

Prof Joe Haslag  
Spring Semester 2012

Econ 4329  
The Banking System and the Money Market

Office : 324 Professional Bldg  
email: [haslagj@missouri.edu](mailto:haslagj@missouri.edu)  
phone: 2-3483  
office hrs: F 1:30 – 3:0pm and by appt.

Text: Modeling Monetary Economies, 3rd ed. Champ, B., S. Freeman and J. Haslag, Cambridge: Cambridge University Press

The purpose of this course is to dig deeper into models that account for the existence of valued fiat money. The basic premise is the money facilitates transactions. It is cheaper for a society to make exchange using money than, say, trying to barter. This begs the question, What is money? While we are familiar with paper currency and checking accounts, our goal is to develop a framework that permits us to study the nature of money and draw upon differences between outside money—stuff that government usually have a monopoly in producing--and inside money—the stuff that banks create.

As we grow in our understanding of what money does in an economy, we can ask more difficult questions. For example, how important is money for controlling the business cycle fluctuations? More generally, what can a central bank do?

Though the course does not require Econ 4351, it is extremely helpful if you have seen an indifference curve. What you will immediately notice is that while the nature of this course is inherently about societal, or aggregate, economic behavior, the tools for analysis will not be the aggregate demand, or IS-LM, framework. Indeed, the principle tools will be borrowed from *microeconomics*. We will study the behavior of people that maximize utility subject to a budget constraint. The geometry is simple if you have had intermediate micro. Everything about this economy will be completely described. Specifically, we will know everything about the people that populate this economy, their means of production, the ability to trade with one another and their endowments. Given these pieces, it is possible to characterize their behavior by specifying an equilibrium. As usual, equilibrium will be the focus of our analysis.

Since everything will build from this basic setup, it is important that you grasp the first couple of weeks of material. I will be available for extra office hours during these first several weeks. I encourage you to ask questions in class. I think that once you see an economy described in such detail that monetary economics will be easier to understand. But this framework is a substantial departure from what you have seen in previous money and macro classes.

**Grading.** Grades will determined by homeworks, a midterm exam and a comprehensive final exam. Our final exam is TBA

Homeworks will account for 40% of your grade. I do not mind if you work in groups. I actually encourage it. Each person will submit a solution to each homework assignment. In order to attribute the workload appropriately, please indicate all people that contributed to the solutions you are turning. The midterm will account for 20% and the final exam for 40%.

**Course Outline:** references to chaps are for those in Champ and Freeman

I. The Basics—Chaps 1-4

Here, we develop the basic economy and examine what money does. Money is a store of value, it facilitates trade and the government uses it to buy things. Chapter 1 develops the economic environment in detail. Chapter 2 focuses on how money is a lower cost alternative to barter. Chapter 3 develops monetary policy, offering a view of the welfare-maximizing rate of money growth. Chapter 4 presents basic findings pertaining to competing monies across countries and the exchange rate between currencies. We will focus on the material on pages 71 through 82. In addition, this chapter introduces the concept of equilibrium prices are indeterminate.

II. Money and capital—chaps 6-7

We expand the basic model to consider a case in which people will hold a diversified portfolio of with money—which does not pay interest—and capital—which does pay interest. Toward the end of this section we introduce the notion of a bank into the model. Chapter 6 describes how money and capital compete against each other as stores of value. In Chapter 7, money is treated as being more liquid than capital. Money's liquidity advantage raises important questions about mechanisms in the economy that arbitrage two assets in ways that make people better off; in other words, we will offer banks as such a mechanism.

III. Banking—chaps 8-13

Here, we turn our attention to various aspects of commercial banks and their impact on the money supply. It is crucial that we differentiate between government, or outside, money and bank, or inside, money. We begin by looking at a structure in which banks are important for financing capital accumulation. Outside money is valued because banks have to hold some of it. Not terribly satisfying. We move to cases in which banks—both the central bank and the commercial bank—provide more interesting arrangements, showing how each contributes to making people better off by offering simple services. We conclude with a discussion of the risks that banks face in a fractional reserve setting.

Chapter 8 reviews the tools of monetary policy. In Chapter 9, we review some basic facts about business cycles and explain the differences between causes and effects. In doing so, we question the importance of central bank policies in driving business cycle phenomena. Chapter 10 gives us insight into the recent policy to pay interest on reserves. In doing so, we see how this action undoes the link between changes in the money supply and changes in prices. The basic operations of the payment system are described in Chapter 11. This chapter permits us to look at the role that the payment system played in the 2007 Financial Crisis.

Chapters 12 and 13 focus on unexpected liquidity needs. In Chapter 12, we develop the Diamond-Dybvig model to study bank runs, essentially a model with multiple equilibria. Chapter 13 builds on this notion of liquidity shocks in which currency (money) plays a more explicit role. After discussing monetary policy, we talk about liquidity crises in a setting in which aggregate shocks exist.

