

PRINCETON UNIVERSITY
Woodrow Wilson School of Public and International Affairs

Advanced Domestic Macro: Lessons of the Great Financial Crisis

WWS 524 Fall 2019

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Office Hours

2:00–3:30 p.m. Tuesday & by appointment, wdudley@princeton.edu
242 Julis Romo Rabinowitz Building (JRRB)

Course Prerequisites

The course requires some background in economics, with undergraduate coursework or the equivalent in macroeconomics, microeconomics, and money and banking. An understanding of finance is a plus, but not a prerequisite.

Course Description

The financial crisis of 2007–09 was extraordinarily severe, yet, by most, wholly unanticipated. Not only was the ability of the financial system to intermediate between savers and borrowers significantly impaired in the United States and globally, the consequence was the deepest economic contraction in the United States since the Great Depression. The crisis and its aftermath dramatically changed how the U.S. financial system is structured and regulated and how the Federal Reserve conducts monetary policy.

This course will explore the financial crisis in detail, focusing mainly on developments in the United States. Some of the questions that will be explored include:

- What happened?
- Why did it happen?
- What was the policy response, by Congress and the administration, by the regulatory community, by the Federal Reserve?
- What shaped the responses, including constraints created by limits on legal authority and from political economy considerations?
- What lasting repercussions did the financial crisis have on how the U.S. financial system is regulated and how U.S. monetary policy is conducted today?

The course will also explore the state of the U.S. financial system and monetary policy today in light of the changes engendered by the financial crisis.

- In particular, how vulnerable is the financial system today?
- What unfinished business is there in terms of regulation and oversight? In terms of U.S. monetary policy?

Course Goals

The purpose of this course is not just to deepen your understanding of the financial crisis and its aftermath, but also to learn about how to grapple with information across a broad range of disciplines including macroeconomics, money and banking, finance, and the political economy.

This course will go both broad and deep. While most courses emphasize learning technical skills, this course will emphasize how to analyze and think about a very complex system (the U.S. economy and its financial system) and how to evaluate its strengths, weaknesses, and vulnerabilities. The goal is for students to emerge not only with a much broader perspective about the U.S. financial system and its central bank, but also with a greater critical ability to evaluate complex systems and understand their strengths, weaknesses, and points of vulnerability.

Exams and Assignments

- One essay on an issue of the financial crisis that interests you. Why it was important, what was done, and an evaluation of the actions taken (1,000 to 1,500 words).
 - Due by 10:40 a.m. Tuesday, November 26: 25%
- Team class presentation. The class will be divided into 5 teams. Each team will evaluate a particular issue of the crisis. For example: Should Lehman Brothers have been rescued?
 - Each team will have 20 minutes to make its main points, followed by 20 minutes of questions and critique by the rest of the class.
 - Presentations will take place during the last 3 classes of the term and each team member will receive the same grade: 25%
- Take-home final exam: 50%. Distributed Friday, January 10. Due Friday, January 17.

Books (available at Labyrinth Books)

- Required Reading:
 - *After the Music Stopped: The Financial Crisis, the Response and the Work Ahead*, Alan S. Blinder, Penguin paperback, 2014.
- Recommended Reading (except for four chapters from the Geithner book that are Required Reading):
 - *Stress Test: Reflections on Financial Crises*, Timothy F. Geithner, Crown Publishers, 2014.
 - *The Courage to Act: A Memoir of a Crisis and its Aftermath*, Ben S. Bernanke, W. W. Norton, 2015.
 - *On the Brink: Inside the Race to Stop the Collapse of the Global Financial System*, Henry M. Paulson, Jr., Hachette Book Group, 2010.
 - *The Fed and Lehman Brothers: Setting the Record Straight on a Financial Disaster*, Laurence M. Ball, Cambridge University Press, 2018.
 - *Crashed: How a Decade of Financial Crises Changed the World*, Adam Tooze, Viking Press, 2018.

Syllabus and Reading List

Class 1 (Sept 12): Orientation and Introduction to the Financial Crisis

My background, your interests, the goals of the course.

What's expected of you and how the course will be graded.

1. Dalio, Ray, 2018. *Principles for Navigating Big Debt Crises, Part 2: Detailed Case Studies*, Section 3: US Debt Crisis and Adjustment (2007–2011): 105–183. Bridgewater.
<https://www.principles.com/big-debt-crises/>

Class 2 (Sept 17): Why We Should Care about the Financial Crisis

Steep downturn in economic activity, large rise in unemployment, widespread housing foreclosures and business failures, sluggish recovery, and important lasting political consequences.

