^{6}\) Yang (2017), p 69.

\(^{7}\) China Securities Regulatory Commission, ‘Carbon Financial Products’ [Tan Jinrong Chanpin 碳金融产品 (JR/T 0244—2022)], Financial Industry Standards of the People’s Republic of China, 12 April 2022, http://www.csrc.gov.cn/csrc/c101954/c2334725/2334725/files%E9%99%84%E4%BB%B6%E5%BC%9A%E7%A2%B3%E9%87%91%E8%9E%8D%E4%BA%A7%E5%93%81.pdf (accessed 26 Jul 2022).

\(^{8}\) International Criminal Police Organization (2013).

\(^{9}\) Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC, OJ L 145.
The MiFID II was implemented in January 2018. It just recognized carbon emission allowances as financial instruments but was not aimed at dealing with the legal nature of emission allowances (on the grounds of private law). It integrated the auction, spot and derivatives markets into a unified regulatory system. With the strong regulation and effective stabilization reserve mechanism, the carbon price of the EU-ETS in 2019 continued to rise. Even in early 2020, the carbon price declined due to the impact of the COVID-19 epidemic, then soon had a strong rebound, showing outstanding resilience.

Regarding carbon finance, the US has also actively been exploring and debating at the domestic legislative level. Nevertheless, whether it will establish tailor-made financial regulation for the carbon market regime or rely on the financial market rules directly is still not clear. The Peterson bill and Waxman bill submitted to the U.S. Congress were targeting different legal and policy pathways regarding the carbon market.

In China, the general carbon market regime has not yet concentrated on carbon finance (e.g., the ‘Interim Regulation on the Management of Carbon Emissions Trading’ (Draft public comments, 2021), which will be passed by the State Council in the future, still provides no clear definition of carbon finance and its specific management). Moreover, the financial market rules have not followed up on the trend of carbon finance timely. The legal and policy pathway regarding carbon finance in China is ambiguous, having negative impacts on preventing financial risks and protecting the order of the carbon market.

As stated above, this paper will analyze the current situation of carbon finance in China. Next, the typical legal and policy experience on how to deal with carbon finance will be summarized. Comparing the financial market rules and the specialized regulatory regime, an appropriate legal and policy pathway for carbon finance in China will be suggested. The empirical comparison will be between the EU and China. The reasons are the following. Firstly, the EU-ETS and China’s carbon market are both unified markets. The EU-ETS is the world’s first mandatory GHG emission reduction market with a unified regulatory system. China has now formed a national spot carbon market with a specialized regulatory regime. The EU and China’s carbon markets have more in common than other decentralized carbon markets (such as the US). Secondly, the EU and China’s carbon markets both have a complete product chain. The EU-ETS has auction, spot and derivatives markets. China’s carbon market is dominated by spot trading, but with a large number of financial derivatives. Thirdly, the EU has formed a financial regime that integrates the rules of the carbon market and financial market. China’s financial regulatory departments are also trying to explore the regulation on carbon finance. Last but not least, there

10 Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU, OJ L 173/349.
11 International Carbon Action Partnership (2021).
12 Chan (2009), p 152.
13 Ministry of Ecology and Environment, National Development and Reform Commission, People’s Bank of China, China Banking and Insurance Regulatory Commission, China Securities Regulatory Commission, ‘Guidance on Promoting Investment and Financing to Address Climate Change’ [Guanyu Cujin Qihou Bianhua Tourongzi De Zhidaow Yi Jian] 关于促进应对气候变化投融资的指导意见
are similarities in capacity building and technical rules between the EU and China’s emissions trading systems. The EU maintains close bilateral cooperation with China on the carbon market. The two sides have established an adequate international carbon market cooperation mechanism, and carried out two projects (in 2014–2017 and 2017–2020) to support the design and implementation of emissions trading in China.  

2 Carbon Finance in China: Forms and Features

As the largest developing country, China is facing a series of arduous tasks regarding climate change. In order to deal with the problems, China has agreed to comprehensively strengthen the response to climate change that aims to peak CO₂ emissions before 2030 and achieve carbon neutrality before 2060. The Chinese Government Work Report has clearly formulated an action plan for peaking carbon emissions by 2030.

China began to launch seven pilot carbon markets in 2013. As of the end of August 2020, a total of 2837 key emission installations, 1082 non-compliance agencies, and 11,169 natural persons had participated in the pilot carbon markets. The cumulative trading volume of allowances reached 406 million tons, with a turnover of approximately 9.28 billion RMB. China’s carbon market has grown into the world’s second-largest carbon market in terms of trading volume. At the beginning of 2021, the Ministry of Ecology and Environment promulgated the ‘National Measures for the Administration of Carbon Emissions Trading (Trial)’, and officially announced that the national carbon market had entered its first compliance period.

2.1 Carbon Finance Products

In China, there are discussions about the nature of carbon emission allowances, including viewpoints on usufructuary right, quasi-property right, ordinary property right, etc. However, these debates do not affect the development and innovation of
carbon finance. There are various carbon finance products, for instance, spot commodities, forward contracts, asset management, pledge, repurchase, lending, funds, bonds, etc. The products on China’s carbon market are constantly enriched and diversified. Table 1 shows the carbon finance products in China.

These products basically adopt financial structures. For example, the forward contract is performed with these aspects, such as trade on exchange, standard terms, margin requirements, and daily settlement by third parties. Allowance lending is similar to margin trading, whereby an investor advances the amount of currency to a broker or dealer for borrowing carbon emission allowances. The purpose of carbon asset management is similar to financial asset management, which is to maximize the return on investments for the client.

These carbon finance instruments stimulate market participants to hedge risk, but also speed up and expand the transmission of risks. Carbon finance complicates the price mechanism, which is driven by suppliers and demanders of GHG emission reductions.

### 2.2 Carbon Finance Participants

According to the laws and policies of China’s carbon market, the statutory participants are compliance entities, institutions and individuals. The compliance entities, which participate in the carbon market to buy and sell allowances, should not only meet the commands from the government, but also utilize financial instruments to manage the carbon assets and hedge the risks of climate change. The institutions joining the carbon market are mainly institutional investors and intermediaries. Their purpose is to yield returns by managing carbon assets, providing brokerage, and offering consulting services. Institutional investors and intermediaries have become important participants in China’s pilot carbon markets and have promoted market liquidity to a certain extent. In the EU, the main carbon exchange (European Energy Exchange) has large numbers of institutional investors and intermediaries. These institutions form the majority of participants, including 429 institutional investors and 46 brokers. In China, institutional investors and intermediaries can

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19 An (2021), p 3.
20 Shanghai Environment and Energy Exchange, ‘The Rules of Forward Trading of Carbon Allowance in Shanghai’ [Shanghai Tan Pei Yueguan Yewu Guize 上海碳配额远期业务规则], 13 February 2017, https://www.cneeex.com/c/2017-02-13/487432.shtml (accessed 26 Jul 2022).
21 Butler (1997).
22 Ibid.
23 Zhou et al. (2020), p 109.
24 Ministry of Ecology and Environment, ‘Rules for the Administration of Carbon Emissions Trading (Trial)’ [Tan Paifangquan Jiaoyi Guanli Guize (Shixing) 碳排放权交易管理规则（试行）] 17 May 2021, https://www.mee.gov.cn/xxgk2018/xxgk/xxgk01/202105/t20210519_833574.html (accessed 26 Jul 2022).
25 Håvoll (2012).
26 Zheng and Meng (2010), p 87.
27 European Energy Exchange (2022).
be divided into three types: first, departments or branches of financial institutions; second, affiliates or subsidiaries of the compliance entities; and third, the specially established companies for carbon asset management and consulting. Table 2 sets out institutional investors and intermediaries in China.