IV. Government debt—Chaps 14, 15, and 17

This part of the course focuses on government financing considerations. In particular, how the government can borrow from people to finance current expenditures. Under what conditions does this borrowing violate the ability of the government to meet its interest obligations in the long

run. We will study how government borrowing affects a society's ability to accumulate capital. Lastly, we discuss the government's incentive to inflate away its nominal obligations, after it has issued the debt.

Chapter 14 introduces government bonds and ability to permanently rollover government debt. Chapter 15 develops a simple model to illustrate Ricardian Equivalence; that is, the timing of taxes may not matter. Chapter 17 emphasizes the game of chicken between the central bank and the treasury that exists. We see the fiscal pressures to inflate. In this chapter, we are introduced to the concept of time inconsistency.

### **ACADEMIC INTEGRITY POLICY**

Academic integrity is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards breaches of the academic integrity rules as extremely serious matters. Sanctions for such a breach may include academic sanctions from the instructor, including failing the course for any violation, to disciplinary sanctions ranging from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, collaboration, or any other form of cheating, consult the course instructor.

Academic Dishonesty includes but is not necessarily limited to the following:

- A. Cheating or knowingly assisting another student in committing an act of cheating or other academic dishonesty.
- B. Plagiarism which includes but is not necessarily limited to submitting examinations, themes, reports, drawings, laboratory notes, or other material as one's own work when such work has been prepared by another person or copied from another person.
- C. Unauthorized possession of examinations or reserve library materials, or laboratory materials or experiments, or any other similar actions.
- D. Unauthorized changing of grades or markings on an examination or in an instructor's grade book or such change of any grade report.

**ACADEMIC INTEGRITY PLEDGE:** *"I strive to uphold the University values of respect, responsibility, discovery, and excellence. On my honor, I pledge that I have neither given nor received unauthorized assistance on this work."* Students are expected to adhere to this pledge on all graded work whether or not they are explicitly asked in advance to do so.

The University has specific academic dishonesty administrative [procedures](#). Although policy states that cases of academic dishonesty must be reported to the Office of the Provost for possible action, the instructor may assign a failing grade for the assignment or a failing grade for the course, or may adjust the grade as deemed

appropriate. The instructor also may require the student to repeat the assignment or to perform additional assignments. In instances where academic integrity is in question, faculty, staff and students should refer to [Article VI of the Faculty Handbook](#). Article VI is also available in the [M-Book](#). Article VI provides further information regarding the process by which violations are handled and sets forth a standard of excellence in our community.

**STUDENTS WITH DISABILITIES:**

If you anticipate barriers related to the format or requirements of this course, if you have emergency medical information to share with me, or if you need to make arrangements in case the building must be evacuated, please let me know as soon as possible.

If disability related accommodations are necessary (for example, a note taker, extended time on exams, captioning), please register with the Office of Disability Services (<http://disabilityservices.missouri.edu>), S5 Memorial Union, 882-4696, and then notify me of your eligibility for reasonable accommodations. For other MU resources for students with disabilities, click on "Disability Resources" on the MU homepage.

**THE DEPARTMENT OF ECONOMICS EXAM ACCOMMODATION PROCEDURE FOR STUDENTS WITH DISABILITIES:**

1. A disabled student who wants accommodations for an exam in Economics course must present the course instructor with a Letter of Accommodation from the Office of Disability Services (ODS) that documents the accommodations the student is entitled to receive. This should be done as early in the semester as possible.
2. For each accommodated exam, the student should bring the course instructor an Adaptive Examination Request Form from ODS. The course instructor is not required to accept such a request unless the student has first provided you with a Letter of Accommodation. ODS policies require that this form be provided to you at least 7 business days in advance for hourly examinations and by Thanksgiving Break (Spring Break) for fall (spring) final examinations.
3. The student section of the form must be properly filled out (including consistency with the Letter of Accommodation regarding the accommodations) and signed by the student. The course instructor must fill out the instructor portion including a note in the SPECIAL INSTRUCTIONS box and sign the form.

4. The white and pink copies of the form are given back to the student and the student must submit the white copy to ODS.

#### **RECORDING LECTURES**

University of Missouri System Executive Order No. 38 lays out principles regarding the sanctity of classroom discussions at the university. The policy is described fully in Section 200.015 of the Collected Rules and Regulations. In this class, students may not make audio or video recordings of course activity, except students permitted to record as an accommodation under Section 240.040 of the Collected Rules. All other students who record and/or distribute audio or video recordings of class activity are subject to discipline in accordance with provisions of Section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.

Those students who are permitted to record are not permitted to redistribute audio or video recordings of statements or comments from the course to individuals who are not students in the course without the express permission of the faculty member and of any students who are recorded. Students found to have violated this policy are subject to discipline in accordance with provisions of Section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.