Green Derivatives (FMB667)

Fall Module II, 2013

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Objectives

This course covers selected topics in options, futures, and other derivatives on green assets such as commodities, weather, CO2 emission. FMB505 is prerequisite. The course emphasizes the quantitative models used for pricing and hedging explicit and embedded options on green assets. The course will also address forward and futures contracts.

Reference Books

Text is not required. Options, Futures, and Other derivatives by Hull, John C., is optional.

Helyette Geman, Commodities and commodity derivatives, WILEY.

Denny Ellerman, Frank J. Convery, and Christian de Perthuis, Pricing Carbon, Cambridge.

녹색금융론: 노희진, 2010, 박영사,

Grades

Your grade will be based on class participation (10%), a project (40%), and a final exam (50%).

Projects

The project is to be done in groups of two to four students. You are responsible for forming your own groups but all groups should be formed before Thursday of the second week (November 7). After forming group, please upload your group members' name in the folder of Green Derivatives via Lecture forum of Outlook. The project is to choose one among "commodity derivatives / green derivatives" which will be handed out in class and to suggest how they can be used to enhance trading strategy. The project report should be no more than 10 pages long. It should cite all information sources used and should explicitly indicate any verbatim or near verbatim quotations and their sources. Each group should do all project work independently of other groups. The report is due at beginning of class on **Tuesday, December 10** and each group has to present their work in class on **Thursday, December 12**.

Information Sources

Much of what there is to know about derivatives is descriptive like contract specifications, exchange rules, margin requirements and changes frequently. The internet provides this kind of information.

Derivatives website: numa.com, indexarb.com

Exchanges: CME, NYSE, CCX, ECX, ICE, ASX

For current and historical numerical information (quotation, interest rates), Bloomberg or Reuters terminal are sources. For historical structured product prices, finance yahoo or finance google are another sources.

Tentative Course Schedule

Date	Lecture	
10/29	Commodity markets	
10/31	No class	
11/5	Commodity – investors vs. hedgers	
11/7	Commodity derivatives pricing	
11/12	Commodity derivatives – futures, options	
11/14	Commodity derivatives – exotics	
11/19	Commodity Case Studies	
11/21	Carbon markets	
11/26	Carbon pricing	
11/28	Green finance international conference	
12/3	Carbon strategy	
12/5	Renewable energy market	
12/10	Renewable energy market in Korea	
12/12	Presentation of term project	
Last week	Final Exam	