Financing CDM Projects in Mexico

Asset & Capital Structuring
Corporate & Investment Banking
Santander Global Banking & Markets

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Carbon finance activities are managed by the Global Banking and Markets Division

**Santander Key Data**

- Nº 1 Franchise – Euro Zone
- Nº1 Franchise – Latin America
- Nº4 Globally – by 2008 Profit

Net Operating Income 2008: €17.7 billion
Net profit 2008: €8.9 billion

Presence in over 40 countries
13,390 branches worldwide
171,000 employees
69 million customers
3.0 million shareholders

**Rating Agency Classifications**

- **Dominion Bond Rating Service** – Long Term AA; Short Term R-1 (high); Outlook stable
- **Fitch Rating** – Long Term AA; Short Term F1+; Financial Strength A/B; Outlook negative
- **Moody’s Investors Service, S.A.** – Long Term Aa1; Short Term P1; Financial Strength B; Outlook stable
- **Standard & Poor’s** – Long Term AA; Short Term A1+; Outlook stable
Market Overview
Global CDM Market Indicators

Kyoto Protocol Supply v. Demand

Supply

Demand

Balance

Source: Point Carbon

Risk Adjusted Supply by Year

Source: Point Carbon

Conclusion:
Global net demand for Kyoto Offsets
Market Overview
Global CDM Geographic Market Indicators

Conclusion:
Latin America an important source …
… but below average sized projects

Geographic Distribution (Nº Projects)

- Asia & Pacific: 76.9%
- Latin America: 18.8%
- Europe & Central Asia: 1.0%
- Africa: 2.1%
- Middle East: 1.2%

Projects: 4,541

Source: cdmpipeline.org

Geographic Distribution (Nº CER)

- Asia & Pacific: 80.4%
- Latin America: 14.5%
- Europe & Central Asia: 3.2%
- Africa: 0.6%
- Middle East: 1.3%

MCER Non-Risk Adjusted: 2,910

Source: cdmpipeline.org
Market Overview
European CDM Price Indicators

Conclusion:
Price stability and recovery

Price Evolution

European Climate Exchange ECX CER Futures Contract
5 Day Moving Average Strip Settlement Price (Dec-09 to Dec-12 Contracts)

Source: Point Carbon / European Climate Exchange
Market Overview
Mexican CDM Market Indicators

Conclusion:
30% Failure Rate in Mexico for CDM Project Registration

CDM Pipeline History Mexico (N° Projects)

- Validation Terminated: 50
- Validation Negative: 1
- Under Review: 1
- Withdrawn: 4
- Rejected: 4
- Registered: 117
- Validation: 36
- Correction: 2

Source: cdmpipeline.org
Market Overview
Mexican CDM Project Promoter Analysis

Conclusion:
80% Projects Developed by Large Companies

Source: cdmpipeline.org
**Challenges**

**Overview**

### Promoter
- Financing NOW
- No investment – No CDM project
- Seeks to maximise value of future carbon stream

### Buyer
- In need of CER now
- Risk averse
- No appetite / not geared to pay now for jam tomorrow

### How to Bridge the gap?

### Carbon Rich Projects
- Biogas / Industrial gases
- Carbon 100%+ investment
- Low investment requirement
- Exception rather than the rule

### Carbon Lite Projects
- Renewable Energy
- Carbon no more than 10-15% investment
- High investment requirement
- Carbon part but not whole solution – common occurrence

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Challenges
Post Kyoto Uncertainties

- Global Agreement
- Regional Agreement

- Assumption by Mexico of Compliance Obligations?
- US / North American Agreement – Mexico’s Role
- Continuing Acceptance of CER as Offset
- Certainty of Limited Market for CER in EU-ETS
# Challenges
Financing Hurdles Faced by Commercial Banks

<table>
<thead>
<tr>
<th>Promoter Related Risks</th>
<th>Purchaser Related Risks</th>
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<tr>
<td><strong>Risk</strong></td>
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<tr>
<td>CER Generation</td>
<td>Corporate Guarantee</td>
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<tr>
<td>Operational Performance</td>
<td>Payment</td>
</tr>
<tr>
<td>Timely CER Issuance</td>
<td>Or</td>
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**Mitigant**
- Commercially Available Insurance Policy
- Revolving Credit Facility
- Corporate Guarantee
- Credit Risk Insurance

**Conclusion:** Risks Militate Against Financing Smaller Scale Promoters
Challenges
Risk Characteristics

- Regulatory
- Credit
- Project
- Market
Challenges
Risk Characteristics

Regulatory

- **Registration**: Increasingly harder to obtain project registration. More dogmatic application of regulation.
- **Retrospective Regulation**: Some new regulations have had a retrospective impact – despite a declaration in the original Protocol that this would not occur.
- **Project Review**: Increasing incidence of reviews by regulators of past decisions. Due to lack of staff this can mean a 6 month delay. Also currently no formal framework or timing obligation for reviews.
- **Methodology Review**: Increasing incidence of whole methodologies – Cement blended mix methodology put under review in March 2009 – Final outcome will take 12 months. Represents unrealized loss of 550kCER annually for CEMEX alone.
- **Evolutionary Impact**: Some previous regulatory decisions have been questioned with the passing of time. Consequently regulator has become super conservative.
- **Process Delay**: Uncertainty as to the timing and quantity of credits issued – regulator short-staffed
- **National Differences**: Rules and procedures interpreted differently between countries
- **Supranational Treaty**: Recourse under local law uncertain
- **Window of Opportunity**: Increasing delays to registration and issuance – but Kyoto deadline of 2012 immovable
- **Post Kyoto**: Becoming more certain – EU/ANZ/Japan/US but no international agreement yet – Risk of Mexico being rated Annex 1 – compliance obligations
### Challenges

