

# Carbon Finance in Emerging Markets

## the brief

### WHAT'S NEW

- ▶ The Kyoto Protocol will enter into force in February 2005
- ▶ Buyers have committed more than \$800M to purchase carbon credits
- ▶ More than 14,000 EU entities have their emissions caps set, enabling them to begin trading in the EU Emissions Trading Scheme in January 2005
- ▶ The Chicago Climate Exchange was opened in 2003 to facilitate trading between 19 North American entities that have agreed to reduce annual emissions by 1% over four years

### PROJECTS ELIGIBLE FOR CARBON FINANCING

- ▶ Renewable energy
- ▶ Energy efficiency
- ▶ Methane recovery and utilization
- ▶ Fuel switching
- ▶ Decomposition projects
- ▶ Carbon sequestration

Global climate change is attributed to the greenhouse effect, where greenhouse gases (GHGs) such as carbon dioxide (CO<sub>2</sub>) and methane trap solar energy within the Earth's atmosphere. It is natural for the climate to vary over time, but the Earth's temperature has begun to increase at an accelerated rate—this effect has been dubbed “global warming.” Although it is still a topic of debate, there is growing scientific agreement that humans have played a role. Some governments and businesses have recognized these risks and the growing scientific consensus and are taking steps to circumvent the potential adverse effects.

At the 1992 Rio Earth Summit, various governments voluntarily pledged to reduce their GHG emissions—the Kyoto Protocol was conceived five years later to enhance this with a set of commitments to reduce emission levels. The Protocol had to be ratified by industrialized countries that account for at least 55% of industrial country emissions. With Russia's ratification in November 2004, it will enter into force in February 2005—industrialized signatory countries will now agree to reduce emissions between 2008 and 2012 by an average of 5.2% from 1990 levels. Developing countries are not obliged to reduce their emissions under the Protocol at this time.

The Protocol spurred a global market for trading GHG emissions rights or “carbon credits.” This has been dubbed the carbon market, where governments set a strictly enforced cap on total emissions which are then allocated as carbon credits to emitters (businesses and governments). Due to the realization that they were the major GHG emitters plus the impending compliance obligations, the industrialized countries became carbon credit buyers whereas the emerging market countries positioned themselves as carbon credit sellers.

Several factors spawned the carbon market. The developed world, as buyers of carbon credits, was led by:

- ▶ anticipation of future climate-related legislation;
- ▶ acknowledgement of the potential risks of climate change;
- ▶ risk management;
- ▶ strategic positioning;
- ▶ trading mechanisms that enable cost-effective compliance;
- ▶ approval of Kyoto-based credits as emissions trading currency.

As sellers of carbon credits, the emerging markets were driven by:

- ▶ revenue from credit sales;
- ▶ new financing source targeting sustainable development projects;
- ▶ opportunity to enter a new hard currency market;
- ▶ knowledge transfer.

The Protocol created two project-based trading mechanisms designed to provide incentives for emerging market countries to engage in the carbon market, the Clean Development Mechanism (CDM) and Joint Implementation (JI). CDM applies to developing countries which are exempt from binding commitments. JI applies to economies in transition in Central and Eastern Europe<sup>2</sup> which do have emissions reductions obligations but their preponderance of old technology allows them to sell carbon credits. In both mechanisms, eligible projects are permitted to sell their reductions as carbon credits to industrialized countries that have emissions reduction obligations.

The carbon market is expected to be substantial in the future. If financial institutions (FIs) in emerging markets approach this nascent yet promising market at the right point, they will have an opportunity to carve a niche for themselves. FIs can engage directly via risk management or training, acting as an intermediary on behalf of a carbon buyer, or serving as a project, structured or corporate finance advisor.

<sup>2</sup>Jl applies to all industrialized countries with target reductions, but this report focuses on JI in CEE countries.



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**THE BOTTOM LINE**

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- ▲ The carbon market is expected to grow significantly in the future, potentially reaching \$11 billion by 2007
- ▲ This market presents revenue enhancing opportunities for projects that would not have occurred otherwise in emerging markets and most likely will be the key factor for their completion

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**FUTURE FORECAST**

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- ⌘ The market's growth will be highly dependent on how the Kyoto Protocol is implemented (especially regarding clearer rules for CDM and JI) plus the speed and scale at which other climate-related regulation is adopted (e.g., European Union Emissions Trading Scheme (EU ETS)).
- ⌘ The window of opportunity for developing projects with emissions reductions benefits is narrowing due to regulatory uncertainty beyond 2012.
- ⌘ Demand for CO<sub>2</sub> credits is expected to rise.

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**OPPORTUNITIES**

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|-------------------------------------|--|
| Intermediation and Asset Management | <ul style="list-style-type: none"> <li>▲ Act as intermediaries to purchase carbon credits on behalf of carbon buyer/group of buyers</li> <li>▲ Act as fiduciaries throughout screening, selection, evaluation, structuring, payment and delivery stages of a carbon project</li> <li>▲ Develop investment vehicles to manage risks associated with evolving carbon market</li> </ul> |
| Project Finance                     | <ul style="list-style-type: none"> <li>▲ Participate as financiers for projects that generate carbon credits</li> </ul>  |
| Structured Finance                  | <ul style="list-style-type: none"> <li>▲ Participate in forward contract agreement &amp; transactions</li> </ul>   |
| Emissions Trading                   | <ul style="list-style-type: none"> <li>▲ Apply knowledge in traditional commodity markets to this new trading system</li> </ul>  |
| Risk Management                     | <ul style="list-style-type: none"> <li>▲ Develop credit enhancement and other forward contract guarantees</li> </ul>   |
| Financial Analysis and Accounting   | <ul style="list-style-type: none"> <li>▲ Develop methods to quantify and account for carbon credits and allowances</li> <li>▲ Develop ways to incorporate carbon liabilities in credit rating and company valuation</li> <li>▲ Formulate generally accepted carbon accounting principles</li> </ul>  |

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**RISKS**

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- ▼ Regulatory risk—carbon buyers generally will not accept risk of project not being approved
  - ▼ Bias against small-scale projects—bulk of carbon projects are small-scale but buyers tend to favor contracts with larger sellers to reduce transaction costs and risk
  - ▼ Forward contracts—buyers will increasingly demand a “market cost to cover” clause for non-performance, which can increase sellers’ financial risk
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