

Central Banks, Macroeconomic Policy and Financial Markets
FNCE 7400
Fall 2022

This course will be co-taught by Professor Zvi Eckstein and Professor Joao F. Gomes. Professor Eckstein will teach most of Quarter 1 and Professor Gomes will teach mostly during Quarter 2.

Contact Information

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Course Overview

Description

Macroeconomic events and policies play a crucial role in driving financial market performance over time. This is an advanced course in applied macroeconomics that discusses both how macroeconomic policy works today and how it impacts the broad economy and financial markets. It is assumed that students have a good knowledge of *intermediate* undergraduate macroeconomic analysis and at least a *basic* understanding of the key financial market indicators.

The first half of the class focuses on **understanding and predicting Central Banking (CB) decision making and how monetary policy is conducted today**. We provide the methods and knowledge on how central banks think and implement policies to reach the goals of price and financial stability as well as support of growth and employment. The core of this section connects economic knowledge, legal frameworks and the goals and methods followed by central banks. **We explain the rationale for the policy prescriptions implemented today mainly by the Federal Reserve Bank (Fed) in the US** as well as by the European Central Bank (ECB), Bank of Israel (BOI) and some other major countries. We discuss the current events of inflation and risk of

recession as the world exits from the Covid-19 crisis and central banks adjust their monetary policy. We will also cover events before and after the 2008 financial crisis and attempt to draw lessons from the 1970s stagflation episodes. Students will simulate and forecast upcoming central banks' policy decisions based on current data and the latest theory.

The second half studies government policy more broadly and how financial markets process macroeconomic events and policy announcements. It discusses the key macroeconomic drivers of bond and stock market valuations and how they respond to economic news and policy actions by central banks and governments. We discuss the impact of recent developments and, in particular, the consequences of the aggressive policy interventions to the financial crisis and the Covid-19 induced recession. Students will estimate the impact of key macro developments and assess their implications for bond and equity valuations.

Prerequisites

This course assumes students have a solid knowledge of intermediate macroeconomics, or similar, principles of finance and some basic regression analysis.

Meeting Information

Class Times

Tuesday and Thursday: 10:15-11:45 SHDH 213 (Section 7400.1) and 1:45 PM-3:15 PM SHDH 213 (Section 7400.2).

Guest speakers will talk to *only one session* usually over Zoom during the 10:15 AM class.

All sessions will be **recorded** and available on Canvas.

Class Structure

Most classes will:

- **Start with a class discussion of the latest news** or data related to the class. Our main sources will be the *Financial Times* and *The Wall Street Journal*, as well as *The Economist* and *Bloomberg*. Readings will usually be shared on the day before class.
- **Conclude with a short Quiz.** The Quiz aims to review the core concepts discussed during that class. Quizzes are on Canvas. They should be done individually using a mobile device.

Students are expected to attend class regularly and contribute actively to the discussions and answer Quizzes. Even if you cannot attend a class for health or family emergency reasons, you can still participate in follow up online discussions.

Classroom Safety

This is an in-person class, although most of our guest speakers will only be able to join remotely. The exact **classroom safety rules** will conform with the latest guidance from Penn and the city of Philadelphia. Masks are optional. All classes will be recorded and posted on Canvas.

Requirements and Grading

The final course grade will be calculated as follows:

- **Team Assignments:** to be done by teams of 3-4 students (30%)
- **Active participation:** in class discussions and/or online discussion boards (20%)
- **Quizzes** (drop two lower scores): (30%)
- **Long Quiz (December 8):** covers presentations by guest speakers (20%)

Key Deliverables Dates

- Sep. 8 - Presentation and discussion of Assignment 1
- Sep 20 - Presentation and discussion of Assignment 2
- Oct 11 - Presentation and discussion of Assignment 3
- Nov 29 - Presentation and discussion of Assignment 4
- **Dec 8 – Long Quiz**

Course Materials

Because this is an advanced class that discusses real-time events there is no suitable textbook. Most of our references provide supportive information but *are not required* to follow the class material. They include a few useful chapters or sections from some (text) books, as well as reports, lectures and several recently published articles on each of the topics. We will **provide all necessary readings and data for the assignments**. Slides, readings and assignment materials can be found on Canvas.

Penn provides free online subscriptions to several major financial publications ([*Financial Times*](#), [*Wall Street Journal*](#), [*New York Times*](#)) and we strongly recommend you take advantage of them to be able to link to any web articles we will post from those publications.

In addition, Yardeni Research (<https://www.yardeni.com>) provides incredibly detailed content on financial markets and the macroeconomy. It is freely available and updated daily.