1. Blinder, *After the Music Stopped*, Chapter 1.
2. Funke, Manuel, Moritz Schularick, and Christoph Trebesch, 2016. Going to extremes: Politics after financial crises, 1870–2014, *European Economic Review* 88 (September): 227–60.
<http://dx.doi.org/10.1016/j.euroecorev.2016.03.006>
3. Romer, Christina D., and David H. Romer, 2017. New Evidence on the Aftermath of Financial Crises in Advanced Countries, *American Economic Review* 107 (10): 3072–3118.
<https://doi.org/10.1257/aer.20150320>

Classes 3–11: What happened and why?

Class 3 and 4 (Sept 19 and 24): Evolution of the Financial System

The financial system evolved in unsafe ways with the emergence of large investment banks, widespread securitization, and complex financial engineering.

1. Blinder, *After the Music Stopped*, Chapters 2–3.
2. *The Financial Crisis Inquiry Report: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States*, February 25, 2011, Chapters 2–5. U.S. Government Printing Office. <https://www.govinfo.gov/features/financial-crisis-inquiry-report>
3. Baily, Martin N., Robert E. Litan, and Matthew S. Johnson, 2011. The Origins of the Financial Crisis, Chapter 11, 77–85. In *Lessons from the Financial Crisis: Causes, Consequences, and Our Economic Future* by Robert W. Kolb. John Wiley & Sons, Inc.
<https://doi.org/10.1002/9781118266588.ch11>

Class 5 (Sept 26): The Housing Boom and Bust

What caused the housing boom and the subsequent bust?

1. Case, Karl E., and Robert J. Shiller, 2003. Is There a Bubble in the Housing Market? *Brookings Papers on Economic Activity* 2: 299–362. https://www.brookings.edu/wp-content/uploads/2003/06/2003b_bpea_caseshiller.pdf
2. Keys, Benjamin J., Tomasz Piskorski, Amit Seru, and Vikrant Vig, 2013. Mortgage Financing in the Housing Boom and Bust, Chapter 4, 143–204. In *Housing and the Financial Crisis* edited by Edward L. Glaeser and Todd Sinai. University of Chicago Press.
<https://www.nber.org/chapters/12624>
3. Gorton, Gary, 2008. The Panic of 2007, NBER Working Paper 14358, September 2008.
<http://www.nber.org/papers/w14358>

Class 6 and 7 (Oct 1 and Oct 3): Money Market Stress

The shadow banking system. The weak link in the financial system.

1. Pozsar, Zoltan, Tobias Adrian, Adam Ashcraft, and Hayley Boesky, 2010. Shadow Banking, Federal Reserve Bank of New York Staff Report 458, July 2010 (revised February 2012). https://www.newyorkfed.org/research/staff_reports/sr458.html
2. Brunnermeier, Markus, 2009. Deciphering the Liquidity and Credit Crunch, 2007–08, *Journal of Economic Perspectives* 23 (1, Winter): 77–100. <https://www.jstor.org/stable/27648295>
3. Covitz, Daniel, Nellie Liang, and Gustavo A. Suarez, 2013. The Evolution of the Financial Crisis: Collapse of the Asset-Backed Commercial Paper Market, *Journal of Finance* 68 (3, June): 815–848. <https://doi.org/10.1111/jofi.12023>
4. Kacperczyk, Marcin, and Philipp Schnabl, 2010. When Safe Proved Risky: Commercial Paper During the Financial Crisis of 2007–09, *Journal of Economic Perspectives* 24 (1, Winter): 29–50. <https://www.jstor.org/stable/25703481>