Some of them have backgrounds in financial institutions, others provide financial services in transactions or asset management. With the increase of institutional

| Table 1 | Carbon finance products in China |
|---------|---------------------------------|
| Product            | Description                                      |
| Spot commodity     | Compliance entities, institutions and individuals make deals and settlements concerning carbon emission allowances at carbon exchanges |
| Forward contract   | Transactions are conducted on the exchange. Except regarding the price of the forward contract, the exchange has unified rules on variety, specification, quality, delivery location, settlement method, etc. The transaction rules involve margin requirements, settlement by third parties, daily debt-free settlement, etc. |
| Asset management   | The compliance entities and investment institutions entrust their own allowances to the general members or brokers, who have been approved by the exchange to manage carbon emission allowances |
| Pledge             | For a guarantee, the owner pledges all carbon emission allowances that are registered at the exchange |
| Repurchase         | The compliance entity sells a certain amount of carbon emission allowances to the carbon asset management institution, then entrusts the carbon asset management institution with the funds’ management. The entity repurchases the same amount of allowances after an agreed period |
| Lending            | After depositing a certain margin, a qualified participant can borrow the allowances from the lender, then trade them on exchange. After a certain period, the borrower should return the allowances to the lender and pay the agreed proceeds |
| Fund               | The carbon fund is funded by the government, financial institutions, enterprises or individuals to invest in the carbon market in the public or private interest |
| Bond               | The bond is issued to investors to raise funds for low-carbon economic projects. The income from the projects is linked to the bond interest |

*a* China Hubei Emission Exchange, ‘Emission Spot Forward Trading Rules of China Hubei Emission Exchange’ [Hubei Tan Paifangquan Jiaoyi Zhongxin Tan Paifangquan Xianhuo Yuanqi Jiaoyi Guize 湖北碳排放权交易中心碳排放权现货远期交易规则], 19 June 2017, http://www.hbets.cn/view/369.html (accessed 26 Jul 2022)

*b* China Guangzhou Emissions Exchange, ‘Guidelines for Custody Business of Carbon Emission Allowance in Guangdong Province’ [Guangdong Sheng Tan Paifang Peie Tuoguan Yewu Zhiyin 广东省碳排放配额托管业务指引], 19 January 2019, http://www.cnemission.com/article/zcfg/bsgz/201901/20190100001592.shtml (accessed 26 Jul 2022)

*c* Shanghai Environment and Energy Exchange, ‘Registration Rules for Pledge of Carbon Emission Allowance in Shanghai’ [Shanghai Tan Paifang Peie Zhiya Dengji Yewu Guize 上海碳排放配额质押登记业务规则], 31 December 2020, https://www.cneeex.com/c/2020-12-31/490696.shtml (accessed 26 Jul 2022)

*d* Shanghai Environmental Energy Exchange (2018)

*e* Shanghai Environment and Energy Exchange, ‘Rules of Allowance Lending in Shanghai Environment and Energy Exchange (Trial)’ [Shanghai Huanjing Nengyuan Jiaoyisuo Jietan Jiaoyi Yewu Guize (Shixing) 上海环境能源交易所借碳交易业务细则（试行）], 23 June 2015, https://www.cneeex.com/c/2015-06-23/487434.shtml (accessed 26 Jul 2022)

*f* China Shenzhen Emissions Exchange (2021)

*g* China Shenzhen Emissions Exchange (2021)
Table 2  Institutional investors and intermediaries in China

| Name                                                      | Scope of Service                                                                 | Type                                      |
|-----------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------|
| Beijing Zhongming Carbon Asset Management Co., Ltd.²     | A subsidiary of Jinneng Holding Shanxi Electric Power Co., Ltd., focuses on carbon asset management and services regarding climate change. | Subsidiary of compliance entity           |
| Zhongcheng Carbon Asset Management (Beijing) Co., Ltd.²  | Jointly established by Shenwu Energy Conservation Co., Ltd. and China Steel Equipment Co., Ltd., focuses on the steel industry, provides consultancy on low-carbon development and environmental asset management services to customers. | Subsidiary of compliance entity           |
| China Carbon Future (Beijing) Asset Management Co., Ltd.²| Established by Carbon Trading Capital Co., Ltd. and AGET, specializes in low-carbon consultancy and carbon asset management. | Specially established company for carbon asset management and consulting |
| Sino Carbon Innovation & Investment Co., Ltd.²         | An innovative consulting and investment institution, focuses on the response to climate change and on green and low-carbon fields in China. | Specially established company for carbon asset management and consulting |
| Environmental Finance Department, Industrial Bank Co., Ltd.² | Provides personalized solutions in the field of financial services, focuses on settlement, intermediary services, carbon asset management, etc. | Department of a financial institution     |

² Beijing Zhongming Carbon Asset Management Co., Ltd. (2022)
² Zhongcheng Carbon Asset Management (Beijing) Co., Ltd. (2022)
² China Carbon Future (Beijing) Asset Management Co., Ltd. (2021)
² Sino Carbon Innovation & Investment Co., Ltd. (2021)
² Environmental Finance Department, Industrial Bank Co., Ltd. (2021)
investors’ capital, and the presence of intermediaries providing financial services, the financial components have intense impacts on China’s carbon market.\textsuperscript{28}

\subsection*{2.3 Risks of Carbon Finance}

The purpose of carbon finance is to determine the carbon price and optimize the allocation of carbon resources. With the innovation and diversification of carbon products, carbon finance has maximized the dispersion and transmission of financial risks.\textsuperscript{29}

Theoretically, carbon financial risks include integrity risk (investors are affected by misleading information to buy and sell carbon products; participants abandon honest, sustainable and credible trading strategies for economic reasons under imperfect supervision), information risk (the information of the carbon market cannot be released in an orderly and timely manner), market abuse (the carbon market experiences market abuse like other markets), liquidity risk (the number of trading platforms and products and the degree of commoditization will both affect the liquidity of the market, which further determines the function of the market and the confidence of investors).\textsuperscript{30} Some financial risks are already being transmitted to participants, including compliance entities, institutions and individuals. Intermediaries have made misleading statements through advertising or investment recommendations to cheat their customers. In terms of manipulation, some institutional investors increased the weight value of carbon contracts when publishing commodity indexes (e.g., carbon index, green index), and then created the illusion that the demand for carbon emission allowances increased, which induced a great many investors to buy allowances and raised prices.\textsuperscript{31}

In China, the financial regulator has identified financial risk,\textsuperscript{32} such as misleading statements, fraud and illegal trade. In the ‘Implementation Opinions on the Clean-up and Rectification of Various Trading Platforms’ (Issued by the General Office of the State Council 2012, No. 37), the government announced that some trading methods in carbon exchanges carried financial risks, which should be rectified to prevent financial risks and maintain market stability.\textsuperscript{33}

\textsuperscript{28} Chai and Zhou (2019), p 13.
\textsuperscript{29} Fan and Chen (2019), pp 54–64.
\textsuperscript{30} Hill et al. (2008).
\textsuperscript{31} International Criminal Police Organization (2013).
\textsuperscript{32} Zhang (2022), p 115.
\textsuperscript{33} General Office of the State Council, ‘Implementation Opinions on Clean-up and Rectification of Various Trading Places’ \textit{[Guanyu Qingli Zhengdun Gelei Jiaoyi Changsuo De Shishi Yijian 关于清理整顿各类交易场所的实施意见]}, 20 July 2012, \texttt{http://www.gov.cn/zwgk/2012-07/20/content_2187828.htm} (accessed 26 Jul 2022).
3 Legal and Policy Pathways of Carbon Finance in China

In China, carbon emissions trading has the features of carbon finance. However, from the legal perspective, there are no clear rules governing carbon finance in the specialized regime and financial market rules. Thus, there are suspicions about the validity and legality of carbon finance in practice.

