Financing CDM Projects in Mexico

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

August 2009

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Value from ideas

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Santander is one of the world's largest financial institutions with a strong balance sheet fuelled by €1.1 trillion under management. Consistently profitable, Santander is ranked 4th globally on this basis as well as number one in the euro zone with an investment grade long term credit rating of AA. Santander is also the leading banking franchise in Latin America.

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

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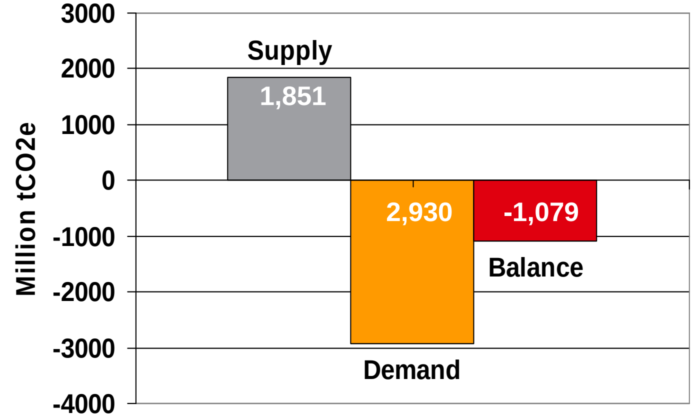
Market Overview
Global CDM Market Indicators

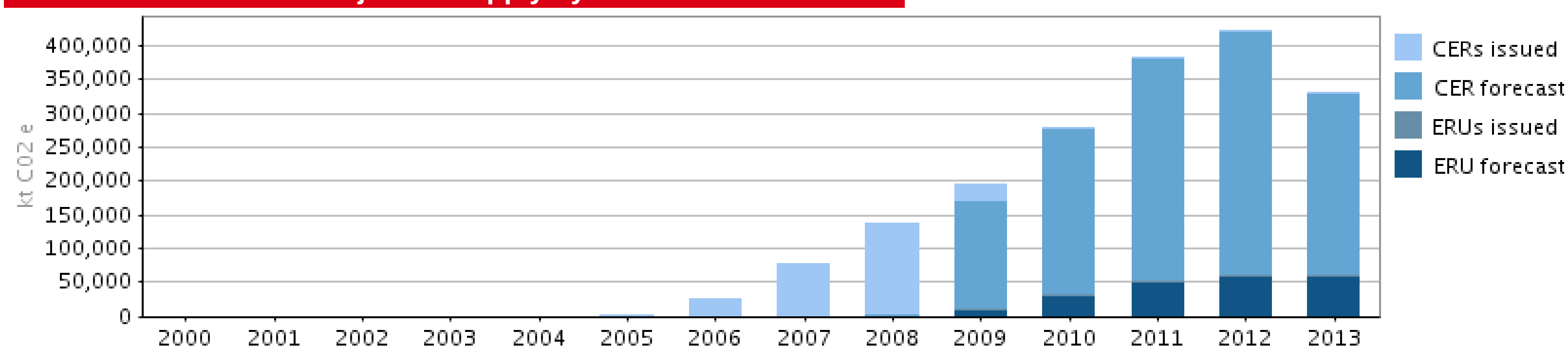
Conclusion:
Global net demand for Kyoto Offsets