Class 8 and 9 (Oct 8 and 10): Other Areas of Vulnerability

1. Kacperczyk, Marcin, and Philipp Schnabl, 2013. How Safe Are Money Market Funds? *Quarterly Journal of Economics* 128 (3, August): 1073–1122. <https://www.jstor.org/stable/26372519>
2. Copeland, Adam, Darrell Duffie, Antoine Martin, and Susan McLaughlin, 2012. Key Mechanics of the U.S. Tri-Party Repo Market, *FRBNY Economic Policy Review* 18 (3, November): 17–28. <https://www.newyorkfed.org/medialibrary/media/research/epr/2012/1210cope.pdf>
3. Baba, Naohiko, Frank Packer, and Teppei Nagano, 2008. The Spillover of Money Market Turbulence to FX Swap and Cross-currency Swap Markets, *BIS Quarterly Review* (March): 73–86. https://www.bis.org/publ/qtrpdf/r_qt0803h.pdf
4. Stout, Lynn A., 2011. Derivatives and the Legal Origin of the 2008 Credit Crisis, *Banking & Financial Services Policy Report* 30 (12, December): 13–23. <https://search.proquest.com/docview/914261795/fulltextPDF/B09DCF77D2F04135PQ/4?accountid=13314>
5. Mollenkamp, Carrick, 2008. Libor Fog: Bankers Cast Doubt on Key Rate Amid Crisis, *Wall Street Journal*, April 16, 2008, A1. <https://search.proquest.com/docview/399070280?pq-origsite=summon>
6. Mollenkamp, Carrick, and Mark Whitehouse, 2008. Study Casts Doubt on Key Rate, *Wall Street Journal*, May 29, 2008, A12. <https://search.proquest.com/docview/399019080?accountid=13314>
7. FRBNY Markets and Research and Statistics Groups, 2008. Recommendations for Enhancing the Credibility of LIBOR, May 27, 2008. https://www.newyorkfed.org/newsevents/news/markets/2012/Barclays_LIBOR_Matter.html

Class 10 and 11 (Oct 15 and 17): When Things Start Breaking

1. Blinder, *After the Music Stopped*, Chapters 4–6.
2. Geithner, *Stress Test*, Chapters 4–6.
3. Frame, W. Scott, Andreas Fuster, Joseph Tracy, and James Vickery, 2015. The Rescue of Fannie Mae and Freddie Mac, FRBNY Staff Report 719, March 2015. https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr719.pdf

4. Wiggins, Rosalind Z., and Andrew Metrick, 2014. *The Lehman Brothers Bankruptcy G: The Special Case of Derivatives*, Yale Program on Financial Stability Case Study 2014-3G-V1, October 1, 2014 (revised, April 7, 2015). Yale School of Management.
<https://som.yale.edu/case/2014/the-lehman-brothers-bankruptcy-g-the-special-case-of-derivatives>

Classes 12–13: The policy response

Class 12 (Oct 22): Keeping Things Afloat

1. Blinder, *After the Music Stopped*, Chapters 7–9.
2. McDonald, Robert L., and Anna Paulson, 2015. *AIG in Hindsight*, NBER Working Paper 21108, April 2015. <http://www.nber.org/papers/w21108>
3. Calomiris, Charles W., and Urooj Khan, 2015. An Assessment of TARP Assistance to Financial Institutions, *Journal of Economic Perspectives* 29 (2, Spring): 53–80.
<https://www.jstor.org/stable/24292123>
4. Hirtle, Beverly, Til Schuermann, and Kevin Stiroh, 2009, *Macroprudential Supervision of Financial Institutions: Lessons from the SCAP*, FRBNY Staff Report 409, November 2009.
https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr409.pdf

Class 13 (Oct 24): U.S. Monetary Policy during the Financial Crisis

1. Board of Governors of the Federal Reserve System. *Monetary Policy Reports to the Congress*, Part 3. February 27, 2008, July 15, 2008, February 24, 2009, July 21, 2009.
https://www.federalreserve.gov/monetarypolicy/mpr_20080227_part3.htm
https://www.federalreserve.gov/monetarypolicy/mpr_20080715_part3.htm
https://www.federalreserve.gov/monetarypolicy/mpr_20090224_part3.htm
https://www.federalreserve.gov/monetarypolicy/mpr_20090721_part3.htm
2. Bernanke speeches, Board of Governors of the Federal Reserve System:
Bernanke, Ben S., August 22, 2008. *Reducing Systemic Risk*. Speech at the Federal Reserve Bank of Kansas City’s Annual Economic Symposium, Jackson Hole, Wyoming.
<https://www.federalreserve.gov/newsevents/speech/bernanke20080822a.htm>
Bernanke, Ben S., January 13, 2009. *The Crisis and the Policy Response*. Speech at the Stamp Lecture, London School of Economics, London, England.
<https://www.federalreserve.gov/newsevents/speech/bernanke20090113a.htm>
3. Keister, Todd, Antoine Martin, and James McAndrews, 2008. *Divorcing Money from Monetary Policy*, *FRBNY Economic Policy Review* 14 (2, September): 41–56.
<https://www.newyorkfed.org/medialibrary/media/research/epr/08v14n2/0809keis.pdf>
4. Goldberg, Linda S., Craig Kennedy, and Jason Miu, 2010. *Central Bank Swap Lines and Overseas Funding Costs*, FRBNY Staff Report 429, January 2010 (revised February 2010).
https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr429.pdf
5. Sheets, Nathan, Edwin (Ted) Truman, and Clay Lowery, 2018. *Responding To the Global Financial Crisis: What We Did and Why We Did It. The Federal Reserve’s Swap Lines: Lender of Last Resort on a Global Scale*, September 11–12, 2018. The Brookings Institute.
<https://www.brookings.edu/wp-content/uploads/2018/08/14-B-International-Swaps-Prelim-Disc-Draft-2018.09.11.pdf>

