

# Topics in Empirical Macroeconomics and Finance

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*“Chance favors only the prepared mind”.*<sup>1</sup> (Louis Pasteur, 1822-1895)

**Lectures**    Tuesdays and Thursdays, 10:30-11:45am. Bunche Hall 9383.

**Office hours**    Email me for an appointment.

**Website**    <https://moodle2.sscnet.ucla.edu/course/view/18S-ECON221C-1>.

**Grading**    First, I will ask you to replicate **two** empirical macro or/and finance papers, using **publicly available data** (e.g. national accounts, Compustat, CRSP, Nielsen Scanner data, other WRDS material, etc.), but for which the replication code was not made available online by the authors (or not fully). I shall give you a list of papers among which to choose at the very beginning of the quarter. See the preliminary timetable on page 14 for deadlines. I believe that the best way to learn empirical methods in macroeconomics and finance is to “get your hands dirty”, and practice working with data. The first replication exercise will count towards 40% of your final grade, and the second will count towards 40%. Second, I will ask you to **present a recent paper in empirical macroeconomics** during the last two lectures. (30 minutes each) Again, I will give you a list from which to choose. This will count towards 20% of your final grade.

**Course outline**    This course will follow an inductive, or bottom-up, approach. Whenever possible, I will start from the facts, and review different theories in light of these facts.<sup>2</sup> I will particularly emphasize empirical observations that have not been explained by currently discussed theories. My hope is that you will find here some inspiration for a dissertation topic. The course will constitute of four parts:

1. **Evidence-based macroeconomics (4 topics)** The first part of the course will introduce you to empirical methods in macroeconomics. We will discuss identification in macroeconomics through structural, narrative, and cross-sectional approaches; and compare the merits of these various approaches. These methods will be used throughout the rest of the class.

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<sup>1</sup>“La chance ne sourit qu’aux esprits bien préparés.”

<sup>2</sup>“For professional economists, after Malthus, were apparently unmoved by the lack of correspondence between the results of their theory and the facts of observation;—a discrepancy which the ordinary man has not failed to observe, with the result of his growing unwillingness to accord to economists that measure of respect which he gives to other groups of scientists whose theoretical results are confirmed by observation when they are applied to the facts.” (JM Keynes)

2. **Consumption, Investment, the Trade Balance and Asset Pricing (5 topics)** The second part of the class will be structured around empirical “puzzles”, which cannot be explained with neoclassical theories of consumption, investment, the trade balance and asset pricing (including exchange rates).
3. **Low interest rate macroeconomics (4 topics)** The third part will present evidence in favor of the “savings glut” hypothesis, and present overlapping-generations and other models of underconsumption. I will also discuss issues of secular stagnation, competitiveness and external balance, and discuss the relationship to Keynesian economics.
4. **Heterogeneity and macroeconomics (4 topics)** Finally, the last part of the course will focus on evidence and models of firm size and productivity heterogeneity, the labor income distribution, etc. I will finally cover some static optimal taxation.

**Textbooks** I will assume that you have basic knowledge of first year macroeconomics and finance, which can be found in many different textbooks. For macroeconomics, I would recommend:

- Romer, David. Advanced Macroeconomics. McGraw-Hill Education, 2011. [Link](#)
- Galí, Jordi. Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework and Its Applications, Second Edition. Princeton University Press, 2015. [Link](#)
- Blanchard, Olivier Jean, and Stanley Fischer. Lectures on Macroeconomics. Vol. 12. 3. Cambridge, MA: The MIT Press, 1990. [Link](#)

If you are interested in how macroeconomics is used in practice, I strongly recommend:<sup>3</sup>

- Bénassy-Quéré, Agnès, Benoît Coeuré, Pierre Jacquet, and Jean Pisani-Ferry. Economic Policy: Theory and Practice. Vol. 53. 9. Oxford, New York: Oxford University Press, 2013. [Link](#)

For finance, I would advise two excellent and complementary textbooks:

- Campbell, John Y. Financial Decisions and Markets: A Course in Asset Pricing. Princeton University Press, 2017. [Link](#)
- Cochrane, John H. Asset Pricing (Revised Edition). Princeton University Press, 2009. [Link](#)

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<sup>3</sup>In the foreword to this textbook, Olivier Blanchard writes: “For a long time, I have felt that my graduate textbook written with Stan Fischer sent the wrong message. We had made the choice to present models and their logic, rather than their applications. The justification was a perfectly good one, namely that we wanted to show the intellectual structure of macroeconomic theory first. But, de facto, the lack of serious empirics sent another message: That theory was largely divorced from practice, and from facts. That message is wrong: Theory without facts is much too easy, and of very little use.”

# Bibliography

Articles with a 📖 symbol will be covered during class. The list of articles may change during the quarter.