#### Risk Characteristics

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<th>Project</th>
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<td><strong>Technical:</strong></td>
<td>Predominance of non-traditional developers with no prior track record.</td>
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<td><strong>Performance:</strong></td>
<td>Uncertainty as to the timing and quantity of credits generated given that projects are typically ancillary to core business – e.g. reduction of steel/cement production due to reduction of global demand will lead to lower emission reductions</td>
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<td><strong>Finance:</strong></td>
<td>More difficult in current conditions to obtain finance for projects</td>
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Challenges
Risk Characteristics

Credit

- **Counterparty**: Predominance of non-investment grade actors
- **Country**: Projects in emerging markets – higher risk profiles
- **Cross-Border**: Currency convertibility risk – Argentina / Brazil / Colombia
- **Central Banks**: Many European central banks require provisions for cross-border lending by Banks
- **Currency**: Carbon predominantly in Euro but investment in local currency/US Dollars
Challenges
Risk Characteristics

**Market**

- **Concentration**: Secondary carbon market principally in Europe. The European Climate Exchange handles 80% of exchange-traded volumes.
- **Market**: Primary market 100% Over The Counter / Bilateral. Also 100% futures market.
- **Hedging Instruments**: Options & Swaps theoretically available but 10,000 CER can move the market – not ideal when average project size is 400,000 CER.
- **Price**: Volatility – daily volatility in secondary market >4%; Implied volatility 55-75%.
- **Price Benchmarks**: Over The Counter market – few benchmarks.
- **Liquidity**: Credit crunch has dried up markets – volumes off. This has led to increasing volatility.
- **Accounting**: There are no specific regulations for accounting for carbon trading. Application of existing rules inadequate. Accounting treatment frequently moves markets as traders can only account for current but not future positions.
Solutions
Facilitation of Commercial Bank Funding For CDM Projects – Public Sector Role

- Development Banks – Nafin, Banobras, Bancomext
  - Development of Guarantees for CER Generation, Operational Performance and Timely CER Issuance
  - Acceptance by Development Banks of responsibility for promoter credit analysis and workout responsibility in the case that a guarantee is called

- Institutional Funds - Fomecar
  - Awareness raising – particularly in public sector / local authorities

- International Financial Institutions
  - Capacity building of state and federal organs
  - Programmatic CDM
Santander’s objectives with Carbon Finance: Meet the needs of investors and buyers through the adoption of symmetric financing structures that share risks equitably between buyer and seller.

As a global financial institution, we work with **project promoters, compliance companies** and **intermediaries**.

**Our Primary Focus:**

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<th>Project Promoters</th>
<th>Compliance Companies</th>
<th>Intermediaries</th>
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| Financing and intermediating in the development of CDM projects but also active in financing and intermediating projects in the voluntary carbon markets. Focus on Europe, Latin America and Asia | ▪ EUA  
▪ CER (primary and secondary) in Europe and Asia  
▪ JI (Eastern Europe)  
▪ VER globally | ▪ EUA  
▪ CER (primary and secondary) in Europe and Asia  
▪ JI (Eastern Europe)  
▪ VER globally |
Existing Structures
Pay After Delivery

**Structure**

- Seller delivers carbon credits as and when generated to buyer account
- Buyer pays for carbon credits after receipt
- Buyer may provide 10-20% upfront payment depending on CDM project registration maturity – but against bank guarantee - Money is usually insufficient
Existing Structures
Leveraged Carbon Finance

Structure

- the guaranteed purchase of up to 100% of emission reductions provides collateral that enables greater leveraged finance and through taking advantage of the natural Euro hedge the potential to also reduce the cost of capital
Negotiation of the purchase of Certified Emission Reductions from CDM Projects using working capital facility to provide a single upfront payment. Advance secured by corporate or other guarantees from counterparty.
Evolving Structures
Carbon Collateralization

- Monetization of an existing Emission Reduction Purchase Agreement. Collateral consists of ERPA Receipts together with corporate or other guarantees from Seller.
Perspectives
What The Future Might Hold?

- **Regulatory Framework**: Increasing clarity on shape of Post-Kyoto regulatory framework:
  - EU-ETS III: 2013-2020 – 8 vs. 5 years. EU has already published framework for 2020 which envisages a reduction by 20% of GHG emissions by 2020 and will permit the use of 1.8 billion CER – whether or not there is an international agreement
  - Japan, Australia & New Zealand have introduced framework regulation to their parliaments
  - Canada is in formal discussions with EU to participate in EU-ETS
  - US is using EPA to force a decision upon congress for federal cap-and-trade legislation
  - Likelihood that Nearly Industrialized Nations – e.g. Mexico, Brazil, Chile etc – will be required to meet some emission reduction targets under new framework agreement.

- **Qualifying Projects**: Expected that a simpler project registration system will be developed – with a concept rather than rules –based framework. Also expected that more types of methodologies will be permitted – currently Avoided Deforestation disallowed and other forestation methodologies practically impossible to implement.

- **Market Liquidity / Diversification**: Introduction of Japan, Australia & New Zealand, USA and Canada will create better opportunities. Also expected that more industries will be covered

- **New Financial Products**: Greater focus by Insurance sector to provide guarantees as credit enhancements to spur project development.
Contacts
Carbon Finance Contacts

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