# MACROECONOMIC THEORY IV: MONETARY POLICY IN DYNAMIC MACROMODELS UNIVERSITY OF TURKU, NOVEMBER 2008

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#### Aim

The goal is to introduce monetary policy into dynamic stochastic general equilibrium macro models.

#### CONTENTS

The course follows the first four chapters of Jordi Galí's excellent book "Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework"<sup>1</sup>. It shows why the monetary policy is neutral in classical, RBC-type macro models and explains special case where it is not. The classical model is augmented with imperfect competition and price rigidities leading to the canonical new Keynesian model. Next, various monetary policy rules are studied in this framework. The course will derive the utilized models in detail.

### OUTLINE

- 1. Introduction
- 2. Classical model
- 3. The basic new Keynesian model
- 4. Monetary policy rules in the new Keynesian model

## LOGISTICS

This set of lectures is a part of the "Macroeconomic Theory IV" course in the University of Turku (Fall 2008). The course will contain 6-8 hours classes and a set of class exercises (homework). You should be able to do the homework without the book, but I recommend to buy/borrow it. The homeworks

<sup>&</sup>lt;sup>1</sup>Book details: http://press.princeton.edu/titles/8654.html

contain both analytical and computational exercises. The computational exercises are important, since dynamic macro models are typically solved numerically. I recommend to use Dynare, that is a Matlab<sup>2</sup> library to solve standard dynamic models using perturbation methods.

I assume that the students are familiar with the standard solution techniques of modern dynamic macroeconomic theory. In particular, this includes the CES aggregator and log-linearization<sup>3</sup>

Regarding the exam, you are instructed to discuss with Professor Matti Virén. This course is also available to the students of Turku School of Economics and Åbo Academi University.

I hope I will have time to set-up a website for the lectures. Please, check http://www.ripatti.net.

<sup>&</sup>lt;sup>2</sup>Octave is an opensource Matlab 'clone' and provides useful alternative if you do not have Matlab. Follow the Dynare (www.dynare.org) instructions (http://www.dynare. org/DynareWiki/DynareOctave) to install Dynare with Octave. I have tested both Windows and Ubuntu versions of Octave/Dynare and both of them do the job.

<sup>&</sup>lt;sup>3</sup>I will briefly introduce both of them. The following links provide useful quick introduction to log-linearization: http://www.econ.upenn.edu/~clausen/teaching/log-lin. pdf, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=951753, http://www. vwl.unibe.ch/studies/3076\_e/linearisation\_slides.pdf