

Euro Area Business Cycle Network Training School

Term Structure Modelling

by

Kenneth Singleton (Stanford University and NBER)

Anh Le (Penn State)

Hosted by: Bank of Finland, Helsinki

27-29 August 2018

Deadline: 6pm (UK time), 15 May 2018

General Description

We are pleased to announce details of the latest EABCN Training School; a three-day course entitled “Term Structure Modelling”. Professors Kenneth Singleton and Anh Le will teach the course. It is primarily aimed at participants in the Euro Area Business Cycle Network but applications will also be considered from doctoral students, post-doctoral researchers and economists working in central banks and government institutions outside of the network, as well as commercial organisations (fees applicable for non-network organisations).

Course Contents

This course covers select topics on the modelling of the term structure of interest rates, including reduced-form affine term structure models and equilibrium models of the interest rates in which agents are endowed with specific preferences. We discuss how to a) construct; b) implement; and c) use of models of the interest rates for analysing risk premiums and interpreted macroeconomic events. The tentative topics are as follows:

Introduction.

(i) review the salient empirical properties of bond yields (conditional moments, factor structure, etc.) and several of the empirical puzzles related to the distributions of bond yields; (ii) review no-arbitrage pricing of default-free bonds; and (iii) introduce parametric models for pricing bonds, including affine and linear-rational models.

Reduced-Form, Affine Term Structure Models.

(i) alternative normalizations for achieving identification; (ii) estimation strategies for dynamic term structure models; and (iii) goodness-of-fit of models of bond yields.

Equilibrium Models of the Term Structure.

(i) pricing bonds in models with long-run risks; (ii) habit formation and risk premiums in bond markets; and (iii) empirical challenges in matching distributions of yields in equilibrium models.

Spanning Restrictions in Dynamic Term Structure Models.

(i) Economic motivations for spanning restrictions; (ii) evidence of unspanned factors and their implications for modelling risk premiums in bond markets; and (iii) learning in bond markets.

Time-Varying Volatility in Bond Markets

(i) unspanned volatility in bond markets; (ii) potential resolutions of the tension between fitting conditional means and variances of yields; and (iii) using options data to infer volatilities in bond markets.

How to apply:

The course will take place at the Bank of Finland in Helsinki, Finland. Participants will be invited to make their own arrangements regarding their travel, accommodation and meals. Further information will be available to successful applicants. **Candidates should apply online by going to the following link <https://portal.cepr.org/eabcn-training-school-term-structure-modelling>** to upload your **CV by 6pm (UK time), 15 May, 2018**. If you have any issues logging in, please get in touch with Mandy Chan at mchan@cepr.org.

PhD students should also send a statement that specifies the ways participating in the school will be useful for their current research (max 300 words).

Participants from non-academic institutions where the employer is not a member of the EABCN network are charged a course fee of € 2000.

About the Instructors:

Kenneth Singleton is the Adams Distinguished Professor of Management at the Graduate School of Business at Stanford University. He has published widely on financial risks and their impacts on economic decision-making, including books on credit risk and dynamic asset pricing. He is a recipient the Stephen A. Ross Prize in Financial Economics; and is a Fellow of the Econometric Society and the Society for Financial Econometrics. He is currently Vice-President of the American Finance Association.

Ken has over 40 years of experience in academia, was a special advisor to the chief economist at the IMF during the crisis in 2009; and is now a member of the Investment Committee for the Stanford GSB Impact Fund. He serves on the Boards of two nonprofits focused on inspiring healthier lifestyles and building financial capacity for lower-income families in the U.S. He holds a BA in Mathematics from Reed College and a PhD in Economics from the University of Wisconsin-Madison.

Anh Le is an Assistant Professor of Finance at the Smeal College of Business, Pennsylvania State University. His primary research interests lie in the area of interest rate and credit risk modelling, using both affine and non-affine dynamics. He received his PhD and master's degrees in finance from New York University's Stern School of Business, and his bachelor of commerce degree with first-class honours from the University of Queensland and Monash University in Australia.

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