Background Reference:

- Andy A. Abel, Ben S. Bernanke and Dean Croushore, *Macroeconomics* (10th edition) Pearson. (ABC)

Course Topics and Schedule

1. Covid-19, the Great Financial Crisis and Central Banks Intervention (Aug 30)

Readings

Optional background:

- ABC, pp. 568-574.
- Economist Special report "Central Banks: The Danger of Excessive Distraction" 20 April 2022. <https://www.economist.com/special-report/2022/04/20/the-danger-of-excessive-distraction>

2. Inflation and Interest: Foundations (Sep. 1)

Main Question: What are the optimal long run (target) inflation and nominal interest rate?

Readings

Priority:

- FOMC, [Statement on Longer-Run Goals and Monetary Policy Strategy](#), Adopted January 24, 2012; as reaffirmed effective January 25, 2022.

Optional background:

- ABC, pp. 63-248; 248-252; 263-270; 276-278; 474-481

Optional additional:

- The Economist “Going Digital: How central banks are moving into e-money?”, 20 April 2022. <https://www.economist.com/special-report/2022/04/20/how-central-banks-are-moving-into-e-money>
- The Economist: “A new era of economics: starting over again”, Briefing, 7/25/2020. <https://www.economist.com/briefing/2020/07/25/the-covid-19-pandemic-is-forcing-a-rethink-in-macroeconomics>
- Robert, E. Lucas Jr, “[Inflation and Welfare](#)”, *Econometrica*, Vol. 68(2), 2000, pp. 247-274.
- Thomas, S. Sargent, “The End of the Four Big Inflations”, in *Inflation: Causes and Effects*, Robert E. Hall (editor), University of Chicago Press, 1982.

3. The Taylor Rule: How do Central Banks Conduct Monetary Policy? (Sep. 6 & 8)

Main Question: How is the short-term interest rate determined?

Readings

Priority:

- Ben S. Bernanke, “[Monetary Policy and the Housing Bubble](#)”, speech at the American Economic Association, 1/2010
- Ben S. Bernanke, “The Non-Monetary Effects of the Financial Crisis in the Propagation of the Great Depression”, *American Economic Review*, Vol. 73(3), 1983, pp. 257-276.
- Ben S. Bernanke, (4/28/2015), “[The Taylor Rule: A Benchmark for Monetary Policy?](#)”, Brookings.
- John Taylor, “[The Financial Crisis and the Policy Responses: An Empirical Analysis of what Went Wrong](#)”, keynote speech, 2008.

Optional background:

- ABC, pp. 542-582

Optional additional:

- The Economist, “Inflation shows the value and the limit of monetary-policy rules”, 14 July 2022. <https://www.economist.com/finance-and-economics/2022/07/14/inflation-shows-both-the-value-and-limits-of-monetary-policy-rules>
- John Taylor, “Discretion Versus Policy Rules in Practice”, in *Carnegie-Rochester Conference Series on Public Policy*, 39, 1993, pp. 195-341.

- John, B. Taylor, “Monetary Policy Rules Work and Discretion Doesn’t: a Tale of Two Eras”, *The Journal of Money, Credit and Banking*, vol 44(6), 2012, pp. 1017-1032.

DUE: Sep. 8 - Presentations and discussion of Assignment 1.

Was the Fed federal funds rate too low before 8/2007 and after 10/2008?

4. Bond Markets: Yield Curves, Credit Spreads and Impact of Macro Events. (Sep. 13 & 15)

Main question: How do bond markets respond to the macroeconomy and policy?

Readings

Priority:

- Federal Reserve Bank of Cleveland, “[Yield Curve and Predicted GDP Growth](#)”, 2022
- Luca Benzoni, Olena Chyruk and David Kelley, “[Credit Risk, Spreads and Intervention. Why does the Yield-Curve Slope Predict Recessions?](#)”, Federal Reserve Bank of Chicago, 2018
- Eric Milstein and David Wessel, [What did the Fed do in Response to the COVID-19 Crisis?](#), The Brookings Institution, 2021
- S&P Global, [Global Credit Conditions Q3 2022](#)
- European Central Bank, [The Transmission Protection Instrument](#), July 2022.

Optional additional

- Joao Gomes, Urban Jermann and Lukas Schmid, “[Sticky Leverage](#)”, *American Economic Review*, vol 106(12), 2016, pp. 3800-3828.
- Arvind Krishnamurthy and Annette Vissing-Jorgensen, “[Aggregate Demand for Treasury Debt](#)”, *Journal of Political Economy*, vol 120(2), 2012, pp. 233-267.

5. Policy at the Zero Lower Bound for Interest Rates (Sep. 20 & 22)

Main question: Is monetary policy effective at the zero lower bound or with negative interest rates?