## Methodology

McCloskey, Donald N. “The Rhetoric of Economics.” *Journal of Economic Literature* 21, no. 2 (1983): 481–517. [Link](#)

Leamer, Edward E. “Let’s Take the Con Out of Econometrics.” *The American Economic Review* 73, no. 1 (1983): 31–43. [Link](#)

Mankiw, N. Gregory. “The Macroeconomist as Scientist and Engineer.” *Journal of Economic Perspectives* 20, no. 4 (December 2006): 29–46. [Link](#)

Caballero, Ricardo J. “Macroeconomics after the Crisis: Time to Deal with the Pretense-of-Knowledge Syndrome.” *The Journal of Economic Perspectives* 24, no. 4 (2010): 85–102. [Link](#)

Romer, Paul M. “The Trouble With Macroeconomics,” 2016. [Link](#)

## Part I

# Evidence-based macroeconomics

## 1 Causality in macroeconomics

Sims, Christopher A. “Macroeconomics and Reality.” *Econometrica* 48, no. 1 (1980): 1–48. [Link](#)

Cochrane, John H. “Shocks.” *Carnegie-Rochester Conference Series on Public Policy* 41 (December 1994): 295–364. [Link](#)

Summer Institute Econometric Lecture, 2008, “What’s New in Econometrics: Time Series”, James H. Stock and Mark W. Watson. [Link](#)

Summer Institute Econometric Lecture, 2010, “Financial Econometrics”, Sydney Ludvigson, Yacine Ait-Sahalia, Michael Brandt, & Andrew Lo. [Link](#)

Angrist, Joshua D., and Jörn-Steffen Pischke. “The Credibility Revolution in Empirical Economics: How Better Research Design Is Taking the Con out of Econometrics.” *Journal of Economic Perspectives* 24, no. 2 (2010): 3–30. [Link](#)

Sims, Christopher A. “But Economics Is Not an Experimental Science.” *Journal of Economic Perspectives* 24, no. 2 (June 2010): 59–68. [Link](#)

Summer Institute Econometric Lecture, 2011, “Computational Tools & Macroeconomic Applications”, Lawrence Christiano and Jesus Fernandez-Villaverde. [Link](#)

📖 “Empirical Macroeconomics. Thomas J. Sargent and Christopher A. Sims” Scientific Background on the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2011. [Link](#)

- ☞ Uhlig, Harald. “Economics and Reality.” *Journal of Macroeconomics*, Has macro progressed?, 34, no. 1 (March 1, 2012): 29–41. [Link](#)
- ☞ Ramey, V. A. “Chapter 2 - Macroeconomic Shocks and Their Propagation.” In *Handbook of Macroeconomics*, edited by John B. Taylor and Harald Uhlig, 2:71–162. Elsevier, 2016. [Link](#)
- ☞ Nakamura, Emi, and Jón Steinsson. “Identification in Macroeconomics.” Working Paper. National Bureau of Economic Research, October 2017. [Link](#)

## 2 Model-based identification / Structural VARs

- Summers, Lawrence H. “Some Skeptical Observations on Real Business Cycle Theory.” *Minneapolis Quarterly Review*, no. Fall (1986): 23–27. [Link](#)
- Prescott, Edward C. “Response to a Skeptic.” *Minneapolis Quarterly Review*, no. Fall (1986): 28. [Link](#)
- Blanchard, Olivier Jean, and Danny Quah. “The Dynamic Effects of Aggregate Demand and Supply Disturbances.” *The American Economic Review* 79, no. 4 (1989): 655–73. [Link](#)
- Summers, Lawrence H. “The Scientific Illusion in Empirical Macroeconomics.” *The Scandinavian Journal of Economics* 93, no. 2 (1991): 129–48. [Link](#)
- ☞ Hansen, Lars Peter, and James J. Heckman. “The Empirical Foundations of Calibration.” *Journal of Economic Perspectives* 10, no. 1 (March 1996): 87–104. [Link](#)
- ☞ Kydland, Finn E., and Edward C. Prescott. “The Computational Experiment: An Econometric Tool.” *Journal of Economic Perspectives* 10, no. 1 (March 1996): 69–85. [Link](#)
- Christiano, Lawrence J., Martin Eichenbaum, and Charles L. Evans. “Chapter 2 Monetary Policy Shocks: What Have We Learned and to What End?” In *Handbook of Macroeconomics*, 1:65–148. Elsevier, 1999. [Link](#)
- ☞ Blanchard, Olivier, and Roberto Perotti. “An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output.” *The Quarterly Journal of Economics* 117, no. 4 (2002): 1329–68. [Link](#)
- Galí, Jordi, and Pau Rabanal. “Technology Shocks and Aggregate Fluctuations: How Well Does the Real Business Cycle Model Fit Postwar U.S. Data?” In *NBER Macroeconomics Annual 2004*, 19:1–25. April, 2005. [Link](#)
- ☞ Uhlig, Harald. “What Are the Effects of Monetary Policy on Output? Results from an Agnostic Identification Procedure.” *Journal of Monetary Economics* 52, no. 2 (March 1, 2005): 381–419. [Link](#)
- Smets, Frank, and Rafael Wouters. “Shocks and Frictions in US Business Cycles: A Bayesian DSGE Approach.” *American Economic Review* 97, no. 3 (June 2007): 586–606. [Link](#)
- Mountford, Andrew, and Harald Uhlig. “What Are the Effects of Fiscal Policy Shocks?” *Journal of Applied Econometrics* 24, no. 6 (2009): 960–92. [Link](#)