Kyoto Protocol Supply v. Demand



Source: Point Carbon

Risk Adjusted Supply by Year

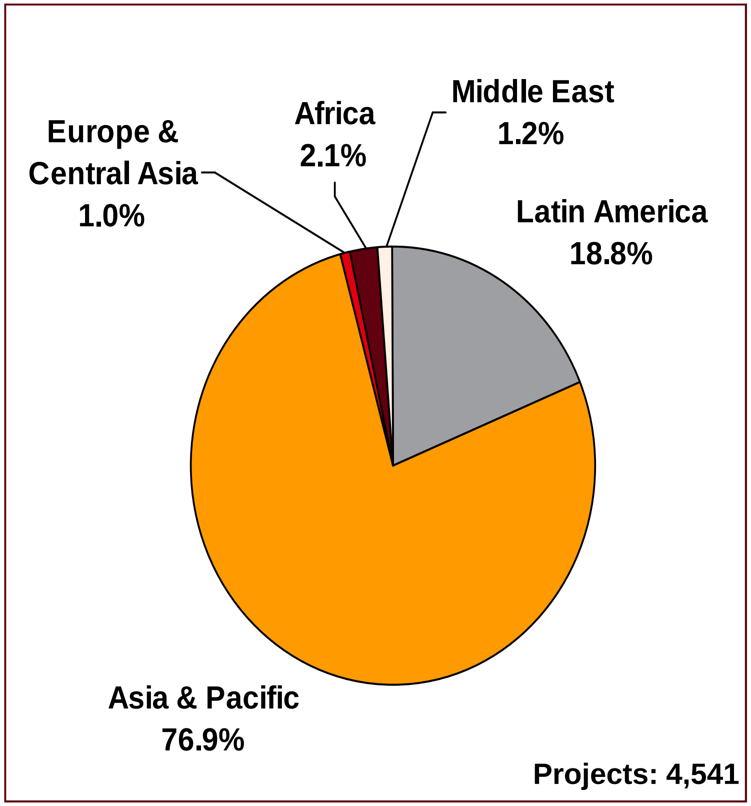


Source: Point Carbon

Market Overview
Global CDM Geographic Market Indicators

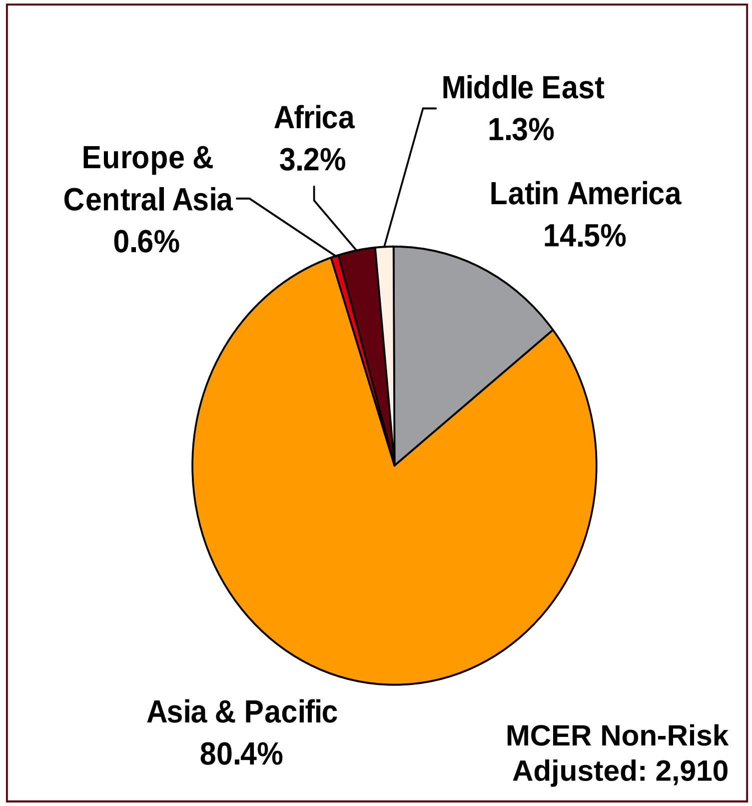
Conclusion:
Latin America an important source …
… but below average sized projects

Geographic Distribution (Nº Projects)



Source: cdmpipeline.org

Geographic Distribution (Nº CER)



