Voluntary Carbon Market

Trends and Opportunities

Promoting Transformation by Linking Natural Resources, Economic Growth, and Good Governance



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Compliance vs. Voluntary Markets

Compliance Market - based on a cap and trade system - limited options for terrestrial CO2.

- Kyoto Protocol
- European Trading Scheme (ETS)
- Regional GHG
 Initiative (RGGI)
- California's Global Warming Solutions Act (AB 32)

Voluntary or Pre-Compliance Market

- Not based on regulation
- CSR and individual demand story
- Includes broader terrestrial carbon options
- Potentially large US market
- Terrestrial carbon likely included in new compliance program (post 2012)

Voluntary Market Trends

Significant Market Growth

2007:
18% of
voluntary marke
t =
forest carbon

(estimated \$46 m)

Transaction Volumes and Values, 2006 and 2007

Markets	Volume (MtCO ₂ e)		Value (US\$million)	
	2006	2007	2006	2007
Voluntary OTC Market	14.3	42.1	58.5	258.4
CCX	10.3	22.9	38.3	72.4
Total Voluntary Markets	24.6	65.0	96.7	330.8
EUETS	1,044	2,061	24,436	50,097
Primary CDM	537	551	5,804	7,426
Secondary CDM	25	240	445	5,451
Joint Implementation	16	41	141	499
New South Wales	20	25	225	224
Total Regulated Markets	1,642	2,918	31,051	63,697
Total Global Market	1,667	2,983	31,148	64,028

Source: Ecosystem Marketplace, New Carbon Finance, World Bank



The Market

- Buyers include companies that buy offsets for their own operations (50% ER's retired), on behalf of their customers (e.g., airlines & travel agents) events, and individuals
- Sellers include retailers and wholesalers who buy and resell emission reductions, and project developers who develop GHG abating activities and sometimes sell directly
- Market intermediaries include brokers who connect project developers and resellers with institutional ER buyers



Key Market Drivers

- 1. Project Quality
 - Ensure climate benefits level of standards consistent with compliance market
 - Permanence systems in place to guarantee the investment (manage risk)
 - Co-Benefits (risk management, story, price)
- 2. Reputation of Provider
- 3. Standards



Standards for Terrestrial Carbon

- 1. Voluntary Carbon Standard (VCS) becoming the industry standard (despite lack of project experience) includes REDD and other forestry activities (AFOLU)
- 2. Chicago Climate Exchange (CCX) terrestrial carbon (forests, soil, etc). REDD project in conjunction with forestation on contiguous site. Considered lower quality offsets than others.

Standards for Terrestrial Carbon

3. Climate, Community and Biodiversity Standards CCBS - a co-benefit standard linked to effective carbon measurement methodologies. (VCS and CCBS strong combination)

4. Plan Vivo - Pro Poor Carbon - reforestation and REDD (small scale/pro poor)

Cobenefits.ppt



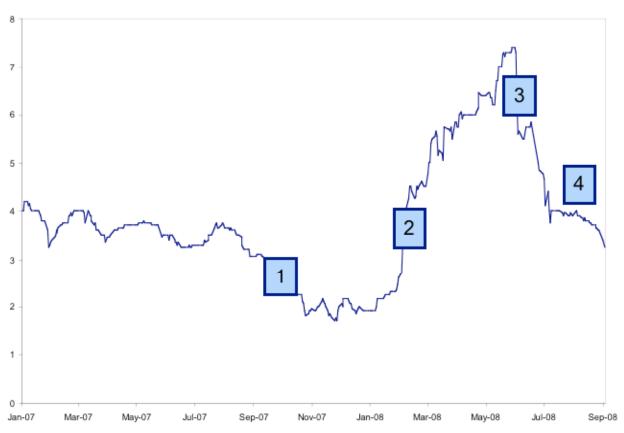
Price Issues

- Price volatility
- Voluntary market lower prices than compliance market
- Recent prices for high quality carbon \$5 \$15.00
- CCX prices lower due to question of quality but does serve as an index
- EDF estimates terrestrial carbon price (compliant market with no quantity restrictions): \$16 per ton in 2012; \$24 per ton in 2020 and \$40 in 2030.
- Co-Benefits add to price





Historical CCX Prices: Vintage 2008 Carbon Financial Instrument (CFI)



Traded Volumes (MTCO2e)

2005: 1.0 million

2006: 10.2 million

2007: 22.9 million

• Q1 2008: 19.7 million • Q2 2008: 26.1 million

1. Retraction October 2007

Large volumes coming onli from 2004 retroactive proje

2. Rally in February 2008

All three presidential front runners support a federal c and trade program

3. Crash in June 2008

Reports show large increase in supply; negative response to the introduction and debat of the Lieberman-Warner be in the Senate

