Term Structure Dynamics in a Monetary Economy with Learning

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Abstract
This paper investigates a general-equilibrium asset pricing model of the term structure of nominal interest rates. In a pure exchange economy with incomplete information, investors are unable to observe the expected growth rates of both exogenous real output and money supply and, therefore, engage in dynamic Bayesian inference. The dependence of term premia on beliefs allows the model to increase the volatility of excess holding returns and introduce GARCH properties, both of which interact with the volatility of macro variables. A calibration exercise also shows that the model generates standard deviations of term premia, which nearly matches data for zero-coupon US Treasury bonds.

JEL Classification: G12, E43, D83.

Keywords: Term structure of interest rates; Monetary equilibrium model; Uncertainty in parameters; Learning.