Author's Accepted Manuscript

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PII: S0304-405X(14)00110-X
DOI: http://dx.doi.org/10.1016/j.jfineco.2014.05.006
Reference: FINEC2425

To appear in: *Journal of Financial Economics*

Received date: 12 March 2013
Revised date: 7 October 2013
Accepted date: 2 November 2013

Cite this article as: Kameliya Filipova, Francesco Audrino, Enrico De Giorgi, Monetary policy regimes: implications for the yield curve and bond pricing, *Journal of Financial Economics,* http://dx.doi.org/10.1016/j.jfineco.2014.05.006

Monetary policy regimes: implications for the yield curve and bond pricing☆

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Abstract

We develop a multivariate dynamic term structure model, which takes into account the nonlinear (time-varying) relation between interest rates and the state of the economy. In contrast to the classical term structure literature, in which nonlinearities are captured by increasing the number of latent state variables or by latent regime shifts, in our no-arbitrage framework the regimes are governed by thresholds and are directly linked to economic fundamentals. Specifically, starting from a simple monetary policy model for the short rate, we introduce a parsimonious and tractable model for the yield curve, which takes into account the possibility of regime shifts in the behavior of the Federal Reserve. In our empirical analysis, we show the merit of our approach three dimensions: interpretable bond dynamics, accurate short end yield curve pricing, and yield curve implications.

Keywords: Threshold regime switching model, Macroeconomic variables, Term structure of interest rates, Asset pricing, Nonlinear dynamics, Business cycles

JEL Classification: C32, C51, C52, C53, E43, G12

1. Introduction

Over the last 40 years researchers, have actively studied the dynamics of the term structure of interest rates and its relation with the states of the economy. Most of the recent attention has been devoted to jointly modeling yield and macroeconomic variables within a no-arbitrage

☆We thank George Tauchen, Mike Chernov, Paul Soederlind, an anonymous referee, the seminar participants at the Financial Econometrics Lunch Group at Duke University, the Fifth Computational Statistics and Data Analysis (CSDA) International Conference on Computational and Financial Econometrics in London, and the Fifth Annual SoFiE Conference hosted by the Oxford-Man Institute, University of Oxford for their comments.

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