3.1 The Specialized Regime is Mainly for the Spot Carbon Market

At present, there is a specialized regime for the carbon market in China. The regime is mainly based on the ‘Administrative Measures for the Trading of Carbon Emission Rights’ promulgated by the national and local governments. The ‘National Measures for the Administration of Carbon Emissions Trading (Trial)’ (National Measures) took effect in February 2021 and provided the legal basis for the national emissions trading scheme. The National Measures constitute an administrative regulation, issued by the Ministry of Ecology and Environment. This departmental regulation contains general rules about carbon emission allowance allocation, registration, trading, settlement, reporting and verification, as well as supervision and management of the said activities.34 In May 2021, the ‘Management Rules for Registration of Carbon Emission Allowances (Trial)’, the ‘Management Rules for Trading of Carbon Emission Allowances (Trial)’ (Rules for Trading), the ‘Management Rules for Settlement of Carbon Emission Allowances (Trial)’ were also issued by the Ministry of Ecology and Environment. Currently, these departmental regulations are at the top of the legal hierarchy of laws of the carbon market.

In the meantime, the ‘Interim Regulation on the Management of Carbon Emissions Trading’ (Interim Regulation), which is expected to be approved by the State Council, has been published for comments.35 The Interim Regulation will rise in the legal hierarchy of the regime of China’s carbon market. Up until now, the ‘Measures for the Administration of Carbon Emissions Trading’ at the national and local governmental levels have been the basic rules for the carbon market. Table 3 shows the specialized regime of the carbon market in China.

Carbon emission allowances are the basic object of these rules. The development of innovative products based on carbon emission allowances is encouraged. Some of them have financial features, which have already been described in detail above.

Table 4 sets out the rules aimed to encourage innovative carbon products. With these rules, the specialized regime of China’s carbon market shows that it has

34 Ministry of Ecology and Environment, ‘National Measures for the Administration of Carbon Emissions Trading (Trial)’ [Tan Paifangquan Jiaoyi Guanli Banfa (Shixing) 碳排放权交易管理办法（试行）] 5 Jan 2021, https://www.mee.gov.cn/xgxk2018/xgxk/xgxk02/202101/t20210105_816131.html (accessed 26 Jul 2022).
35 Ministry of Ecology and Environment, ‘Notice on Publicly Soliciting Opinions on the “Interim Regulations on the Management of Carbon Emissions Trading” (Draft for Solicitation of Comments)’ [Guanyu Gongkai Zhengqiu’Tan Paifangquan Jiaoyi Guanli Xianxing Tiaoli (Zhengqiu Yijiangao)’ Yijian De Tongzhi 关于公开征求《碳排放权交易管理暂行条例（征求意见稿）》意见的通知], 29 March 2019, http://www.mee.gov.cn/hdjl/yjtz/wqzj_1/201904/t20190403_698483.shtml (accessed 26 Jul 2022).
| Legislator | Name | Type | Title | Date | Website |
|------------|------|------|-------|------|---------|
| State Council | Ministry of Ecology and Environment | Interim Regulation on the Management of Carbon Emissions Trading (Draft for Public Comments) | Notice on Publicly Soliciting Opinions on the "Interim Regulations on the Management of Carbon Emissions Trading" (Draft for Solicitation of Comments) | 29 March 2019 | [http://www.mee.gov.cn/hdjl/yjzj/wqzj_1/201904/t20190403_698483.shtml](http://www.mee.gov.cn/hdjl/yjzj/wqzj_1/201904/t20190403_698483.shtml) |
| Ministry of Ecology and Environment | Measures for the Administration of Carbon Emissions Trading (Trial) | Measures for the Administration of Carbon Emissions Trading in Beijing | Notice of the Administration Department of Beijing Municipal Government on the Public Solicitation of Opinions on Measures for the Administration of Carbon Emissions Trading in Beijing | 5 Jan 2021 | [https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105_843574.html](https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105_843574.html) |
| Ministry of Ecology and Environment | Rules for the Administration of Carbon Emissions Trading (Trial) | Rules for the Administration of Carbon Emissions Trading in Shanghai | Notice on Publicly Soliciting Opinions on the "Interim Regulations on the Management of Carbon Emissions Trading" (Draft for Solicitation of Comments) | 29 March 2019 | [http://www.mee.gov.cn/hdjl/yjzj/wqzj_1/201904/t20190403_698483.shtml](http://www.mee.gov.cn/hdjl/yjzj/wqzj_1/201904/t20190403_698483.shtml) |
| Ministry of Ecology and Environment | Measures for the Administration of Carbon Emissions Trading (Trial) | Measures for the Administration of Carbon Emissions Trading in Tianjin | Notice of the Administration Department of Tianjin Municipal Government on the Public Solicitation of Opinions on Measures for the Administration of Carbon Emissions Trading in Tianjin | 17 May 2021 | [https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202105/t20210512_833574.html](https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202105/t20210512_833574.html) |
| People’s Government of Beijing Municipality | Measures for the Administration of Carbon Emissions Trading in Beijing (Trial) | Measures for the Administration of Carbon Emissions Trading in Beijing | Notice of the Administration Department of Beijing Municipal Government on the Public Solicitation of Opinions on Measures for the Administration of Carbon Emissions Trading in Beijing | 29 March 2019 | [http://www.mee.gov.cn/hdjl/yjzj/wqzj_1/201904/t20190403_698483.shtml](http://www.mee.gov.cn/hdjl/yjzj/wqzj_1/201904/t20190403_698483.shtml) |
| People’s Government of Tianjin Municipality | Measures for the Administration of Carbon Emissions Trading in Tianjin | Notice of the Administration Department of Tianjin Municipal Government on the Public Solicitation of Opinions on Measures for the Administration of Carbon Emissions Trading in Tianjin | 17 May 2021 | [https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202105/t20210512_833574.html](https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202105/t20210512_833574.html) |
| People’s Government of Guangdong Province | Interim Measures for the Administration of Carbon Emissions Trading in Guangdong | Measures for the Administration of Carbon Emissions Trading in Guangdong | Notice of the Administration Department of Guangdong Province on the Public Solicitation of Opinions on Measures for the Administration of Carbon Emissions Trading in Guangdong | 15 January 2014 | [http://www.cnemission.com/article/201401/20140105_19951.html](http://www.cnemission.com/article/201401/20140105_19951.html) |
| People’s Government of Hubei Province | Interim Measures for the Administration and Trading of Carbon Emissions in Hubei | Notice of the Administration Department of Hubei Province on the Public Solicitation of Opinions on Measures for the Administration and Trading of Carbon Emissions in Hubei | 28 May 2014 | [https://www.bets.com.cn/news/201406/20140627/11414.html](https://www.bets.com.cn/news/201406/20140627/11414.html) |
| People’s Government of Shenzhen Municipality | Interim Measures for the Administration of Carbon Emissions Trading in Shenzhen | Notice of the Administration Department of Shenzhen Municipality on the Public Solicitation of Opinions on Measures for the Administration of Carbon Emissions Trading in Shenzhen | 20 April 2015 | [http://www.cerx.com.cn/news/201504/20150420_6138.html](http://www.cerx.com.cn/news/201504/20150420_6138.html) |
| People’s Government of Chongqing Municipality | Interim Measures for the Administration of Carbon Emissions Trading in Chongqing | Notice of the Administration Department of Chongqing Municipality on the Public Solicitation of Opinions on Measures for the Administration of Carbon Emissions Trading in Chongqing | 7 May 2014 | [http://www.cqggzy.com/news/201405/20140507_6074.html](http://www.cqggzy.com/news/201405/20140507_6074.html) |
covered not only the ordinary commodities of carbon emission allowances, but also the innovative derivatives based on carbon emission allowances. For the commodity trading of carbon emission allowances, the specialized regime has already provided clear and detailed rules. However, there are no detailed rules for the innovative derivatives based on carbon emission allowances (like various carbon financial products) in the specialized regime of the carbon market. The reason is that the specialized regime is mainly for the spot carbon market, not for carbon financial trading.

