

# **Money, Banking and the Financial System**

**(220:301:10)** Fall 2017

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Office Hours: 2:45-3:30 Mondays and Wednesdays

Class meets Mondays/Wednesdays 1:10pm to 2:30pm

Room A5 Frelinghuysen Hall, CAC

## **Prerequisites: Eco 102 & 103 (This is a lower level elective)**

December 23, 1913 Woodrow Wilson signed into law the Federal Reserve Act. We are now a few years beyond the 100th anniversary of the Fed. As such it is appropriate that we spend some time in class studying the history of the Fed.

The world of Money, Banking and the Financial System has changed significantly in recent years. Concepts such as "Too Big to Fail", and the "Volcker-Rule" have been incorporated into recent legislation (Dodd-Frank).

The Fed reached the so-called "Zero-Bound" back in late 2008 that is when the traditional policy rate is effectively at zero. In late 2015 the Fed moved off the zero-bound, but still has a way to go before the policy rate is fully normalized. What were the unconventional tools used by the Fed, and did they work? How will the Fed unwind these unconventional policies?

Welcome to Money, Banking and the Financial System

These topics and more will be discussed in class.

## **Final Exam**

To avoid any confusion it is policy to display the date and time of the final exam on the front page of the syllabus.

***Date: Wednesday, December 20, 8:00am***

## **Grading Policy**

First Exam	40%
Final Exam	50%
Assignments	10%

Make-Up Exams will only be given under extraordinary circumstances. Students should check with me before missing an exam to see whether their particular circumstances meet my very limited definition of extraordinary.

## Learning Outcomes

Students who satisfactorily complete Money & Banking will understand the role of money and banks in the broader economy. Specifically, students should garner an understanding of the unique role of banks in the financial system. Students will learn how banks and other financial institutions make money, and allocate credit. Students will also have an appreciation for the money markets and bond market.

Students will also learn the relevance of the Federal Reserve and related central banking topics, including the causes, policy responses, and lessons associated with the recent financial market crisis.

## Attendance Policy

Students are expected to attend every class. While I understand that such is not always possible, students should be aware that I will not provide individual review sessions. I will take attendance. Moreover, *students should understand that it is impossible to pass this course without regular attendance.*

*Students are expected to attend all classes; if you expect to miss one or two classes, please use the University absence reporting website: <http://sims.rutgers.edu/ssra> to indicate the date and reason for your absence. An e-mail is automatically sent to me.*

## Other

The University has established rather severe penalties for cheating. This link details the academic integrity disciplinary process: <http://academicintegrity.rutgers.edu/academic-integrity-disciplinary-process>

## Textbook

Much has changed in the world of Money & Banking over the past few years. As a consequence most textbooks are out of date. I teach largely from Power-Point presentations, which I make available to students. I don't teach directly from a textbook. That said, I do recommend that students have access to a standard text. The textbook below is popular and expensive (\$236), currently this text is in its 11<sup>th</sup> edition. Buy the 10<sup>th</sup> (about \$35) or even 9<sup>th</sup> edition, save money..

**The Economics of Money, Banking and Financial Markets**, 11<sup>th</sup> ed. Frederic S. Mishkin  
[https://www.amazon.com/Economics-Money-Banking-Financial-Markets/dp/0132770245/ref=sr\\_1\\_3?ie=UTF8&qid=1503656157&sr=8-3&keywords=The+Economics+of+Money%2C+Banking+and+Financial+Markets](https://www.amazon.com/Economics-Money-Banking-Financial-Markets/dp/0132770245/ref=sr_1_3?ie=UTF8&qid=1503656157&sr=8-3&keywords=The+Economics+of+Money%2C+Banking+and+Financial+Markets)

## Homework Assignments

There will be a number of homework assignments. These assignments are designed to get your "hands dirty" with economic and financial market data. You will be required to download data from Federal Reserve and other websites, manipulate the data in an Excel spreadsheet, draw graphs using these data, and reflect upon the underlying story captured in these graphs.

Students should be aware that I am not looking for perfection; each assignment should take only about 1/2 hour. Your mission is an attempt at some basic level of economic research. My thinking is that you will understand the concepts better by actually playing with the data.

Students should use the "*Assignments*" function on *Sakai* to turn in assignments. Full credit will be given to all "good-faith" attempts at completing assignments. ***Thus, make sure you turn in all assignments on time.*** This is an easy way of securing the full 10% contribution to your final grade.

