CDR Investment Primer

Overview

This investment primer aims to provide an overview of the carbon market, the voluntary market, and the investment vehicles available to investors interested in gaining exposure to CDR.

Intro to Carbon Markets

For over 20 years, entities around the world have participated in carbon trading through legally mandated Emissions Trading Systems (ETS), often referred to as the “compliance” market. Outside the compliance market, actors in the Voluntary Carbon Market (VCM) purchase carbon credits to offset their emissions, with each credit representing one tonne of CO_2 equivalent. The VCM saw trade activity of approximately $2 billion USD in 2023, compared to over $100 billion USD in the compliance market. Besides size, these markets differ in what is traded, who trades, and where trading occurs. In the compliance market, regulated entities are allocated allowances, which they must surrender to cover their actual emissions; any surplus can be traded on exchanges or over-the-counter (OTC). In addition to allowances like EUAs in the EU ETS, the compliance market also trades instruments such as Certified Emission Reductions (CERs) and Emission Reduction Units (ERUs) from Kyoto Protocol mechanisms, as well as Renewable Energy Certificates (RECs).

Less standardization is seen in the VCM, with most transactions taking place OTC. There are hundreds of brokers and marketplaces however, helping to connect carbon credit generating projects and buyers. The VCM offers a much wider variety of credit types, reflecting the diversity of projects aimed at reducing or removing carbon from the atmosphere. These include credits from renewable energy projects, which reduce reliance on fossil fuels; forest conservation and reforestation efforts, which sequester carbon through tree growth; and methane capture initiatives that prevent potent greenhouse gases from entering the atmosphere. A particularly important and emerging category within the VCM is carbon dioxide removal (CDR), which encompasses innovative approaches like direct air capture (DAC) technology, biochar production, soil carbon sequestration, and ocean-based removal methods, and more. These projects not only help offset emissions but also contribute to achieving long-term climate goals by actively removing CO_2 from the atmosphere, making carbon removal a critical element of net-zero strategies.

Participants in the Voluntary Carbon Market (VCM) include corporations, governments, non-governmental organizations (NGOs), individual buyers, and speculators. Corporations typically engage in the VCM to offset their carbon emissions by retiring credits, fulfil sustainability commitments, and enhance their corporate social responsibility profiles. Governments and NGOs participate to support and fund climate action projects, drive environmental stewardship, and meet policy goals. Individual buyers purchase carbon credits to offset their personal carbon footprint and contribute to climate mitigation efforts. Additionally, speculators and investors participate in the VCM to trade carbon credits for potential financial gains, betting on the future value of credits as demand for offsets increases.

Authors: Frank Vasek, John Robert Hojnacki

September 2024

Investing in Carbon

Investors seeking general exposure to the carbon market have several pathways to consider:

Trading Instruments

- Commodity Trading: Carbon allowances and credits can be traded directly through financial instruments such as spot and futures contracts on specialized exchanges or OTC. This approach offers the most direct way to engage with carbon pricing dynamics.
- Mutual Funds & ETFs: Carbon-focused Exchange-Traded Funds (ETFs) provide a structured investment in carbon allowances. These products typically hold futures contracts or spot carbon but are limited to the major ETS markets where there exists sufficient liquidity to manage such a product (no VCM credit focused ETFs that we are aware of).

Direct Equity Investment

- Carbon Credit Projects: Investors can directly fund companies that generate carbon credits, such as reforestation, Direct Air Capture (DAC), or biochar initiatives.
- Carbon Credit Funds: Several funds hold a diversified portfolio of carbon credit rights from multiple projects. Investors can buy equity into the fund in order to gain exposure to the credits.

Indirect Equity Investment

- Low Carbon and Climate Solutions Funds: ETFs and mutual funds that focus on low-carbon technologies, energy transition, and climate solutions offer exposure to companies poised to benefit from the global shift towards a net-zero economy. Although these funds do not invest directly in carbon credits, they target firms that are integral to the transition.

Investing in Carbon Removal (CDR)

Limited Public Markets Access

- Gaining direct exposure to CDR can be difficult for individual investors due to the early stage of many technologies and the limited scale of carbon removal credit delivery. Currently, only a small fraction of the removal credits sold have been delivered, reflecting the nascent nature of the CDR market. **The best route to gain exposure to CDR is through private investment into companies that generate removal credits or buy credits directly**.
- Retail Carbon Credits: Individuals can purchase carbon removal to offset their personal carbon footprint through various marketplaces. However, these purchases are often limited in scale and scope and may not offer a resale function, limiting usefulness to investors.

Large Corporate Domination

- Large corporations lead the way supporting the growth of the CDR market through forward purchases or pre-purchases of carbon credits. These agreements may include equity components, effectively making them a form of direct investment.
  - Microsoft alone has purchased more than 70% of all CDR sold to date.

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Future Outlook

Carbon emission allowances and offsets (credits) carry value that is particularly sensitive to the present regulatory environment. This presents both risk and opportunity. There is little doubt that the carbon markets will continue to evolve with regulatory changes and technology advancements. Here are some of the things we are monitoring for the future of CDR investment:

Carbon Removal Certification Framework (CRCF)

- The CRCF is an EU initiative establishing standardized certification for carbon removal projects, ensuring their effectiveness and credibility. By enhancing transparency and providing clear criteria, CRCF boosts investor confidence, making carbon removal projects more attractive for investment. This is expected to drive more capital into Carbon Dioxide Removal (CDR) initiatives, supporting their growth and contributing to global climate goals.

Integration with Compliance ETS Schemes

- At present, CDR remains exclusive to the Voluntary market for reasons of both complexity and cost. Future efforts to integrate CDR into compliance markets could prove to be a positive catalyst for growth. Initiatives such as the CRCF provide the foundation for these challenges to be addressed in the future.

Growing Corporate Climate Commitments

- As companies face pressure to meet net-zero targets, many are turning to CDR as a critical component of their sustainability strategies. This demand for high-quality carbon removal solutions drives investment in CDR technologies and projects.

CDR Market Accessibility

- Until carbon removal technologies begin to deliver credits at scale, the market is unlikely to open up to smaller companies and individuals. The liquid financial products that exist for the compliance markets are contingent on having enough credits to go around, which is simply not the case for the CDR market at present.

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