

EC0342: Money and Banking

Fall 2020

MW, 1:30PM-2:50AM

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Eco 342: Money and Banking

Course Description:

This course explores the interaction between money, financial markets and institutions. We examine (1) the three roles of money – using crypto and digital currencies as leading example, (2) the core principles of asset pricing, (3) how financial institutions help to overcome financial frictions, but may lead to financial crisis and bank runs – with the Great Depression, the Great Recession and the Euro crisis as prominent examples, (4) how monetary and macroprudential policy manage inflation and can help to mitigate financial crises, (5) the international financial architecture, especially the role of the International Monetary Fund, and the impact of FinTech on the financial sector.

The course will be offered online on zoom. We will try to include some interactive online features, and hence I encourage you to participate live. However, you can also attend the course by watching the recorded classes and precepts. It is important to solve the problem sets and stay on top of the material week-by-week. Each student has to submit his own problem set, but you are allowed to work together.

Textbooks:

We will provide lectures notes to this course, which will closely resemble the material taught in the class.

- Lectures notes “*Money and Banking*”, Fall 2020
- Markus K. Brunnermeier and Ricardo A. Reis, (2019) “[A Crash Course on the Euro Crisis](#)”

There is no need to buy any textbook. Students who find the lecture notes too concise and analytical and would like to read more about the institutional details might consult in addition one of the following books as background reading:

- Frederic S. Mishkin, (2018) “*The Economics of Money, Banking, and Financial Markets*”, 12th Edition, Pearson.
- R. Glenn Hubbard and Anthony P. O'Brien, (2017), “*Money, Banking and the Financial System*”, 3rd Edition, Pearson.
- Stephen G. Cecchetti and Kermit L. Schoenholtz, (2017), “*Money, Banking and Financial Markets*”, 5th Edition, MacGraw Hill.

More popular books give you further insights:

- Mervyn King, (2016), “*The End of Alchemy: Money, Banking and the Future of the Global Economy*”, W. W. Norton
- Markus K. Brunnermeier, Harold James and Jean-Pierre Landau, (2016), “*The Euro and the Battle of Ideas*”, Princeton University Press. [BJL]

- Liaquat Ahamed, (2009), *"Lords of Finance: The Bankers who Broke the World"*, Penguin

Video:

- [YouTube: Markus Economicus](#)

Structure of the Course:

01. Introduction

02. Money, Credit and Crypto

- Double coincidence of wants, Gresham's Law
- Token vs. account-based money
- M.K. Brunnermeier et al. 2019 ["The Digitalization of Money"](#)
- Cryptocurrencies
 - o <https://www.youtube.com/watch?v=I9j0Jk30eQs>
 - o <https://www.lrb.co.uk/v38/n08/john-lanchester/when-bitcoin-grows-up>
 - o Abadi, J. and M.K. Brunnermeier, ["Blockchain Economics"](#) (Sections 1 & 2)

03. Interest Rates, Risks and Bond Market Evaluations

- Relative asset pricing, arbitrage
- Yield curve, Forward rates, term structure, expectation hypothesis, ...
 - o Pietro Veronesi (2016), ["Handbook of Fixed Income Securities"](#) (Chapter 1) Wiley Handbooks,
- Interest rate risk, default risk, variance risk and options, correlation risk and CDOs, CDS

04. Risk-free Rate, Risk Premia, and the Macroeconomy

- Absolute asset pricing, stochastic discount factor
- Leverage and capital structure

05. Bubbles and the Efficient Market Hypothesis

- Gordon Growth Model, Efficient Market Hypothesis
- Bubbles
 - o M.K. Brunnermeier ["Bubbles"](#)
 - o M.K. Brunnermeier and M. Oehmke ["Bubbles, Financial Crises, and Systemic Risk"](#)
 - o M.K. Brunnermeier and I. Schnabel, ["Bubbles and Central Banks: Historical Perspectives"](#) (Classifying 400 years of bubbles)

06. Financial Frictions and Inefficiencies

- Adverse selection, moral hazard, debt overhang, commitment problems, solvency vs. liquidity,
- Mitigation via collateral, securitization, intermediaries, ...

07. Intermediation

- Trust and reputation
- Role of banks
 - o [I Theory video \(Part 1\)](#)

- Traditional vs. Modern Banking and Shadow Banking [BJL, chapter 9]
 - o M.K. Brunnermeier and R.A. Reis, 2019, "[A Crash Course on the Euro Crisis](#)"
- Securitization
 - o M.K. Brunnermeier "[Deciphering the Liquidity and Credit Crunch 2007-2008](#)"
- FinTech

08. Financial Crises, Systemic Risk, Financial Regulation

- Amplification, multiple equilibria, liquidity spiral, endogenous risk, volatility paradox
- Liquidity vs. Solvency
 - o M.K. Brunnermeier and R.A. Reis, 2019, "[A Crash Course on the Euro Crisis](#)"
- Bank Runs, LOLR
 - o [I Theory video \(Part 2\)](#)
 - o D. Diamond and Ph. Dybvig, (1983) "[Bank runs, deposit insurance, and liquidity](#)", Journal of Political Economy, pp. 401-419.
- Systemic Risk Measures and Financial Regulation
- Great Recession:
 - o M.K. Brunnermeier, (2009) "[Deciphering the Liquidity and Credit Crunch 2007 – 2008](#)", Journal of Economic Perspectives 23(1), p. 77–100
- Euro crisis [BJL]:

09. Monetary Theory, value of money, inflation, etc.

- Quantity equation with exogenous velocity
 - o McCandless, George T., Jr., and Warren E. Weber, "[Some Monetary Facts](#)" Federal Reserve Bank of Minneapolis Quarterly Review, Vol 19., No. 3, Summer 1995
- Fiscal Theory of the Price Level
 - o German hyperinflation
- Financial frictions: Long-run Philipps curve
 - o M.K. Brunnermeier and Y. Sannikov 2015 "[On the Optimal Inflation Rate](#)", *American Economic Review*.
 - o Role of safe asset
- With Intermediation
 - o The I Theory of Money
 - Liquidity and disinflationary spiral
- Price rigidities: Short-run Phillips curve
 - o Babysitter co-op. analogy
 - Sweeney, J.; Sweeney, R. J. (1977). "[Monetary Theory and the Great Capitol Hill Baby Sitting Co-op Crisis: Comment](#)", *Journal of Money, Credit and Banking*, 9 (1): 86–89. doi:10.2307/1992001. JSTOR 1992001
 - o Keynesian model (with backward looking price stickiness)
 - o New Keynesian models (dynamic & expectations augmented)
 - J. Gali, (2008), "*Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework*", Princeton University Press

- Clarida, R., J. Gali, and M. Gertler, “[Monetary Policy Rules and Macroeconomic Stability: Evidence and some Theory](#),” *Quarterly Journal of Economics* 115(1), 2000, p. 147–180 (technical)

10. Monetary and Macroprudential Policy

- Mandates and goals of monetary policy, inflation targeting, Taylor rules
- Time inconsistency and reputation
- Accounting basics (Central banks, banks, and households’ balance sheets)
- Transmission mechanism, time-inconsistency problem
- Central banks and bubbles
- Risky government debt, diabolic loop, stability and dominance concepts
 - [I Theory video \(Part 3 and 4\)](#)

11. International Financial Architecture

- Mundell Fleming Trilemma, pegs, dollarization,
- Role of the IMF (chapter 14 of [BJL]), Regional Finance Arrangements (RFAs), Swap lines, Flight to safety, Global Safe Asset

12. Digitalization of Money

- Digital Currency Areas, Digital dollarization
- M.K. Brunnermeier et al. 2019 “[The Digitalization of Money](#)”

Course material:

Additional course material (if necessary) will be made available on a shared Google Drive and/or on Canvas after classes.

Preceptor:

Name: Ziang Li
 E-mail: Ziang.Li@princeton.edu
 Precept: Time, location
 Office: online
 Office Hour: TBA

- The preceptor’s job is to act as a catalytic in the process. Please **ask** him when something is not clear – if you did not understand something, the odds are that somebody else did not either

Assignments and Precepts:

Time: Tuesday 7:30-8:30pm
 Location: online

The purpose of the homework assignments and precepts is to help you better understand the rather abstract material from the lectures. To that end, careful **preparation** of the precepts as well as the lectures will help you a lot. Moreover, it is only possible to grasp the concepts by **thinking through concrete examples by yourself**. Many students find it helpful to **discuss** the problems with their peers.

To align your incentives with these goals, and to give you a commitment device...

- Collaboration is explicitly allowed and desirable. Help each other prepare for the precepts, make stuff available to each other, and discuss your solutions.
- Use the Canvas Discussion Board to discuss problems before emailing me. I will look into it and give comments if needed.
- Everyone should submit the written homework assignment. You should also be ready to individually present your solutions to the precept class. Your performance (not your presentation skills) and participation in the discussion will enter your overall grade.
- We set up the following assignment policies: There is an absolute discount of 20% per day an assignment is submitted late. You have one free shot; we will ignore your worst assignment score when determining grades.

Furthermore, he will answer questions of general concern and respond to feedback in the precepts. Do not hesitate to email him your questions in advance, especially if they might require preparation. You can also point them out to him during the office hours.

Online office hours (preliminary):

Instructor: Mondays 3:15 to 4:15 pm

Preceptor: Mondays 10:00 to 11:00 a.m. (Ziang Li)

The purpose of office hours is to allow you to ask additional questions outside the classroom setting. These could be issues you did not understand in the lecture or in the last precept, or more personal concerns. The preceptor will be very happy to assist you with any of these. For the sake of fairness to your fellow students, the preceptor will, however, make an effort to answer questions that are of general concern in the precepts.

To make the best use of office hours, **come prepared**. A clear question is the best way to elicit a clear answer. Please email the preceptor in advance if you plan on attending so that he may prepare for your meeting as well.

Grading:

The overall grade is calculated based on the following weighting scheme:

Class Participation:	20 %
Problem Sets/Presentations:	15 %
Midterm test:	30 %
Final examination:	35 %

The midterm test will be held in class on Wednesday, October 23rd, 2020 (subject to change). The final will be held in December 2020.

Although the exams are closed book, you may bring into the exam one 8 ½ x 11 sheet of paper. You can write on both sides and as small as you wish, but I recommend using this only as a psychological support to have a formula available “just in case.” The exams won’t be “fill in the blanks” exercises, nor will they rely on intensive formula-based computations. Preparing lots of pre-fabricated solutions from previous exams or assignments will only be distracting during the exam.

You will be allowed to use a silent battery operated calculator during the exams (but not during the “precept tests”). Laptops, while useful for assignments, are not needed (nor allowed) in my exams.

Appeals policy:

Since the preceptor will grade all assignments and exams, all appeals of grades should first be addressed to the preceptor within one week. Verbal appeals of grades will not be accepted. We will be glad to regrade any assignment or exam. However, you must provide a statement in writing as to where and why there is a problem. Importantly, the entire exam or assignment will be regraded. As a result, the regraded score may increase, remain the same, or decrease.