Readings

Priority:

- Ben S. Bernanke, “[The Crisis and the Policy Response](#)”, At the Stamp Lecture, London School of Economics, 1/13/2009; Also Jackson Hole speech, 8/21/2009.
- Bernanke, Ben, S. “[Monetary Policy in New Era](#)”, Paper presented at Rethinking Macroeconomic Policy conference, Peterson Institute for International Economics, October 12-13, 2017.
- Kenneth Rogoff, “[The Case for a Deeply Negative Interest Rate](#)”, Project Syndicate, 5/4/2020

Optional background:

- ABC, pp. 569-573, 620

Optional additional:

- The Economist, “Emergency Response: The perils of expanded balance-sheets” 23rd April 2022. <https://www.economist.com/special-report/2022/04/20/the-perils-of-expanded-balance-sheets>

- Arvind Krishnamurthy and Annette Vissing-Jorgensen, “[The Effect of Quantitative Easing Policies on Interest Rates: Channels and Implications for Policy](#)”, Brookings Papers on Economic Activity, 2011.

DUE: Sep. 20: Presentations and discussion of Assignment 2

Simulation and discussion of the FOMC decision of 9/22. The Fed monetary policy since March 2020 and what is expected for the future.

6. The Outlook for US Monetary Policy (Sep. 27)

Main Question: What is the near term outlook for monetary policy in the US?

Guest Speaker: Loretta Mester (President, Federal Reserve Bank of Cleveland)

NOTE: The presentation takes place only during the 1:45-3:15 session

7. Flexible Inflation Targeting Policy: Theory and Practice (Sep. 29 & Oct. 4)

Main question: What is the theory and practice of modern monetary policy analysis?

Readings:

Priority:

- Class notes on DSGE model

Optional background:

- ABC, 160-167; 170-175; 339-342; 441-443; 490-497; 518-527

Optional additional:

- John Williams, “[The Theory of Average Inflation Targeting](#)”, Speech, 7/12/2021.
- Jordi Gali, “The State of New Keynesian Economics: A Partial Assessment”, *Journal of Economic Perspectives*, Vol. 32(3), pp. 87–112.
- Lawrence J. Christiano, Martin S. Eichenbaum, and Mathias Trabandt. “On DSGE models”, *Journal of Economic Perspectives*, Vol 32(3), pp. 113–140.

8. The ECB New Monetary Strategy, The Debt Crisis and Current policy (Oct. 11)

Main Question: How does fiscal and monetary policy interact and affect financial stability?

Readings

Priority:

- ECB, [The ECB New Monetary Strategy](#), July 8, 2021.
- Mario Draghi, “[Whatever it Takes](#)”, speech on 7/26/2012.
- Mario Draghi, “[Unemployment in the Euro Area](#)”, speech at Jackson Hall, 8/2014.

Optional background:

- ABC, 604-627

Optional additional:

- The Economist- The ECB's Masterplan to Manipulate markets 7-16-2022.
<https://www.economist.com/finance-and-economics/2022/07/14/the-ecbs-masterplan-to-manipulate-markets>
- The Economist - How higher interest rates squeeze government budgets - 7-16-2022.
- <https://www.economist.com/finance-and-economics/2022/07/12/how-higher-interest-rates-will-squeeze-government-budgets>

DUE: Oct. 11: Presentations and discussion of Assignment 3.

Simulation of the next ECB monetary policy decision. ECB policy under Mario Draghi and Christine Lagarde: does it follow a Taylor rule or only the goal of “price stability”? What is the impact of negative deposit rate and ECB QE?

9. Monetary Policy in the Euro-Zone (October 25)

Guest lecture: Dr. Frank Smets (Director General Economics, European Central Bank)

Main question: What is the ECB monetary policy framework?

NOTE: The presentation takes place only during the 10:15-11:45 session

10. Small Open Economies: Bank of Israel Monetary Policy Framework (Oct. 27)

Guest speaker: Professor Amir Yaron (Governor, Bank of Israel)

Main question: Should monetary policy include exchange rate intervention? How different is the BOI response to the Covid-19 crisis?

NOTE: The presentation takes place only during the 10:15-11:45 session

Reading

Priority:

- Read the last publications of [Bank of Israel Interest Rate](#); and Report to the Public on Interest Rate Discussions.

Optional Additional:

- Amir Yaron [“Are we Again Taking Financial Stability for Granted?”](#) (Or: Do we Need Central Banks?), Israel Economic Review Vol. 17, No. 1 (2019), 135–143.

11. Fiscal Policy Stimulus and Inflation. (Nov. 1 & 3)

Main question: What is the evidence on the impact of fiscal policy on the economy? How did Covid stimulus impact inflation and growth?