Table 4  Rules to encourage the development of innovative carbon products

| Rule                                                                 | Content                                                                                                                                 |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Measures for the Administration of Carbon Emissions Trading (Trial) | Article 20. The trading products in the national carbon market are carbon emission allowances. The Ministry of Ecology and Environment may approve other trading products in accordance with relevant national regulations. |
| Measures for the Administration of Carbon Emissions Trading in Beijing (Trial) (Beijing) | Article 15. Trading products include carbon emission allowances, certified carbon emission reductions, etc. The government will explore innovative carbon-related products. |
| Trial Measures for the Administration of Carbon Emissions in Shanghai | Article 19. The government encourages the exploration of innovative carbon-related products. |
| Interim Measures for the Administration and Trading of Carbon Emissions in Hubei | Article 24. The trading products in the carbon market include carbon emission allowances and China Certified Emission Reductions (CCER). The government encourages the exploration of innovative carbon-related products. |
| Interim Measures for the Administration of Carbon Emissions Trading (Shenzhen) | Article 54. The carbon products created by the exchange include carbon emission allowances, certified emission reductions, and other carbon products approved by the relevant competent authorities. The government encourages the exploration of innovative carbon-related products. |

a Ministry of Ecology and Environment, ‘Measures for the Administration of Carbon Emissions Trading (Trial)’ [Tan Paifangquan Jiaoyi Guanli Banfa (Shixing) 碳排放权交易管理办法（试行）] 5 Jan 2021, https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105_816131.html (accessed 26 Jul 2022)

b People’s Government of Beijing Municipality, ‘Measures for the Administration of Carbon Emissions Trading in Beijing (Trial)’ [Beijing Tan Paifangquan Jiaoyi Guanli Banfa (Shixing) 北京市碳排放权交易管理办法（试行）], 28 May 2014, https://www.bjets.com.cn/article/zcfg/201407/2014070000255.shtml (accessed 26 Jul 2022)

c People’s Government of Shanghai Municipality, ‘Trial Measures for the Administration of Carbon Emissions in Shanghai’ [Shanghai Tan paifangquan Guanli Shixing Banfa 上海市碳排放权交易管理办法], 18 November 2013, https://www.cneex.com/c/2014-05-16/487443.shtml (accessed 26 Jul 2022)

d People’s Government of Hubei Province, ‘Interim Measures for the Administration and Trading of Carbon Emissions in Hubei’ [Hubei Sheng Tan paifangquan Guanli He Jiaoyi Zanxing Banfa 湖北省碳排放权管理和交易暂行办法], 4 April 2014, http://www.hbets.cn/view/314.html (accessed 26 Jul 2022)

e People’s Government of Shenzhen Municipality, ‘Interim Measures for the Administration of Carbon Emissions Trading’ [Shenzhen Tan Paifangquan Jiaoyi Guanli Zanxing Banfa 深圳市碳排放权交易管理办法], 20 April 2015, http://www.cerx.cn/szPolicy/385.htm (accessed 26 Jul 2022)
Table 5 Rules of coordination among the relevant authorities

| Rule                                                                 | Content                                                                                                                                 |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Measures for the Administration of Carbon Emissions Trading (Trial)⁹ | Article 6. The Ministry of Ecology and Environment is responsible for cooperating with other relevant authorities of the State Council to supervise, manage and guide national carbon emissions trading and related activities |
| Measures for the Administration of Carbon Emissions Trading (Trial) (Beijing)ᵇ | Article 4. Municipal authorities in charge of statistics, finance, landscaping, and other industries are responsible for relevant supervision and management according to their responsibilities |
| Trial Measures for the Administration of Carbon Emissions in Shanghaiᶜ | Article 3. Municipal authorities which are responsible for economic informatization, construction and transportation, commerce, transportation, tourism, finance, statistics or finance shall coordinate in accordance with their respective responsibilities |
| Interim Measures for the Administration of Carbon Emissions Trading (Tianjin)ᵈ | Article 4. The authorities which are responsible for industry and informatization, construction, state-owned assets, finance, statistics, market supervision or securities supervision shall perform relevant work in accordance with their respective responsibilities |
| Carbon Emissions Management Trial Measures (Guangdong)ᵉ             | Article 4. Provincial authorities which are responsible for economy and informatization, finance, housing and urban-rural construction, transportation, statistics, pricing, quality supervision or finance shall perform relevant work regarding carbon emissions trading according to their respective responsibilities |
| Interim Measures for the Administration and Trading of Carbon Emissions in Hubei¹ | Article 4. Relevant authorities, which are responsible for economy and informatization, finance, state-owned assets, statistics, price, quality supervision, finance, etc. shall perform relevant responsibilities within their scope of authority |
| Interim Measures for the Administration of Carbon Emissions Trading (Shenzhen)ᵉ | Article 5. The district governments and functional authorities which are responsible for finance, economic and trade information, technological innovation, taxation, environmental protection, planning, land, transportation or water affairs are responsible for work related to carbon emissions trading within the scope of their respective responsibilities |
| Interim Measures for the Administration of Carbon Emissions Trading⁶ | Article 4. The Municipal Finance Bureau, Economic Information Commission, Urban and Rural Construction Commission, State-owned Assets Supervision and Administration Commission, Quality Supervision Bureau, Price Bureau, and other departments and units shall perform relevant work regarding the management of carbon emissions trading according to their respective responsibilities |
To address this problem, the specialized regime has taken a collaborative governance approach. When the innovative derivatives involve the fields of finance, taxation, etc., the relevant authorities should be responsible for jurisdiction over these products. Table 5 shows the rules of coordination among the relevant authorities.

Except for these rules of coordination between the competent authority and relevant authorities there are, in principle, no detailed rules allocating the responsibilities of the authorities in the specialized regime of the carbon market. Hence, the specialized regime is unable to fully cover and coordinate the supervision regarding both carbon commodity and innovative financial products. There may be regulatory loopholes or legal conflicts in the carbon market. For example, the spot carbon forward transaction is only approved through record filing by the competent authority in the Hubei pilot carbon market, but in this regard clear procedures for review and approval by the local financial regulator are lacking, which has caused doubts about the legality of products.

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36 Liu (2021), p 42.

37 China Hubei Emission Exchange, ‘Emission Spot Forward Trading Rules of China Hubei Emission Exchange’ [Hubei Tan Paifangquan Jiaoyi Zhongxin Tan Paifangquan Xianhao Yuanqi Jiaoyi Guize 湖北碳排放权交易中心碳排放权现货远期交易规则], 19 June 2017, http://www hbets cn/view/369.html (accessed 26 Jul 2022).
3.2 Absence of Financial Market Rules

The ‘Securities Law of the People’s Republic of China’ (Securities Law), the ‘Regulation on the Administration of Futures Trading’ and other relevant laws and rules are constantly being revised and updated. Financial law enforcement is more flexible regarding new challenges. In the evaluation of China’s ‘Financial Sector Assessment Program’, the International Monetary Fund and World Bank stated that China had made remarkable achievements in strengthening the protection of securities investors and improving the basic regime of the capital market. The financial regime in China provides a series of approaches and technical solutions to ensure that regulators can act swiftly and decidedly in cases of market abuse, misconduct, unfair treatment of clients and threats to the order of the market.

