

Carbon Trading and Transfer Pricing: The Next Frontier?



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In this article, the authors explain what carbon trading is, why it exists, why it is important, why some companies are doing it, and ways in which multinational corporations can think about the transfer pricing aspects of a carbon trading function.

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Introduction

A growing consensus on the adverse effects of carbon dioxide (CO₂) and other greenhouse gases (GHGs)¹ on the world's climate and peoples has led to significant developments over the past decades. The United Nations Framework Convention on Climate Change in 1994, the Kyoto Protocol² in 1997, and the Paris Agreement³ in 2015 have aimed to achieve binding commitments from countries to limit their emissions. In 2016 196 countries agreed to the goal of limiting global mean temperature increases to below 2 degrees Celsius, and preferably to 1.5 degrees Celsius.

Fast forward to the 2021 United Nations Climate Change Conference (COP 26) in Glasgow, Scotland, at which the international community agreed to take significant steps forward on the future of carbon markets. These developments

updated the rules introduced in article 6 of the Paris Agreement. Commentators regarded this as significant progress, albeit with further developments expected. The market reacted to the announcements with substantial carbon price increases. Progress continued at the 2022 United Nations Climate Change Conference (COP 27), at which participants outlined a more detailed framework for how a carbon market would work, including allowing corporations to purchase credits from governments. Nevertheless, consensus was not reached at COP 27 on some of the key issues of how to operationalize an international carbon trading system. These discussions will continue next year at the 2023 United Nations Climate Change Conference (COP 28).

Countries and multinational enterprises (MNEs) across the globe have been developing long-term strategies for lowering GHG emissions. MNEs are adapting their strategies to regulations (in the form of carbon taxes and emission trading systems (ETSs)) and disclosure requirements being established by countries or regional bodies such as the EU, and to incentives to develop "green" technologies. Because many MNEs are making large investments to meet their environmental and sustainability goals, transfer pricing issues are gaining prominence. These issues include how to allocate the costs associated with environmental innovation or incremental environmental costs, how to design an efficient supply chain structure with a focus on clean technology and carbon abatement, and what strategy to adopt regarding sourcing or trading emission offsets depending on the MNE's objectives and net emission goals. This article focuses on carbon trading and the transfer pricing considerations based on what operational model an MNE adopts.

¹ Other gases included in GHGs are methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

² "Kyoto Protocol," Britannica.com.

³ United Nations Climate Change, "The Paris Agreement."

Breaking It Down

CO₂ is one of the GHGs responsible for our changing climate. GHG emissions are what economists call a negative externality — a consequence that negatively affects others who are not compensated for the costs or damages that they incur.

Carbon trading originates from the fact that companies have different marginal costs for reducing their CO₂ emissions or for abatement, so some will generate credits that can be traded to firms that need or want them. A carbon emitter can offset a tonne of emitted CO₂ by purchasing an equal carbon credit from a company that has a surplus. These purchases reflect carbon offsets, which refers to one tonne of CO₂ that is removed from the environment or stopped from being produced.

Carbon offsets take two main forms: avoidance and removal. Avoidance offsets result from activities that prevent the emission of GHGs. Avoidance offsets are often scrutinized, because it is difficult to determine whether the actor would have undertaken the emitting activity without the sale of a carbon credit, thus truly avoiding GHG emissions. Removal offsets are credits based on activities that actively remove carbon from the atmosphere. This can be done both through nature (forestry or soil sequestration) or via mechanical removal (carbon capture technologies). Offset markets can be set up by private firms undertaking either avoidance or removal activities. This is a quickly growing market, with regulators looking to enhance the process of certification and verification.

There are two types of carbon markets: compliance markets and voluntary markets. Compliance markets are created by domestic or regional laws and are generally instated by a cap-and-trade system or ETS that involves limiting the total volume of emissions. Under a compliance market, an MNE would be required by law to purchase carbon credits to offset its emissions to reach the emission volume cap. Other MNEs (for example, those making “net zero promises” in jurisdictions that do not have an ETS) may participate in the voluntary market and purchase carbon credits to offset their emissions.

