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Risk Management for Emissions Trading

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Agenda

- Problem Formulation
- Research Setting
- Literature Review
- Findings and Discussion
- Conclusions
- Summary



Problem Formulation

What are the different risk management strategies and practises companies are using for EU ETS?

- Objectives:
 - Give insight on EU ETS risk management
 - Evaluate EMA and its support for EU ETS risk management



Research Setting

- Literature review with 4 main topics
- Web-based survey over EU ETS risk management
 - 47 respondents throughout Europe
 - Questionnaire with 6 distinct themes
 - Quantitative and qualitative data analysis



Literature Review (1/3)

EU Emissions Trading Scheme:

- Started on 1 January 2005
- 11,500 complying installations
→ Emissions must be covered with emission allowances (EUA)
- Compliance possible also with CER and ERU credits from CDM/JI projects

CER

ERU

Flexible Mechanisms (Kyoto):

- CDM = emission reduction projects in developing countries, unit CER
- JI = emission reduction projects in "industrialised countries", unit ERU
- IET = international emissions trading between governments, unit AAU

Abbreviations: CDM = Clean Development Mechanism
CER = Certified Emission Reduction
ERU = Emission Reduction Unit
EUA = European Union Allowance
JI = Joint Implementation
AAU = Assigned Amount Unit



Literature Review (2/3)

- Risk Management
 - EU ETS risks mainly operational or financial
 - Managed through hedging or on-balance-sheet decisions (relocation, mergers)
- EU ETS Compliance Strategies
 - Internal: emission reductions (e.g. abatement)
 - External: more EUAs (e.g. funds, trading)



Literature Review (3/3)

- EU ETS in practise
 - Instruments: spot, forward, futures, option, swap
 - Trading through exchanges, OTC and bilaterally
 - Carbon funds investing in CDM/JI projects
- EMA
 - Emphasis on both physical and monetary issues
 - Benefits decision-making, accounting, reporting
 - Separate or integrated EMA systems



Findings and Discussion (1/3)

- EU ETS operations
 - Responsibility at HSE function, operations, or trading
 - Employees generally part-time
 - Cooperation with external parties common
- Risk management strategies
 - 3/4 had determined a strategy for EU ETS
 - Included generally risk limits, responsibilities
 - Minimization of risks emphasized



- Risk management practises
 - Majority comply by trading and abatement
 - Some also use CDM/JI and carbon funds
 - Methods
 - 44 % use portfolios
 - 25 % construct models for EUA price
 - EUA trading bilaterally or through OTC



Findings and Discussion (3/3)

- Carbon Funds and CDM/JI projects
 - 15 % invested in carbon funds, 25 % in CDM/JI
 - Reasons: diversification, experience, more EUAs
- EMA and EU ETS risk management
 - Mapping key risks and abatement possibilities
 - Improved information collection and cost assessment



Conclusions

- Risk management relatively versatile
 - Great differences between companies
 - Strategies and methods still being developed
 - Minimisation of risks and costs central
- EMA benefits companies in their EU ETS risk management



Summary

- EU ETS risks operational and financial
 - Hedging, internal and external compliance
- Companies prepared with EU ETS
 - Strategies and practises exist, versatile
- EMA can help companies
 - Support information collection and decisions

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