### 3 Narrative approach and case/event studies

☞ Romer, Christina D., and David H. Romer. “Does Monetary Policy Matter? A New Test in the Spirit of Friedman and Schwartz.” NBER Macroeconomics Annual 1989, Volume 4, January 1, 1989, 121–84. [Link](#)

Romer, Christina D., David H. Romer, Stephen M. Goldfeld, and Benjamin M. Friedman. “New Evidence on the Monetary Transmission Mechanism.” *Brookings Papers on Economic Activity* 1990, no. 1 (1990): 149–213. [Link](#)

Alesina, Alberto, Roberto Perotti, Francesco Giavazzi, and Tryphon Kollintzas. “Fiscal Expansions and Adjustments in OECD Countries.” *Economic Policy* 10, no. 21 (1995): 207–48. [Link](#)

Alesina, Alberto, Roberto Perotti, Francesco Giavazzi, and Tryphon Kollintzas. “Fiscal Expansions and Adjustments in OECD Countries.” *Economic Policy* 10, no. 21 (1995): 207–48. [Link](#)

Rebelo, Sergio, and Carlos A. Vegh. “Real Effects of Exchange-Rate-Based Stabilization: An Analysis of Competing Theories.” NBER Macroeconomic Annual, January 1, 1995, 125–88. [Link](#)

Alesina, Alberto, and Roberto Perotti. “Fiscal Adjustments in OECD Countries: Composition and Macroeconomic Effects.” *Staff Papers* 44, no. 2 (June 1, 1997): 210–48. [Link](#)

☞ Alesina, Alberto, and Silvia Ardagna. “Tales of Fiscal Adjustment.” *Economic Policy* 13, no. 27 (October 1, 1998): 488–545. [Link](#)

Romer, Christina D., and David H. Romer. “A New Measure of Monetary Shocks: Derivation and Implications.” *American Economic Review* 94, no. 4 (September 2004): 1055–84. [Link](#)

Velde, François R. “Chronicle of a Deflation Unforetold.” *Journal of Political Economy* 117, no. 4 (August 1, 2009): 591–634. [Link](#)

☞ Romer, Christina D., and David H. Romer. “The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks.” *American Economic Review* 100, no. 3 (June 2010): 763–801. [Link](#)

Mertens, Karel, and Morten O. Ravn. “Empirical Evidence on the Aggregate Effects of Anticipated and Unanticipated US Tax Policy Shocks.” *American Economic Journal: Economic Policy* 4, no. 2 (May 2012): 145–81. [Link](#)

☞ Cloyne, James. “Discretionary Tax Changes and the Macroeconomy: New Narrative Evidence from the United Kingdom.” *American Economic Review* 103, no. 4 (June 2013): 1507–28. [Link](#)

Chodorow-Reich, Gabriel. “Effects of Unconventional Monetary Policy on Financial Institutions.” *Brookings Papers on Economic Activity*, no. April (2014): 155–228. [Link](#)

Alesina, Alberto, Carlo Favero, and Francesco Giavazzi. “The Output Effect of Fiscal Consolidation Plans.” *Journal of International Economics*, 37th Annual NBER International Seminar on Macroeconomics, 96 (July 1, 2015): S19–42. [Link](#)

☞ Gertler, Mark, and Peter Karadi. “Monetary Policy Surprises, Credit Costs, and Economic Activity.” *American Economic Journal: Macroeconomics* 7, no. 1 (January 2015): 44–76. [Link](#)

Cloyne, James S., and Paolo Surico. “Household Debt and the Dynamic Effects of Income Tax Changes.” *The Review of Economic Studies* 84, no. 1 (January 1, 2017): 45–81. [Link](#)

Krishnamurthy, Arvind, and Annette Vissing-Jorgensen. “The Effects of Quantitative Easing on Interest Rates: Channels and Implications for Policy.” *Brookings Papers on Economic Activity*, 2011, 215–87. [Link](#)

## 4 Cross-sectional data and model based aggregation

Blanchard, Olivier Jean and Lawrence F. Katz. “Regional Evolutions.” *Brookings Papers on Economic Activity* 1992, no. 1 (1992): 1–75. [Link](#)

Kashyap, Anil K, and Jeremy C. Stein. “What Do a Million Observations on Banks Say about the Transmission of Monetary Policy?” *The American Economic Review* 90, no. 3 (2000): 407–28. [Link](#)

