GUTENBERG SCHOOL OF MANAGEMENT & ECONOMICS

JG|U

Johannes-Gutenberg Universität Mainz
Master in International Economics and Public Policy

Seminar on Financial Economics: *Monetary Economics: Theory and Policy*

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Chair of Financial Economics

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1 Outline

This seminar is designed for MIEPP students in their second or higher semester who have a strong interest in macroeconomic theory and mathematical model building. It is therefore tailor-made for students who attended the lecture on '*Monetary Policy, Inflation, and Business Cycles*' in the summer term 2016 and also for those who successfully completed the lecture '*Advanced Macroeconomics*' in the winter term 2015/16.

The general aim of the seminar is to provide a comprehensive discussion of modern macroeconomic models designed to study the role of monetary policy in a dynamic general equilibrium framework featuring a description of the production side, the consumption side, as well as the fiscal sector. Such a framework allows to incorporate the full interactions between monetary and fiscal policy and to study their joint impact on real and financial variables and their evolution over time. Moreover, it sets the stage for a normative study of alternative polices by quantifying their impact on consumer welfare. This allows to formulate and discuss alternative policies and objectives for central banks such as Taylor rules, optimal inflation targets, etc.

Specific questions that can be addresses in such a framework are: How does monetary policy affect monetary variables such as prices, interest rates, and governmental debt? Can it be used to foster economic growth and increase real variables such as output, wages, and employment? What are the mutual interdependencies between monetary and fiscal policy? Which objectives should monetary policy pursue? What are the welfare cost of inflation?

Our discussion will involve the two major workhorses of modern macroeconomics in this field: First, the *New Classical* framework, which typically assumes price-taking behavior of all market participants combined with perfect price flexibility on all markets. Conceptually, these models employ Dynamic Stochastic General Equilibrium (DSGE) theory which combines a sound microeconomic foundation of the behavior of all market participants (producers, consumers, government/central bank, etc.) with a an internally consistent description of their interactions on all markets and the dynamic evolution of economic variables over time.

The second class of models to be studied are the *New Keynesian* models which incorporate various frictions such as monopolistic competition and/or staggered price adjustments while

retaining the virtues of DSGE modelling. In recent years, the New Keynesian approach has become the dominant framework used at central banks to guide decisions on monetary policy.

2 Topics

Following is a list of seminar topics. The reference(s) in brackets should serve as the main source for your seminar paper. In addition, you should also look at additional references, e.g., those cited in the main paper to put the topic and results into a broader perspective. Finally, when describing the model and results you should not just copy the equations and formulae but instead try to add further explanations and derivations not explicitly given in the original paper whenever possible.

2.1 Part I: New Classical Models

1. *The Basic New Classical Model with Money-in the Utility function* (Gali (2008, Ch. 2), Walsh (2010, Ch. 2))
2. *Welfare and the Cost of Inflation I: The Sidrauski Model* (Lucas (2000, Section 3))
3. *Welfare and the Cost of Inflation II: The McCallum-Goodfriend Model* (Lucas (2000, Section 5))
4. *Money Demand and The Optimal Rate of Inflation* (Schmitt-Grohé & Uribe (2011, Section 2))
5. *Money Demand, Fiscal Policy and The Optimal Rate of Inflation* (Schmitt-Grohé & Uribe (2011, Sections 3,4,5)).

2.2 Part II: New Keynesian Models

6. *The Basic New Keynesian Model* (Gali (2008, Ch. 3))
7. *Monetary Policy Design in the Basic New Keynesian Model* (Gali (2008, Ch. 4))
8. *Monetary Policy Trade-offs: Discretion vs. Commitment* (Gali (2008, Ch. 5))
9. *A Model with Sticky Prices and Wages* (Gali (2008, Ch. 6))
10. *Sticky Prices and the Optimal Rate of Inflation* (Schmitt-Grohé & Uribe (2011, Section 6)).

2.3 Part III: Miscellaneous Topics

11. *Equilibria under 'Active' and 'Passive' Fiscal and Monetary Policies* (Leeper (1991))
12. *Determinacy and Identification with Taylor Rules* (Cochrane (2011))
13. *Monetary Policy with Interest on Reserves* (Cochrane (2014))
14. *Fiscal Solvency and Price Level Determination in a Monetary Union* (Bergin (2000)).

3 Organization

3.1 Requirements

Participation is open to all MIEPP students in their second or higher semester. The number of slots is limited to **10 participants**. The seminar takes place as a blocked course on Friday, **January 20, 2017** (see time schedule below). Participants must hand in a seminar paper (approx. 12-15 pages, font size 12 pt., 1.5 line spacing, preferably written using LaTeX), and deliver a presentation on their topic. Each presentation lasts about 30 minutes, plus 10 minutes of discussion. Active participation in each of these discussions is expected. All presentations and discussions will be held in English.

3.2 Seminar papers

Please read carefully read our guidelines for seminar participants which can be found at `http://www.macro.economics.uni-mainz.de/963.php`. On Friday, **January 13, 2017** (the latest), please submit an electronic version (single pdf file) by email to `mhillebr@uni-mainz.de`. All seminar papers will be made available to the other participants prior to the final presentations to promote questions and discussion. Participants will be offered two office hours to discuss the outline and content of their seminar paper together with any remaining questions.

3.3 Distribution of topics

If you are admitted for participation, please send an email to `mhillebr@uni-mainz.de` with your preferred topic and at least two (ranked) alternatives **before Monday, November 7, 2016**. We will assign the seminar topics during the kick-off meeting on November 11, 2016.

3.4 Time schedule

- **Kick-off meeting and topic assignment**: Friday, November 11 from 14:15 - 15:45 pm (room: HS V). **Attendance is mandatory**!
- **Submission deadline for seminar papers**: Friday, January 13, at 23:59.
- **Final presentations**: Friday, January 20, 2017 from 10:00 till 18:00 in HS V.

References

Bergin, P. R. (2000): "Fiscal Solvency and Price Level Determination in a Monetary Union", *Journal of Monetary Economics*, 45, 37–53.

Cochrane, J. H. (2011): "Determinacy and Identifcation with Taylor Rules", *Journal of Political Economy*, 119, 565–615.

——— (2014): "Monetary Policy with Interest on Reserves", *Journal of Economic Dynamics and Control*, 49, 74–108.

Gali, J. (2008): *Monetary Policy, Inflation, and the Business Cycle*. Princeton University Press, Princeton a.o.

Leeper, E. M. (1991): "Equilibria under 'active' and 'passive' fiscal and monetary policies", *Journal of Monetary Economics*, 27, 129–147.

Lucas, R. E. (2000): "Inflation and Welfare", *Econometrica*, 68(2), 247–274.

Schmitt-Grohé, S. & M. Uribe (2011): "The Optimal Rate of Inflation", in *Handbook of Monetary Economics, Volume 3*, ed. by B. M. Friedman & M. Woodford, S. 653–722. Elsevier, North-Holland.

Walsh, C. E. (2010): *Monetary Theory and Policy*. MIT Press, Cambridge, Massachusetts.