

MAXIMILIAN SCHRÖDER

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RESEARCH INTERESTS

Applied Macroeconomics; Time-series Econometrics; Machine Learning

PROFESSIONAL EXPERIENCE

Central Bank Experience:

Intern, *Norges Bank*, PPO

Aug 2021 - present

MP Analyst, *European Central Bank*, Directorate General Monetary Policy

Jun 2020 - Aug 2020

Trainee, *European Central Bank*, Directorate General Monetary Policy

May 2019 - May 2020

Intern (Master's Thesis), *Deutsche Bundesbank*, Economics Department

Oct 2018 - Dec 2018

Intern, *Deutsche Bundesbank*, Research Department

Sep 2017 - Dec 2017

Research Assistance:

Research Assistant, *University of Tübingen*, Chair of Econometrics

Oct 2016 - Aug 2019

Research Assistant, *Institute for Applied Economic Research*

Nov 2016 - Apr 2019

Intern, *Institute for Applied Economic Research*

Aug 2016 - Oct 2016

EDUCATION

PhD candidate in Economics, *CAMP, BI Norwegian Business School*

2020 - 2024 exp.

Title: Modeling Macroeconomic Uncertainty and its Drivers

Advisers: Leif A. Thorsrud (BI), Dimitris Korobilis (University of Glasgow)

Committee: Hilde Bjørnland (BI), Silvia Miranda-Agrippino (New York Fed)

Pre-doc examination passed in June 2023

MSc in Economics, *University of Tübingen*

2016 - 2019

BSc in Economics, *University of Tübingen*

2013 - 2016

JOB MARKET PAPER

Mixing it up: Inflation at risk

Measuring and monitoring macroeconomic uncertainty has become a key concern of contemporary monetary policy and an active field of academic research. In this paper, a joint approach is proposed that allows to construct risk measures that capture the unknown and non-standard distribution of inflation in a way that consistent with central bank preferences. In addition, two algorithms are proposed that enable to monitor how economic predictors affect the risk outlook and how they shift probability mass across the forecast distribution. Both are widely applicable, enhance the interpretability of a broad class of models, and are suitable for real-time applications. In the empirical exercises, the model yields superior point and density forecasts of U.S. CPI inflation. During the recent high-inflation period, inflation risk predominantly increased due to a recovery of the U.S. business cycle and rising commodity prices and was in part balanced by monetary policy and credit spreads.

PUBLICATIONS

Nowcasting GDP with a pool of factor models and a fast estimation algorithm, 2023, *International Journal of Forecasting*, 39(3), 1460-1476. (With Sercan Eraslan)

What drives euro area financial market developments? The role of US spillovers and global risk, 2021, *ECB Working Paper No. 2560/May 2021*. (With Lennart Brandt, Arthur Saint Guilhem, and Ine Van Robays)

WORKING PAPER

Monitoring macroeconomic risk (R&R in the Journal of Econometrics)

We propose a multicountry quantile factor augmented vector autoregression (QFAVAR) to model heterogeneities both across countries and across characteristics of the distributions of macroeconomic time series. The presence of quantile factors allows for summarizing these two heterogeneities in a parsimonious way. We develop two algorithms for posterior inference that feature varying level of trade-off between estimation precision and computational speed. Using monthly data for the euro area, we establish the good empirical properties of the QFAVAR as a tool for assessing the effects of global shocks on country-level macroeconomic risks. In particular, QFAVAR short-run tail forecasts are more accurate compared to a FAVAR with symmetric Gaussian errors, as well as univariate quantile autoregressions that ignore comovements among quantiles of macroeconomic variables. We also illustrate how quantile impulse response functions and quantile connectedness measures, resulting from the new model, can be used to implement joint risk scenario analysis. (With Dimitris Korobilis)

Probabilistic quantile factor analysis (With Dimitris Korobilis)

Under review at the *Journal of Business & Economic Statistics*

MANUSCRIPTS UNDER PREPARATION

When it rains it pours: Drivers of joint uncertainty

Commodity price forecasting with text data (With Dimitris Korobilis and Leif A. Thorsrud)

TEACHING EXPERIENCE

PhD/Expert level:

Advanced Summer School 2023: Bayesian Machine Learning Methods for Modelling Macroeconomic and Financial Time Series, University of Crete.

Bachelor & Master level:

Data Analysis with Programming, (BSc, BI)

Causality, Machine Learning and Forecasting (BSc, BI)

International Macroeconomics and Finance (MSc, BI)

Trends, Cycles, and Signal Extraction from a Macroeconomic Perspective (MSc, BI)

Statistical machine learning (Lab Sessions, University of Glasgow)

REFEREEING ACTIVITY

Journal of Applied Econometrics, Latin American Economic Review, International Journal of Forecasting, Studies in Nonlinear Dynamics & Econometrics, Journal of Economics and Finance.

CONFERENCE PRESENTATIONS

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| 2023 | Junior Workshop in Econometrics and Applied Economics, Rome; 3rd Sailing the Macro Workshop, Siracusa; ESOBE 2023, Glasgow; IAAE Annual Conference 2023, Oslo ; 3rd Dolomiti Macro Meetings, San Candido; 27th International Conference on Macroeconomic Analysis and International Finance, Rethymno; SNDE Symposium 2023, Orlando. |
| 2022 | Advances in alternative data and machine learning for macroeconomics and finance, Paris; Workshop on Recent Advances in Econometrics, Glasgow. |
| 2019 | Third Research Conference of the CEPR Network on Macroeconomic Modelling, Frankfurt. |

ADDITIONAL SKILLS

Language skills: German (Native Language); English (Proficient: CPE, Toefl); Spanish (Intermediate); Norwegian (Intermediate)

Software and coding skills: Matlab, Python, Julia