

Econ 4329/7329  
The Banking System and the Money Market

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Text: Modeling Monetary Economies, 4<sup>th</sup> ed. Champ, B., S. Freeman and J. Haslag, Cambridge: Cambridge University Press

In this course, we start with the basics. People trade and the institutions, or technologies, that are critical to facilitating those trades is at the heart of what we are studying. Monetary economics examines the process of exchange. For example, why is it that intrinsically useless pieces of paper are held by rational people? What other means of payment exist in the world and how does this competition play out? And, not to be forgotten, what roles do banks play in helping with transactions? 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 you might think is *microeconomics*. (At the end of the semester, I will try to convince that there is just economics.) 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. Here, equilibrium describes a recipe for figuring out what is going in the economy. Without the discipline of the equilibrium, we are left just throwing ingredients in and we can get anything (literally). Without equilibrium defined well, we are hard pressed to do any 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.** There are 100 semester points available in this class. Grades will depend on the accumulation of semester points through four specific means: class participation, problems sets, a midterm and a comprehensive final. Class participation counts for 5% of your grade. I will measure class participation by interactions in class and by the number of times you are not in class to pick up your problem sets. For the latter, the relationship is inverse; that is, the more times I leave class with your problem set unreturned, the fewer class participation points you will receive. (Note that typically, problems sets will be returned at the beginning of class following

their due date.) The problem sets account for 20 semester points, the midterm exam counts for 30 semester points and the final exam counts for 45 semester points. You should expect 8-10 problems sets during the semester

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

I. The Basics—Chaps 1-5

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 describes what trade would look like without money. Chapter 2 introduces money. Chapter 3 asks whether other means of exchange could be lower cost than using money; specifically, use barter or commodity money for exchange. Chapter 4 asks about the consequences of using money growth to pay for government operations. So you see the connection between fiscal and monetary policy and why the inflation tax is harmful. Chapter 5 looks at currency exchange across countries. What kind of exchange rate policies make sense?

II. Money and capital—chaps 7-8

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 7 describes how money and capital compete against each other as stores of value. In Chapter 8, 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 9-14

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 9 reviews the tools of monetary policy. In Chapter 10, 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 11 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 12. This chapter permits us to look at the role that the payment system played in the 2007 Financial Crisis.

Chapters 13 and 14 focus on unexpected liquidity needs. In Chapter 13, we develop the Diamond-Dybvig model to study bank runs, essentially a model with multiple equilibria. Chapter 14 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 15, 16, and 18

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. When government debt policy is involved, there is an explicit link between fiscal policy and monetary policy. There is a chance to talk about the fiscal theory of the price level.

Chapter 15 introduces government bonds and ability to permanently rollover government debt. Chapter 16 develops a simple model to illustrate Ricardian Equivalence; that is, the timing of taxes may not matter. Chapter 18 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**

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 or the [Office of Academic Integrity](#).

Students are expected to adhere to this honor pledge on all graded work whether or not they are explicitly asked in advance to do so: "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."

#### **ACCOMMODATION OF DISABILITIES**

The goal of the University of Missouri is to ensure an inclusive learning environment for all students. [The University of Missouri Disability Center](#) provides services and accommodations for students to participate fully in the learning experience and to experience equitable evaluation of their performance. Students (including online students) with a documented disability can contact the Disability Center to establish an [Accommodation Plan](#). Documented disabilities include hearing, vision, mobility, learning and attention, psychological health, and physical health. Students' accommodations are implemented with the input of students to maximize the learning experiences. The MU Disability Center keeps information about a student's disability confidential.

Please notify me of your eligibility for accommodations as soon as possible. Additionally, if there are aspects of the course that present as barriers, such as inaccessible course content (e.g., learning assessments, PowerPoints, non-captioned videos, images, tables, PDFs) or if you need an immediate accommodation due to an injury, please contact me or the Disability Center as soon as possible.

### **INTELLECTUAL PLURALISM**

The University community welcomes intellectual diversity and respects student rights. Students who have questions or concerns regarding the atmosphere in this class (including respect for diverse opinions) may contact the departmental chair or divisional director, the [Office of Academic Integrity](#), or the [MU Equity Office](#).

### **ACADEMIC INQUIRY, COURSE DISCUSSION, AND PRIVACY**

When students record something that happens in a course (a lecture, class discussions, meetings, etc.) it has an impact on the rights of the people captured in that recording. For example, the instructor and the University may have rights to the intellectual property contained in that recording. At the same time, another student who may have been recorded has the right to privacy. In order to protect these rights, MU employs a policy (called "[Executive Order No. 38](#)") to govern both situations you may encounter while taking a course – when an instructor allows recordings and when they do not.

- In this class, students may make audio or video recordings of course activity unless specifically prohibited by the faculty member. However, the redistribution of audio or video recordings of statements or comments from the course to individuals who are not students in the course is prohibited without the express permission of the faculty member and of any students who are recorded.

OR

- 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.

Students who violate 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.

### **FERPA**

The [Family Educational Rights and Privacy Act](#) (FERPA) of 1974 is a federal law designed to protect the privacy of educational records; to establish the rights of students to inspect and review their education records; and to provide guidelines for the correction of inaccurate and misleading data through informal and formal hearings. The law applies to any individual who is or has been in attendance at an institution and regarding whom the institution maintains educational records. Once students have matriculated to the

University of Missouri, i.e. enrolled in course work, FERPA rights transfer to the student, regardless of the student's age.

Students can enable certain individuals to have access to their education records by signing a [FERPA waiver](#). The consent must specify records to be disclosed, state the purpose of the disclosure and identify the party or class of parties to whom the disclosure must be made.

### **NONDISCRIMINATION POLICY**

The University of Missouri does not discriminate on the basis of race, color, national origin, ancestry, religion, sex\* (including gender), pregnancy, sexual orientation, gender identity, gender expression, age, disability, protected veteran status, and any other status protected by applicable state or federal law. Discrimination includes any form of unequal treatment such as denial of opportunities, harassment, and violence. \*Sex discrimination includes rape, sexual assault, sexual harassment, unwanted touching, stalking, dating/domestic violence, stalking, and sexual exploitation. Retaliation for making or supporting a report of discrimination or harassment is also prohibited.

If you experience discrimination or sexual violence, you are encouraged (but not required) to report the incident to the MU Office for Civil Rights & Title IX. Learn more about your rights and options at [civilrights.missouri.edu](http://civilrights.missouri.edu) or call 573-882-3880. You also may make an anonymous report online.