Most companies are trying to reduce their own GHG emissions, and many have made public

commitments to become net zero — meaning that any greenhouse gases they emit will be balanced by an equal amount being removed from the atmosphere. Yet, it may be difficult for companies in energy-intensive industries such as oil and gas or mining to become net zero with available technologies. These companies may access carbon markets to purchase carbon credits or engage in carbon trading — that is, buying and selling carbon credits in a strategic manner to counterbalance or offset residual emissions. Because of the increased interest in reducing GHGs, carbon markets (and carbon trading) are increasingly of interest to MNEs in a wide range of industries that operate even in jurisdictions that do not price GHGs.

Why Now?

MNEs are setting targets for themselves to lower GHG outputs aided by three different external pressures: stakeholder concern on GHG emissions, worldwide disclosures on GHG emissions, and financial disincentives from governments in the form of carbon taxes and ETSs.

First, as internal and external stakeholders of companies focus on environmental, social, and governance issues, companies will continue to address these pressures by making related changes to the business. For example, some MNEs have seen shareholder resolutions requesting that they reduce GHG emissions. Also, other stakeholders, like financial counterparties and suppliers, MNE employees, or nongovernmental organizations, often publicly pressure MNEs to set and meet emission reduction targets. Many companies have committed to voluntary emission reduction targets in their public disclosures.

Second, governments — such as the United States — have made proposals regarding climate disclosures. If the U.S. disclosures are adopted in their proposed form, SEC filers will need to, among other things, disclose scope 1, 2, and 3 emissions. Scope 1 emissions are direct emissions from company-owned and -controlled resources. Scope 2 emissions are indirect emissions from the generation of purchased energy from a utility provider. Scope 3 emissions are all indirect emissions not included in scope 2 that occur in the value chain of the reporting company, including

both upstream and downstream emissions. If emission disclosures are required in annual audited filings, MNEs will face added incentives to focus on reducing their overall emission levels and meeting stated GHG targets.

Third, an increasing number of jurisdictions have implemented or are scheduled to adopt carbon taxes or an ETS. A carbon tax is a tax levied on each metric tonne of CO₂ emitted into the atmosphere. A government places this tax on emitters to encourage businesses and consumers to reduce their emissions. On the other hand, in an ETS, the regulator sets an overall cap on emissions by covered facilities, such as manufacturing plants or other asset types that emit carbon, by limiting the number of allowances or tradeable permits available. This is done by issuing a limited number of allowances or permits granting firms or facilities a specified volume of emissions. These permits are initially directly allocated to firms (free allocation of allowances), sold through an auction market, or the market may set the price through supply and demand. Typically, there are price floors, and perhaps a price cap. According to the World Bank's 2022 annual "State and Trends of Carbon Pricing" report, there are 37 jurisdictions with carbon taxes and 34 with ETSs.

Carbon Trading and Transfer Pricing

Below we set forth several potential transfer pricing models for carbon trading, focusing on companies that are looking toward having a centralized carbon trading team (a CT). These models can arise from the compliance markets (e.g., an MNE cap requirement because of an ETS) or the voluntary markets (e.g., an MNE wanting to meet targets that are not based on regulations or an ETS). We focus on the trading of carbon credits and do not discuss other implications of carbon trading (e.g., discouraging GHG emissions leading to moving manufacturing locations to reduce overall transportation costs) that could have transfer pricing implications.

It is important for companies to first understand what types of carbon trading activities they would like to perform. These types of activities will generally be a function of the company's underlying business, its geographic footprint, and its future objectives. Whereas a manufacturing company could consider an active

team taking proprietary positions in carbon credits to manage its compliance and voluntary positions, a professional services company with limited or no emitting assets could focus on tracking and reducing emissions through an internal carbon price (ICP). The professional services company could allocate ICP charges to its service lines to help target a carbon net-zero position at a future date (by encouraging its business to lower its emissions and lower its allocable costs that include the ICP).