Saiz, Albert. “The Geographic Determinants of Housing Supply.” *The Quarterly Journal of Economics* 125, no. 3 (August 1, 2010): 1253–96. [Link](#)

☞ Chaney, Thomas, David Sraer, and David Thesmar. “The Collateral Channel: How Real Estate Shocks Affect Corporate Investment.” *American Economic Review* 102, no. 6 (May 2012): 2381–2409. [Link](#)

Jiménez, Gabriel, Steven Ongena, José-Luis Peydró, and Jesús Saurina. “Credit Supply and Monetary Policy: Identifying the Bank Balance-Sheet Channel with Loan Applications.” *American Economic Review* 102, no. 5 (May 2012): 2301–26. [Link](#)

☞ Mian, Atif, Kamalesh Rao, and Amir Sufi. “Household Balance Sheets, Consumption, and the Economic Slump.” *The Quarterly Journal of Economics* 128, no. 4 (November 1, 2013): 1687–1726. [Link](#)

☞ Jiménez, Gabriel, Steven Ongena, José-Luis Peydró, and Jesús Saurina. “Hazardous Times for Monetary Policy: What Do Twenty-Three Million Bank Loans Say About the Effects of Monetary Policy on Credit Risk-Taking?” *Econometrica* 82, no. 2 (March 1, 2014): 463–505. [Link](#)

Nakamura, Emi, and Jón Steinsson. “Fiscal Stimulus in a Monetary Union: Evidence from US Regions.” *American Economic Review* 104, no. 3 (March 2014): 753–92. [Link](#)

☞ Mian, Atif, and Amir Sufi. “What Explains the 2007–2009 Drop in Employment?” *Econometrica* 82, no. 6 (November 1, 2014): 2197–2223. [Link](#)

☞ Beraja, Martin, Erik Hurst, and Juan Ospina. “The Aggregate Implications of Regional Business Cycles.” Working Paper. National Bureau of Economic Research, February 2016. [Link](#)

Cloyne, James S., and Paolo Surico. “Household Debt and the Dynamic Effects of Income Tax Changes.” *The Review of Economic Studies* 84, no. 1 (January 1, 2017): 45–81. [Link](#)

Beraja, Martin. “Counterfactual Equivalence in Macroeconomics”, WP 2017. [Link](#)

Chodorow-Reich, Gabriel. “Geographic Cross-Sectional Fiscal Spending Multipliers: What Have We Learned?”, WP 2017. [Link](#)

## Part II

# Investment and asset pricing

## 1 Investment: benchmark and puzzles

Modigliani, Franco, and Merton H. Miller. “The Cost of Capital, Corporation Finance and the Theory of Investment.” *The American Economic Review* 48, no. 3 (1958): 261–97. [Link](#)

Summers, Lawrence H., Barry P. Bosworth, James Tobin, and Philip M. White. “Taxation and Corporate Investment: A Q-Theory Approach.” *Brookings Papers on Economic Activity* 1981, no. 1 (1981): 67–140. [Link](#)

Hayashi, Fumio. “Tobin’s Marginal Q and Average Q: A Neoclassical Interpretation.” *Econometrica* 50, no. 1 (1982): 213–24. [Link](#)

Bernanke, Ben S. “Nonmonetary Effects of the Financial Crisis in the Propagation of the Great Depression.” *The American Economic Review* 73, no. 3 (1983): 257–76. [Link](#)

📖 Fazzari, Steven M., R. Glenn Hubbard, Bruce C. Petersen, Alan S. Blinder, and James M. Poterba. “Financing Constraints and Corporate Investment.” *Brookings Papers on Economic Activity* 1988, no. 1 (1988): 141–206. [Link](#)

Bernanke, Ben S., and Alan S. Blinder. “The Federal Funds Rate and the Channels of Monetary Transmission.” *The American Economic Review* 82, no. 4 (1992): 901–21. [Link](#)

Kashyap, Anil K., and Jeremy C. Stein. “Monetary Policy and Bank Lending.” In *Monetary Policy*, edited by N. Gregory Mankiw, 221–261. January. University of Chicago Press, 1994. [Link](#)

📖 Campello, Murillo, John R. Graham, and Campbell R. Harvey. “The Real Effects of Financial Constraints: Evidence from a Financial Crisis.” *Journal of Financial Economics*, The 2007-8 financial crisis: Lessons from corporate finance, 97, no. 3 (September 1, 2010): 470–87. [Link](#)

📖 Gilchrist, Simon, and Egon Zakrajšek. “Credit Spreads and Business Cycle Fluctuations.” *American Economic Review* 102, no. 4 (June 2012): 1692–1720. [Link](#)

📖 Chodorow-Reich, Gabriel. “The Employment Effects of Credit Market Disruptions: Firm-Level Evidence from the 2008–9 Financial Crisis.” *The Quarterly Journal of Economics* 129, no. 1 (February 1, 2014): 1–59. [Link](#)