## Class Notes

I will use Power-Point presentations in class. I will make these available to you in advance (via Sakai). I recommend that you use printouts of these presentations to take class notes. Some students have found it useful to compile these presentations in a binder.

## Lesson 1--What Is a Bank?

**Banking Basics**, Federal Reserve Bank of Boston

<http://www.bostonfed.org/education/pubs/bankingbasics.htm>

*Extra Credit Assignment:* Fun With T-Accounts

## Lesson 2--What Is Money?

## Lesson 3--How Banks Work

## Lesson 4--Instruments of the Money Markets

Special Report: Instruments of the Money Market, Tim Cook and Robert Laroche, Federal Reserve Bank of Richmond (Chapter 1)

[http://www.richmondfed.org/publications/research/special\\_reports/instruments\\_of\\_the\\_money\\_market/index.cfm](http://www.richmondfed.org/publications/research/special_reports/instruments_of_the_money_market/index.cfm)

The Pre-Crisis Monetary Policy Implementation Framework, Alexander Kroeger, John McGowan, Asani Sarkar, FRBNY Staff Report No. 809, March 2017.  
[http://www.newyorkfed.org/medialibrary/media/research/staff\\_reports/sr809.pdf?la=en](http://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr809.pdf?la=en)

Who's Borrowing in the Fed Funds Market? Gara Afonso, Alex Entz, and Eric LeSueur, Liberty Street Blog, FRBNY (December 9, 2013)  
<http://libertystreeteconomics.newyorkfed.org/2013/12/whos-borrowing-in-the-fed-funds-market.html>

Who's Lending in the Fed Funds Market? Gara Afonso, Alex Entz, and Eric LeSueur, Liberty Street Blog, FRBNY (December 2, 2013)  
<http://libertystreeteconomics.newyorkfed.org/2013/12/whos-lending-in-the-fed-funds-market.html>

Libor: The Basics, The British Bankers Association  
<http://www.bbalibor.com/bbalibor-explained/the-basics>

Why Are Bill Yields Negative? CNBC Interview with Raymond Stone (December 21, 2011), <http://video.cnb.com/gallery/?video=3000063716>

*Assignment 1:* Graph the following (1995 to present monthly, all on same graph)

- (1) Federal Funds rate
- (2) 1-month Eurodollar
- (3) 1-month Commercial Paper (Nonfinancial)
- (4) 1-month CD (secondary market)
- (5) Bank Prime Loan
- (6) 3-month Treasury Bill (secondary Market)

These data can be found here:

<https://fred.stlouisfed.org/>

## **Lesson 5-Bank Regulation and Supervision**

The Dodd-Frank Act: a cheat sheet

<http://www.mofo.com/files/Uploads/Images/SummaryDoddFrankAct.pdf>

Too Big to Fail

[http://www.minneapolisfed.org/publications\\_papers/studies/tbtf/index.cfm](http://www.minneapolisfed.org/publications_papers/studies/tbtf/index.cfm)

What are CAMELS and who should know?

[http://www.minneapolisfed.org/publications\\_papers/pub\\_display.cfm?id=2518](http://www.minneapolisfed.org/publications_papers/pub_display.cfm?id=2518)

FRBPF Chapter 5 [http://www.federalreserve.gov/pf/pdf/pf\\_5.pdf](http://www.federalreserve.gov/pf/pdf/pf_5.pdf)

## **Lesson 6--Fed History (Early Days)**

Centennial Timeline

<http://www.federalreserveeducation.org/about-the-fed/history/>

Events, People, and Purpose

<http://www.federalreservehistory.org/>

**Video of Centennial Commemoration**

<https://www.youtube.com/watch?v=BYAI9cLggPU>

Panic of 1907

Federal Reserve Bank of Boston

<http://www.bos.frb.org/about/pubs/panicof1.pdf>

Historical Beginnings.... The Federal Reserve System (Chapter 3)

Federal Reserve Bank of Boston

<http://www.bos.frb.org/about/pubs/begin.pdf>

A Century of U.S. Central Banking: Goals, Frameworks, Accountability, Ben Bernanke, July 10, 2013.

