

SS 4521G/FM 9521B - Advanced Financial Modelling

Outline of Lectures: 24-28 February 2014

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

1. Portfolio insurance
2. Creation of synthetic options
3. Volatility smiles/smirks
4. Implied volatility of European calls and puts
5. Reasons for volatility smiles in foreign currency options
6. Reasons for volatility skews in equity options
7. Volatility term structure and volatility surfaces
8. Implied volatility when a single large jump in the stock price is anticipated

9. Recovering risk-neutral probabilities from option prices

10. Volatility surfaces

11. Implied volatility when a single large jump in the stock price is anticipated