CARBON MARKET DEVELOPMENTS

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High-Level Key Messages

- 2021 Banner Year for Market Growth → Continues through 2022 (despite Geo-Political challenges)
- All Major Compliance Markets going through Program Reviews in 2022
- Glasgow Validates Markets – Article 6 Rule Book Complete, but now Implementation Begins
- Majority of Countries Need/Want International (Article 6) Trading to reach NDCs and Net Zero Goals
- Compliance and Voluntary Carbon Markets Rapidly Evolving – and Converging
- Surge in Carbon Credit Protocol Development and Modifications
- Enhanced Scrutiny and Push for Integrity and Transparency in Net Zero Targets and Credit Use
- Growing role and impact of digitization on future carbon markets
2021 Major Growth – 2022 Trend Continues

Compliance and Voluntary Carbon Markets

Global Carbon Market Size (US$ Billion)

- Dominated by (Government) Compliance Emissions Trading Systems
- Mostly EU and California-WCI
- Allowance Trading Markets
- Some Eligible Offset Crediting

VCM Yearly Historical Retirements (tCO2e)

- Voluntary (Non-Government) Market
- Material Growth – but still small compared to compliance markets
- Offset Credits Only

Source: ClearBlue Markets (March 2022)
Compliance Carbon Pricing (2021)
Compliance Carbon Pricing 2021

Over 50% with Carbon Market Elements

Updated 2022 Map to be published by World Bank on 25 May 2022
Voluntary Carbon Market
Corporate Pledges Drives Demand Growth
Carbon Crediting Protocols & Standards

Period of Growth, Transition, Convergence

GROWING CONVERGENCE & INTERPLAY
ALFREDO NICASTRO
Senior Vice President
Head of Carbon Markets
StoneX
StoneX at a Glance

- 36 Exchanges
- 18,000+ OTC Products
- 140 Currencies

- Global Execution, Clearing & Custody Across Equities, FX, Fixed Income, Commodities, Carbon, Metals and Crypto

- 50,000+ Institutional, Commercial & Payments Clients
- 370,000 Retail Clients

- $5.8B Customer Assets
- $3.5T Volume Traded*
- 146M Listed Derivative Contracts Traded

- Supported by Expansive Global Footprint

- $904M Equity Capital
- 3,200+ Staff
- 18 Countries across 6 continents

*Total volume traded of FX, CFD, Securities and Global Payments contracts on a trailing 12-month basis as of September 30, 2023.
Carbon Solutions Group - What we do

1. Brokerage & Trading
   - B2B, OTC and Exchange transactions
   - Access to carbon exchanges and registries

2. Financial Solutions
   - Financial Structuring
   - Project Finance
   - Asset Monetization
     - Credit placement for Sellers/Project owners
     - Identification/credit origination for buyers
   - Access to funds for development of climate mitigation projects

3. Advisory services
   - Regulatory and Compliance Support
   - Carbon Accounting (Carbon footprinting)
     - Greenhouse Gas inventory
     - Corporate and product carbon footprinting
   - Development of Carbon Management and Neutrality Strategy
     - Risk management
     - Asset Optimization
   - Emission Reduction Project Development
     - Project identification
     - Project feasibility/eligibility under existing standards (CDM, VERRA, GS, etc.)
     - Development of Project documentation (PIN, PDD, monitoring, etc.)
     - Support for registration, verification and issuance of credits
     - Commercialization of credits
   - Development of Market Strategy
     - Support to assets owners and buyers
   - Climate Action Communication Strategy
Credit Supply – Number of Projects and Issuances by Mechanism

Carbon Credit Transaction Volumes – Contributions by Sectors

Voluntary Market Growth (2016 - 2022)

Source: Voluntary Carbon Market 2021 in Review and 2022 Outlook, Jan 2022

1. Excludes carbon credits used for compliance
## Summary Carbon Markets – Price References (May 22)

### B2B / OTC Transactions

<table>
<thead>
<tr>
<th>Standards</th>
<th>Nature-Based Projects (USD/t)</th>
<th>Non Nature-Based projects (USD/t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verra (VCUs)</td>
<td>$10.30-$12.00</td>
<td>$5.50- $7.50</td>
</tr>
<tr>
<td>Gold Standard (GS-VERs)</td>
<td>&gt;$12.00</td>
<td>$7.50 - $9.00</td>
</tr>
<tr>
<td>Corsia (CEUs)</td>
<td></td>
<td>$6.00 - $6.40</td>
</tr>
<tr>
<td>CDM (CERs)</td>
<td>$3.00 - $5.00</td>
<td>$2.15- $4.00</td>
</tr>
<tr>
<td>CAR (CCOs)</td>
<td></td>
<td>$16.50 - $17.50</td>
</tr>
</tbody>
</table>