Source: cdmpipeline.org

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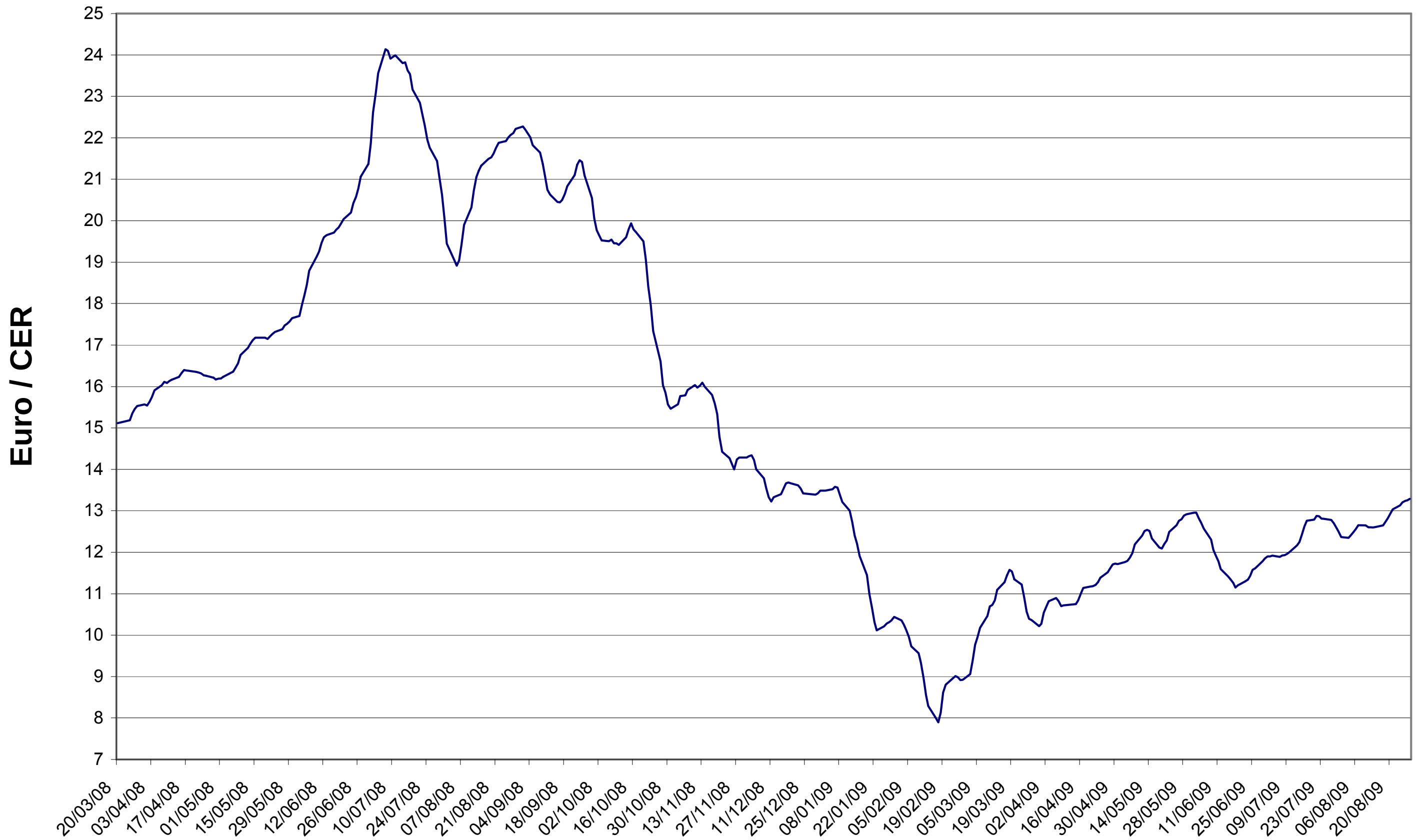
Market Overview

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

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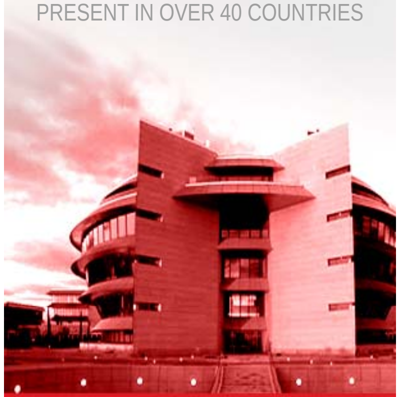

