Recovering a time-homogeneous price process from perpetual option prices

David Hobson

Department of Statistics, University of Warwick

D.Hobson@warwick.ac.uk

Abstract. It is well-known how to determine the price of perpetual American options if the underlying stock price is a time-homogeneous diffusion. In the talk we consider the inverse problem, i.e. given prices of perpetual American options for different strikes we show how to construct a time-homogeneous model for the stock price which reproduces the given option prices.

Keywords perpetual American options; stock price model