📖 Giroud, Xavier, and Holger M. Mueller. “Firm Leverage, Consumer Demand, and Employment Losses During the Great Recession.” *The Quarterly Journal of Economics* 132, no. 1 (February 1, 2017): 271–316. [Link](#)

## 2 Asset pricing: benchmark and puzzles

Shiller, Robert J. “Do Stock Prices Move Too Much to Be Justified by Subsequent Changes in Dividends?” *The American Economic Review* 71, no. 3 (1981): 421–36. [Link](#)

Campbell, John Y., and Robert J. Shiller. “The Dividend-Price Ratio and Expectations of Future Dividends and Discount Factors.” *The Review of Financial Studies* 1, no. 3 (July 1, 1988): 195–228. [Link](#)

☞ Fama, Eugene F., and Kenneth R. French. “The Cross-Section of Expected Stock Returns.” *The Journal of Finance* 47, no. 2 (June 1, 1992): 427–65. [Link](#)

Cochrane, John H. *Asset Pricing* (Revised Edition). Princeton University Press, 2009. [Link](#)

☞ Cochrane, John H. “Presidential Address: Discount Rates.” *The Journal of Finance* 66, no. 4 (August 1, 2011): 1047–1108. [Link](#)

Cheng, Ing-Haw, Sahil Raina, and Wei Xiong. “Wall Street and the Housing Bubble.” *American Economic Review* 104, no. 9 (September 2014): 2797–2829. [Link](#)

Cochrane, John H. *Asset Pricing*, Part 1. YouTube Online Courses. [Link](#)

Cochrane, John H. *Asset Pricing*, Part 2. YouTube Online Courses. [Link](#)

Cochrane, John H. “Macro-Finance.” *Review of Finance* 21, no. 3 (May 1, 2017): 945–85. [Link](#)

### 3 Investment and financial frictions

Townsend, Robert M. “Optimal Contracts and Competitive Markets with Costly State Verification.” *Journal of Economic Theory* 21, no. 2 (October 1, 1979): 265–93. [Link](#)

Bernanke, Ben, and Mark Gertler. “Agency Costs, Net Worth, and Business Fluctuations.” *The American Economic Review* 79, no. 1 (1989): 14–31. [Link](#)

Shleifer, Andrei, and Robert W. Vishny. “Liquidation Values and Debt Capacity: A Market Equilibrium Approach.” *The Journal of Finance* 47, no. 4 (September 1, 1992): 1343–66. [Link](#)

☞ Shleifer, Andrei, and Robert W. Vishny. “The Limits of Arbitrage.” *The Journal of Finance* 52, no. 1 (March 1, 1997): 35–55. [Link](#)

☞ Kiyotaki, Nobuhiro, and John Moore. “Credit Cycles.” *Journal of Political Economy* 105, no. 2 (April 1, 1997): 211–48. [Link](#)

Holmstrom, Bengt, and Jean Tirole. “Financial Intermediation, Loanable Funds, and The Real Sector.” *The Quarterly Journal of Economics* 112, no. 3 (August 1, 1997): 663–91. [Link](#)

Holmström, Bengt, and Jean Tirole. “Private and Public Supply of Liquidity.” *Journal of Political Economy* 106, no. 1 (February 1, 1998): 1–40. [Link](#)

☞ Bernanke, Ben S., Mark Gertler, and Simon Gilchrist. “Chapter 21 The Financial Accelerator in a Quantitative Business Cycle Framework.” In *Handbook of Macroeconomics*, 1:1341–93. Elsevier, 1999. [Link](#)

☞ Krishnamurthy, Arvind. “Collateral Constraints and the Amplification Mechanism.” *Journal of Economic Theory* 111, no. 2 (August 2003): 277–92. [Link](#)

Tirole, Jean. *The Theory of Corporate Finance*. Princeton University Press, 2006. [Link](#)



Chari, V. V., Patrick J. Kehoe, and Ellen R. McGrattan. “Business Cycle Accounting.” *Econometrica* 75, no. 3 (May 1, 2007): 781–836. [Link](#)

☞ Lorenzoni, Guido. “Inefficient Credit Booms.” *The Review of Economic Studies* 75, no. 3 (2008): 809–33. [Link](#)

Hall, Robert E. “The High Sensitivity of Economic Activity to Financial Frictions.” *The Economic Journal* 121, no. 552 (May 1, 2011): 351–78. [Link](#)

Gertler, Mark, and Nobuhiro Kiyotaki. “Financial Intermediation and Credit Policy in Business Cycle Analysis.” In *Handbook of Monetary Economics - Volume 3A*, 3:547–599. 11. Elsevier Ltd, 2011. [Link](#)

Holmström, Bengt, and Jean Tirole. *Inside and Outside Liquidity*. Cambridge, MA: MIT Press, 2011. [Link](#)

