

The Working Group on Risk - CREAR and the Econometrics & Forecasting seminar of the IDS Department at ESSEC, with the support of the BFA group of the SFdS, Institut des Actuaire, have the pleasure to invite you to listen to:

Prof. Robert TAYLOR
University of Essex, United Kingdom

March 26, 2015, 12:30-1:30 pm
EEE - ESSEC La Défense (CNIT) – Room 104

Tests for explosive financial bubbles in the presence of non-stationary volatility

This paper studies the impact of permanent volatility shifts in the innovation process on the performance of the test for explosive financial bubbles based on recursive right-tailed Dickey-Fuller-type unit root tests proposed by Phillips et al. (2011). We show that, in this situation, their supremum-based test has a non-pivotal limit distribution under the unit root null, and can be quite severely over-sized, thereby giving rise to spurious indications of explosive behaviour. We investigate the performance of a wild bootstrap implementation of their test procedure for this problem, and show it is effective in controlling size, both asymptotically and in finite samples, yet does not sacrifice power relative to an (infeasible) size-adjusted version of their test, even when the shocks are homoskedastic. We also discuss an empirical application involving commodity price time series and find considerably less emphatic evidence for the presence of speculative bubbles in these data when using our proposed wild bootstrap implementation of the Phillips et al. (2011) test.

Financial support from ESSEC Research Center, the Department of Information Systems, Decision Sciences & Statistics (IDS) at ESSEC and the Labex MME-DII is gratefully acknowledged.



*For any information, please contact
Frédérique JEAN-LOUIS
(01 34 43 32 49 / jeanlouis@essec.edu)*

<http://crear.essec.edu/working-group-on-risk>

Prof. Robert TAYLOR
University of Essex, United Kingdom

Professor Robert TAYLOR, took his PhD from Cambridge University in 1997. He is currently employed as Professor of Financial Econometrics at the University of Essex and has previously held academic posts at the Universities of York, Birmingham and Nottingham. He is a fellow of the Journal of Econometrics. Robert is Editor-in-Chief of the Journal of Time Series Analysis, a Co-Editor of Econometric Theory, and an Associate Editor of The Econometrics Journal and of Econometrics Reviews.



*For any information, please contact
Frédérique JEAN-LOUIS
(01 34 43 32 49 / jeanlouis@essec.edu)*

<http://crear.essec.edu/working-group-on-risk>