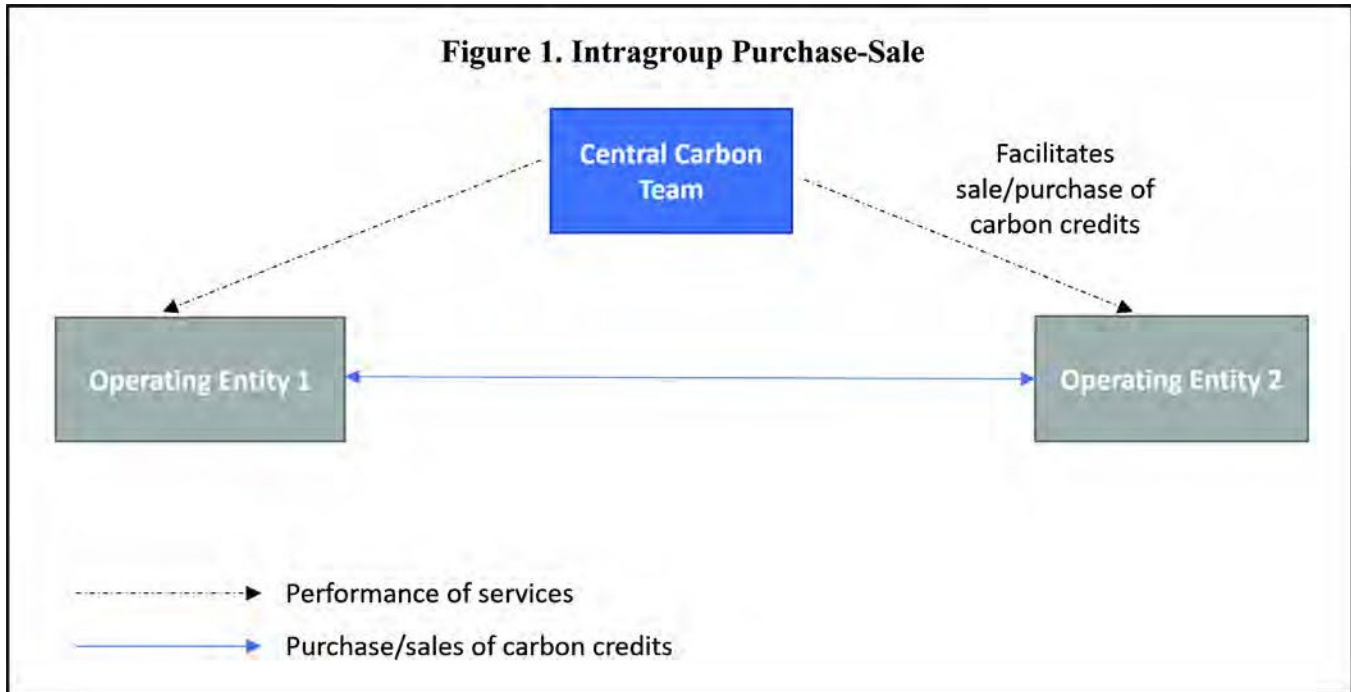
Companies that are looking toward having a CT could have it perform one or more types of functions:

- purchase and sale of intragroup carbon offsets;
- purchase or sale of carbon offsets in the voluntary carbon market;
- acting as a broker or sales agent for carbon offsets on behalf of group entities;
- performing hedging activities and cost optimization on behalf of group entities; or
- buying and selling carbon offsets for proprietary trading in the open market.

Determining the appropriate transfer pricing model will require analyzing the types of functions performed, the complexity of the activities, and the risks assumed. While we have presented some potential models as discrete options, MNEs may use some combination of the models based on their circumstances.

CT as a Service Provider

The most basic form of intercompany arrangement would include each operating entity/carbon producer settling its obligations related to emissions with the local exchange or regulatory body directly. Understanding the carbon markets and executing transactions efficiently requires expertise. The CT in this case provides administrative services to help, and the transfer pricing issue at hand will only involve compensating the CT for its activities. These services and the associated reward may vary depending on the role the CT has in structuring the arrangements on behalf of its affiliate company and whether the activity is pure execution services or something more strategic.



