

# Monetary Economics – Master

Keith Kuester

Winter term 2025/26

## Outline:

This course provides a graduate-level introduction to monetary economics. Because central banks are large players, what they do affects macroeconomic conditions, and thus the conditions that other policymakers, households, or businesses face. The course will be of interest to students who are considering a career in a central bank or other policy-making institution, who are interested in a career in finance or public policy, who wish to work in the treasury or research department of (typically) larger companies, or who wish to make the transition to research.

The framework within which we will work is that of dynamic, stochastic, general equilibrium macroeconomic theory. We begin with classical theories of money and interest (prices are flexible). What policies support the value of money? Can the central bank alone maintain price stability? What is the optimal monetary-fiscal mix? We then turn to a model environment with nominal rigidities, namely the New Keynesian model of the business cycle. This has become the workhorse of monetary policy analysis. We derive the representative household core of this model. Within this framework, we ask how monetary policy shapes the business cycle. And we ask which trade-offs are important in thinking about optimal monetary policy. Based on this framework, we will, last, consider extensions to household heterogeneity and unconventional monetary policy.

Lectures:

Tu 8:30-10am, HS K, Th. 2.15-3.45 p.m. HS N

First lecture: October 14, 2024.

Last lecture: January 22, 2024.

Exceptions:

Dec 23-Jan 5: winter break

Exercises:

We will have an exercise session roughly every two weeks (at the time of the lecture). Please try and solve the exercises yourself at home and compare your solutions to the solutions provided. This will be valuable practice for the exam and will provide you with an early indication as to how well you master the material.

Office hour:

Mo., 3 pm-4 pm; register by email by the respective Friday, cob.

Course materials:

The slides and class notes for the course are meant to be self-contained. If you would like to consult a textbook, Azzimonti et al. (2025) is available online for free. Both Walsh (2017) and Galí (2015) are available in the university library. Walsh's book, in addition, can be accessed online from the ULB while connected to the university's network. This material will be complemented by further references that are provided throughout the course.

Grades:

Grades will be based on a 90-minute final exam.

## Plan of the lecture

### Ch. 1 **Classical monetary model.**

Textbook: Azzimonti et al. (2025), ch. 17.3, or Walsh (2017), ch. 2 and 3; or Galí (2015), ch. 2.

- Definitions.
- Review: choice under risk.
- Models of money demand.
- Money-in-the utility function model.
- Linearization.
- Classical dichotomy.
- Method of undetermined coefficients.
- Money-supply and interest-rate rules.
- Planner's problem and decentralization.
- Friedman rule.

Further (optional) readings: Lucas (2000), Ireland (2009), Benati et al. (2021).

### Ch. 2 **Nominal rigidities: Monetary stabilization policy in the New Keynesian Model.**

Azzimonti et al. (2025), ch. 18.

Walsh (2017): ch. 7.2.2 price-setting and Phillips curve; ch. 7.2.3 monopolistic competition; ch. 8 (all sections): New Keynesian model and policy implications; ch. 11.1-11.4: effective lower bound and forward guidance.

Galí (2015): ch. 3: basic New Keynesian model, shock transmission, determinacy; ch. 4: optimal monetary policy; ch. 5: sticky wages and sticky prices.

- Setup of the New Keynesian model.
- Welfare cost of inflation.
- Linearized model.
- (In)determinacy.
- Transmission of shocks.
- Zero lower bound.
- Fiscal-monetary interaction revisited: government spending and the lower bound.
- Natural output and efficient output.
- Optimal monetary policy.

- Divine coincidence.
- Wage rigidity and welfare costs.
- Commitment and discretion.
- Medium-scale New Keynesian models.

Further (optional) readings: Correia et al. (2012), Leeper et al. (2017), Woodford (2011), Smets and Wouters (2007). Further references on the slides.

### Ch. 3 **Monetary fiscal interaction.**

Textbook: Walsh (2017), ch. 4.2 and 4.5.

Review papers: Leeper and Leith (2016), Sims (2013).

Application: Bianchi et al. (2023).

- Seignorage and “unpleasant monetarist arithmetic.”
- Fiscal theory of the price level.
- Optimal fiscal and monetary policy mix.
- Fiscal theory in the New Keynesian model.

Further (optional) readings: Schmitt-Grohé and Uribe (2010), Barthelemy et al. (2024), Sargent (1982), Leeper and Zhou (2021). Further references on the slides.

### Ch. 4 **Household heterogeneity and monetary policy.**

Main reference: Bilbiie (2025) and Angeletos et al. (2024).

- Tractable models with heterogeneity.
- The distribution of income.
- Marginal propensity to consume.
- Stabilization policy with heterogeneity.

### Ch. 5 **Banks, firms, unconventional monetary policy.**

Main reference: Sims et al. (2023). Further references: Gertler and Karadi (2011), Del Negro et al. (2017), more on the slides.

## References

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