Anh Le (Penn State University, Smeal College of Business)

Tractable Term-Structure Models and the Zero Lower Bound

(co-authored with Bruno Feunou, Jean-Sebastien Fontaine, and Christian Lundblad)

Abstract

We greatly expand the space of tractable term-structure models. Key to our approach is a direct specification of bond pricing functions, that does not require an explicit pricing kernel, but that nonetheless guarantees absence of dominant trading strategies. We study a special case of our models that can be viewed as a generalized Nelson-Siegel model designed to be consistent with the zero lower bound (ZLB) of interest rates. Model-implied bond prices are available in closed-form and estimation of the model is straightforward. We show, through simulations, that our model can offer forecasting performances comparable to existing ZLB models. Variants of our ZLB-consistent model can also provide a good fit to the time-varying volatility and correlation structure of bond yields.

.