Facilitating Intragroup Transfers of Carbon Credits

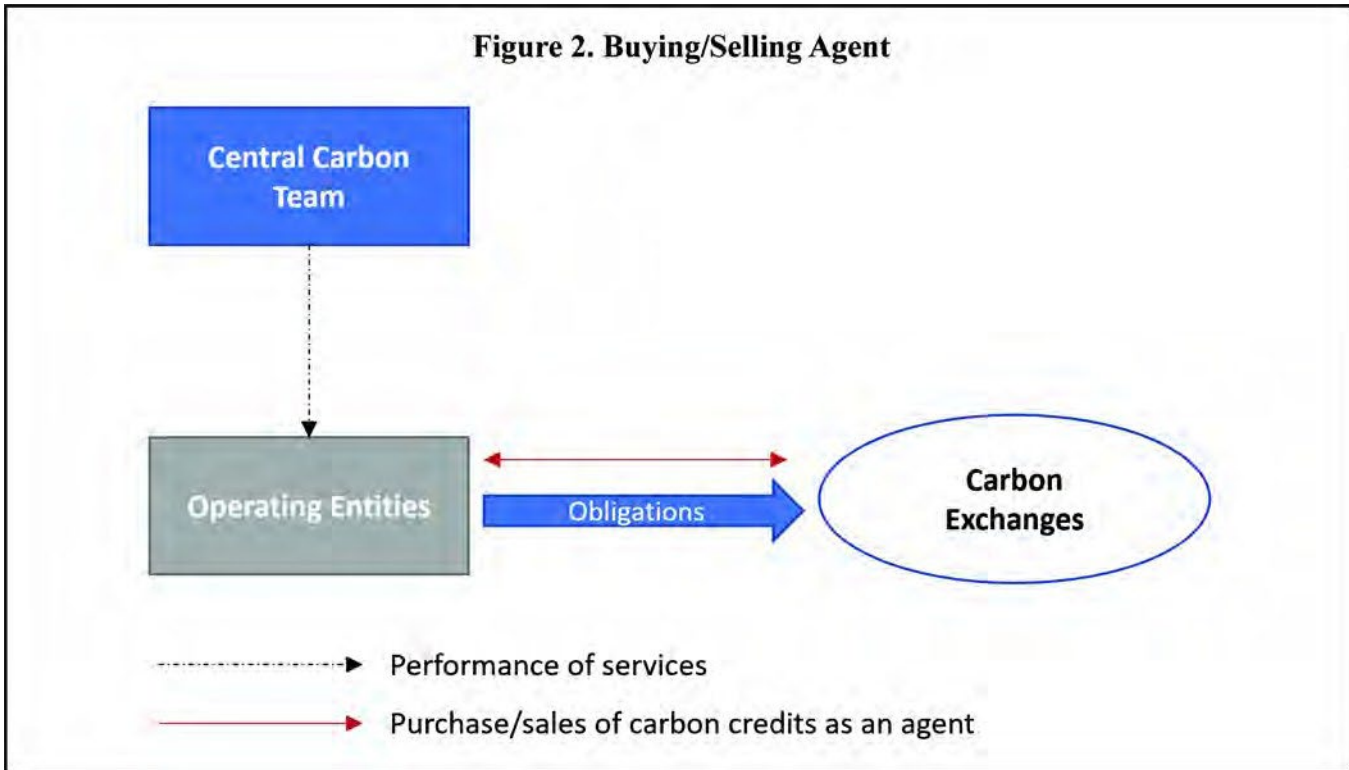
MNEs may seek to minimize overall group carbon tax liability or the need to purchase credits under an ETS system by moving carbon credits among different related-party entities. This could be between different CT desks in an organization, such as from the United Kingdom to the United States or Singapore, or between operating companies. For example, Figure 1 could be relevant in a compliance market such as in the EU's ETS scheme. Here, Operating Entity 1 requires an additional 100 tonnes of CO₂ emission credit over its capped allowance. Operating Entity 2 (a related party located in the same jurisdiction as Operating Entity 1) has a more efficient plant or manufacturing facility and has several eligible projects that reduce emissions and generate carbon credits equivalent to 100 tonnes that can be sold back to the market. The CT could reduce Operating Entity 1's total emissions by facilitating the purchase of credits by Operating Entity 1 from Operating Entity 2.