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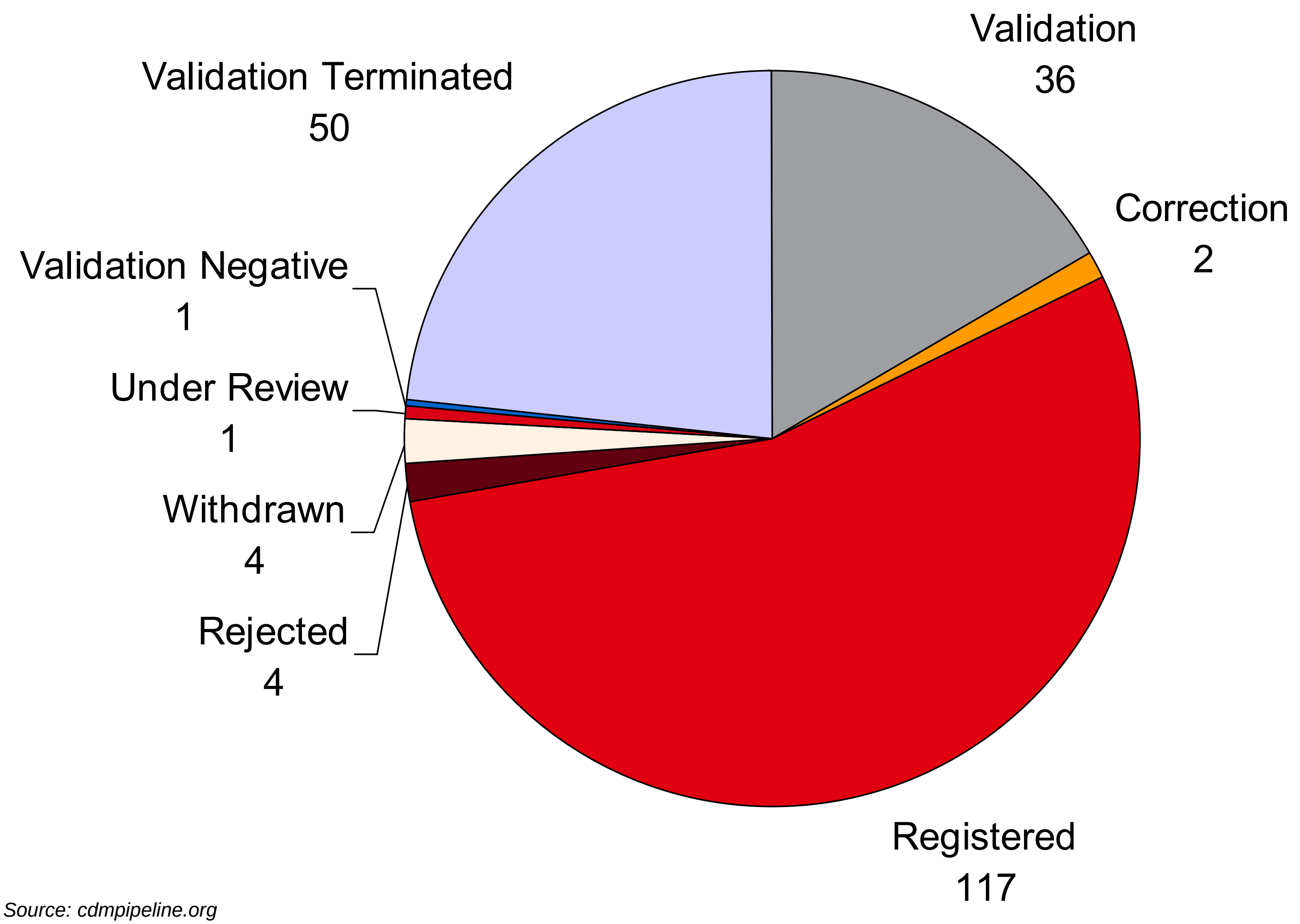
Market Overview

Mexican CDM Market Indicators

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

CDM Pipeline History Mexico (N° Projects)



