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Forecasting the Term Structure of Government Bond Yields in Unstable Environments[*]

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Abstract

In this paper we model and predict the term structure of US interest rates in a data-rich and unstable environment. The dynamic Nelson-Siegel factor model is extended to allow the model dimension and the parameters to change over time, in order to account for both model uncertainty and sudden structural changes, in one setting. The proposed specification performs better than several alternatives, since it incorporates additional macro-finance information during hard times, while it allows for more parsimonious models to be relevant during normal periods. A dynamic variance decomposition measure constructed from our model shows that parameter uncertainty and model uncertainty regarding different choices of predictors explain a large proportion of the predictive variance of bond yields.

Keywords: Term Structure of Interest Rates; Nelson-Siegel; Dynamic Model Averaging; Bayesian Methods; Term Premia.

JEL Classification Codes: C32; C52; E43; E47; G17.