Figure 1 could also be relevant in a voluntary market in which the MNE has made commitments that all its operating entities will be net zero — for example, if Operating Entity 1 has excess CO₂ emissions after it has used existing

technology to reduce its overall emissions and Operating Entity 2 has invested in a voluntary project that generates 100 tonnes of carbon credits.

Under this model, the central carbon team does not own or warehouse the carbon credits; it is a service provider that facilitates pooling of internal resources, performs related compliance and administrative activities, and should be remunerated on that basis as a service provider.

A key transfer pricing consideration for the group would be how to price the carbon credits. The company could use a market price, or (if available) the MNE's ICP. During the analysis, the MNE would need to consider the price of the credit of a willing buyer and seller, which may be different in the compliance and voluntary markets. In terms of pricing, the group would need to evaluate the appropriate market price (spot prices at different dates and potentially forward price curves) to understand its available alternatives. The group would need to consider whether aligning the emissions and credits has a larger benefit to the MNE — for example, a benefit to its reputation that allows it to charge a premium price or boost sales.



Buying and Selling From the External Market (CT as a Service Provider and Buying Agent)

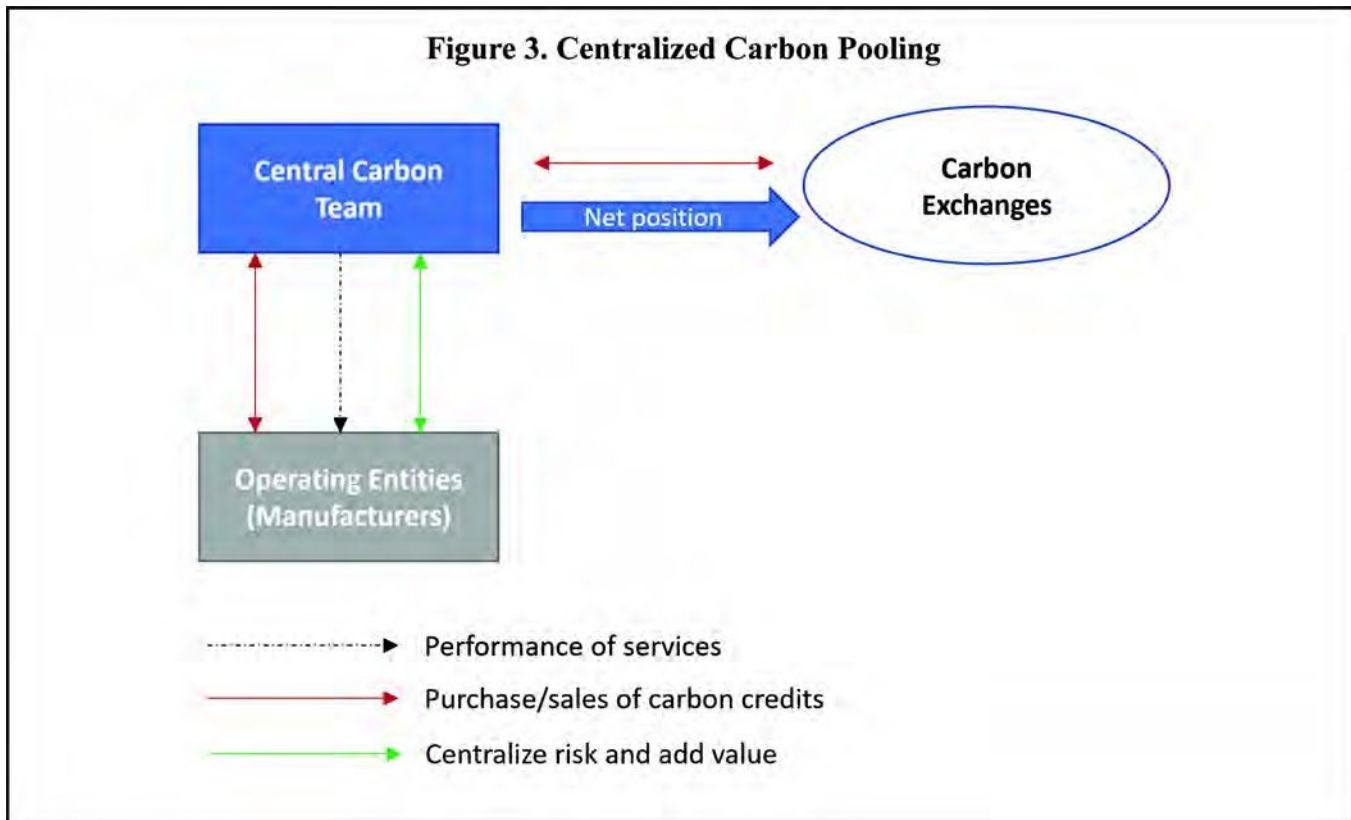
To meet an overall MNE carbon emissions reduction target, many MNEs will need to purchase carbon credits from the open market. For example, in the voluntary market, Company A promised its shareholders that it will reduce carbon emissions from 100 tonnes to 50 tonnes in 2023. From its own efforts during 2023, it can reduce carbon emissions by 20 tonnes; however, because of technology and business constraints, it is unable to further reduce it. Company A may purchase 30 tonnes of carbon credits from the open market. Figure 2 assumes the CT acts as a buying agent for the group. Similarly, if an entity has surplus carbon credits, the CT could act as its agent to sell those carbon credits in the open market.

