Carbon as a New Asset Class – State Street Asset Services Capabilities

Demand for carbon assets is expected to grow substantially as governments, companies and communities tap into the power of markets to facilitate the energy transition. For full year 2022, for example, total traded value in carbon markets grew to €865 billion[1] (Refinitiv). A study conducted by McKinsey & Company, Government of Singapore Investment Corporation, and the Singapore Economic Development Board forecasts a 15-fold increase in demand for carbon credits between 2021 and 2030[2].

There is a growing interest from institutional investors for this asset class that is driving this trend.

Investing in carbon assets provides a mechanism for corporations including institutional investors to reduce their overall carbon footprint, by acquiring and then retiring these assets. Corporations are motivated to reduce emissions to achieve their net-zero commitments and to meet both new public policies as well as demands from global stakeholders concerned about climate change.

As emission standards tighten and decarbonization commitments increasing globally, demand for carbon assets is anticipated to increase, thereby lifting the price and making it more costly to abate over time. This dynamic will also create return opportunities for investors: not only do high-quality carbon assets provide a tool to combat climate change, they can also help fund the energy transition all while offering potential benefits to investment portfolios as a new asset class.

Carbon asset markets are growing dramatically

As emissions standards and decarbonization commitments strengthen, carbon prices are expected to increase as it becomes more expensive to pollute

Investing in carbon assets allows financial institutions to participate in compelling decarbonization trends across the economy

[1] See Refinitiv (2023) for more details.
[2] McKinsey & Company. 2021. "Putting carbon markets to work on the path to net zero"

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Understanding the Mechanics of Carbon Markets

Carbon assets are fungible assets representing either allowances or credits (also known as offsets).

Carbon allowances are traded within the compliance market, issued by governments through cap-and-trade programs (e.g., EU Emission Trading System ("ETS")). Governments issue carbon allowances (e.g., European Allowances (EUA)) to companies based on defined emission thresholds. In these trading systems, under-emitting companies sell unused allowances, over-emitting companies buy allowances to retire them and avoid penalties, and financial institutions can buy allowances with the potential to sell them at a higher price.

Compliance markets benefit from established infrastructure that has been solidified over time. As an example, EUAs can be traded on three major exchanges (EEX/Nasdaq Oslo/ICE Endex). These exchanges works like traditional market infrastructures (i.e., using CCPs and Clearing Members) and allow to trade into spots and derivatives markets.

Carbon credits are traded within the voluntary market, issued by certifiers of private projects. Voluntary carbon offsets programs (e.g., Verra) issue tradable carbon credits (e.g., Verified Carbon Units (VCU)) to project developers, after quantification of the achieved carbon reduction. Project developers sell carbon credits generated by the project, corporations buy carbon credits to retire them and offset their own emissions on a voluntary basis, and financial institutions buy carbon credits to sell them at a higher price.

Voluntary markets have less developed infrastructure and a more illiquid market. However, service providers such as Xpansiv provide a global exchange platform and facilitate the settlement of transactions and it is expected these markets will continue to develop over time.

Why Invest in Carbon Assets?

Foreseen carbon price variation	• Per projections from market participants, mechanisms such as **decreasing emission caps** on compliance markets and **net-zero commitments** on voluntary markets might result in an **increasing scarcity of carbon, driving carbon prices up**.
Portfolio Diversification	• The environmental attribute asset class provides **diversification** for both ESG and non-ESG funds. Exposure to a new asset class enables funds to **hedge** risks in their portfolios, including the risk that carbon emission price fluctuation may have on prices.
Decarbonization	• **Decarbonization of the economy:** There are certain views that **locking-in allowances through portfolio** purchases has an indirect effect on **reducing the total emissions of EU allowances**, helping to accelerate the decarbonization of the economy. • **Decarbonization of investment portfolio:** By choosing to **retire carbon assets** on their own, investments managers may **reduce the carbon emission footprint of their portfolio**. • **Prerequisite:** regulatory frameworks (e.g.: SFDR) need to recognize carbon assets retirement as a negative carbon emission in the calculation of the carbon footprint of the funds.
Investments in companies or infrastructures generating generating carbon credits	• This is a topic regulators are actively working on some **alternative investments funds may own,** directly or indirectly, **green infrastructures generating the attribution of carbon credits.** The funds can then either hold the generated carbon credits for price speculation purposes or redistribute the assets to investors.

How Can State Street Help?

State Street's asset services now extend to the carbon asset class, allowing clients to partner with State Street on new investment opportunities.

Our solutions provide:

Fund Administration Services

- Maintenance of the books and records of the fund
- Net asset value (NAV) calculation
- Fund expenses administration
- Automated pricing quotes through vendor feeds
- Financial reporting
- NAV dissemination to appropriate publications & investment managers
- Standard reporting
- Audit liaison
- Dividend distribution calculation
- Standard tax reporting

Depositary Services (EU)

- Safekeeping in the form of Ownership verification and record keeping of "other assets" of the UCITS / AIF
- UCITS / AIF cash flow monitoring
- Oversight relating to:
  - Sale, issue, repurchase, redemption and cancellation of shares/units of the UCITS / AIF
  - Valuation of shares/units of the UCITS / AIF (pricing source to be directed by the client)
  - Execution of instructions of the investment manager
  - Timely settlement of transactions involving the assets of the UCITS / AIF
  - Income distributions of the UCITS / AIF

Carbon Asset Servicing Value Proposition and Differentiators

Rely on Our Proven Expertise

As a trusted partner of the world's leading financial services firms for over two hundred years, we have the experience and expertise in all aspects of the investment lifecycle to assist our clients with any fund structure, strategy, and in any location.

Gain World Class Service

We combine technology, tools, and talent to provide world class service to clients and a robust platform supporting their full product development/investment needs.

Leverage State Street's Full Range of Services

Our carbon market asset servicing solutions enable the integration of carbon assets into both existing ESG and non-ESG portfolios. Our services streamline the workflow by leveraging the same back and middle-office capabilities used for other asset classes and provide the ability to sync across State Street business units to deliver complementary products and services enhancing the value you receive from accessing this new asset class.

Simplify Multiple Parties Interactions

By integrating data from a variety of sources and world's top carbon registries, we help reduce the need to coordinate with multiple parties (including fragmented registries, asset issuers, exchanges and cash agents).

Capture Digital Opportunities

As a key player in the digital asset space, State Street is expanding asset classes available to its investors and is exploring the tokenization of carbon assets.

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