## 4 Asset pricing and financial frictions

☞ Brunnermeier, Markus K., and Lasse Heje Pedersen. “Market Liquidity and Funding Liquidity.” *The Review of Financial Studies* 22, no. 6 (2009): 2201–38. [Link](#)

☞ He, Zhiguo, and Arvind Krishnamurthy. “Intermediary Asset Pricing.” *American Economic Review* 103, no. 2 (April 2013): 732–70. [Link](#)

Brunnermeier, Markus K., and Yuliy Sannikov. “A Macroeconomic Model with a Financial Sector.” *American Economic Review* 104, no. 2 (February 2014): 379–421. [Link](#)

☞ Adrian, Tobias, Erkko Etula, and Tyler Muir. “Financial Intermediaries and the Cross-Section of Asset Returns.” *The Journal of Finance* 69, no. 6 (2014): 2557–2596. [Link](#)

☞ Muir, Tyler. “Financial Crises and Risk Premia.” *The Quarterly Journal of Economics* 132, no. 2 (May 1, 2017): 765–809. [Link](#)

He, Zhiguo, Bryan Kelly, and Asaf Manela. “Intermediary Asset Pricing: New Evidence from Many Asset Classes.” *Journal of Financial Economics* 126, no. 1 (October 1, 2017): 1–35. [Link](#)

☞ Geerolf, François. “Asset Pricing without Risk Aversion.” Working Paper, 2017, 1–59. [Link](#)

## 5 Behavioral asset pricing

Geanakoplos, John. “Promises Promises.” In *The Economy as an Evolving Complex System II*, edited by D Lane B Arthur, S Durlauf, Addison-Wesley, 285–320. Reading, MA: SFI Studies in the Sciences of Complexity, 1997. [Link](#)

Miller, Edward M. “Risk, Uncertainty, and Divergence of Opinion.” *The Journal of Finance* 32, no. 4 (1977): 1151–68. [Link](#)

☞ Harrison, J. Michael, and David M. Kreps. “Speculative Investor Behavior in a Stock Market with Heterogeneous Expectations.” *The Quarterly Journal of Economics* 92, no. 2 (May 1, 1978): 323–36. [Link](#)

De Long, J. Bradford, Andrei Shleifer, Lawrence H. Summers, and Robert J. Waldmann. “Noise Trader Risk in Financial Markets.” *Journal of Political Economy* 98, no. 4 (1990): 703–38. [Link](#)

Abreu, Dilip, and Markus K. Brunnermeier. “Bubbles and Crashes.” *Econometrica* 71, no. 1 (January 1, 2003): 173–204. [Link](#)

Hong, Harrison, and Jeremy C. Stein. “Disagreement and the Stock Market.” *Journal of Economic Perspectives* 21, no. 2 (June 2007): 109–28. [Link](#)

Geanakoplos, John. “The Leverage Cycle.” *NBER Macroeconomics Annual 2009 Volume 24* (April 23, 2010): 1–65. [Link](#)

☞ Simsek, Alp. “Belief Disagreements and Collateral Constraints.” *Econometrica* 81, no. 1 (January 1, 2013): 1–53. [Link](#)

☞ Geerolf, François. “Leverage and Disagreement.” Working Paper, 2015, 1–61. [Link](#)

Shiller, Robert J. *Irrational Exuberance: Revised and Expanded Third Edition*. Princeton University Press, 2015. [Link](#)

## Part III

# Low interest rates macroeconomics

## 1 Measuring the marginal product of capital

☞ Abel, Andrew B., N. Gregory Mankiw, Lawrence H. Summers, and Richard J. Zeckhauser. “Assessing Dynamic Efficiency: Theory and Evidence.” *The Review of Economic Studies* 56, no. 1 (January 1, 1989): 1–19. [Link](#)

Caselli, Francesco, and James Feyrer. “The Marginal Product of Capital.” *The Quarterly Journal of Economics* 122, no. 2 (May 1, 2007): 535–68. [Link](#)

Geerolf, François. “Reassessing Dynamic Efficiency.” Working Paper, 2013. [Link](#)

## 2 OLG models, public debt, rational bubbles

Allais, Maurice. “Economie et Intérêt.” Imprimerie Nationale, 1947.

☞ Samuelson, Paul A. “An Exact Consumption-Loan Model of Interest with or without the Social Contrivance of Money.” *Journal of Political Economy* 66, no. 6 (1958): 467–82. [Link](#)

☞ Diamond, Peter A. “National Debt in a Neoclassical Growth Model.” *The American Economic Review* 55, no. 5 (1965): 1126–50. [Link](#)

Blanchard, Olivier Jean. “Speculative Bubbles, Crashes and Rational Expectations.” *Economics Letters* 3, no. 4 (January 1, 1979): 387–89. [Link](#)

Sargent, Thomas J., and Neil Wallace. “Some Unpleasant Monetarist Arithmetic.” In *Monetarism in the United Kingdom*, 15–41. Palgrave Macmillan, London, 1984. [Link](#)