The CT performs services and acts as a buying/selling agent for operating entities and performs related compliance and administrative activities. In this example, the actual credits would be purchased (or sold, if they are in an excess position) by the operating entities, which would maintain the obligations and settle their obligations directly with the exchanges.

A key transfer pricing consideration is how to remunerate the CT for its administrative and agency activities. Should it be remunerated strictly based on its total costs, or should it be remunerated based on a discount/premium on the price of the carbon credits, with the service fee included in that price? To the extent that operating entities transfer carbon credits among related parties, there are transfer pricing questions regarding the appropriate pricing. One key issue is to understand which entity bears the market risk for the fluctuations in carbon price to ensure that the entity is appropriately remunerated. This can be particularly relevant when there is a multiyear time lag between acquiring offset certificates and the settlement date.

CT: Centralized Hub Model

In terms of increasing the level of activities performed and risk assumed from the prior example, a CT could execute the transactions with the market itself. Depending on whether the group is operating in a compliance or voluntary market, the rules around market access and carbon credit retirement or settlement vary.



Under this scenario, a carbon pricing model would be for the CT to augment its scope from being a buying or selling agent and to pool the group benefits from carbon trading centrally and manage the net carbon position with the external market. In Figure 3, the operating entities buy or sell carbon credits as appropriate from or to the CT. The CT team could both source credits from the carbon exchanges and manage credits across the operating entities. Therefore, any operating entity buying or selling carbon credits will enter a transaction with the CT without having to consider how it sources or offloads the carbon credits. The CT also performs risk-pooling functions, so it may need to consider options around contracting, such as derivative hedging contracts.