However, there are still no clear financial market laws and rules for carbon emission allowances. For instance, the Securities Law applies to the issuance and trading of stocks, corporate bonds, depositary receipts and other securities recognized by the State Council. If carbon emission allowances are to be governed by the Securities Law, it should be stipulated by the laws, regulations or at least special rules made by the State Council. However, there are no laws, regulations or special rules to recognize the carbon emission allowance as a security in China. In the Regulation on the Administration of Futures Trading, futures tradings are trading activities with futures contracts or option contracts as the subject matter of trading conducted in the manner of centralized public trading or any other manner approved by the regulatory authority of the State Council. However, according to the ‘Implementation Opinions on the Clean-up and Rectification of Various Trading Platforms’, the trading of carbon emission allowances can be conducted with non-standardized contracts, non-centralized trading and at non-futures trading venues. Hence, carbon emission allowances cannot be futures according to the Regulation on the Administration of Futures Trading either.

The carbon emission allowance is not stipulated directly in the financial market rules. However, it is not completely excluded from the scope of the underlying assets. The ‘Interim Measures for the Business Management of Derivative Transactions of Banking Financial Institutions’, the ‘Specification for Over-the-counter Trading of Financial Derivatives of Securities Companies’, and especially the ‘Futures and Derivatives Law of the People’s Republic of China’ (Not Yet Effective) allow various underlying assets (including carbon emission allowances) to form derivatives. Table 6 sets out the financial market rules on carbon emission allowances and underlying assets.

38 Xinhua News Agency (2017).
39 People’s Bank of China (2017).
40 Lin and Hong (2022), p 143.
### Table 6  Financial market rules on carbon emission allowances and underlying assets

| Name                                                      | Legislator                                      | Content                                                                                                                                                                                                 |
|-----------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Securities Law of the People’s Republic of China<sup>a</sup> | Standing Committee of the National People’s Congress | Article 2. This Law shall apply to the offering of and trading in stocks, corporate bonds, depositary receipts, and other securities recognized in accordance with the law by the State Council within the territory of the People’s Republic of China |
| Regulation on the Administration of Futures Trading<sup>b</sup> | State Council of the People’s Republic of China  | Article 2. For the purposes of this Regulation, ‘futures trading’ means trading activities with futures contracts or option contracts as the subject matter of trading conducted in the manner of centralized public trading or any other manner approved by the regulatory authority of the State Council |
| Interim Measures for the Business Management of Derivative Transactions of Banking Financial Institutions<sup>c</sup> | China Banking Regulatory Commission             | Article 3. The term ‘derivative’ as mentioned in these Measures shall refer to a financial contract with its value depending on one kind or a number of underlying assets or indexes. The basic categories of such contracts include forwards, futures, swaps and options. A derivative also includes structured financial instruments with features of one or more forwards, futures, swaps and options |
| Specification for Over-the-counter Trading of Financial Derivatives of Securities Companies<sup>d</sup> | Securities Association of China                 | Article 2. ‘Financial derivatives’ refers to financial agreements in which the value of forwards, swaps, options, etc. depends on equity, debt, credit, funds, interest rates, exchange rates, indices, futures, etc. or a combination of multiple products |
| Futures and Derivatives Law of the People’s Republic of China<sup>e</sup> | Standing Committee of the National People’s Congress | Article 3. For the purposes of this Law, ‘trading in derivatives’ means trading activities other than futures trading, which have swap contracts, forward contracts, and non-standard option contracts, as well as their portfolios as the subject matter of transactions |

<sup>a</sup>Standing Committee of the National People’s Congress, ‘Securities Law of the People’s Republic of China’ [Zhanghua Renmin Gonghe Guo Zhengquan Fa 中华人民共和国证券法], 28 December 2019, http://www.npc.gov.cn/npc/c30834/201912/75071693601842506304ca1dcb843a57.shtml (accessed 26 Jul 2022)

<sup>b</sup>State Council of the People’s Republic of China, ‘Regulation on the Administration of Futures Trading’ [Qihuo Jiaoyi Guanli Tiaoli 期货交易管理条例], 1 March 2017, http://www.gov.cn/zhengce/2020-12/27/content_5574482.htm (accessed 26 Jul 2022)

<sup>c</sup>China Banking Regulatory Commission, ‘Interim Measures for the Business Management of Derivative Transactions of Banking Financial Institutions’ [Jinrong Jigou Yanshengpin Jiaoyi Yewu Guanli Zanxing Banfa 金融机构衍生产品交易业务管理暂行办法], 4 February 2004, http://www.gov.cn/gongbao/content/2004/content_62942.htm (accessed 26 Jul 2022)

<sup>d</sup>Securities Association of China, ‘Specification for Over-the-counter Trading of Financial Derivatives of Securities Companies’ [Zhengquan Gongsi Jinrong Yanshengpin Guitiai Jiaoyi Yewu Guanli 证券公司金融衍生产品柜台交易业务管理暂行办法], 15 March 2013, https://www.sac.net.cn/flgz/zlgz/201303/t20130319_61899.html (accessed 26 Jul 2022)

<sup>e</sup>Standing Committee of the National People’s Congress, ‘Futures and Derivatives Law of the People’s Republic of China’ [Zhonghua Renmin Gonghe Guo Qihuo He Yanshengpin Fa 中华人民共和国期货和衍生品法], 20 April 2022, http://www.npc.gov.cn/npc/c30834/202204/162cf3a6d6d493fb5c1660b9a4c1c5.shtml (accessed 26 Jul 2022)
The carbon investment fund,\textsuperscript{41} carbon collective asset management plan\textsuperscript{42} and carbon trust,\textsuperscript{43} which aim to obtain benefits and hedge risks by operating and managing carbon assets, rely on carbon emission allowances as underlying assets. Therefore, these innovative carbon products, which take financial forms, should comply with the financial market rules.

Even though, some carbon products are governed by financial regulation, there are still regulatory conflicts in the carbon market. For instance, asset management companies should comply with the regulatory requirements of the China Securities Regulatory Commission (CSRC) or the China Banking and Insurance Regulatory Commission (CBIRC). Once intermediaries in the carbon market take the form of asset management companies or trust institutions, they should be governed by the current financial requirements regarding qualifications and thresholds. However, the financial market rules have not applied to the establishment of intermediaries (like carbon asset management companies) in practice, which means there are suspicions about the legality of these existing carbon intermediaries.

3.3 Alternative: The Self-Discipline of Carbon Exchanges

Carbon exchanges are trading venues that centralize traders, brokers, dealers and other participants to facilitate trading, settlement, monitoring, dispute resolution, etc.\textsuperscript{44} The self-discipline of carbon exchanges originates from members’ voluntary agreements, in which the standards of products, trading behaviors, and responsibilities of participants are agreed. Carbon exchanges have the power to manage and supervise the members according to self-discipline rules. The self-discipline rules of the Shanghai Environment and Energy Exchange are shown in Table 7.

All carbon exchanges in China have formulated their own systems. To a certain extent, self-discipline rules protect the legitimate rights and interests of participants and make the carbon market orderly.

