

Transaction Structures

Paramaribo, 7 May 2009

Adriaan Korthuis

How to make money out of my carbon credits?

- Sell forward
- Sell futures
- Sell spot
- Attract project finance



Transactions types



- Forward Contracts (ERPAs)
 - Agreement to deliver CERs upon generation
 - Some available templates: CERSPA, IETA, World Bank
 - Adjusted to project-specific circumstances
- Futures
 - Guaranteed delivery in the future against an agreed price
 - Traded via exchanges
- Spot Contracts
 - Traded via exchanges
- Other types of Agreement
 - Joint ventures (equity investment)
 - Loans with re-payment in CERs

And where and how can I
sell my CERs?

- Bilateral trade: buyer – seller
 - the oldest type of trade
 - can be initiated both by sellers and buyers
- Bilateral trade via broker
 - can be initiated both by sellers and buyers
 - broker takes a percentage of the deal, usually around 3%
- Seller organised auction
 - useful when selling a large amount of high quality / low risk CERs
- Buyer organised auction
- Carbon exchanges
 - selling futures, options, spot trades

Forward vs. Spot



- Most CER transactions have taken place through forward sales and purchase contracts (ERPAs);
- Increasingly sellers decide selling CERs only after they are issued
- Issued CERs can be traded in:
 - Exchange platforms: electronically based trade of EUAs and CERs (e.g., ECX, Nord Pool, BM&F); or
 - OTC (over-the-counter): bilateral trades between parties (often intermediated by brokers) -these account for the majority of EUA trade

	Forward	Spot
Financing	<ul style="list-style-type: none"> • Allows for advance payments • Future CERs - collateral for bridge financiers 	<ul style="list-style-type: none"> • A financier may take the prospect of future CER spot sales into account
Market and Price Risk	<ul style="list-style-type: none"> • Price risk normally shared • An advance payment adds risk for the buyer 	<ul style="list-style-type: none"> • Seller takes price risk • Premium CER prices
Cash Flow	<ul style="list-style-type: none"> • Known cash flow 	<ul style="list-style-type: none"> • No predictable cash flow

	Forward	Spot
Production and Delivery	Seller should be careful in accepting delivery guarantees	<ul style="list-style-type: none"> • The CERs are production risk free • Seller assumes the delivery risk
Contractual Arrangement	Individually negotiated long-term off-take and financing agreements	Highly standardised spot contracts
Pricing	Negotiated forward price that reflects the risk sharing and expectations of the parties at the time of signing	Depends on the market value of CERs at the time of trade

Futures

- Seller and buyer agree to execute a transaction in the future
 - an agreed volume
 - an agreed price
 - an agreed delivery date
 - If the seller does not have the CERs at the agreed delivery date, he pays the buyer the equivalent market value of the CERs at that time, which can be higher or lower than the agreed price.
- These trades are offered at exchanges
 - completely standardised contracts
 - the exchange arranges the delivery and payment risk via a clearing house
 - anonymous buyers, sellers, CERs
 - exchanges require high credibility of participants
- Works best when seller has high certainty to have CERs at the time of delivery

Options

- Seller sells the right to a buyer to acquire CERs
 - of an agreed fixed or flexible volume
 - to an agreed price
 - on an agreed date
- Dynamics:
 - If the market price at the agreed date is higher than the agreed price, the buyer will usually buy – or sell the option to someone else
 - If the market price at the agreed date is lower than the agreed price, the buyer will usually refrain from buying – and loses the money he paid for the option
- Options are agreed bilaterally, as part of ERPAs and at exchanges
- Works well when the buyer is confident that there will delivery, while the seller needs an advance payment
- This structure is not so much used

Others

- Joint ventures / equity participations
 - an investor participates with equity in a CDM project special purpose vehicle or a project developer
 - future dividends are paid out as a combination of money and CERs
 - the investor can also contribute knowledge, a network, access to markets etc
- Loans
 - a bank provides a loan with CERs as collateral
 - this is still a rare construction as banks are not able to assess carbon risks, or find the amounts too small

Establishing a carbon selling strategy



What are we talking about?

- estimate carbon credit volume and timing

Assess project financing needs

- how much money is needed
- when is it needed

Establish business preferences

- how much risk do we like to take

Assess the carbon market developments

- current prices, expected prices

Establish strategy

- forward, spot, combination

How is the CER price determined

- Market: timing
 - demand and supply
- Project development: progress
 - higher prices when project is more developed
- Contract: risk distribution
 - assuming risk is rewarded
- Project characteristics
 - bonus for additional social and environmental benefits

Demand and supply in the future carbon market

Future prices in the carbon market are still hard to predict and depend on numerous factors

First clarity by December 2009

Most analysts expect prices to move to the EUR 25 – 40+ range

Demand

- Emission reduction target agreed internationally
- How much CDM allowed in each of the trading schemes
- Oil prices, winter temperature
- recovery from economic crisis
- Qualitative restrictions in use of CERs



Supply

- New sources of supply (Programmes, forests?)
- Supply from China may drop considerably
- Will Russia and Ukraine release their AAUs?
- CDM reform



Effect on price by project development

Physical

- Project designed – financed – construction – operation

CDM

- PIN – PDD prepared – validated – registered – first CERs issued

Allocation of risk in the contract

- Delivery guarantees and enforcement
 - fixed or flexible volumes
 - guaranteed or best effort
 - damages and penalties
- Who pays what
 - PDD, validation, UNFCCC fees
- Warranties given by both parties

Others

- Additional environmental benefits
 - reduction of waste problems and other emissions
- Additional social benefits
 - job creation
 - energy security
 - participation of underprivileged groups
 - poverty reduction
- “Guaranteed origin”
 - provide certainty to buyer that the CERs come from the agreed project
- Competence of the negotiator

Contact details

- Adriaan Korthuis
- Phone +31 10 217 5993
- E-mail a.korthuis @ climatefocus.com

- www.climatefocus.com