Syllabus for 308 - Money and Banking

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Office hours: Monday & Wednesday from 12.30-2pm.

Important: we are officially due to 'meet' at the following days and times: Monday and Wednesday, 12.30-1.50pm. The general asynchronicity of this class notwithstanding, you **cannot** take it if you have another class that conflicts. This is because (i) the midterm will occur during class time, (ii) I will follow the registrar's schedule for the final exam (so it will coincide with the final of any conflicting class), (iii) the discussion sections will be synchronous and in the associated Friday 12.30-1.50pm slot, and (iv) my office hours will be during these class times. The last two point are perhaps the most salient; I think office hours and sections are even more important under the current circumstances than they usually are.

All times indicated for office hours and assignments/exams are CST, i.e. Evanston time.

1 Logistics

The class lectures will be asynchronous. I will pre-record me talking mostly about money & banking, and will release a few recordings for each lecture that we would have had if life were normal. I will make clear just which of these lectures correspond to which days, and my advice is to keep up with my suggested Monday/Wednesday/Friday viewing schedule. Taken together, a given week's recordings will amount to less than the 160 minutes of allotted class time.

The lecture videos will be available as mp4 files posted directly on Canvas. I suggest you download the files to a local drive and then watch them.

1.1 sections

The plan is as follows.

• For each week I will post 'supplementary questions' on Canvas. I will post answers too, but do not look at the answers before you try the questions yourselves. Economics is one of those disciplines where the answers can often seem obvious ex post, once you have them in front of you, but not ex ante.

• The sections will be led by the TA, Emre Enes Yavuz, over Zoom. They will be at 12.20pm on Fridays. Emre Enes will go through the supplementary questions and address any issues you have with the class material. He will also hold additional office hours and you can go to those as well.

You may attend my office hours and those of the TA as it suits you. Attendance is not mandatory but is encouraged. Zoom links for office hours will be on the front page on Canvas. I will be using a Zoom waiting room for office hours, which means I will manually admit people as they arrive. If I don't admit you immediately just be patient, as it only means I haven't seen yet you because I'm talking to someone already in the meeting. You don't have to be there at the start of office hours but can turn up any time, just like in the real world.

There are advantages and disadvantages of the asynchronous approach that I'm largely adopting. Advantages include minimisation of technical problems, and greater flexibility for students. The main disadvantage is that students might be less likely to engage with their instructors. Again, I encourage you to attend sections and office hours.

1.2 What should you do each week?

On Canvas I will organise things by week using the 'Modules' section. For each week there will be a 'material' page that has everything you need to read and watch for that week. It will contain the slides that I will use in my pre-recorded lectures, links to the corresponding recordings, occasional written notes, supplementary questions (and answers) and whatever else I want you to absorb that week. Note that there will be no textbook readings on Canvas, as strictly speaking the textbook is optional (see below).

So, each week you should make sure to:

- Read and watch everything on that week's material page.
- Do the supplementary questions before attending section and perhaps office hours.
- If there's an assignment due soon, complete the assignment. If there's an exam on the horizon, prepare for the exam.

1.3 Recording policy

All instructors have been asked to include the following statement on all syllabi this quarter.

Unauthorized student recording of classroom or other academic activities (including advising sessions or office hours) is prohibited. Unauthorized recording is unethical and may also be a violation of University policy and state law. Students requesting the use of assistive technology as an accommodation should contact AccessibleNU. Unauthorized use of classroom recordings - including distributing or posting them - is also prohibited. Under the Universitys Copyright Policy, faculty own the copyright to instructional materials - including those resources created specifically for the purposes of instruction, such as syllabi, lectures and lecture notes, and presentations. Students cannot copy, reproduce, display, or distribute these materials. Students who engage in unauthorized recording, unauthorized use of a recording, or unauthorized distribution of instructional materials will be referred to the appropriate University office for follow-up.

Note also that the discussion sections will be recorded and made available to the class during the quarter. This is chiefly for students in time zones that make attendance of the (live) sections difficult. The following statement applies to these recordings:

This class or portions of this class will be recorded by the instructor for educational purposes and available to the class during the quarter. Your instructor will communicate how you can access the recordings. Portions of the course that contain images, questions or commentary/discussion by students will be edited out of any recordings that are saved beyond the current term.

2 Evaluation

- Two assignments, due on Wednesday February 3rd and Wednesday March 10th. (20% each)
- Midterm on Wednesday February 10th (30%)
- Final exam at 3pm on Wednesday March 17th (30%)

Two assignments will be submitted through Canvas, and will be due at 11.59pm on the respective Wednesdays.

The midterm and the final will be administered online, via either Canvas or Crowdmark. The exams will be administered 'live'. The midterm questions will be posted at 12.30pm on Wednesday February 10th and you will have until 1.50pm to submit your answers on Canvas/Crowdmark. The final will be similarly administered, with the questions posted at 3pm on Wednesday March 17th and answers due by 4.20pm. You will have to join a Zoom meeting and remain there while you take the exam.

While the final will focus on the second half of the course, it may require students to draw on their knowledge of the earlier material.

3 Course Overview

This is a course in monetary economics. The aim is to convey the fundamentals of monetary theory and policy, and to examine select topics in finance and in monetary history. It is not a course in 'pure' finance and not designed to prepare you for a career in investment banking. You will not learn how to price esoteric options or read banks' balance sheets, although asset pricing and balance sheets will both turn up somewhere. You will instead learn something about economists think about 'money' more generally, in particular regarding the problems faced by monetary policymakers. The course does not consist entirely of analysis of the recent financial crisis, but does culminate in a week or two of this sort of thing.

