Power Market II - Modeling and Strategic Positioning

Lecturer
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Assistants
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Date
Wed 8-12am, HG D 7.1

Hours/Credit points
6 credits

Type
Elective course

Course number
227-0730-00L

Subject

- Part 1:
  Model to price options, analysis of sensitivities, delta and gamma neutral hedging of a portfolio, financial modelling of physical assets, evaluation of power plants using discounted cash flows or real options, management of a portfolio.

- Part 2:
  Analysis of the markets and the environment, SWOT analysis, develop strategic options.

Contact:
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Language: Lectures will be given in English

Contents

- Part 1: Modeling
  Option pricing, Black-Scholes, sensitivity analysis ("greeks"), modeling of power market prices, binominal trees, advanced modeling (mean reversion), derivatives on electricity market prices: swaps, caps and floors, swaptions, spread options, "exotic" options, hedging of an option portfolio, financial modeling of power plants, evaluation of power plants, contracts and grids using future cash-flows an risk, discounted cash flow, real options.

- Part 2: Strategic Positioning
  Initial position of utilities in a dynamic environment, expected market development, SWOT analysis, strategic positioning, strategic options and examples of selected European utilities, case studies.

- Handouts of the lecture slides will be provided in the lecture.

- For questions regarding the lecture, please contact the assistants.

- We expect the active participation in the lecture (including group activities and exercises).

How to find us
• **Option Valuation Tool**

Special

• 2-day excursion

• presentations of invited speakers from industry

Exam 2015

• 180 Minutes, written exam
• HCI G7
• Wednesday, May 27, 2015
• 08:15 - 11:15
• Closed book, non programmable calculator allowed (No Ti voyage200, Ti-89, or similar)

Documents  Download
Lecture Program  
Exercises  Tasks Solutions
Exercise 1: Option Values  
Exercise 2: Hydropower Optimisation  
Exercise 3: KEV and DCF  
Exercise 04: Real Options  
