INSTITUTE OF MATHEMATICAL SCIENCES
UNIVERSITI MALAYA

SIRI SEMINAR KUMPULAN PENYELIDIKAN

Title: Estimating the R-Star in the US: A Score-Driven State-Space Model with Time-Varying Volatility Persistence.

Speaker: Tibor Pal.
(University of Salerno)

Date: 12 March 2025..

Time: 11 am-12 pm.

Venue: Hybrid mode:
MM3, Level 2, Institute of Mathematical Sciences, Faculty of Science, Universiti Malaya, and Microsoft Teams (https://tinyurl.com/4zpk8a9n)

ABSTRACT

This paper studies the natural rate of interest (r-star) in the US using a score-driven state-space model within the Laubach-Williams structural framework. The proposed model improves the flexibility in variance adjustments by assigning time-varying weights to both the conditional likelihood score and the inertia coefficient in the volatility updating equations. The improved state dependence of volatility dynamics effectively accounts for sudden shifts in volatility persistence induced by highly volatile unexpected events. In addition, the time-varying IS and Phillips curve relationships allow us to study the structural changes in the US economy that are relevant to monetary policy. The results suggest that the advanced models improve the precision of the r-star estimates and reduce their real-time measurement error.

All are Welcome