Source: cdmpipeline.org

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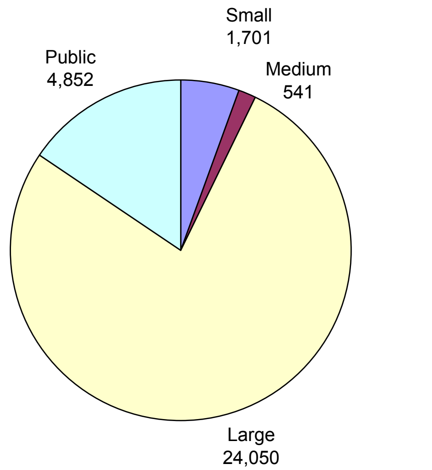
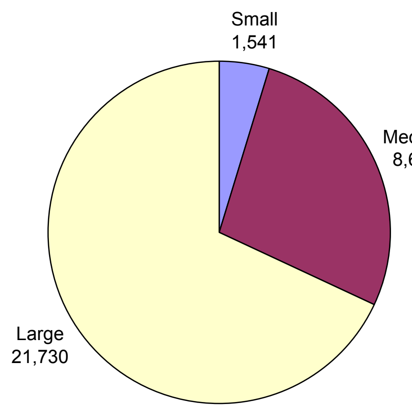
Market Overview
Mexican CDM Project Promoter Analysis

Conclusion:
80% Projects Developed by Large Companies

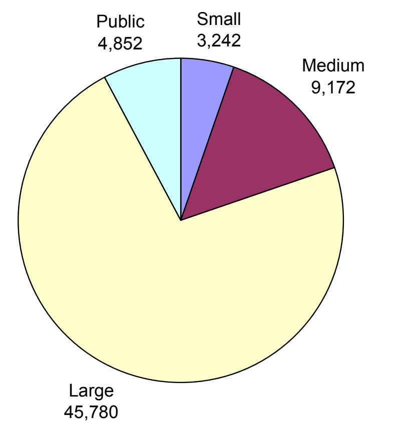
Mexican Promoters: N° CER



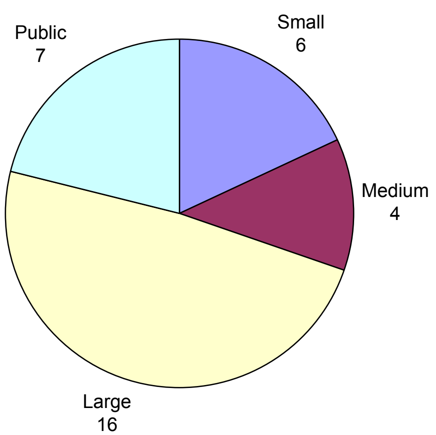
International Promoters: N° CER



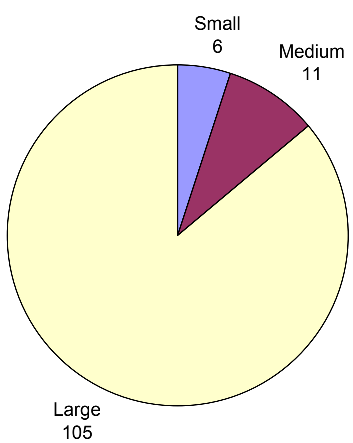
All Promoters: N° CER



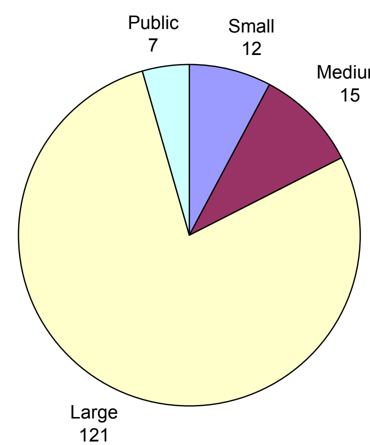
Mexican Promoters: N° Projects



International Promoters: N° Projects



All Promoters: N° Projects



Source: cdmpipeline.org

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Challenges

Overview

Promoter

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

How to Bridge the gap?

Buyer

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

Carbon Rich Projects

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

How to meet the needs

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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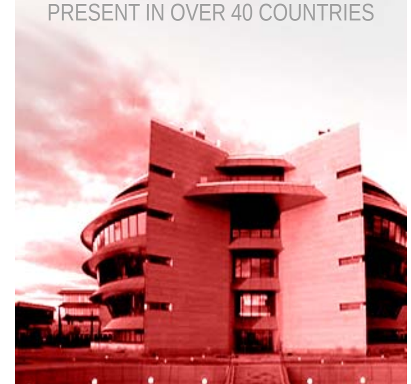
Challenges

