

Proposal for the Establishment of the OTC Market for Emissions Trading

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1. Introduction

Emissions trading is the mechanism of trading between states or firms, the right (or similar object) related to gas emissions such as carbon dioxide, which are considered the cause of global warming. It was adopted by the Parties to the Third Session of the United Nations Framework Convention on Climate Change (December 1997), as a scheme to reduce greenhouse gas emissions efficiently using a market mechanism, and was incorporated into the Kyoto Protocol. Although the international trading of emissions under the Protocol will begin in 2008, in advance of this the movement to establish an original emissions trading market is becoming active in various countries. In this paper, we would like to propose an infrastructural framework for this market, clarifying the significance of creating the OTC market for emissions trading in Japan and the participation of financial institutions in this market.

2. The Status of Development in Overseas Markets and the Japanese Approach

In the United Kingdom (the UK), an emissions trading system open to unrestricted participation has already been in operation since April 2002, and, concurrently with the operation of the domestic system, the UK intends to implement laws necessary to carry out the EU enacted emissions trading system mentioned below. Prime Minister Blair is also extremely active in seeking to increase emissions trading, and is inviting positive participation from financial institutions without restriction, in order to enhance market liquidity. The EU will officially begin a regional emissions trading system in January 2005. More than 10,000 facilities will take part in the system, which is expected to be the world's largest, covering about 50% of the greenhouse gas (GHG) emissions of the EU. Similar to the UK system, which places no limits on participation, it is expected that the system will not only allow spot trading, but also derivative trading based on the emissions as underlying assets in the market.

On the other hand, the approach of Japan, which acted as the host nation of the Third Session of the United Nations Framework Convention on Climate Change, is explained below:

When the Kyoto Protocol comes into effect, it will impose a duty on Japan to reduce average greenhouse emissions between 2008 and 2012 by 6% as compared to emissions in 1990. As such, the Ministry of the Environment and the Ministry of Economy, Trade and Industry are separately inviting public participation in an open way to help achieve the country's obligations to reduce emissions, through trialing the most effective methods of emissions trading and transfer.

These trials were carried out in a manner that is close to the way that the system is expected to operate in the actual practice. In cases where participants carried out frequent dummy deals, it is thought that prices will fluctuate according to supply and demand, in a manner very similar to the financial products market. In the trial trading by the Ministry of Environment, the executive office provided order details (the number of tons and the selling and buying price) from one participant to the other participant, and produced an artificial reality. In trial trading of the Ministry of Economy, Trade and Industry, brokers provided information about development of agreed prices to the participants to bring more realism to the trial. From the results of trial trading by both Ministries in which over 100 participants in total, mainly firms, took part, increased expectations and concerns for emissions trading were observed.

Based on the results of the trials, preparations for business accounting practices, and legal stability and infrastructure are also being examined and discussed. However, compared with some other parts of the

world, such as the UK and the EU, which have already implemented policies for penalties and incentives within their markets, the Japanese system must be said to be lagging behind.

3. Future Issues

(i) Establishment of the OTC Market

For companies investing in greenhouse gas reduction projects, what the future price of the emissions will be (quoted in terms of quota price per ton of CO₂ in the greenhouse effect) is an essential issue

For example, suppose that Company A makes a 1 billion yen investment in greenhouse reduction facilities, and that through this investment, 200,000 t of CO₂ reduction can be achieved every year for five years. Now, if the average market price in five years time is 500 yen per ton, this company would have made an investment in a very expensive project. This is because the cost of the CO₂ reduction in the project would be double the market price (this example excludes factors such as the favorable image to the company that may come from making social contributions). But if Company A is not able to know the emissions price for the next five years, it is not possible for the company to make a rational decision as to whether they should discontinue investment in the project, and search for other more favorable investment opportunities.

Company A can be said to be exposed to the risk of future emissions price fluctuations, *i.e.* a form of market risk. Derivatives are generally used as a means of hedging market risk, and their main market is the OTC (over-the-counter) market.

The OTC market is a market where risk hedgers, risk takers, and brokers meet to deal directly in the trading of various derivative products based on various underlying assets such as interest rates, currency, equities, and commodities etc. The OTC market is also at the cutting edge of financial innovation, where new products are developed one after another based on the creativity and needs of unrestricted participants. It is believed that in the near future risk hedging techniques, such as medium-to-long term swaps, and options, will be dealt also in underlyings related to emissions.

Returning to the example, once the OTC market of emissions has been created, Company A can make a swap transaction in which they will pay the emissions price of 200,000 t (the price which fluctuates from time to time) to the OTC market participant for next five years respectively, and receive a predetermined fixed price (for instance, 1000 yen per ton) in return. Consequently, Company A can eliminate their price volatility risk.