The carbon exchange is not only a trading venue, but also responsible for frontline supervision. Based on the self-discipline rules for products, trading methods, and participants, the carbon exchange implements rules of management and supervision.\textsuperscript{45}

The authority competent for the carbon market in China is the Ministry of Ecology and Environment, whose main expertise is to control environmental pollution

\textsuperscript{41}On 27 November 2014, Huaneng Group and Lion Fund jointly released the nation’s first fund, named ‘Special Asset Management Plan for Carbon Emission Rights’, which was registered with the China Securities Regulatory Commission.

\textsuperscript{42}On 18 January 2015, the Haitong Baotan No. 1 collective asset management plan for China’s Certified Emission Reduction (CCER) special investment fund, which was the first product in which the large-scale securities company participated, was officially launched at the Shanghai Environment and Energy Exchange.

\textsuperscript{43}On 20 March 2015, China Jianyin Investment Trust • Yongquan No. 1 Collective Capital Trust Plan, the first domestic carbon trust in China, was officially put on sale.

\textsuperscript{44}Chen (2016), p 69.

\textsuperscript{45}Yang (2018), p 8.
and protect ecosystems\textsuperscript{46} but not to supervise the trading market. In practice, the Ministry of Ecology and Environment authorizes carbon exchanges to monitor and supervise the carbon market, and has the power to manage and regulate carbon exchanges according to the specialized regime. Table 8 sets out the relationship between the competent authority and Shanghai Environment and Energy Exchange.

In order to prevent financial risks, the carbon exchanges draw up self-discipline rules, including regulatory requirements for products, trading methods and participants. As regards the technical provisions of the self-discipline rules, the carbon exchanges in China have similarities with the financial exchanges. Table 9 shows the risk control systems of the carbon exchanges and China Financial Futures Exchange.

The self-discipline rules of carbon exchanges reflect the features of financial market rules, but these rules cannot be regarded as the real financial market rules. On the one hand, carbon exchanges are not financial trading venues approved by the State Council or the financial competent authority of the State Council.\textsuperscript{47} China’s official trading venues for financial products are only the securities exchanges and futures exchanges, whose establishment process and management systems should be conducted in accordance with the Securities Law and the Regulation on the Administration of Futures Trading. On the other hand, the carbon exchanges have been empowered by the Ministry of Environment and Ecology, but still have no authorization under the financial market rules. As a result, the identification and management of products and participants by the carbon exchanges do not imply that carbon products and participants meet the legal requirements of the financial market rules. There is no doubt that the self-discipline rules of carbon exchanges cannot make up for the shortcomings of the financial market rules of the carbon market.

4 The Application of the Financial Market Rules to the EU’s Carbon Market

4.1 The EU’s Carbon Market Moves Towards a Unified Financial Regulation

The EU’s carbon market has experienced a significant growth in size and sophistication, with an overall annual turnover of tens of billions of euros.\textsuperscript{48} As the most important policy in the EU, the EU-ETS responds to the GHG reduction and low-carbon economic development. In the coming decades, the EU will need a healthy carbon market to attract a large amount of investment into a low-carbon economy.

The EU’s carbon market consists of three parts: the auction market, the spot market and the derivatives market. A large part of carbon trading in the EU is in the form of derivatives (including futures, forwards and options). These derivatives have already been clearly covered by the financial market rules of the EU. The

\textsuperscript{46} Ministry of Ecology and Environment (2018).

\textsuperscript{47} General Office of the State Council, ‘Decision of the State Council on Cleaning up and Rectifying Various Trading Venues and Practically Preventing Financial Risks’ [Guanyu Qingli Zhengdun Gelei Jiaoyi Changsuo Qieshi Fangfan Jinxing De Jueding 关于清理整顿各类交易场所切实防范金融风险的决定], 24 November 2011, http://www.gov.cn/zwgk/2011-11/24/content_2002092.htm (accessed 26 Jul 2022).

\textsuperscript{48} European Commission (2020).
aucation market for carbon emission allowances has been incorporated into the financial regulation of 2013. Hence, before the MiFID was revised, there was only the spot market, which was not restricted by the financial market rules. Some financial crimes and violations of laws occurred in the spot carbon market, which affected the confidence of market participants. The EU needed a safe and effective trading environment to enhance the confidence in the EU’s carbon market.

Initially, a tailor-made regime was considered by the European Commission. This regime could also respond to the financial risks of the spot carbon market. However, a tailor-made regime would cause duplication of legislation and application of financial market rules, because the financial provisions and technical rules were already contained in those rules. The duplication would result in a waste of legal resources.

49 European Commission (2013).
50 International Criminal Police Organization (2013).
51 Mandaroux et al. (2021), p 440.
52 European Commission (2011a).
As the auction market and derivatives market had been covered by the financial market rules, a tailor-made regime for the spot market would result in an artificial separation of the auction market and derivatives market. This could create obstacles to the continuity and consistency of supervision in all segments of the EU’s carbon market.

Generally, financial supervision was necessary for the financial market to prevent financial risks such as manipulation, insider trading, false information, rumors, etc. Before the MiFID was revised, to deal with the financial risks in the spot market and fill the loopholes of laws and rules, some European exchanges had to

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53 Chiu et al. (2022), p 4.
54 Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU. OJ L 173/349.

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**Table 8** The relationship between the competent authority and the Shanghai Environment and Energy Exchange

| Name | Content |
|------|---------|
| Rules for the Administration of Carbon Emissions Trading (Trial) | Article 6. Carbon emissions trading shall be conducted through the national carbon emissions trading system (Shanghai Environment and Energy Exchange).  
Article 19. The national carbon emissions trading system shall establish a risk control system and report to the Ministry of Ecology and Environment.  
Article 28. The national carbon emissions trading system shall establish information disclosure rules and report to the Ministry of Ecology and Environment.  
Article 32. The Ministry of Ecology and Environment shall strengthen the supervision and management of the national carbon emissions trading system and conduct supervision by inquiring about the national carbon emissions trading system and its employees, reviewing and copying information and materials related to the national carbon emissions trading system, and take other measures stipulated by laws and regulations.  
Article 41. The national carbon emissions trading system shall formulate detailed implementation rules in accordance with the above rules. |
| Trial Measures for the Administration of Carbon Emissions in Shanghai | Article 20. The exchange shall formulate carbon emissions trading rules, clarify the rights and obligations of participants, trading procedures, trading fees, disputes solutions, etc. The exchange shall formulate relevant rules, such as regarding member management, information disclosure, settlement and delivery, risk control, etc., in accordance with the carbon emissions trading rules, and submit them to the competent authority.  
Article 33. The exchange shall employ professionals, establish and improve various rules, strengthen risk control and internal supervision. The exchange and its staff shall consciously abide by the relevant laws, regulations and rules, implement various trading rules, regularly report the trading situation to the competent authority, and accept the guidance and supervision of the competent authority. |

