Chapter 11

Related Literature

The following advances to the GARCH literature have been published since Duan's 1995 paper:

- Heston and Nandi [22] published a closed-form solution to a GARCH option pricing problem similar to that of Duan's 1995 paper. This method makes use of the conditional moment generating function of the stock price at expiry.
- Duan and Simonato [11] proposed a numerical method for valuing American options with GARCH -like volatility in 2001. This method is based on approximating the underlying asset price process by a finite-state, time-homogeneous Markov chain.
- Ritchken and Trevor [30] in 1999 proposed a lattice approximation scheme for the pricing of GARCH and bivariate stochastic volatility frameworks.
- Duan, Gauthier, Sasseville and Simonato [12] proposed an efficient approach to pricing in the GARCH framework by combining lattice methods and moments approximation in 2002.

Other stochastic volatility option pricing models (see Chriss [8]):

- Implied volatility trees. A model by Derman and Kani and similar models by others. This is a lattice system that use the implied volatility surface of a stock price as input to price an option. This model can also be adapted to price American options.
- Implied binomial trees. A lattice system that uses the implied volatility of European options of all strikes at a fixed expiration date to price nonstandard and exotic options.

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