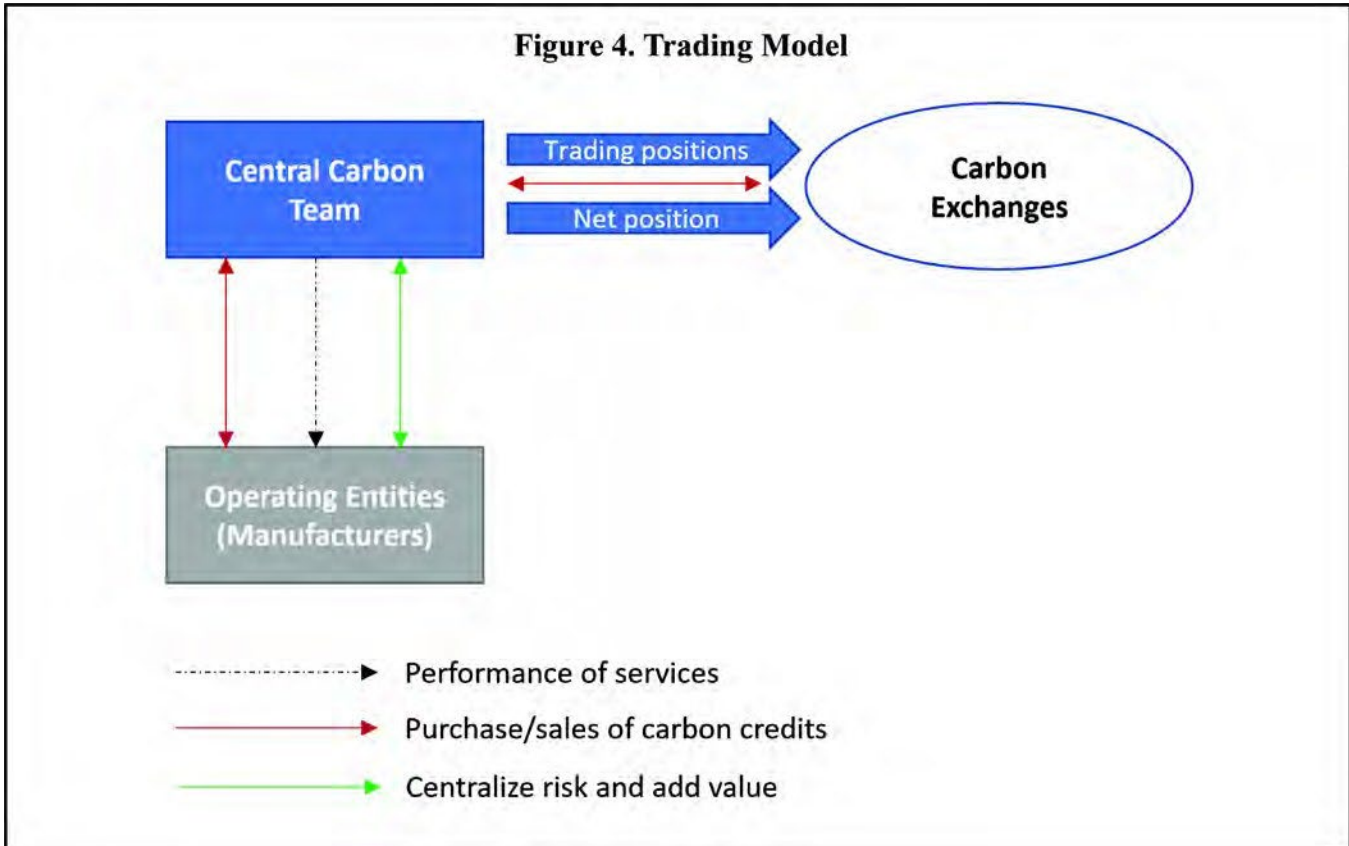
The transfer pricing analysis will have to consider (i) the arm's-length markup the CT should earn as remuneration for its services, (ii) market risk faced by the CT while selling excess carbon credits in the external carbon market, and (iii) how well the CT should be capitalized to bear such risks and if there is a cost of carry related to holding inventory.

The CT could augment its role further by entering intragroup transactions to manage the price risk and volatility. With increasing complexity of the functions performed by the CT, it is critical to delineate the risks involved, ensure that the CT has the ability (capital and decision-making power) to bear those risks, and design a transfer pricing policy remunerating the functions and risks in an arm's-length manner.

Full Trading Model

A company could consider a structure under which the CT has more functions, greater responsibilities, and works as a profit center. The CT could be performing all the services discussed in the previous subsection (buying and selling carbon credits from and to operating entities) as well as be involved in the following additional activities:

- Significant central oversight, such as advising operating entities on ways to reduce emissions and the quality of carbon credits to procure, as well as risk pooling.



