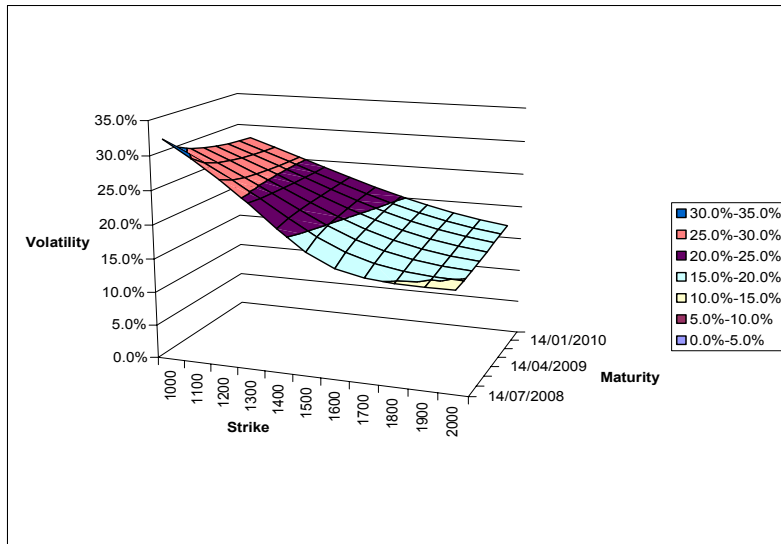
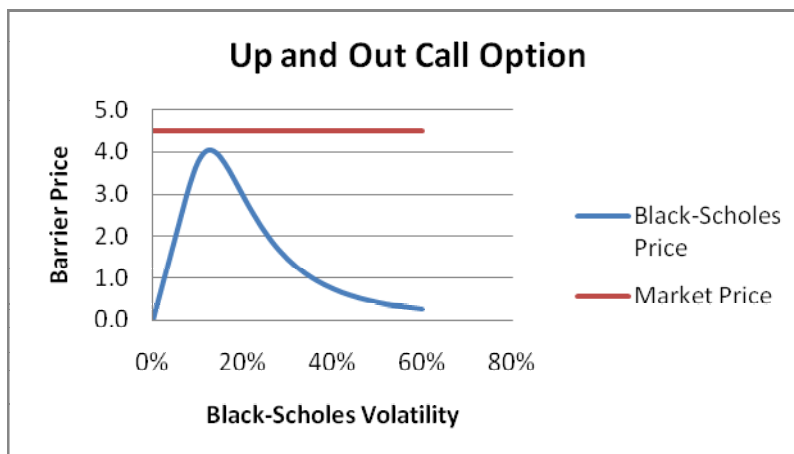


Volatility : Trading and Managing Risk

When pricing European options it is common practice to use a Black-Scholes pricing formula with different volatilities for options at different strikes and maturities. The following chart shows the “volatility surface” for an equity index.



If we use the same assumptions as Black-Scholes in pricing a barrier option such as an “up and out” call option then the market price of the option can be higher than any value possible with Black-Scholes assumptions. This is illustrated in the following chart:



In this course we explain this strange behaviour of barrier options by exploring the different ways in which the volatility surface can be modelled. Using this framework we then look at different products used to trade volatility and how they can be used to hedge a portfolio of volatility exposure.

After attending this course a participant will be able to:

- Model a volatility surface
- Understand the differences between some of the common alternatives to Black-Scholes
- Appreciate the practicality of how to trade volatility
- Understand the instruments commonly used to trade volatility
- Assess the impact of a volatility surface on more complex products
- Hedge the volatility exposure of a complex book of position