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*People’s Government of Shanghai Municipality, ‘Trial Measures for the Administration of Carbon Emissions in Shanghai’ [Shanghai Tan Paifangquan Guanli Shixing Banfa 上海市碳排放管理试行办法], 18 November 2013, [https://www.cneeex.com/c/2014-05-16/487443.shtml](https://www.cneeex.com/c/2014-05-16/487443.shtml) (accessed 26 Jul 2022)*
Table 9  Risk control systems of the carbon exchanges and China Financial Futures Exchange

| Measures on Risk Control of Emissions Trading of the China Shenzhen Emission Exchange (Trial)\(^a\) | Measures on Risk Control of Emissions Trading (Trial) of the Shanghai Environment and Energy Exchange (Trial)\(^b\) | Measures on Risk Control of the China Financial Futures Exchange\(^c\) |
|---|---|---|
| Full capital transaction | Margin | Price limits |
| Price limits | Price limits | Position limits |
| Position limits | Maximum position limits | Large position reporting |
| Large position reporting | Large position reporting | Forced position reduction |
| Forced position reduction | Risk warning | Risk warnings |
| Risk warning | Risk disposal fund | Guarantee fund |
| Risk disposal fund | Resolution of extraordinary situations | Forced liquidation |
| Resolution of extraordinary situations | Regulation on block trade | Trading limit |
| Regulation on block trade | Information disclosure regarding important customers | |

\(^a\) China Shenzhen Emission Exchange, ‘Measures on Risk Control of Emissions Trading of China Shenzhen Emission Exchange (Trial)’ [Shenzhen Paifangquan Jiaoyi Fengxian Kongzhi Guanli Xize (Zanxing) 深圳排放权交易所风险管理细则（暂行）] 14 October 2021, [http://www.cerx.cn/ceexPolicy/index.htm](http://www.cerx.cn/ceexPolicy/index.htm) (accessed 26 Jul 2022)

\(^b\) Shanghai Environment and Energy Exchange, ‘Measures on Risk Control of Emissions Trading (Trial)’ [Tan Paifang Jiaoyi Fengxian Kongzhi Guanli Banfa (Shixing) 碳排放交易风险控制管理办法（试行）] 30 June 2020, [https://www.cneeex.com/c/2020-06-30/487431.shtml](https://www.cneeex.com/c/2020-06-30/487431.shtml) (accessed 26 Jul 2022)

\(^c\) China Financial Futures Exchange, ‘Measures of China Financial Futures Exchange on Risk Control’, 24 December 2020, [http://www.cffex.com.cn/en_new/04/](http://www.cffex.com.cn/en_new/04/) (accessed 26 Jul 2022)
package the spot products of carbon emission allowances as derivative instruments (e.g., futures with a few days delivery period). With these operations, market participants could derive protection from the financial supervision.

Finally, the European Commission, aiming to provide a safe and efficient trading environment to enhance confidence in the carbon market, passed the rules of the new Markets in Financial Instruments Directive (MiFID II) and Markets in Financial Instruments Regulation (MiFIR) to deal with those matters. On the one hand, the rules of the MiFID II and relevant rules ensure the ability of supervisors to act swiftly and decidedly on cases of misconduct, unfair treatment of clients, threats to the orderly functioning of the market, and the risks of market abuse. On the other hand, the financial market rules give a clearer regulatory status to emission allowances and provide a comprehensive regulatory framework that will still be adaptable to carbon market specificities.

4.2 The Application of Financial Market Rules to the EU’s Carbon Market

According to the MiFID II, the carbon emission allowance and its relevant market activities will all be governed by the financial market rules. The MiFID II, as the core rule for the EU’s carbon market, guides other financial rules in applying to the carbon market. Other financial market rules include the MiFIR, MAR, CSMAD and ‘Anti-Money Laundering Directive’ (AMLD). Some financial market rules will not apply to the carbon market, including the ‘Prospectus Directive’, ‘Transparency Directive’, ‘Undertakings for Collective Investment in Transferable Securities (UCITS) Directive’ and ‘Financial Collateral Directive’.

The financial market rules will apply to the main market participants of the carbon market and their activities. The compliance buyers all need to respect the prohibitions of insider dealing and market manipulation, and follow related obligations, such as those regarding disclosure of inside information and keeping an insiders list. Professional traders in the carbon market are required to hold the MiFID II license and comply with all MiFID II organizational and operational requirements (including know-your-customer checks, transactions reporting, record keeping and investor protection rules). The carbon exchanges obtain MiFID II authorization in accordance with their specific profile (such as a regulated market, a multilateral trading facility (MTF) or the new category, an organized trading facility (OTF)).

The MiFID II states that institutions or individuals that meet any of the conditions, such as (1) being market makers, (2) being members or participants of a regulated market or a multilateral trading facility or having direct electronic access to a trading venue, (3) applying a high-frequency algorithmic trading technique, and (4)

55 European Commission (2011b).
56 People’s Government of Hubei Province, ‘Interim Measures for the Administration and Trading of Carbon Emissions in Hubei’ [Hubei Sheng Tan Paifangquan Guanli He Jiaoyi Zanxing Banfa 湖北省碳排放权管理和交易暂行办法], 4 April 2014, http://www.hbets.cn/view/314.html (accessed 26 Jul 2022).
57 European Commission (2021).
dealing on own account when executing client orders, should be governed by the MiFID II and relevant financial market rules. However, part of the market participants will not be governed by the financial market rules. They are mainly compliance entities under certain conditions, i.e., (1) they are not market makers, (2) they are not members of or participants in a regulated market or an MTF or do not have direct electronic access to a trading venue, (3) they do not apply a high-frequency algorithmic trading technique, and (4) they do not deal on own accounts when executing client orders. They may be exempted from the application of the financial market rules. This can also apply to joint venture companies or non-consolidated subsidiaries that are set up by compliance entities.

As stated above, carbon emission allowances are classified as financial instruments. The financial market rules apply to the main market participants and their behaviors. There are exemptions in the application of the financial market rules in the EU. One is that some financial market rules do not blindly apply to the auction, spot and derivatives markets. Another is that participants meeting certain conditions may be excluded from application of the financial market rules.

The applications and exemptions show that the financial market rules in the EU are tailored to the EU-ETS specificities. Their purpose is to pursue a balance between the development of the carbon market and the control of financial risks. Thus, in the EU’s carbon market, the eligible market participants follow the right rules with no extra expense.

4.3 A Mirror to China: The Applications and Exemptions of the Financial Regulation of the EU-ETS

The EU and China are both shoudering the responsibility of GHG emission reduction and facing pressures from climate change. They have some similarities in the regulation on the carbon market. On the one hand, they have regulatory difficulties in the spot carbon market. The absence of financial regulation regarding the spot market in the EU-ETS directly led to financial violations and crimes. China is also facing ambiguity in financial regulation on the carbon market. The present specialized regime of the carbon market and financial market rules could not effectively deal with the dilemmas in China’s carbon market. On the other hand, both gradually began to pay attention to regulation on carbon finance. A set of professional and systematic tools has been implemented to ensure the safety and stability of the carbon market. The EU has incorporated the auction, spot and derivatives markets into financial supervision. In China, the competent authority and the financial regulators have been instructed to find solutions to the challenges posed by carbon finance.

58 Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU. OJ L 173/349.
59 Ibid.
60 Ibid.
61 Ibid.
Furthermore, the competent authority in China authorized the carbon exchanges to develop management and risk control for the carbon market.

However, the EU and China have formulated different legal and policy pathways regarding carbon finance. The EU has applied the financial market rules to all segments of the EU’s carbon market. China formed a specialized regime only for the spot carbon market and developed no clear and sound provisions for carbon finance. The regulatory dilemmas in China’s carbon market have caused financial risks and have influenced the stabilization of the carbon market.

Therefore, the application and exemption pathway of the financial market rules in the EU could provide an incentive to rethink the current regime of China’s carbon market. The value of the legal and policy pathway of carbon finance in the EU is twofold. On the one hand, the legal and policy reform regarding the spot carbon market is based on the reality and consistency of regulation. On the other hand, the application and exemption pathway of the financial market rules could be an appropriate way to deal with the market risks of carbon commodities and carbon finance.