<http://www.federalreserve.gov/newsevents/speech/bernanke20130710a.htm>

## **Lesson 7--Fed History (Depression/Modern Fed)**

Then and Now: Fed Policy Actions During the Great Depression and Great Recession, David Lopez, Federal Reserve Bank of St Louis, November 2011

<http://liber8.stlouisfed.org/newsletter/2011/Lib1111ClassrmEdition.pdf>

Closed for the Holiday (The Bank Holiday of 1933)

Banking Act of 1933 (Glass-Steagall), Federal Reserve History

[https://www.federalreservehistory.org/essays/glass\\_steagall\\_act?platform=hootsuite](https://www.federalreservehistory.org/essays/glass_steagall_act?platform=hootsuite)

Banking Act of 1935, Federal Reserve History

[https://www.federalreservehistory.org/essays/banking\\_act\\_of\\_1935?platform=hootsuite](https://www.federalreservehistory.org/essays/banking_act_of_1935?platform=hootsuite)

Treasury-Federal Reserve Accord 1951

[http://www.richmondfed.org/publications/research/special\\_reports/treasury\\_fed\\_accord/background/](http://www.richmondfed.org/publications/research/special_reports/treasury_fed_accord/background/)

The Great Inflation (Late 1960s/1970s)

Federal Reserve Bank of San Francisco

<http://www.frbsf.org/econsrch/wklyltr/2000/el2000-21.html>

## Monetary Policy in the Late 1970s/Early 1980s

Federal Reserve Bank of San Francisco

<http://www.frbsf.org/education/activities/drecon/2003/0301.html>

## Lesson 8-- Money Supply and the Economy/Quantity Theory

Milton and Money Stock Control, William Poole (FRBSL July 30, 2007)

[http://fraser.stlouisfed.org/docs/historical/frbsl\\_history/presidents/poole/20070731.pdf](http://fraser.stlouisfed.org/docs/historical/frbsl_history/presidents/poole/20070731.pdf)

## Lesson 9 Understating Interest Rates

*Assignment 2:* Bond Math Worksheet

## Lesson 10 Interest Rate Determination

## Lesson 11 The Risk and Term Structure of Interest Rates

The Yield Curve as a Leading Indicator, Arturo Estrella (FRBNY October 2005)

[http://www.newyorkfed.org/research/capital\\_markets/ycfaq.html](http://www.newyorkfed.org/research/capital_markets/ycfaq.html) - Main

*Assignment 3:* Graph the following (1980 to present monthly)

(1) Yield Curve Slope--10-yr constant maturity Treasury minus effective Fed Funds rate

(2) Compare Yield Curve Slope series with 12-month % chg in Industrial Production

These data can be found on the St Louis Fed's FRED Database:

<http://research.stlouisfed.org/fred2/>

***First Exam--Date to be announced***

## Lesson 12--The Federal Reserve Structure, Transparency and Independence

## Lesson 13--The Money Supply Process

*Assignment 4:* Graph the following: (Monthly 1978 to present)

M1 & M2 Money Supply Multipliers (Money Supply/Monetary Base)

Total Reserves: <http://www.federalreserve.gov/releases/h3/hist/h3hist1.txt>

Money Supply: <http://www.federalreserve.gov/releases/h6/hist/h6hist1.txt>

## **Lesson 14 -- Monetary Policy--Traditional Tools of the Fed**

A Day in the Life of the FOMC

<http://www.philadelphiafed.org/education/teachers/resources/day-in-life-of-fomc/>

## **Lesson 15--Credit Crisis: What Went Wrong?**

Six Fingers of Blame in the Mortgage Mess, Alan Blinder, Op-Ed NYT Sept 30, 2007

[http://www.nytimes.com/2007/09/30/business/30view.html?\\_r=1&scp=7&sq=Alan%20Blinder&st=cse](http://www.nytimes.com/2007/09/30/business/30view.html?_r=1&scp=7&sq=Alan%20Blinder&st=cse)

## **Lesson 16--Crisis Related Fed Liquidity Provisions**

Discount Window Policies

<http://www.frbdiscountwindow.org/index.cfm>

Why Do Banks Feel Discount Window Stigma? Olivier Armantie, Liberty Street Blog, FRBNY, January 15, 2014 <http://libertystreeteconomics.newyorkfed.org/2014/01/why-do-banks-feel-discount-window-stigma.html>

The History of a Powerful Paragraph

[http://www.minneapolisfed.org/publications\\_papers/pub\\_display.cfm?id=3485](http://www.minneapolisfed.org/publications_papers/pub_display.cfm?id=3485)

Federal Reserve Liquidity Provision During the Financial Crisis of 2007-2009, Michael Fleming, FRBNY Staff Reports # 563, July 2012.

