

FM 9561B - Fixed-Income Modelling

Outline of Lectures: 27 – 31 January 2014

For this week, we aim to cover the following theories/concepts:

1. Recap of multi-dimensional Brownian motion
2. Cross-variations of BMs and the multi-dimensional Itô's formula
3. Change of measure (Girsanov's theorem) and applications in finance
4. Bayes' theorem for conditional expectation
5. Risk-neutral or martingale measure and risk-neutral valuation
6. The Martingale Representation Theorem
7. Self-financing and self-replicating strategies