Pricing of Discount Bonds with a Markov Switching Regime[*]

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Abstract. We introduce a Markov switching regime and price a discount bond using two popular models for the short rate, the Vasicek- and CIR-dynamics. In both cases, an explicit formula is obtained for the bond price which includes the solution of a matrix ODE. Our model is easy to calculate and captures the effect of regime uncertainty on the price and the term structure.

Keywords: Bond pricing, term structure, Markov switching regime, Vasicek model, CIR model, stochastic flows.

JEL classification: G12, E32,