5 The Legal and Policy Pathway of Carbon Finance in China

Currently, China has already formed a specialized regime for the spot carbon market. With the development of carbon finance, the participants and products are facing the suspicion of legality. A new approach to the connection between the specialized regulatory regime of the carbon market and financial market rules should be developed. And the legal position of carbon emission allowances and relevant financial instruments should be clarified.

Since the specialized regulatory regime of China’s carbon market has stipulated the responsibilities between the competent authority and the financial regulator in principle, the existing legal resources and regulatory mechanisms can be utilized. The legal and policy pathway can take the current specialized regime of the carbon market as the basis and develop applications and exemptions for the financial market rules.

5.1 The Legal and Policy Pathway of Carbon Finance is Based on the Market Participants and Behaviors

The legal nature of carbon emission allowances in China is still under discussion. Therefore, whether the legal and policy pathway of carbon finance adopts the regulatory mode of commodity or finance, it may not only depend on the nature of carbon emission allowances. Another way is to clarify the market participants and their behaviors. In detail, the application of the specialized regime of carbon market or financial market rules could be based on whether the participants engage in relevant financial behaviors or not.

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62 Tu (2012), p 95.
The main market participants and their behaviors include compliance entities buying and/or selling carbon emission allowances on their own account, intermediaries providing investment services regarding carbon emission allowances, investment institutions trading derivatives of carbon emission allowances or commodities, trading venues offering contracts and designing financial products, etc. Specific pre- and post-trade requirements will be developed in due consideration of the specificities of carbon emission allowances as commodities or financial products.

The application and exemptions in the financial market rules shall follow two standards: (1) such activities will be ancillary to carbon trading, or (2) such activities will be part of financial activities. If one of those two conditions is fulfilled, the application of or exemptions from financial market rules will be available to the market participants. This approach can provide timely and appropriate legal and policy support for maintaining the order of the carbon market and protecting the interests of market participants, against the background of the rapid development of carbon finance and the continuous increase in financial risk.

5.2 Application and Exemption for Compliance Entities

The compliance entities are the major basis of the market. The current specialized regulatory regime in China mainly focuses on compliance entities. The regime covers allowance allocation, trading, monitoring, reporting, verification and settlement, etc. The application of financial market rules will not limit compliance entities’ possibilities to buy or sell allowances on exchange or over-the-counter. Indeed, compliance entities perform emission allowance trading activities that are always ancillary to their main task of GHG emission reduction. In these cases, compliance entities will be dispensed from the obligation to have a financial license which is normally required for financial investment firms. Even without a license, compliance entities should be able to become member of or directly participate in exchanges offering carbon trading (as long as they satisfy the conditions for membership or direct access set by that trading venue). Compliance entities have to abide by the prohibitions of insider dealing and market manipulation, and where applicable, by related obligations such as disclosure of inside information and keeping an insiders list.

Furthermore, the specialized regulatory regime should provide exemption for compliance entities. Some large compliance installations and operators have set up specialized departments or affiliates for carbon asset management. If compliance entities or their affiliates deal on their own accounts when executing clients’ orders, provide financial services for other participants, or apply a high-frequency algorithmic trading technique, they should be treated as financial intermediaries or investment institutions, and be brought under the jurisdiction of financial market rules.

5.3 Application and Exemption for Intermediaries and Investment Institutions

Intermediaries in China’s carbon market provide brokerage, carbon asset management and information consulting services for market participants. Investment institutions trade and manage derivatives of carbon emission allowances or commodities.
They take part in the carbon market for investment or speculative purposes, and may apply a high-frequency algorithmic trading technique in the future. Their products and behaviors take financial forms, such as carbon asset management, carbon funds, carbon bonds, etc. But the specialized regulatory regime of China’s carbon market does not have provisions that specifically concern these entities and their behavior.

In the financial market, entities providing investment services will be required to hold a financial license and comply with financial organizational and operational requirements (including know-your-customer checks, transactions reporting, record keeping and investor protection rules). Thus, general intermediaries and investment institutions in carbon finance are normally covered by financial market rules. The entities engaging in financial services should follow the financial market rules regarding institutional establishment, behavior management, etc. Investment institutions which administrate their own assets and emission allowances by dealing on their own accounts, which are not market makers, members or participants of a regulated market or an MTF, which have no direct electronic access to a trading venue, or which do not apply a high-frequency algorithmic trading technique, will obtain an exemption from the financial market rules.

5.4 Application and Exemption for Carbon Exchanges

In the EU, the trading venues offering contracts for spot carbon markets were not subject to the financial market rules before the MiFID was revised. However, under the MiFID II, these trading venues should obtain financial authorization in accordance with their specific profile (as a regulated market, a multilateral trading facility (MTF), or the new category, an organized trading facility (OTF)). To continue spot trading activities, they should make the necessary adaptations for seeking MiFID authorization.

In China, the carbon exchanges are designated by the national and local governments as the only carbon trading venues, and obtain administrative and exclusive permits to carry out such trade. Moreover, the authority of the carbon exchanges to conduct self-discipline management is confirmed by the specialized regime of the carbon market.63 According to the specialized regulatory regime, self-discipline measures formulated by the carbon exchanges should be filed and supervised by the competent authority.64

Carbon financial products and trading methods currently in the carbon market are mainly developed and designed by the carbon exchanges. The carbon exchanges are increasingly and abundantly innovating financial products. However, some carbon exchanges practiced continuous trading and centralized trading in the past years, thus violating the rules of the ‘Implementation Opinions on the Clean-up and

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63 Ministry of Ecology and Environment, ‘Measures for the Administration of Carbon Emissions Trading (Trial)’ [Tan Paifangquan Jiaoyi Guanli Banfa (Shixing)] 碳排放权交易管理办法(试行)], 5 Jan 2021, https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105_816131.html (accessed 26 Jul 2022).
64 Ibid.
Rectification of Various Trading Places of the General Office of the State Council’. Some carbon exchanges were on the list to rectify the financial risks. Depending on the situation of the carbon exchanges in China, the specialized regime should divide the services or behaviors of the carbon exchanges into ancillary services for carbon trading and financial services. When providing financial services, the carbon exchanges should comply with the financial market rules.

6 Conclusion

The development of the carbon market is inseparable from financial mechanisms. Carbon finance has become an increasing trend in the global carbon market. The legal and policy pathway of carbon finance will become a matter of concern for all sovereign countries and regions in the future. This paper summarizes the trend of carbon finance and provides a detailed description of its features. The research reveals an ambiguous and complicated route in the financial market rules and specialized regime of the carbon market in China. Through the literature and normative analysis, the application and exemptions of the financial market rules applying to the EU-ETS are set out. Currently, China and the EU are going through similar developments in the carbon market and both have financial regulatory needs. This paper proposes applying principles regarding the application and exemptions of the EU rules to the specialized regulatory regime of China’s carbon market. In this way, the legal and policy pathway of carbon finance in China can be implemented in a clear and orderly manner.

This paper is mainly based on a normative and comparative analysis of the carbon market in China and the EU. This analysis is mostly qualitative and not quantitative. Future research should be able to analyze quantitative information and make more empirical analyses of other carbon markets across the world.

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65 China Securities Regulatory Commission, ‘China Securities Regulatory Commission answers questions on the clean-up and rectification of various trading venues’ [Zhengjianhui Jiu Dui Gelei Jiaoyi Changsuo De Qingli Zhengdun Deng Dawen 证监会就对各类交易场所的清理整顿等答问], 26 September 2014, http://www.gov.cn/govweb/xinwen/2014-09/26/content_2757015.htm (accessed 26 Jul 2022).
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