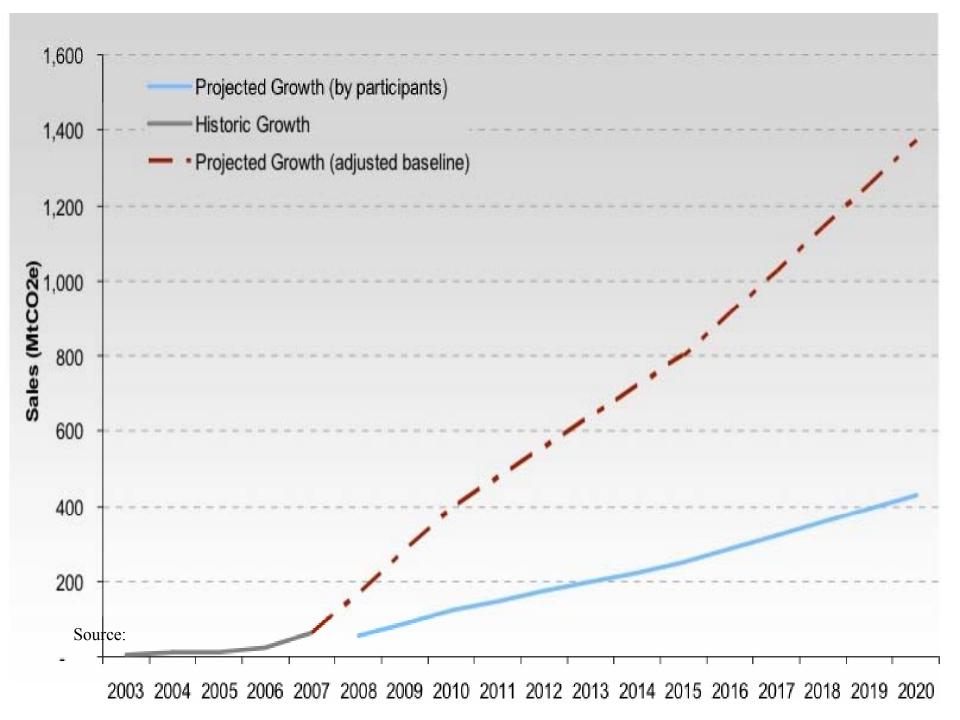
4. Further Decline in 2008

Supplies remain strong; congressional recess pause legislative process; decreas in price of CERs, EUAs and the entire energy complex

Source: Chicago Climate Exchange, Goldman Sachs

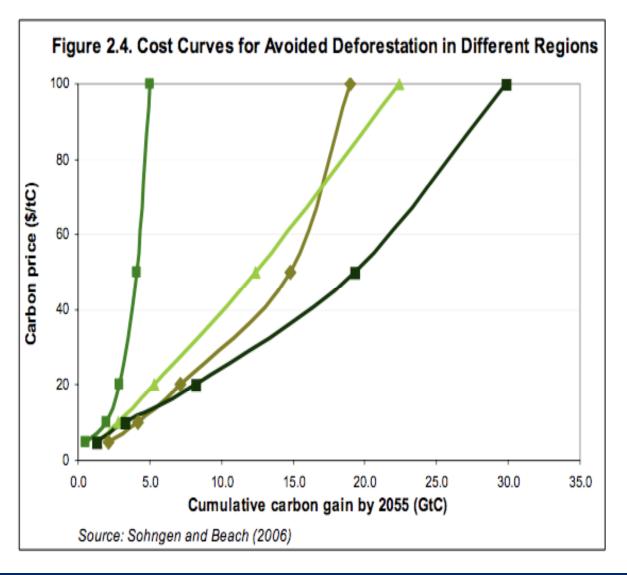
Voluntary Market - Issues

- Historically somewhat weak due to lack of commonly recognized standards for REDD projects (VCS can address this constraint)
- Concerns over projects that may not deliver what promised
- Uncertainty regarding future of voluntary market - especially with forest carbon entering compliance markets
- Volatility



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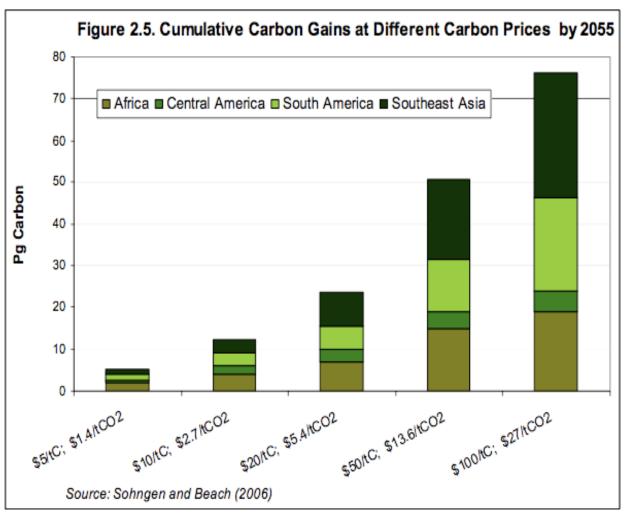
Price Matters





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Price Matters





Near Term Future

Voluntary Market will continue to grow with new buyers looking for quality projects with good stories and new suppliers develop projects for the market - there will be greater competition

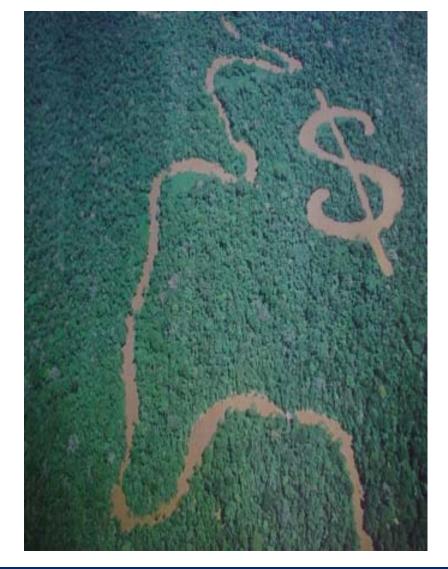
Buyers appear willing to purchase credits with vintages through 2012 - so there is still time to develop projects for the market - with caveats

Demand is stronger for ex-post credits (risk) - WCS preference Some investor interest in acquiring future credits (an ante) exists how far into the future is the question

Private capital still interested in voluntary market REDD projects with demand likely to grow after US agreements

RAN SIINKS

Longer Term Future



QuickTime™ and a decompressor are needed to see this picture.

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"Offsets are an imaginary commodity created by deducting what you hope happens from what you guess would have happened."

(Dan Welch quoted in *The Guardian*, June 16 2007)