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

Conclusion:
Risks Militate Against Financing Smaller Scale Promoters

Promoter Related Risks		
Risk	**Mitigant**	
CER Generation	Commercially Available Insurance Policy	Corporate Guarantee
Operational Performance	Commercially Available Insurance Policy	
Timely CER Issuance	Revolving Credit Facility	

Purchaser Related Risks	
Risk	**Mitigant**
Payment	Corporate Guarantee Or Credit Risk Insurance

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Challenges
Risk Characteristics

Risk Characteristics

Regulatory

Project

Credit

Market

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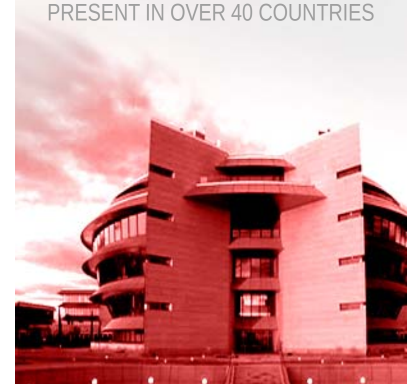

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Challenges
Risk Characteristics

Regulatory

- **Registration:** Increasingly harder to obtain project registration. More dogmatic application of regulation.
- **Regulatory Framework**: Rules-based rather than concept-based regulatory framework breeds complexity – no interpretation rather new rules created monthly. Also no appeals process.
- **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

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Challenges
Risk Characteristics

Project

- **Technical:** Predominance of non-traditional developers with no prior track record.
- **Performance:** 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
- **Finance**: More difficult in current conditions to obtain finance for projects

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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

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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

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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

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Solutions
Santander Approach

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:

Project Promoters	Compliance Companies	Intermediaries
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

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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

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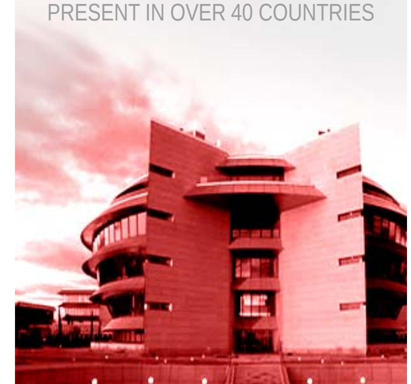

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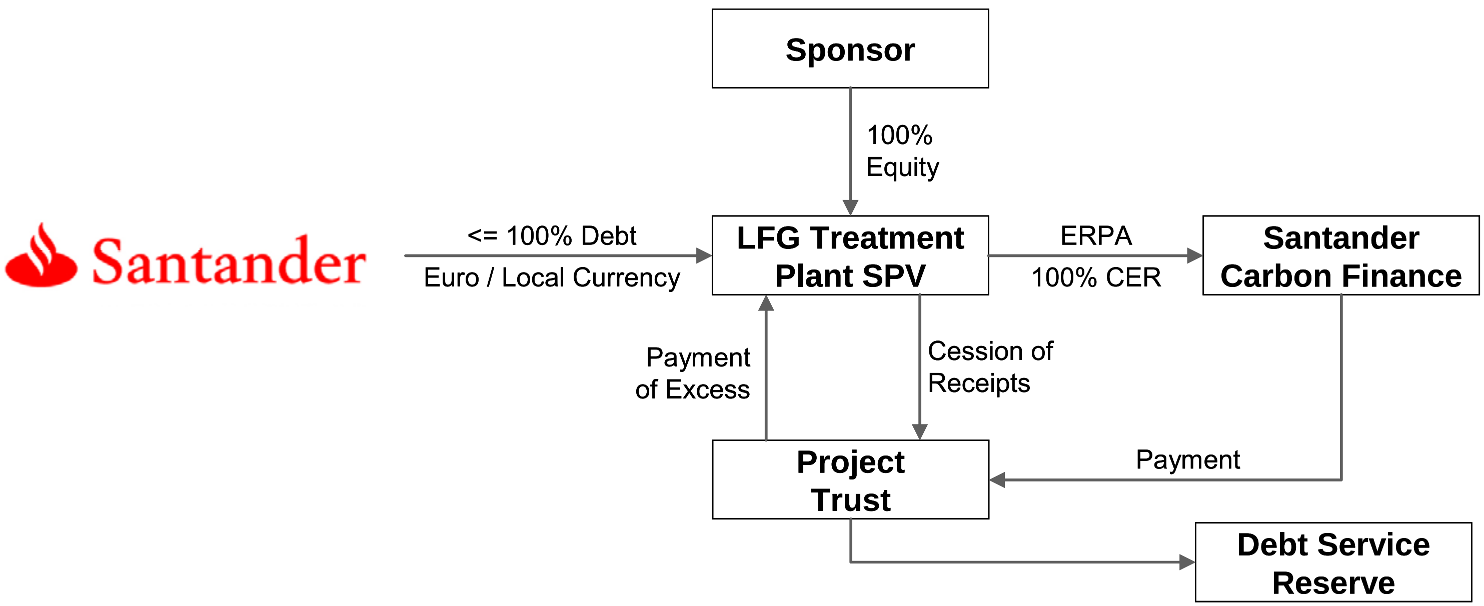
Existing Structures
Leveraged Carbon Finance