☞ Tirole, Jean. “Asset Bubbles and Overlapping Generations.” *Econometrica* 53, no. 5 (1985): 1071–1100. [Link](#)

- Diba, Behzad T., and Herschel I. Grossman. “On the Inception of Rational Bubbles.” *The Quarterly Journal of Economics* 102, no. 3 (1987): 697–700. [Link](#)
- Abel, Andrew. “Can the Government Roll over Its Debt Forever?” *Business Review*, no. Nov (1992): 3–18. [Link](#)
- Geanakoplos, John. “Overlapping Generations Models of General Equilibrium.” In *The New Palgrave Dictionary of Economics Second Edition*, edited by Lawrence E. Durlauf, Steven N. and Blume. Palgrave Macmillan, 2008. [Link](#)
- Martin, Alberto, and Jaume Ventura. “Theoretical Notes on Bubbles and the Current Crisis.” *IMF Economic Review* 59, no. 1 (February 2011): 6–40. [Link](#)
- Farhi, Emmanuel, and Jean Tirole. “Bubbly Liquidity.” *The Review of Economic Studies* 79, no. 2 (April 1, 2012): 678–706. [Link](#)
- Martin, Alberto, and Jaume Ventura. “Economic Growth with Bubbles.” *American Economic Review* 102, no. 6 (May 2012): 3033–58. [Link](#)

### 3 Low interest rates: demand or supply

- Keynes, John Maynard. *The General Theory of Employment, Interest, and Money*, 1936. [Link](#)
- Hansen, Alvin H. “Economic Progress and Declining Population Growth.” *The American Economic Review* 29, no. 1 (1939): 1–15. [Link](#)
- Eggertsson, Gauti B., and Paul Krugman. “Debt, Deleveraging, and the Liquidity Trap: A Fisher-Minsky-Koo Approach.” *The Quarterly Journal of Economics* 127, no. 3 (August 1, 2012): 1469–1513. [Link](#)
- Gordon, Robert J. “Secular Stagnation: A Supply-Side View.” *American Economic Review* 105, no. 5 (May 2015): 54–59. [Link](#)

### 4 External balance and competitiveness

- Keynes, John Maynard. *The Economic Consequences of the Peace*, 1919. [Link](#)
- Keynes, J. *Essays in Persuasion*. Springer, 1931. [Link](#)
- Krugman, Paul. “Competitiveness: A Dangerous Obsession.” *Foreign Affairs*, March 1, 1994. [Link](#)
- Bernanke, Ben S. “The Global Saving Glut and the US Current Account Deficit.” *Sandridge Lecture Speech*, March 2005, 2005, 1–12. [Link](#)
- Kraay, Aart, and Jaume Ventura. “The Dot-Com Bubble, the Bush Deficits, and the U.S. Current Account.” In *G7 Current Account Imbalances: Sustainability and Adjustment*, 457–96. University of Chicago Press, 2007. [Link](#)
- ☞ Caballero, Ricardo J., Emmanuel Farhi, and Pierre-Olivier Gourinchas. “An Equilibrium Model of ‘Global Imbalances’ and Low Interest Rates.” *American Economic Review* 98, no. 1 (March 2008): 358–93. [Link](#)
- Autor, David H., David Dorn, and Gordon H. Hanson. “The China Syndrome: Local Labor Market Effects of Import Competition in the United States.” *American Economic Review* 103, no. 6 (October 2013): 2121–68. [Link](#)

Schmitt-Grohé, Stephanie, and Martín Uribe. “Downward Nominal Wage Rigidity, Currency Pegs, and Involuntary Unemployment.” *Journal of Political Economy* 124, no. 5 (August 30, 2016): 1466–1514. [Link](#)

## Part IV

# Heterogeneity and macro

## 1 Size / wage distributions: evidence

Pareto, Vilfredo. *Cours d'économie politique*. Librairie Droz, 1896.

☞ Feenberg, Daniel R., and James M. Poterba. “Income Inequality and the Incomes of Very High-Income Taxpayers: Evidence from Tax Returns.” *Tax Policy and the Economy*, Volume 7 7, no. January (1993): 145–177.

Hsieh, Chang-Tai, and Peter J. Klenow. “Misallocation and Manufacturing TFP in China and India.” *The Quarterly Journal of Economics* 124, no. 4 (November 1, 2009): 1403–48. [Link](#)

☞ Gabaix, Xavier. “Power Laws in Economics and Finance.” *Annual Review of Economics* 1, no. 1 (September 2009): 255–293. [Link](#)

Atkinson, Anthony B., Thomas Piketty, and Emmanuel Saez. “Top Incomes in the Long Run of History.” *Journal of Economic Literature* 49, no. 1 (2011): 3–71. [Link](#)

## 2 Size / wage distributions: dynamic theories

Champernowne, D. G. “A Model of Income Distribution.” *The Economic Journal* 63, no. 250 (1953): 318–51. [Link](#)