(ii) Significance of participation of financial institutions

Through derivatives dealt in the OTC market, from macroscopic viewpoint, redistribution of risk, from firms who want to reduce risk as a whole to firms that want high returns in spite of possible risks, is possible, and, in return, the redistribution of resources is made possible. Financial institutions play a leading role in establishing this market.

Their role may be summarized as follows;

- (1) To offer prices to sellers/buyers through its own proprietary accounts, similar to a financial intermediary function. Also, to offer prices at their own risk, adjusting the scale of transactions, maturity, timing of trading, etc., in order to close transactions smoothly through managing their position by using transactions on an organized exchange etc., even in cases where there are no reverse transactions corresponding fully with the needs of sellers/buyers in the OTC market.

- (2) To expand market scale and enhance liquidity, by circulating information about sellers/buyers of risk globally, through channels of industrial corporations and business connections with institutional buyers, and the networks between financial institutions.
- (3) To protect both sellers and buyers from credit risk, and to assist them to conclude smooth transactions, by taking over the credit risk (counterparty risk) associated with the direct transaction between the seller and the buyer.
- (4) To fulfill various needs of the sellers/buyers of the risk, by developing various financial instruments, based on know-how developed through other financial derivatives.
- (5) To play a key role in infrastructure development (establishment of trade practices, preparation of standard agreements, etc.) in developing the OTC market.
- (6) To enhance the understanding of people about emissions trading, and to make contributions for realizing the international pledge based on the Kyoto Protocol in the most efficient manner with the least public financial burden, by performing educational activities about the structure of the complicated Kyoto mechanism, and risk management techniques.

(iii) Legal Characterization

First, it is necessary to clarify the characterization of emissions under Japanese law by special legislation. A right (or rather more akin to a privilege) which entitles a person to claim exemption from specified legal duties (greenhouse gas emissions reduction) which that person (a firm) owes to another person (the Japanese Government) possessed by the "holder" of the emissions must be recognized in law. Construing such right or privilege as another form of property right by analogy would lack legal stability. If the legal characterization of emissions rights is clarified by special legislation, the necessary legal infrastructure such as, the methods for transfer, creation and perfection of security interest, attachment procedure, treatment in insolvency proceedings (for instance, whether or not the right is the "commodity" defined in Article 61 item 1 of the bankruptcy law, or whether it could be viewed that time is of the essence for emissions trading etc.), and the eligibility as an underlying asset of a derivative transaction would be provided. Moreover, clarifying the character of emissions also affects the participating qualification of the financial institutions that are restricted by the laws to conduct only such limited businesses as specified in the respective laws. If participation of financial institutions is approved, their know-how or infrastructure will be utilized.

For instance, the Banking Act of Japan limits "banking" business activities to certain areas including derivatives. Although the validity of the transaction as a matter of contract law will not be denied for a violation of regulatory statutes, it would be practically difficult for the bank to actually execute such business. There are problems similar to those above in the case of the insurance and securities businesses.

The business activities for emissions rights in which a financial institution may conduct could take the form of the following four types, i.e., "cash" trading, derivatives, brokerage business, and project consulting. The following discussion considers whether each of these four cases could be viewed as falling within the activities allowed to financial institutions under the current law.

(1) "Cash" trading

This refers to purchases or sales of emissions rights by the financial institutions booking them directly as the object of a deal. This business seems to be difficult unless emissions are recognized as a so-called financial instrument.

(2) Derivatives

The derivatives which banking institutions are allowed to deal with are restricted to cash settled

transactions, with certain exceptions. Therefore, emissions derivatives could be viewed as similar to financial transactions such as commodity derivatives for or weather-derivatives. Even where such argument is recognized, however, forward contracts which promise to deliver physical goods in exchange for the payment of purchase price, so-called spot basis, will not be considered as ancillary businesses in the Banking Act. As far as emissions are concerned, securities companies and insurance companies are deemed to be in the same situation. From this point, even if, for instance, emissions derivatives are included as "financial derivatives" (*see*, Article 13-2 of the Banking Act Implementation Regulations), problems still remain for banking institutions, in that they may not enter into a physically settled transaction. If parties to emissions derivatives could not physically settle, emissions must once be converted to cash in the spot market for settlement of derivatives. Since the physically settled emissions transaction cannot be used for the hedging of derivative trading in financial institutions such as banks, severe restrictions will be imposed on position management in the proprietary accounts of the financial institution itself. For the reasons stated above, financial institutions need to be authorized to enter into physically settled transactions in the spot market. Whether or not the emissions trading constitutes a derivative transaction to a financial institution has a great significance for accounting treatments, to be discussed below, and for the applicability of the law which protects close-out netting which is vital for credit-risk management in the OTC transactions.