Structure

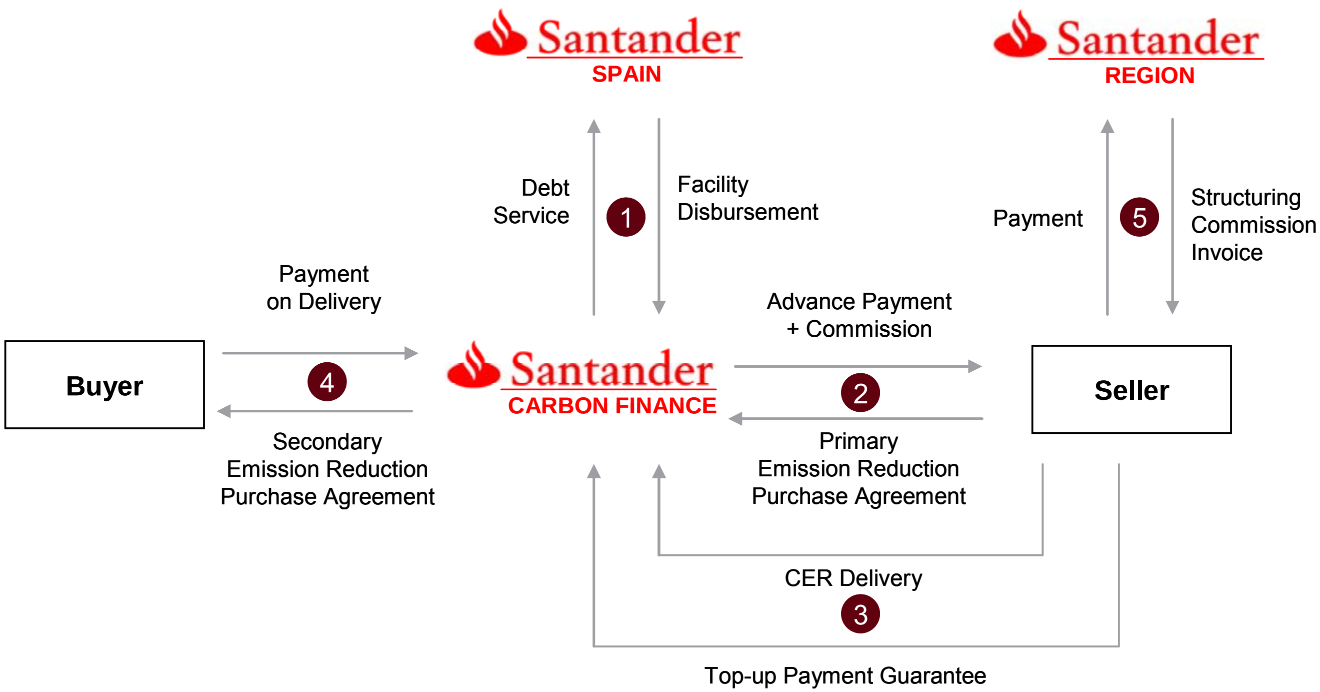
- the guaranteed purchase of up to 100% of emission reductions provides collateral that enables greater leveraged finance and through taking advantage of the natural Euro hedge the potential to also reduce the cost of capital



Evolving Structures
Carbon Monetization

Structure

- 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.



