

Ph.D. Program Seminar

Macro-Financial Modeling: Interaction of Monetary, Regulatory and Macroprudential Policies

Description:

The purpose of this seminar is to give advanced doctoral students a hands-on introduction to frontier research in empirical macroeconomics and the development and application of structural macroeconomic models. The seminar will consist of a combination of lectures, supervision of modeling projects, student presentations and group discussions with extensive feedback. Each project, which should be pursued by a single student or a team of two students, will involve studying an existing macroeconomic model from the literature. Students will then be advised on the development of a software implementation of the model in DYNARE with a policy application. At the end of the seminar, students should be able to start working on a dissertation project that involves structural macroeconomic modeling. The seminar can be counted as a seminar in the field macroeconomics of the Ph.D. Program. Successful participation in this seminar is a precondition for the supervision of a dissertation at the chair.

Time and Location:

We will be meeting repeatedly throughout the semester for lectures and student presentations in the House of Finance. The introductory meeting will take place on 19th of October 2-3 pm at HoF, room Boston 2.45.

Registration:

To register for the course, students should send an e-mail to Jinhyuk Yoo (Jinhyuk.Yoo@hof.uni-frankfurt.de). The e-mail should contain the participant's name and contact details. Registration should take place as soon as possible. The maximum number of students participating in the course for credit will need to be restricted to twelve.

Requirements:

Students will be expected to give two short presentations for group feedback. The first presentation will discuss the assigned paper from the literature and modeling project. It will take place in the middle of the semester. The second presentation will report on the implemented model and policy application. Grading for the seminar course will be based on a problem set, presentations and model implementation.

Literature

The comparative approach is described in detail in:

Wieland, Volker, Tobias Cwik, Gernot J. Müller, Sebastian Schmidt, and Maik Wolters (2012). "A New Comparative Approach to Macroeconomic Modeling and Policy Analysis," *Journal of Economic Behavior and Organisation*, Elsevier, Vol. 83, Issue 3: 523-541, also available at <http://www.macromodelbase.com>.

Wieland, Volker and Sebastian Schmidt (2013), "The New Keynesian Approach to Dynamic General Equilibrium Modelling: Models, Methods and Macroeconomic Policy Evaluation", *Handbook of Computable General Equilibrium Modeling*, Elsevier.

These papers are required reading for all students.

Student projects will focus on studying and later implementing one of the models described in the following papers. Project with medium- to large-scale models may be pursued by teams of two students.

Banks and Macroprudential Policies

Agenor, Pierre-Richard, Koray Alper, and Luiz Pereira da Silva (2012). "Capital requirements and Business Cycles with Credit Market Imperfections," *Journal of Macroeconomics* (34): 687 -705. Note: the model is largely based on: Agenor, Pierre-Richard and Koray Alper (2012). "Monetary Shocks and Central Bank Liquidity with Credit Market Imperfections," *Oxford Economic Papers* 64: 563 – 591.

Christiano, Lawrence and Daisuke Ikeda (2013). "Leverage Restrictions in a Business Cycle Model," NBER Working Paper 18688.

Darracq Paries, Matthieu, Christoffer Kok Sørensen, and Diego Rodriguez-Palenzuela (2011). "Macroeconomic Propagation under Different Regulatory Regimes: Evidence from an Estimated DSGE Model for the Euro Area," *International Journal of Central Banking* 7 (4): 49–113.

Hirakata, Naohisa, Nao Sudo, and Kozo Ueda (2013), "Capital Injection, Monetary Policy, and Financial Accelerators", *International Journal of Central Banking* 9 (2): 101-145. Note: the model is largely based on: Hirakata, Naohisa, Nao Sudo, and Kozo Ueda (2013), "Do banking shocks matter for the U.S. economy?" *Journal of Economic Dynamics and Control* 35: 2042-2063.

Robert Kollmann, Marco Ratto, Werner Roeger, and Jan in't Veld (2013), "Fiscal policy, banks and the financial crisis", *Journal of Economic Dynamics and Control*, Volume 37, Issue 2: 387-403

Charles T. Carlstrom, Timothy S. Fuerst, Alberto Ortiz, Matthias Paustian, "Estimating contract indexation in a Financial Accelerator Model", *Journal of Economic Dynamics and Control*, Volume 46, September 2014, Pages 130-149.

Asset Prices, Monetary and Macroprudential Policy

Galí, Jordi (2014). "Monetary Policy and Rational Asset Price Bubbles," *American Economic Review* 104(3): 721-752.

Gelain, Paolo, Kevin J. Lansing, and Caterina Mendicino (2013). "House Prices, Credit Growth, and Excess Volatility: Implications for Monetary and Macroprudential Policy," *International Journal of Central Banking* 9(2): 219-276.

Lambertini, Luisa, Caterina Mendicino and Maria Teresa Punzi (2013). "Leaning Against Boom-Bust Cycles in Credit and Housing Prices," *Journal of Economic Dynamics and Control* 37: 1500-1522.

Mendicino, Caterina and Maria Teresa Punzi (2014). "House Prices, Capital Inflows and Macroprudential Policy," *Journal of Banking and Finance* 49: 337-355.

Unconventional Monetary Policies

Ellison, Martin and Andreas Tischbirek (2014). "Unconventional Government Debt Purchases as a Supplement to Conventional Monetary Policy," *Journal of Economic Dynamics and Control* 43: 199-217.

Gertler, Mark and Peter Karadi (2013). „Q1 vs. 2 vs. 3...: A Framework for Analyzing Large-Scale Asset Purchases as a Monetary Policy Tool," *International Journal of Central Banking* 9(1): 5-53.

Students may propose an alternative model in any of these areas for a project. It will be approved if the model is sufficiently interesting and implementable within such a project.

Schedule:

October 19, 14:00-15:00 (Boston, HoF 2.45)

1st meeting to discuss course plan and potential projects. Students may state preferences for projects and assignments can be made.

November 3

Last day for signing up for a particular project. Availability to be cleared with Jinhyuk Yoo.

November 18-24

November 18, 14:00-16:00 (Boston, HoF 2.45) Lecture on Macroeconomic Modelling I (Prof. Wieland)

November 20, 10:00 -12:00 (Milan, HoF 4.59) Lecture on Macroeconomic Modelling II (Jinhyuk Yoo)

November 24, 10:00-12:00 (Milan, HoF 4.59) Introduction to Dynare and Macro Model Data Base. Computer Session (Macro Model Base Team)

December 18 (Milan, HoF 4.59, time TBD)

Student presentations explaining the model and paper chosen for the project. Time: 30 minutes for each presentation including discussion.

February 10/11 (Milan, HoF 4.59 ,time TBD)

Student presentations of model implementation. Proof of replication and comparisons to other models available in Wieland et al. (2012). Time: 35 minutes for each presentation including discussion.

March 11

Last day for turning in the write-up describing model implementation (equations, data etc.), replication and comparison exercises.