- Maintain surplus carbon credits when available at a lower price to meet future demands of the operating entities.
- Engage in trading activities from fluctuations in price of carbon credits and generate additional profits for the company.
- Performing hedging activities (to lock in certainty in producer locations and minimize price risk and volatility) and cost optimization on behalf of group entities.

While these activities are expected to generate additional income for a company, it should be noted that they involve entering proprietary transactions and could lead to losses and may be subject to additional domestic regulations, depending on the jurisdiction. Therefore, if the CT is structured to perform these functions, it should ensure that the legal entity is sufficiently capitalized to bear these risks and employs qualified traders with specialized knowledge and experience in carbon trading to take reasonable market positions.

To have robust transfer pricing support for this arrangement, the company should maintain clear and transparent books and records so that there is a demarcation between income and loss generated from proprietary trading activity versus income generated from selling and sourcing surplus carbon credits for the operating entities. Each service that the CT provides to the operating entities (for example, the hedging activities noted above) needs to be identified and compensated in a manner consistent with the arm's-length standard.

A Unique Market

Transfer pricing professionals will need to consider some unique facets of the carbon market during their analysis. First, there is concern about the creditability of the international carbon credit market: Participants may be concerned that the carbon credits they purchase in the external market are not genuine. There is ongoing work to ensure sufficient verification of earned credits. For example, the World Bank Group, in coordination with the government of Singapore,

is creating a “climate warehouse” to allow for the transparent sharing and reporting of carbon credit information by connecting private sector and government registry systems to allow for traceability of carbon credits.

Second, the carbon market itself has been quite volatile lately, meaning that companies that enter carbon trading will face increased market risks. The recent geopolitical issues have increased the volatility because of the numerous uncertainties related to the fundamentals of this newer market. For example, there is concern that the war in Ukraine may influence the climate priorities in Europe because of energy-related issues.

Third, the carbon market has an increasing number of regulations, which means those entering carbon trading will need to keep abreast of these rules, which may influence purchasing, selling, accounting, and other tax issues. The tax department would need to scrutinize indirect tax issues under any model. MNEs will need to consider accounting and legal issues that will arise, such as those related to the accounting recognition of the costs. Regulations would also influence which jurisdiction an MNE would want to use to house its central carbon team.

Key Considerations for MNEs

Regarding emissions and transfer pricing, there are several key issues companies should consider. Of key importance is the MNE’s long-term strategy for emission reduction and how it can achieve these objectives based on its industry and geographic footprint. For example, it will be far easier for a consulting services company to become net zero as compared with a chemicals company. MNEs will continue to analyze how they can reduce their emissions. For example, MNEs could plant trees or reduce the scale of some operations that produce disproportionate emissions or decide to purchase carbon credits. Regarding the central carbon team, under some models the location of the legal entity housing the CT will be critical.

Companies should also consider where to focus on innovation for clean technology. As part of that analysis, they will want to consider countries that offer incentives for research and development or investment in green technology.

This will need to be overlaid with how those credits and incentives will be treated under any potential minimum tax regime.

Conclusion

Environmental taxation and the treatment of carbon as part of the value chain could be the next most important mega-trend influencing MNEs after digitalization. The OECD has committed significant resources to examining environmental taxes. A 2021 OECD report suggested that around 60 percent of carbon emissions from energy use in OECD member countries and the G-20 remained entirely unpriced in 2018; governments will be looking to change this going forward. It seems clear that carbon trading — and the related transfer pricing issues — will continue to be important for MNEs in the months and years to come.⁴ ■

⁴ The foregoing information is not intended to be “written advice concerning one or more Federal tax matters” subject to the requirements of section 10.37(a)(2) of Treasury Department Circular 230. The information contained herein is of a general nature and based on authorities that are subject to change. Applicability of the information to specific situations should be determined through consultation with your tax adviser. This article represents the views of the author(s) only, and does not necessarily represent the views or professional advice of KPMG LLP.

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