☞ Gabaix, Xavier. “Zipf’s Law for Cities: An Explanation.” *The Quarterly Journal of Economics* 114, no. 3 (1999): 739–67. [Link](#)

☞ Luttmer, Erzo G. J. “Selection, Growth, and the Size Distribution of Firms.” *The Quarterly Journal of Economics* 122, no. 3 (2007): 1103–44. [Link](#)

Benhabib, Jess, Alberto Bisin, and Shenghao Zhu. “The Distribution of Wealth and Fiscal Policy in Economies With Finitely Lived Agents.” *Econometrica* 79, no. 1 (January 1, 2011): 123–57. [Link](#)

## 3 Size / wage distributions: assignment models

☞ Lucas, Robert E. “On the Size Distribution of Business Firms.” *The Bell Journal of Economics* 9, no. 2 (1978): 508–23. [Link](#)

☞ Rosen, Sherwin. “The Economics of Superstars.” *The American Economic Review* 71, no. 5 (1981): 845–58. [Link](#)

☞ Garicano, Luis. “Hierarchies and the Organization of Knowledge in Production.” *Journal of Political Economy* 108, no. 5 (October 1, 2000): 874–904. [Link](#)

Garicano, Luis, and Esteban Rossi-Hansberg. “Organization and Inequality in a Knowledge Economy.” *The Quarterly Journal of Economics* 121, no. 4 (November 1, 2006): 1383–1435. [Link](#)

Terviö, Marko. “The Difference That CEOs Make: An Assignment Model Approach.” *American Economic Review* 98, no. 3 (June 2008): 642–68. [Link](#)

Gabaix, Xavier, and Augustin Landier. “Why Has CEO Pay Increased So Much?” *The Quarterly Journal of Economics* 123, no. 1 (February 1, 2008): 49–100. [Link](#)

Geerolf, François. “A Theory of Pareto Distributions.” Working Paper, 2016, 1–49. [Link](#)

## 4 Static optimal taxation

Mirrlees, J. A. “An Exploration in the Theory of Optimum Income Taxation.” *The Review of Economic Studies* 38, no. 2 (1971): 175–208. [Link](#)

Tuomala, Matti. *Optimal Income Tax and Redistribution*. Oxford, New York: Oxford University Press, 1990. [Link](#)

Diamond, Peter A. “Optimal Income Taxation: An Example with a U-Shaped Pattern of Optimal Marginal Tax Rates.” *The American Economic Review* 88, no. 1 (1998): 83–95. [Link](#)

Saez, Emmanuel. “Using Elasticities to Derive Optimal Income Tax Rates.” *The Review of Economic Studies* 68, no. 1 (January 1, 2001): 205–29. [Link](#)

Piketty, Thomas, and Emmanuel Saez. “A Theory of Optimal Inheritance Taxation.” *Econometrica* 81, no. 5 (September 1, 2013): 1851–86. [Link](#)

## Tentative Course Time Table - Spring 2018

|   |                       |
|---|-----------------------|
| <b>I - Evidence-based macroeconomics</b>            |                       |
| 1. Causality in macroeconomics                      | April 3, 2018         |
| 2. Model-based identification / Structural VARs     | April 5, 2018         |
| 3. Narrative approach and case/event studies        | April 10, 2018        |
| 4. Cross-sectional data and model based aggregation | April 12, 2018        |
| <b>II - Investment and asset pricing</b>            |                       |
| 1. Investment: benchmark and puzzles                | April 17, 2018        |
| 2. Asset pricing: benchmark and puzzles             | April 19, 2018        |
| 3. Investment and financial frictions               | April 24, 2018        |
| 4. Asset pricing and financial frictions            | April 26, 2018        |
| <b>Replication 1 proposal due</b>                   | <b>April 29, 2018</b> |
| 5. Behavioral asset pricing                         | May 1/3, 2018         |
| <b>III - Low interest rates macroeconomics</b>      |                       |
| 1. Measuring the marginal product of capital        | May 8, 2018           |
| 2. OLG models, public debt, rational bubbles        | May 10, 2018          |
| <b>Replication 1 due</b>                            | <b>May 13, 2018</b>   |
| 3. Low interest rates: demand or supply             | May 15, 2018          |
| 4. External balance and competitiveness             | May 17, 2018          |
| <b>IV - Heterogeneity and macro</b>                 |                       |
| 1. Size / wage distributions: evidence              | May 22, 2018          |
| 2. Size / wage distributions: dynamic theories      | May 24, 2018          |
| <b>Presentation / Replication 2 proposal due</b>    | <b>May 27, 2018</b>   |
| 3. Size / wage distributions: assignment models     | May 29, 2018          |
| 4. Static optimal taxation                          | May 31, 2018          |
| <b>Presentations</b>                                | <b>June 5/7, 2018</b> |
| <b>Replication 2 due</b>                            | <b>June 8, 2018</b>   |