

## **Monetary Economics (Monetary theory)**

Summer term 2020

### **Time and venue**

The class takes place on Friday from 12 am to 2 pm. Exercises are scheduled as a 45 min exercise afterwards, but it might be preferable to have 90 min exercises on a bi-weekly basis. The class will take place using WebEx. All the specifics will be announced.

### **Course summary**

This class takes place in times when the world economy faces one of the deepest and most-likely longest recessions within the last hundred years. This class will therefore not be business as usual. Instead, we will try to cover and discuss the challenges to the monetary authorities that follow from the crisis. First, the central bank has to stabilize the economy and fight the recession. Second, the authorities have to carefully watch the financial sector to prevent the crisis becoming another financial crisis. Third, inequality moved more and more into the focus of attention. Monetary policy has thus to take the consequences of monetary policy into account as well as the role income- and wealth inequality play for the transmission of monetary policy. Finally, the crisis leads to an incredible build-up of public debt. Which role can or will the central bank play in reducing the debt burden?

In order to address these questions, we will start by talking about the nature of money and how the central bank relates to it. We will look at what monetary policy is and how it effects the economy. Here, we pay special attention to the role of the financial sector and inequality. Afterwards, we investigate whether policy has learned its lessons from the financial crisis of 2007/08. Finally, we consider the relationship between the monetary authority and the fiscal authority. Can monetary policy be used to reduce the amount of public debt?

Important disclaimer: the name of the class is monetary theory because it is a pre-determined condition. We will find it useful however to look at data and work with data during the class. Monetary economics would be a more fitting title.

Also, because of the Covid-19 circumstances, the fact that May 1<sup>st</sup> and May 8<sup>th</sup> are both Fridays and holidays, we will very likely not have the time to cover interesting aspects such as Green Finance and Central Bank Digital Currency.

### **Course overview**

#### **Part 1: The nature of money**

What is money and why has it value?

History of money

How to model money in macro-model?

## **Part 2: Monetary policy**

What do central banks do?

How does monetary policy effect the economy (and how can we estimate it)?

What is the role of the financial sector?

Does income- and wealth inequality matter for monetary policy?

Monetary policy in times of Covid-19 – discussion of monetary policy programs

## **Part 3: Monetary- and fiscal interactions**

Monetary policy as the solution to high sovereign- and private debt levels?

## **Exercises**

Exercises will be hands-on and asking you to solve DSGE models, but especially to work with data.

## **Prerequisites**

Knowledge in econometrics, macroeconomics and some knowledge of Stata will be helpful throughout the class.

## **Grading**

As discussed in class, we change the grading format. Students are no longer required to write a seminar paper. Instead there will be a take-home exam.

## **Suggested readings (the list will be extended regularly)**

### **On the relationship between money and credit:**

“Imagined Futures: fictional expectations and capitalist dynamics” by Jens Beckert (online available);

- especially chapter 5 on “Money and Credit: promise on future value”

### **Digital currencies:**

“Public or private? The future of money”, by Chi Hyun Kim and Alexander Kriwoluzky, Monetary Dialogue of the European Parliament, December 2019

“Central Bank Digital Currency: Central Banking for all?” by Jesus Fernandez-Villaverde, Daniel Sanches, Linda Schilling and Harald Uhlig, NBER Working Paper 26753, 2020

“Some simple Bitcoin Economics” by Linda Schilling and Harald Uhlig, Journal of Monetary Economics, 106, 16-26, 2019

“Currency Substitution under transaction costs” by Linda Schilling and Harald Uhlig, AEA Papers and Proceedings, 109, 83-87, 2019

### **Money in DSGE models:**

“Monetary Theory and Policy” by Carl Walsh (2<sup>nd</sup> edition is online available)

- The description of the MIU-model and the CIA-model will follow chapter 2 and 3
- Some aspects of the part on Monetary and fiscal interaction will follow chapter 4

### **Empirical analysis of monetary policy**

A very good introduction into the topic:

“Identification in Macroeconomics” by Emi Nakamura and Jon Steinsson, Journal of Economic Perspectives, 32(3), 59-86, 2018

Overview and comparison of recent monetary policy shocks:

“Same, but different? Testing monetary policy shock measures” by Stephanie Ettmeier and Alexander Kriwoluzky, Economics Letters, 184, 2019

The Taylor Rule:

“Discretion Versus Policy Rules in Practice” by John B. Taylor, Carnegie-Rochester Conference Series on Public Policy, 39, 195-214, 1993

Monetary policy shocks with timing restrictions:

“Monetary policy shocks: What have we learned and to what end?” by Lawrence J. Christiano, Marty Eichenbaum and Charles Evans, Handbook of Macroeconomics, Volume 1, Part A, Pages 65-148, 1999

Narrative monetary policy shocks:

“A New Measure of Monetary Shocks: Derivation and Implications” by Christiana D. Romer and David H. Romer, American Economic Review, 94, 1055-1084, 2004

Monetary policy shocks from a factor model:

“Do Actions Speak Louder Than Words? The Response of Asset Prices To Monetary Policy Actions and Statements” by Refet Gürkaynak, Brian Sack, Eric Swanson, International Journal of Central Banking, 1(1), 2005

“Monetary policy matters: Evidence from new shocks data” by S. Mahdi Barakchian and Christopher Crowe, Journal of Monetary Economics, 60(8), 950-966, 2013

“Measuring euro area monetary policy” by Carlo Altavilla, Luca Brugnolini, Refet Gürkaynak, Roberto Motto and Guiseppa Ragusa, Journal of Monetary Economics, 108, 162-179, 2019

Excess bond premium included in VAR:

“Monetary Policy Surprises, Credit Cost, and Economic Activity” by Mark Gertler and Peter Karadi, American Economic Journal: Macroeconomics, 7(1), 44-76, 2015

Introduction of local projections:

“Estimation and Inference of Impulse Response by Local Projections” by Òscar Jordà, American Economic Review, 95(1), 161-182, 2005

Monetary policy in booms and recessions:

“Pushing on a String: US Monetary Policy is less powerful in recessions” by Sylvana Tenreyro and Gregory Thwaites, *American Economic Journal: Macroeconomics*, 8(4), 2016

Signaling effects of monetary policy in a theoretical model:

“Signaling Effects of Monetary Policy” by Leonardo Melosi, *The Review of Economic Studies*, 84(2), 853-884, 2017

The information component in monetary policy shocks:

“The Transmission of Monetary Policy Shocks” by Silvia Miranda-Agrippino and Giovanni Ricco, *American Economic Journal: Macroeconomics*, forthcoming

“Deconstructing Monetary Policy surprises – The role of information shocks” by Marek Jarocinski and Peter Karadi, *American Economic Journal: Macroeconomics*, 12(2), 2020

### **Monetary policy and the financial sector**

Credit growth and financial crisis:

“Credit booms gone bust” by Moritz Schularick and Alan Taylor, *American Economic Review*, 102(2), 1029-1061, 2012

A DSGE model with a financial sector:

“A model of unconventional monetary policy” by Mark Gertler and Peter Karadi, *Journal of Monetary Economics*, 58(1), 17-34, 2011