Readings

Priority:

- Brookings Institution, [Hutchins Center Fiscal Impact Measure](#)
- Moody Analytics, [Global Fiscal Policy in the Pandemic](#), 2022
- MarkusAcademy, [“The Inflation Debate Between Paul Krugman and Larry Summers – Part II”](#), January 2022

Optional background:

- ABC, section 15.3

Optional additional

- Valery Ramey and Sarah Zubairy, [“Government Spending Multipliers in Good Times and in Bad: Evidence from US Historical Data”](#), Journal of Political Economy, 2018.

12. Debt and Fiscal Crises (Nov. 8)

Main question: What are the causes and effects of a fiscal crisis? What is the likelihood of a fiscal crisis in the US?

Readings

Priority:

- Zvi Eckstein, Notes on Debt Dynamics, 2018.
- Goldman Sachs, [Daunting Debt Dynamics](#), 2020.
- Penn Wharton Budget Model, “[Can Higher Inflation Help Offset the Effects of Larger Government Debt?](#)”, 2021

Optional additional

- Olivier Blanchard, “[Public Debt and Low Interest Rates](#)”, American Economic Review, 2019.
- Carmen M. Reinhart and Kenneth S. Rogoff, “[Financial and Sovereign Debt Crises: Some Lessons Learned and Those Forgotten](#)”, IMF, 2013.

13. Interest Rate Strategies (Nov. 10)

Guest lecture: Dr. Praveen Korapaty (Chief Interest Rates Strategist, Goldman Sachs)

Main question: What is the outlook for interest rates in the major economies?

NOTE: The presentation takes place only during the 10:15-11:45 session

14. Equity Markets Indicators and Historical Performance (Nov. 15)

Main Questions: What drives the expected return on equities?

Readings

Priority:

- FRED Blog, [The Equity Premium](#)
- Roger Ibbotson and James Harrington, [Stocks, Bonds, Bills and Inflation \(SBBI\) Summary Edition](#), CFA Institute 2021

Optional additional

- Eugene Fama and Kenneth French, “[The Equity Premium](#)”, Journal of Finance, 2002

15. Equity Markets and Macro Events (Nov 17 & Nov. 29)

Main Question: How are key macro variables and policies reflected in stock valuations?

Readings

Priority:

- Thomas Mertens, Patrick Shultz, and Michael Tubbs, “[Valuation Ratios for Households and Businesses](#)”, San Francisco Fed, 2018.
- Yardeni.com, [Predicting Valuations](#)

Optional additional

- Andrew Ang and Geert Bekaert, “[Stock Return Predictability: is it There?](#)”, Review of Financial Studies, 2007.
- Yardeni Research, [Corporate Finance Report: NIPA versus S&P 500 Profits](#)

DUE: Nov 29 Presentation and discussion of Assignment 5.

Is the US stock market overvalued?

16. The US Macro Outlook (Dec. 1)

Guest Lecture: Dr. Mark Zandi (Chief Economist, Moody Analytics)

Main question: What is the near term outlook for the US economy?

NOTE: The presentation takes place only during the 10:15-11:45 session

17. Macro Investment Strategies (Dec. 6)

Guest Lecture: Alp Ercil (CEO, Asia Research and Capital Management)

Main question: Investment considerations in a changing global macro environment

18. Summary and Conclusion (Dec. 8)

Reflection on the main themes of the course.

DUE: Dec. 8 LONG QUIZ on Guest Speaker Presentations.

Ethics Matrix

	Materials							People				
FNCE 240/740 Central Banks, Macroeconomic Policy and Financial Markets	Calculator	Laptop / other electronics	Summary sheet	Textbooks / Class Notes	Past notes / summaries	Past exams / problems	Internet content / other outside materials	Group of 3-4	Other student(s) in same section	Student(s) in other sections (same term)	Wharton student not taking the class this term	Person outside of Wharton
Quizzes	A	A		A								
Assignments	A	A		A			A	W	D	D	D	D
Long Quiz Preparation	A	A	A	A	A	A	A	W	W	W	D	D
Long Quiz	A	A	A									
	A = Allowed material Shaded Cell = Not allowed							W = Allowed to work together D = Discussion of general concepts and procedures is allowed but no sharing of specific answers. Shaded Cell = Not allowed				
<p>The information above covers many common situations but probably not every circumstance. Remember: the Wharton Code of Ethics that you accepted requires, among other things, that you represent yourself and your work honestly, do not try to gain unfair advantage over other students, follow the instructor's guidelines and respect confidentiality of your work and that of others. Should you have questions, please contact your professor.</p>												