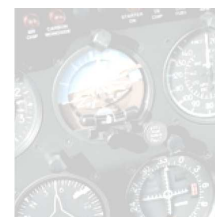


Global carbon market – Outlook 2020 Market Makers and Market leaders

UNEP FI Roundtable, Melbourne

Date: 25 October 2007
Produced by: Otti Bisang





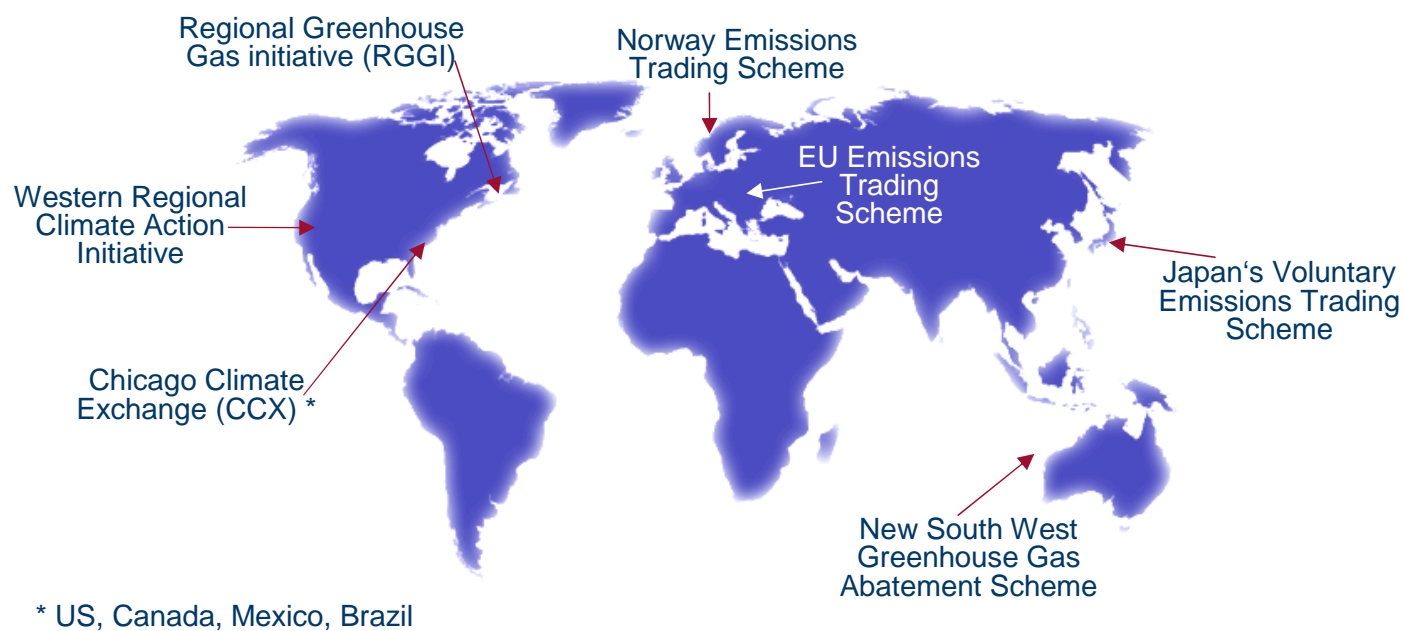
Outline

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Carbon market(s)

- **Mandatory**
 - Which industries are entering the scheme?
 - How to deal with industries in competition with firms in non-regulated countries?
- **Voluntary**
 - Inclusion of social aspects into the certificates?



2020: the future of carbon market(s)

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■ How many carbon market(s)?

– Several regional markets

- Americas, Europe and Asia-Pacific?
- Different standards for calculation?
- No compatibility between different schemes?

