Finance and Emissions Trading: 10 years of developments in the EU

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About Redshaw Advisors Ltd

Why?
We are here to help carbon markets be successful and to help companies be successful in carbon markets.

What?
We are a carbon emissions trading and risk management business. We provide:
• carbon market access,
• carbon finance
• risk management expertise & consultancy services

Where?
London, the global centre of carbon legal, financial and consulting expertise

Our ethos
Well informed companies make better risk management decisions, because they have the confidence to know what to do and when to do it.

Expertise, integrity and excellence.
Finance and Emissions Trading: 10 years of developments in the EU

- Carbon markets: milestones from the formative years
- The undesirable milestones
- Evolution of financial products in the EU ETS
- What is market liquidity and why is it so important?
- Ticking the liquidity boxes: how does the EU ETS measure up?
- Access to credit: the rise and fall of bank participation in the EU ETS
- How to deliver a robust market: EU ETS learning points
Carbon markets: milestones from the formative years

2003: The first “OTC” EUA trade reported, detailed terms not published (Dec delivery for forward trades is established)
2004: IETA, ISDA and EFET work, separately, on legal documentation for trades
   July 2004: First trades using ISDA reported
2004/5: Importance of IETA, ISDA and EFET working together finally recognised
2005: Exchanges begin to offer EUA products
2006: Barclays publishes standardised CER trading contract (SCERFA)
2006: Phase 1 price crash caused by oversupply (and no banking)
2007: Exchanges start to offer CER contracts
2009: Post-Lehman’s liquidity squeeze puts OTC trading on ICE
2011-13: Phase 2 price crash caused by oversupply (offsets and recessions)
The undesirable milestones

- 2008/9 VAT fraud
- 2009/10 EUA & CER thefts

Causes:
- VAT legislators didn’t anticipate MTIC VAT fraud
- Lax registry account opening procedures
- Low registry account security
Evolution of financial products in the EU ETS

- OTC forward trades
- Spot trades (these came *after* forwards!)
- Centrally cleared exchanges
- Derivatives (options)
- Simple “Repo” trades
- Investor financing of repo trades
- Collateralised forward trades

Unsophisticated (2005)

Sophisticated (2015)

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What is market liquidity and why is it so important?

• Good market liquidity is defined as:
  • Ability to buy or sell an asset with minimal impact on price
  • Ability to buy or sell an asset with a low transaction cost

• To get good liquidity you must remove barriers to entry:
  • There must be free access to the market for anyone and everyone
  • Products must be standardised
  • Documentation must be simple and standardised
  • Creditworthy companies should be involved in the market
  • Transparency – participants and potential participants must be aware of trades

• Other requirements:
  • The market must be deep with large numbers participating (driven by a large requirement to participate)
  • The market must be competitive
  • If any, there must be predictable intervention. Best is none.

• Benefits of liquidity:
  • Costs to transact will be low (competition will drive down brokerage, exchange fees, bid / offer spreads etc.)
  • Longer term hedging becomes possible
  • Trust develops and the market price becomes a benchmark to measure performance and potential for investment

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# Ticking the liquidity boxes: how does the EU ETS measure up?

<table>
<thead>
<tr>
<th>Liquidity factor</th>
<th>EU-ETS performance</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardised product</td>
<td>Good</td>
<td>Market delivered this efficiently</td>
</tr>
<tr>
<td>Documentation standardised</td>
<td>(Good)</td>
<td>No default document</td>
</tr>
<tr>
<td>Transparency</td>
<td>Good</td>
<td>Benchmark data publicly available</td>
</tr>
<tr>
<td>Depth</td>
<td>Medium</td>
<td>50% coverage, main omission: transport</td>
</tr>
<tr>
<td>Competition</td>
<td>Good</td>
<td>Large variety of participants</td>
</tr>
<tr>
<td>Intervention</td>
<td>Medium</td>
<td>+ve that intervention not price based</td>
</tr>
<tr>
<td>Transaction costs</td>
<td>Good</td>
<td>Although one exchange dominant</td>
</tr>
<tr>
<td>Long term hedging</td>
<td>Good</td>
<td>Prices to 2020 available</td>
</tr>
<tr>
<td>Transaction security</td>
<td>Good</td>
<td>Arguably too high</td>
</tr>
<tr>
<td>Creditworthy companies</td>
<td>Medium</td>
<td>Banks exiting due to indirect regulation</td>
</tr>
</tbody>
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Access to credit: the rise and fall of bank participation in the EU ETS

2004/5
Barclays
Fortis
Dresdner

2008/9
Fortis
Deutsche
Citi
Commerzbank
Unicredit
Goldman Sachs
UBS
BNP Paribas
Bank of America
Merril Lynch
JP Morgan
Macquarie
CSFB
ANZ
RBC
RBS
ABN Amro
SocGen

2014/15
Citi
Commerzbank
Macquarie
Standard Bank
Unicredit
RBC

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How to deliver a robust market: EU ETS learning points

1. Provide a secure registry system to maintain integrity
2. Markets needs banks for liquidity, don’t discourage their participation
3. Auctioning (not free allocation) leads to liquidity
4. Set a realistic emissions target and allocation to avoid crashes
5. Although ETS’s are manufactured markets, leave them well alone, competition will deliver the rest:
   • The market will decide whether it prefers spot or longer dated (forward) trades
   • The market will deliver standardisation
   • Competition between service providers will deliver the required service
   • Competition drives down transaction costs
   • Competition drives up innovation
   • Competition is good for liquidity
   • Don’t interfere, long term certainty makes emissions reduction projects bankable

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Price and liquidity development since 2005

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