[http://www.newyorkfed.org/research/staff\\_reports/sr563.html](http://www.newyorkfed.org/research/staff_reports/sr563.html)

Interest on Reserves and Monetary Policy, Marvin Goodfriend, FRBNY Economic Policy Review 2002 <http://www.newyorkfed.org/research/epr/02v08n1/0205good.pdf>

Overnight RRP Operations as a Monetary Policy Tool: Some Design Considerations, Josh Frost, Lorie Logan, Antoine Martin, Patrick McCabe, Fabio Natalucci, and Julie Remache, FRBNY Staff Reports no. 712, February 2015

[https://www.newyorkfed.org/medialibrary/media/research/staff\\_reports/sr712.pdf](https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr712.pdf)

## **Lesson 17--Unconventional Policies--The Great Experiment**

Monetary Policy 101: A Primer on the Fed's Changing Approach to Policy Implementation, Jane E. Igrig, Ellen E. Meade, and Gretchen C. Weinbach, Board of Governors of the Federal Reserve System. June 30, 2015

<https://www.federalreserve.gov/econresdata/feds/2015/files/2015047pap.pdf>

Federal Reserve Communications, Ben Bernanke (Nov 14, 2007)  
<http://www.federalreserve.gov/newsevents/speech/bernanke20071114a.htm>

Monetary Policy: Many Targets, Many Instruments. Where Do We Stand? Janet Yellen, April 16, 2013  
<http://www.federalreserve.gov/newsevents/speech/yellen20130416a.htm>

Thoughts on Unconventional Monetary Policy, Jerome H. Powell, June 27, 2013  
<http://www.federalreserve.gov/newsevents/speech/powell20130627a.htm>

The Federal Reserve's Asset Purchase Program, Janet Yellen, January 8, 2011  
<http://www.federalreserve.gov/newsevents/speech/yellen20110108a.pdf>

Fed's Twist May Prompt Bigger Turn, Matt Phillips, WSJ, September 30, 2011  
<http://online.wsj.com/article/SB10001424052970203405504576601313434984974.html>

## **Lesson 18-- The Transmission of Monetary Policy**

The Monetary Transmission Mechanism: Some Questions and Further Answers, Kenneth Kuttner and Patricia Mosser, FRBNY Economic Policy Review, May 2002  
<http://www.newyorkfed.org/research/epr/02v08n1/0205kutt.pdf>

The Financial Accelerator and the Credit Channel. Ben Bernanke, *At the The Credit Channel of Monetary Policy in the Twenty-first Century Conference, Federal Reserve Bank of Atlanta, Atlanta, Georgia,* June 15, 2007  
<http://www.federalreserve.gov/newsevents/speech/bernanke20070615a.htm>

Evidence of the Portfolio Balance Channel of Quantitative Easing, Daniel Thornton, FRBSTL Working Paper, June 2012  
<http://research.stlouisfed.org/wp/more/2012-015>

## **Lesson 19 --The Unwinding of Unconventional Fed Policies--Interest on Reserves and Other Exit Strategy Tools**

Policy Normalization Principles and Plans (September 17, 2014)  
<http://www.federalreserve.gov/newsevents/press/monetary/20140917c.htm>

Addendum to the Policy Normalization Principles and Plans (June 14, 2017)  
<https://www.federalreserve.gov/newsevents/pressreleases/monetary20170614c.htm>



## Lesson 20 –Monetary Policy Rules

Donald Kohn: John Taylor rules

<http://www.bis.org/review/r071019f.pdf>

**Assignment 5:** Graph the following (Quarterly 1992 to present)

Effective Funds Rate and Taylor Rule estimate of Funds Rate--Data to be provided

Monetary Policy Rules and Their Role in the Federal Reserve's Policy Process,  
Monetary Policy Report, Part 2 (July 2017)

<https://www.federalreserve.gov/monetarypolicy/2017-07-mpr-part2.htm#xmonetarypolicyrulesandtheirroleinth-e8fb8472>

## **Other Resources**

### **Just In Case Web App**

<http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

### **Counseling, ADAP & Psychiatric Services (CAPS)**

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901 / <http://www.rhscaps.rutgers.edu/>

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

### **Violence Prevention & Victim Assistance (VPVA)**

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / <http://www.vpva.rutgers.edu/>The

Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

### **Disability Services**

(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation:

<https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at:

<https://ods.rutgers.edu/students/registration-form>

### **Scarlet Listeners**

(732) 247-5555 / <http://www.scarletlisteners.com/>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.