– One global market

- Convergence of the different regional and national initiatives?
- Will the EU Emissions Trading Scheme become the nucleus of this single market?
- Kyoto protocol enhanced and more clarity in the distribution of allowances?
- Standardization of the CDM and JI, harmonization of the percentage

– No more market

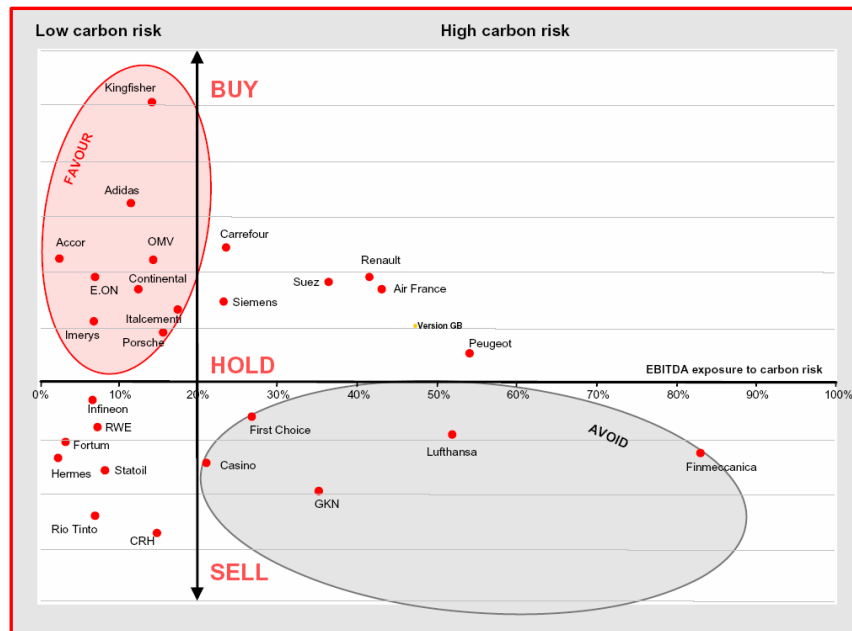
- End of Climate Change concern?
- National protectionism and no more global vision?

2020: the future carbon market(s)

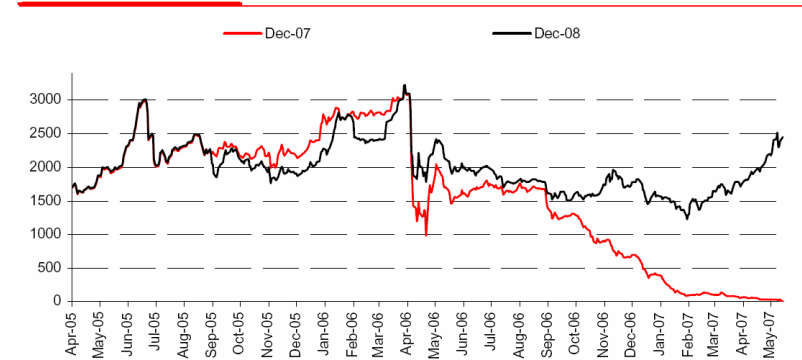
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- Price assumption for EU ETS in the future
 - Risk exposure for specific industries
 - Towards a price of € 50 / ton from today € 23 / ton
 - The model from Société Générale Asset Management



European Union Allowance carbon price: 2007 and 2008



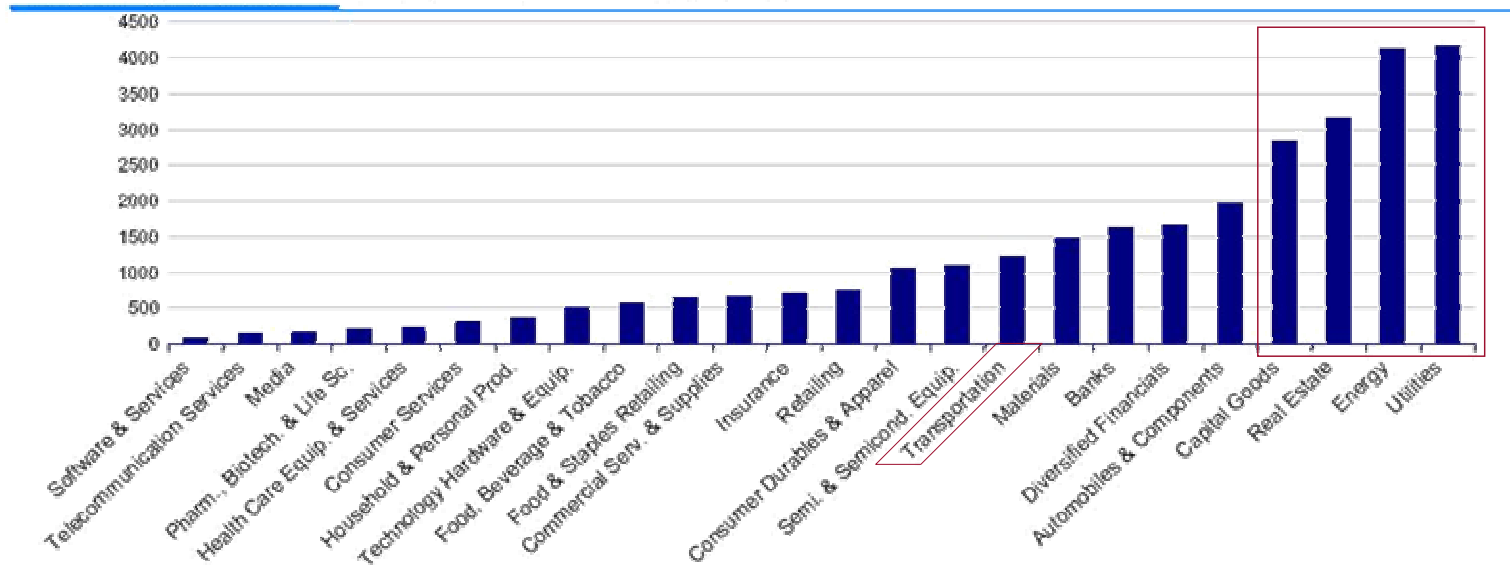
Source: SG Equity Research, Reuters (left axis scale: €cents)

