



20-22 September 2022

Narodowy Bank Polski Webinar

# Dynamic factor models and their popular applications

## Tentative Programme

Lecturer: Mr Grzegorz Szafrński, Adviser, Analysis and Research Department, NBP

### 20 September, Tuesday (UTC +2)

09:00-09:15	Welcome remarks
09:15 – 10:00	Statistical factor analysis and principal components analysis (PCA). Dynamic factor model (DFM): identification and estimation issues. Kalman filter vs. two-step method of Stock&Watson – presentation.
10:15 – 11:00	Data collection and pre-processing (including seasonal adjustment) in data-rich environment. Popular data sources (Eurostat) and tools (JDemetra with a cruncher)
11:15 – 12:30	Data preparation and factor selection exercise. Workshop with Matlab codes. Coding assignment – group activity
12:30 – 13:00	Q&A session

### 21 September, Wednesday (UTC +2)

09:15-10:00	Leading indicators (LI) vs. DFM models in short-term inflation forecasting – presentation
10:15-11:00	Forecast evaluation with examples (presentation)
11:15 – 12:30	LI and model selection with forecast evaluation. Workshop with Matlab codes. Coding assignment – group activity
12:30 – 13:00	Q&A session



22 September, Thursday (UTC +2)

09:15-10:00	Advances in dynamic factor models: model and data selection, dynamic factor structure selection
10:15-11:00	Real-time data analysis. Mixed data frequency and ragged edges. Multi-level factor models. Decomposition into country, group and subgroups specific factors.
11:15 – 12:30	Data mining HICP in EU. Coding assignment – individual activity
12:30 – 13:00	Q&A session

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