Prerequisites for the course are 201, 202, 281, 310-1, 311, Math 220, Stat 210. Students should already be comfortable with basic differential calculus; I might show you some integrals at some point, but you will not have to actually perform any integration. You should also be familiar with with the standard IS/LM macroeconomics framework. We'll review the IS/LM model near the start of the course, but will go over it fairly quickly.

Previous iterations of this course 'used' two textbooks: Frederic Mishkin's '*The Economics of Money, Banking and Financial Markets*' [8th edition], hereafter **FM**; and '*Money, Banking, and Financial Markets*' [1st edition] by Laurence Ball (**LB**). Each covers a wide range of topics at an intermediate level, and as such is not pitched at the ideal level for this course. We will cover fewer topics than either book and will sometimes go a little deeper into theoretical issues than they do. We will also cover some topics that they ignore completely. While the books make for good preparatory and background reading, and will be sufficient for some areas, the slides I present in class will constitute the main resource for students. You should consider **FM** and **LB** as optional, as it's perfectly possible to do the course without buying either one of them. For what it's worth **FM** is relatively the stronger for the first half of the course, **LB** for the second.

In my experience, almost nobody buys the textbook.

In addition to the posted slides I will provide supplementary readings if appropriate, and occasional notes when no suitable source is available.

4 Lecture topics and references

The plan is to tackle the following subjects in order. If it looks like we're falling behind, certain sections will be abbreviated. I will keep students informed of potential adjustments to the syllabus as soon as they look likely. Textbook readings are obviously only relevant if you choose to buy a textbook. Other readings are mandatory save those marked with an asterisk, which are optional.

4.1 Introduction/revision/basic concepts

Review of basic concepts, and a roadmap for the rest of the course.

- functions and definitions of money
- the quantity equation and money neutrality
- short-run non-neutrality in the IS/LM framework

Readings: **FM** Ch. 3, Ch. 19 (pp.493-500), Chs 20-22; **LB** Ch. 2 (pp.25-36), Ch. 14 (pp.413-417) [note that **LB** has nothing on IS/LM, which is perhaps in its favour].

4.2 Hyperinflations and fiscal credibility

The importance of fiscal rectitude in underpinning the value of the medium of exchange.

- the Cagan model of hyperinflation
- the ends of big inflations: the role of fiscal policy

Readings: http://gregmankiw.blogspot.com/2006/04/time-inconsistency.html * "The Realities of Modern Hyperinflation", Reinhart & Savastano (Blackboard).

4.3 Money demand: theory and evidence

Examination of the main theories of money demand.

- transactions demand and the Baumol-Tobin model
- portfolio demand: money as an asset
- empirical evidence

Readings: My supplementary notes.

4.4 Monetary policy instruments

Consideration of the policy tools available to central banks.

- institutional arrangements in the US
- central bank control of the money supply
- choice of monetary target: quantity or price?

Readings: FM Ch. 12 (pp.311-322), Ch. 13, Ch. 14 (not the appendix), Ch. 15; LB Ch. 11.

4.5 The term structure of interest rates

What can the bond market tell us about expected Fed policy?

- bond pricing
- no-arbitrage and the yield curve

Readings: LB Ch. 4 (pp.102-109), Ch. 13 (pp.383-390).

4.6 The monetary transmission mechanism

How does money affect aggregate demand?

- evidence on the traditional 'interest rate' channel
- information asymmetries, lending and the importance of net worth
- the credit channel

Readings: **FM** Ch. 8 (pp.181-192, 195-198), Ch. 23 (pp.596-609); **LB** Ch. 11, Ch. 13 (pp.390-399); "Credit Channel Effects in the Monetary Transmission Mechanism", Bank of England (Blackboard); "Inside the Black Box: The Credit Channel of Monetary Policy Transmission", Bernanke & Gertler (Blackboard).

4.7 Modern policymaking

Discussion of the appropriate objectives for policymakers.

- the 3-equation framework
- time inconsistency and solutions
- inflation persistence and structural uncertainty

Readings: **FM** Ch. 16 (omit the section on Monetary Targeting; skim the rest); **LB** Ch. 12 (pp.352-377), Ch. 15, Ch. 16; supplementary notes; http://gregmankiw.blogspot.com/2006/04/time-inconsistency.html again

4.8 The credit crunch

Examination of the 2007/8 financial crisis.

- what happened?
- unconventional monetary policy

Readings: LB Ch. 14 (pp.433-438), Ch. 18 (pp.543-651); other readings to be provided; *"Monetary Policy Alternatives at the Zero Bound: An Empirical Assessment", Bernanke, Reinhart & Sack (Blackboard).

5 Comments, policies

- The midterm and final dates/times are not negotiable.
- If you miss an exam for whatever reason (illness, wedding, prison...) then I might allow you to do a makeup exam, your percentage score on which will be capped at the score of the other exam. For example, say you missed the midterm and your score on the final ends up being 80%. If you get 70% on the makeup-midterm then you will receive a score of 70% for that midterm. If you get 90% on the makeup-midterm then you will receive a score of 80% for that midterm.
- Makeup exams might not happen until late in the quarter, or even next quarter.
- If you don't understand something as we're going through it, that's fine. Just be sure to come to office hours (mine or the TA's) very quickly to sort things out. The nature of the course means that falling behind is a bad thing.
- There will be no expost reweighting of the relative contributions of assignments and exams to the final grade. Please don't ask, as I find saying no painful, though not painful enough never to say it.