

1046-90-48

Victor Goodman* (goodmanv@indiana.edu), Mathematics Department, Indiana University, Bloomington, IN 47405. *Volatility Models of the Yield Curve*.

An interesting and useful class of multi-factor term structure models is formed by specifying common volatilities for forward interest rates. The context is not HJM since it is well known that constant volatility in an HJM model produces infinite rates. On the other hand, if one solves for the arbitrage-free dynamics in terms of a forward measure, one finds that rates are finite up to the maturity of the numeraire. Basic derivatives may be priced using this approach, even though the risk-neutral and forward measures are not equivalent. We present specific prices for caps and swaptions; these results allow one to compute hedging positions. Also, we describe the structure of a three-factor model which best implements the observed statistics of rates, and we indicate some open problems remaining for this class of models. (Received July 08, 2008)