Industry perspective



- Which industries would be in the scheme? 2 different aspects
 - Capacity to transfer costs of allowances to end users
 - e.g. Energy companies
 - Loss of competitiveness compared to firms in developing countries
 - e.g. Export-oriented industry
 - Aviation and/or surface transport with mandatory reductions goal?

Carbon intensity by sector – worldwide average (g CO₂/\$ turnover)



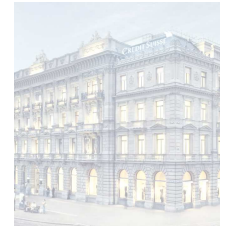
Source: Centre Info (Enviroimpact), 2006 data, sector averages determined by companies in sector (1,800 companies worldwide)



Players on the chess board

- **Developing countries**
 - Russia signed the Kyoto Protocol
 - Importance of China, India and Brazil entering the scheme and taking commitment
- **Regional governments**
 - European Union
- **International organizations & transnational unions**
 - United Nations Framework Convention on Climate Change
 - World Trade Organization
 - NAFTA (North American Free Trade Association)
 - APEC (Asia Pacific Economic Cooperation)
- **Financial institutions**
 - Banks
 - Insurances
- **Investors**
 - More awareness concerning environment practices from firms, e.g. CDP
 - Looking for investments low correlated to traditional markets
- **Consumers**
 - More demand for CO2 compensated products?

Voluntary carbon market



- **Characteristics**
 - Possibility to buy CO2 reduction certificates
 - Integration of social and ethical aspects?

- **Potential players**
 - Companies in industries not in a binding scheme
 - Firms in countries without reduction targets
 - International groups active in different countries

- **Benefits**
 - Positive „green“ image, positioning
 - Gain competitive advantage as energy costs decrease
 - Gain experience in new technologies