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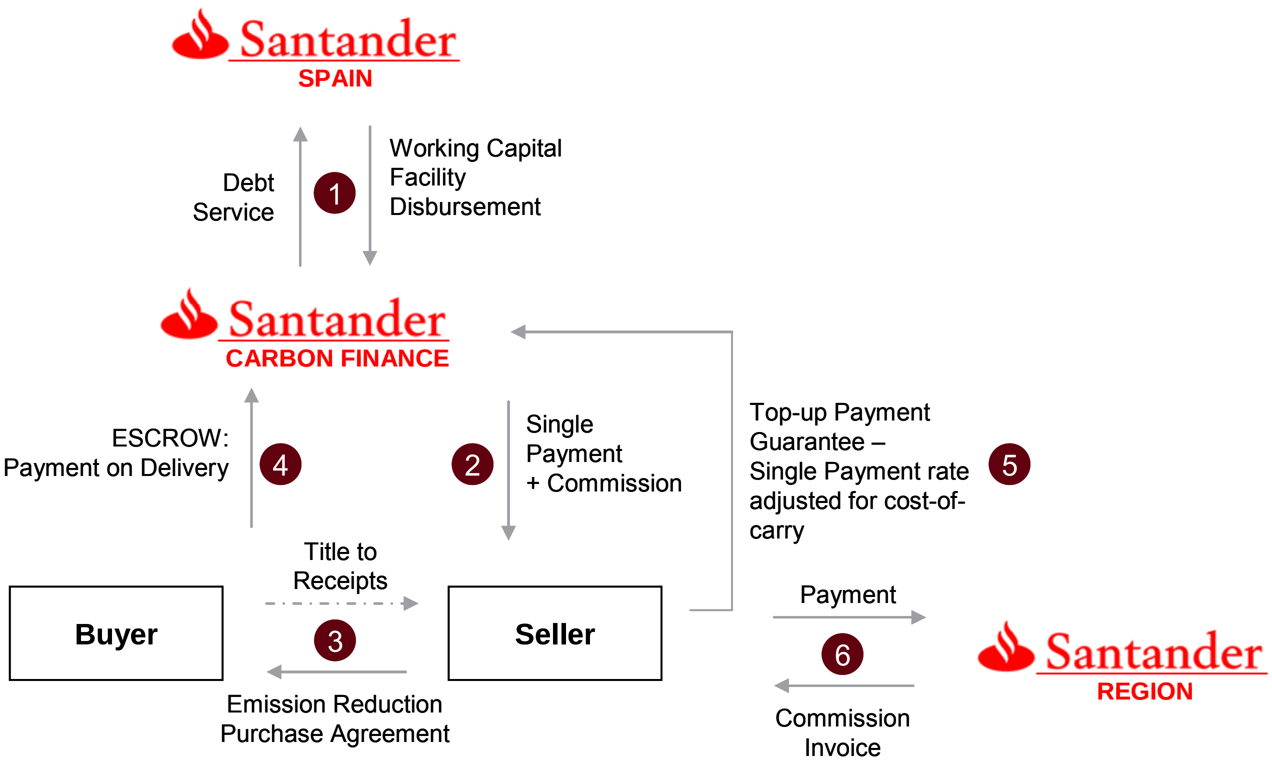
Evolving Structures
Carbon Collateralization

Structure

- Monetization of an existing Emission Reduction Purchase Agreement. Collateral consists of ERPA Receipts together with corporate or other guarantees from Seller.



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Perspectives
What The Future Might Hold?

Perspectives

- **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.

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Carbon Finance Contacts

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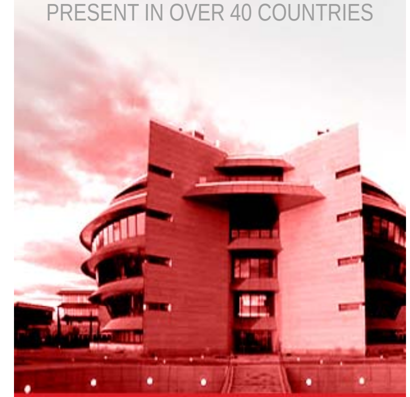

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