### Exchanges

<table>
<thead>
<tr>
<th>Offsets and Allowances</th>
<th>USD/t</th>
</tr>
</thead>
<tbody>
<tr>
<td>CME CBL GEO/ACX-CET (Global Emission offset Future)</td>
<td>$5.60 - $5.95</td>
</tr>
<tr>
<td>CME CBL N-GEO/ACX-GNT+ (Nature based Global Emissions offset)</td>
<td>$10.70 - $12.30</td>
</tr>
<tr>
<td>ICE EUA (European Allowances)</td>
<td>€88.50 - €110.75</td>
</tr>
</tbody>
</table>
WILLIAM PAZOS
Co-Founder and Managing Director
AirCarbon
AirCarbon Exchange - ACX

Fully Digital 24/7 Trading Platform

Transparency: Bids/offers & transacted prices are fully transparent

Efficiency: Eliminates the complexity and resources needed for OTC transactions

Liquidity: Standardised contract specifications with a price on an exchange platform allow an unprecedented level of liquidity

Cost-Effective: Lowest transaction costs in the market

No settlement risk: Eliminates settlement risk for buyers and sellers through real-time settlement

Secure: All transactions on the blockchain are recorded immutably

Creation of price signal for the carbon market, facilitating flow of investment dollars into carbon projects

PARTNERSHIP WITH EEX will deliver a futures contract in Q3 2022

Private & Confidential
Governments are imposing regulatory carbon constraints and constituents are demanding concrete mitigation efforts from companies.

Industries are incapable of curtailing carbon emissions internally without disrupting profitability.

Carbon markets remain fragmented and inefficient but moving towards more transparency.

01

Increasingly, investors are using Environmental, Social, Governance (ESG) criteria when screening companies.

03

Industries are turning to carbon markets to identify the most efficient carbon reductions.

05
**2021 A Banner Year**

**Price Appreciation:** Carbon credits were one of the 2021’s best performing assets.

- CET (CORSIA Contract) appreciated 967% from March 2021 to March 2022.
- GNT+ (Global Nature Contract) appreciated over 200%

**Global Efforts:**

ICVCM - Took shape

Singapore announces a Carbon Tax and makes further efforts to set itself apart as a global carbon hub. It now hosts 3 carbon exchanges and several market participants.

Rio in keeping with its legacy as the host of the world’s first summit, launched the Bolsa Verde (Green Exchange) - a marketplace to host climate mitigating efforts.

World Bank pushed forward with the development of a Carbon Warehouse - a blockchain based repository of carbon market data.

Abu Dhabi Global Markets announces the hosting of a regulated carbon exchange (ACX) on the back of making carbon a commodity as opposed to an intangible commodity.

Saudi Arabia announces the creation of a VCM

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**2022 What to Expect**

**Further Price Appreciation?** There has been some retracement from the heady Q4 of 2021. Current market sentiment is somewhat dampened due to expectations of inflation and uncertainties from the Ukraine war.

**New Tradable Instruments:** Several players are likely to announce new carbon contracts.

- EEX/Redshaw Advisors/ACX to launch GER contracts.
- ICE announces a Nature based futures contract
- Market awaits the ICVCM’s CCPs

**Supply Constraints?** Back log of issuances at VERRA have caused some concerns around supply. As we move further into 2022 some of these credits will come to market.

**New Markets:** Countries are grappling with their responsibilities under Article 6. Expect to see further announcements from all four corners of the world similar to Saudi Arabia’s announcement.
Blockchain - Comment on Digitalization of Carbon

Salient Efforts:

• KLIMA Dao hoovered 13mm tons of legacy CERs. It has now peaked and is unlikely to recover.

• World Bank Climate Warehouse - A Blockchain based repository of carbon data with broad support from industry stakeholders.

• Toucan looks to bridge the gap between crypto and carbon.

• Registries and Industry groups such as IETA, establish task forces to grapple with the intersection of blockchain and carbon.

Comments

• Blockchain carbon plays that have a native coin have a perverse incentive and should be heavily scrutinized.

• Simply writing transaction data to a blockchain ledger fails to take full advantage of the technology’s capabilities.

• Several efforts globally (e.g.: Carbon Asset Solutions) are looking to streamline the issuance of carbon credits by leveraging remote sensing and blockchain. Will any of these efforts unseat traditional registries?
Voluntary Carbon Market
Global Integrity Initiatives: Developing Guidance
Voluntary Carbon Market

VCM Global High-Integrity Initiatives: Updates

High-Integrity Voluntary Carbon Market Requires:

1. **Unimpeachable quality**
   Promote social and environmental integrity in the generation of carbon credits by developing a Core Carbon Principle (CCP) threshold standard for what constitutes a high-integrity credit, along with governance to ensure proper oversight.

2. **Market transparency**
   Ensure integrity in market transactions by creating a market infrastructure that promotes data transparency, funding availability, ease of access and price transparency.

3. **Honest claims**
   Ensure integrity in the use of carbon credits by defining high-integrity corporate claims and creating norms around their use in the context of a robust net-zero pathway.

4. **Genuine accountability**
   Hold market participants accountable by maintaining civil society organizations to act as watchdogs on supply, transactions, and corporate claims.
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VCM Global High-Integrity Initiatives: Updates

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Focus of Voluntary Carbon Markets Integrity initiative (VCMii) SBTi, others
2022-2023 → Critical Period of Consultations and Implementation

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