(3) Brokerage business

Brokerage business refers to an arrangement to conclude a cash or derivative transaction related to emissions between two potential parties to such transaction. From this point, brokerage of the derivative business that are cash-settled may be regarded as an extension of the present Banking Act, for banking institutions. On the other hand, whether the brokerage for physically settled transactions of emissions could be recognized as a banking business depends on whether it could be viewed as an ancillary business as specified in Article 10, paragraph 2 of the Banking Act.

The guideline of the Financial Services Agency revised on June 30, 2003, specifies that "business matching activities" and "consulting activities" shall constitute "ancillary activities" from the viewpoint of the enhancement of managerial consultation/ support functions to client firms. However, in its actual implementation, it is important to make sufficient preparations for such points as prevention of abuse of dominant positions, details of products and services to be provided, and clear disclosure of contractual terms, such as the consideration paid therefor. From the viewpoint of this guideline, the brokerage of emissions may be considered to constitute business matching activities referred to above.

(4) Project consulting

As a precondition of dealing in emissions, activities to provide preliminary advice or evaluations on whether or not the project for absorbing or reducing greenhouse gas, that is, the project for "producing" emissions will function in the actual situation are required.

For such activities, the know-how which financial institutions have developed for a long time in project finance etc. can be utilized. Consequently some financial institutions have already begun this business. This is considered to fall within the category of "consulting activities" currently raised as an example of the ancillary businesses mentioned in (3) above.

(iv) Preparation of accounting and taxation systems

In order to manage the emissions trading system smoothly, it is necessary to clarify its treatment in the corporate accounting and tax system in addition to the legal characterization. When a financial institution or an exchange enters into the emissions market especially for the purpose of dealing / brokerage, discussion on the valuation methods (acquisition cost, market valuation, etc.) and accounting for derivatives (application of net settlement and hedge accounting etc.) are unavoidable, in addition to interpretation of

underlying assets. However, though the international framework is agreed upon in the mechanism laid out under the Kyoto Protocol, specific guidelines about the interpretation and treatment in domestic law, accounting and taxation systems are not yet settled at the present time.

In the United States, an emissions trading of SO₂ for power companies with thermal power plant is legislated in the Clean Air Act amended in 1990. Emissions rights for the purpose of reduction of emissions within the limit is allowed to be recorded as an inventory asset account for new emissions quotas, and if it is for the purpose of speculation, it should be recorded in the other investment account. In such manner, account items are classified according to the purpose of holding, thus effectiveness and openness of financial statements are enhanced.

In the emissions trading system of the UK introduced in April, 2002, firms can elect the accounting treatment, intangible inventory asset by cost basis or financial asset by market price basis based on similarity with financial instrument according to the purpose of transaction.

On the other hand in Japan, on the ground that the "subjective goodwill" (difference amount between use value and fair value) in the business asset is included in the emissions themselves as an underlying asset, in some consider emissions as a real asset (since it has no physical reality, it is classified as an intangible asset), considering that a profit cannot be produced independent of such goodwill, and it is classified as a non-financial asset. In Japan, since discussion on assets classification based on the purpose of possession and the method of valuation is still premature, emissions for business purposes may possibly be classified as non-financial assets.

As mentioned above, the interpretation of the nature of emissions and the policy for its treatment for accounting purposes differ in each country according to accounting philosophies and emissions reduction policies. However, putting into prospective the international trading of emissions, a uniform accounting system in accordance with international accounting standards is desired.

4. Conclusion

Until now, the Kyoto Protocol has not yet come into effect, and it depends on Russian ratification as to whether it will go into effect in the future. However, in addition to the frameworks of the UK and Denmark, a kind of forward agreement conditioned on the entry into force of the Protocol (for example, a contract "for the sale of emissions reduction quotas in 2008 for 10 dollars per CO₂ 1ton ") is already transacted, and some firms in Japan have participated in these businesses. The firms that have purchased emissions at this stage have the risk that the Protocol will not come into effect and the risk that the domestic legal system will not be prepared, while avoiding the risk that they might have to purchase emissions at a higher price in the future.

Japan is considered to become the biggest purchaser of emissions rights as additional reduction costs are great due to the environmental considerations which have already progressed substantially. In achieving the international pledge, it is important for Japan to establish an efficient emissions market by ushering in the market mechanism to the maximum extent, while reducing the public financial burden. The role of financial institutions is considered to be very important in operating such a market smoothly. In order to play such role required for financial institutions, the legal characterization of emissions must be clarified first and further, the clear provisions on treatment of emissions under its regulatory regime is strongly expected.

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