Queen Mary, University of London
BSc. (Econ), ECN-358 Futures and Options

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READING LIST & LECTURE SCHEDULE

Aim (Broad Educational Purpose)

The aim of this course is to provide the student with a full understanding of how derivatives are priced and traded and how they are used for hedging and speculation in today's financial markets. We first analyze how intrinsic and time value are securitized in an option's theoretical price, and then we study the marking-to-market mechanism for futures. We then turn our attention to directional, volatility and pure arbitrage trading strategies using portfolio of options.

Objectives (Specific Learning Outcomes)

On successful completion, students should

- be familiar with the basic concepts in options and futures pricing
- thoroughly understand how time and intrinsic value determine the option's theoretical price
- understand the marking-to-market mechanism for futures
- be familiar with directional trading strategies using options
- understand how the volatility of the underlying cash market is securitized in the option's premium and subsequently devise "pure" volatility trading strategies
- be familiar with arbitrage trading strategies using options

Teaching Arrangements

Throughout semester B, there is a weekly (two hours) lecture combined with a one hour class which is compulsory and starts the 2nd week of the semester. Students will be provided with a handbook containing a detailed lecture notes, problem set, and solutions. The lecture notes are drawn extensively from the books given below. It is essential that students work on each problem set at home before it is solved in the class.

Course Assessment

There will be one compulsory test (at an arranged date) which will count 20% towards the course unit mark. In May, students will sit a two hour formal examination which will count for 80% of the course unit mark.

Essential Reading

- John C. Hull (2005), *Options, Futures, & Other Derivatives,* Prentice-Hall.
- Robert G. Tompkins (1994), *Options Analysis* , Macmillan.

Related Reading

Dunbar N. (2000), *Inventing Money,* Wiley.
Stiglitz J.E (2003), *The Roaring Nineties,* Penguin Books.
Malkiel B.G. (1990), *A Random Walk Down Wall Street,* W.W. Norton.

Lecture Schedule

1. Option Concepts and Fundamental Strategies
2. The Black and Scholes Option Pricing Model
3. The "Greeks"
4. Stock Index Options
5. Forwards and Futures
6. The Binomial Pricing Model
7. Directional Trading Strategies
8. Volatility Estimation
9. Volatility Trading Strategies
10. Option Arbitrage