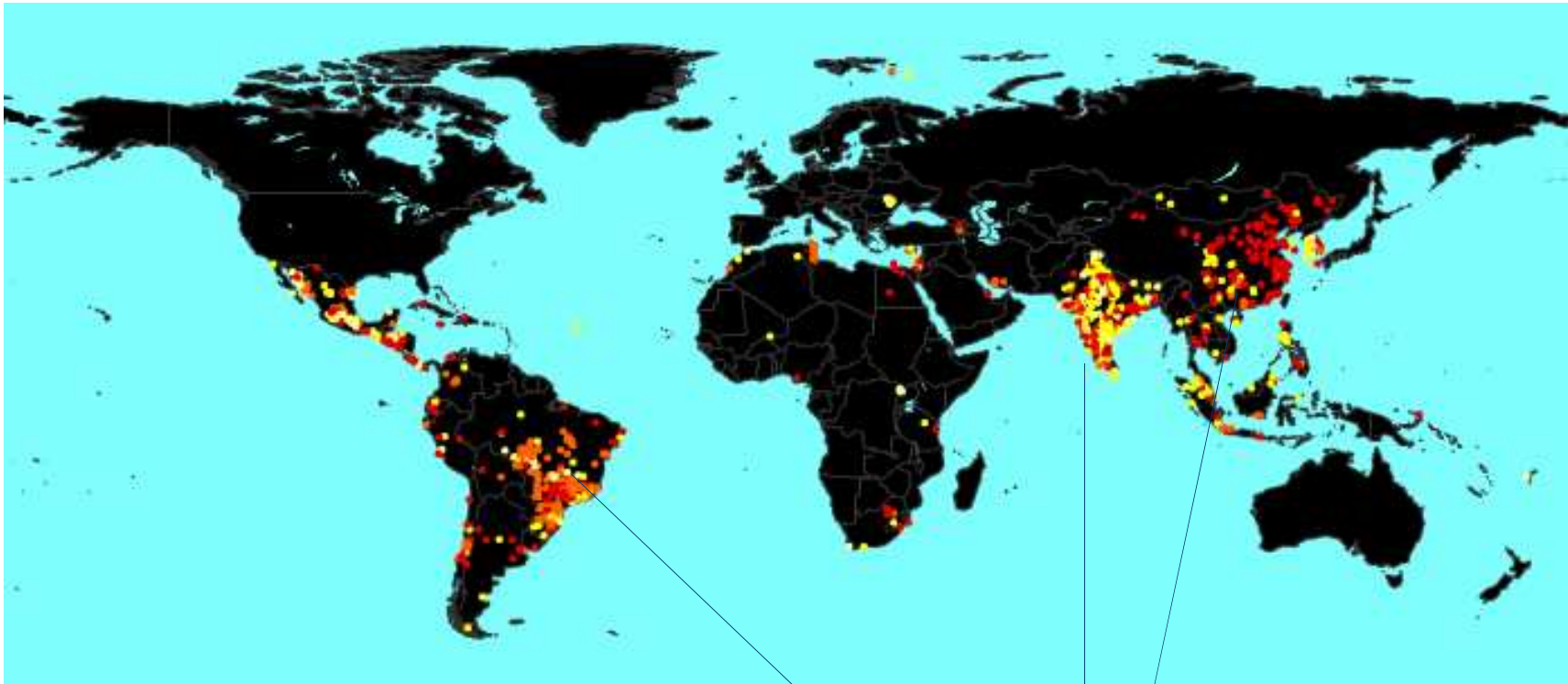


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Annex 1

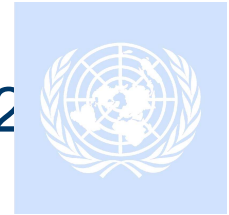
CDM projects location



- = CDM project, Large scale, one location
- = CDM project, Large scale, several locations
- = CDM project, Small scale, one location
- = CDM project, Small scale, several locations

Most CDM projects are in India, China & Brazil

UN Conference on Environment and Development 1992



- The message has produced results, making eco-efficiency a guiding principle for business and governments alike
 - Patterns of production are being scrutinized in a systematic manner by the UN and Governments alike;
 - Alternative sources of energy sought to replace the use of fossil fuels linked to global climate change;
 - New reliance on public transportation systems being emphasized in order to reduce vehicle emissions,
- Outputs of the „Earth Summit“
 - Rio Declaration
 - Agenda 21
 - UNFCCC
 - Convention on Biological Diversity (CDB)
 - Convention to Combat Desertification (UNCDD)
 - Statement of Forest Principles

Real environment impact of reduction



- **Global warming & Climate Change are a world issue**
 - Climate do not have boundary & diverse potential affected regions
 - Droughts, e.g. Spain
 - Floods, e.g. Germany, Switzerland
 - Higher sea level, e.g. New Orleans
 - Famine, e.g. Africa
 - Clean water, e.g. China

- **Verification & Certification needed**
 - CDM, Clean Development Mechanism
(called Certified Emission Reduction units or CERs)
 - How to control the project in developing countries?
 - Should this mechanism be abandoned?
 - JI, Joint Implementation
(called Emission Reductions Units or ERUs)
 - Towards more acceptance and compatibility in different schemes?
 - Incitement for developing countries to join the UNFCCC?

- **Compatibility will help reducing cost**
 - Today different percentage of JI allowed in EU countries

- **Transferability of different mechanisms**