Classes 14–15: Financial reform efforts

Class 14 (Nov 5): The Dodd Frank Act

1. Blinder, *After the Music Stopped*, Chapters 10–11.
2. Geithner, *Stress Test*, Chapter 10.
3. Webel, Baird, 2017. The Dodd-Frank Wall Street Reform and Consumer Protection Act: Background and Summary, Congressional Research Service Report 41350, April 21, 2017. <https://fas.org/sgp/crs/misc/R41350.pdf>
4. Acharya, Viral V., and Matthew Richardson, 2012. Implications of the Dodd Frank Act, *Annual Review of Financial Economics* 4:1–38. <https://www.jstor.org/stable/42940376>

Class 15 (Nov 7): International Reform Efforts

1. Elliott, Douglas J., July 23, 2010. *Basel III, the Banks and the Economy*. The Brookings Institution. https://www.brookings.edu/wp-content/uploads/2016/06/0726_basel_elliott.pdf
2. Knight, Malcolm D., 2014. Reforming the Global Architecture of Financial Regulation: The G20, the IMF and the FSB, CIGI Paper 42, September 22, 2014. Centre for International Governance Innovation, Waterloo, Ontario, Canada. <https://www.cigionline.org/sites/default/files/no42.pdf>

Classes 16–17: Fixing structural problems: Triparty repo, OTC derivatives, Money market mutual fund, and LIBOR reforms

Class 16 (Nov 12): Triparty and OTC Derivatives

1. Federal Reserve Bank of New York, 2012. Task Force on Tri-Party Repo Infrastructure, Payments Risk Committee Final Report, February 15, 2012. https://www.newyorkfed.org/medialibrary/microsites/tripartyrepo/pdf/report_120215.pdf
2. Copeland, Adam, Darrell Duffie, Antoine Martin, and Susan McLaughlin, 2011. Policy Issues in the Design of Triparty Repo Markets, Stanford Graduate School of Business Working Paper 3312, June 2011 (revised, July 2011). <https://www.gsb.stanford.edu/faculty-research/working-papers/policy-issues-design-tri-party-repo-markets>
3. Dudley, William C., 2012. Reforming the OTC Derivatives Market, Speech at Harvard Law School Symposium, Armonk, NY, March 22, 2012. <https://www.newyorkfed.org/newsevents/speeches/2012/dud120322>
4. Financial Stability Board, 2017. Review of OTC derivatives market reforms: Effectiveness and broader effects of the reforms, June 29, 2017. <http://www.fsb.org/wp-content/uploads/P290617-1.pdf>

Class 17 (Nov 14): Money Market Fund Refund and Reference Rate Reform

1. Securities and Exchange Commission, 2010. SEC Approves Money Market Fund Reforms to Better Protect Investors, Press Release, January 27, 2010. <https://www.sec.gov/news/press/2010/2010-14.htm>
2. Securities and Exchange Commission, 2014. SEC Adopts Money Market Fund Reform Rules, Press Release, July 23, 2014. <https://www.sec.gov/news/press-release/2014-143>
3. Duffie, Darrell, and Jeremy C. Stein, 2015. Reforming Libor and Other Financial Benchmarks, *Journal of Economic Perspectives* 29 (2): 191–222. <https://www.jstor.org/stable/24292129>

4. Frost, Joshua, 2017. Introducing the Secured Overnight Funding Rate (SOFR), Presentation at the Alternative Reference Rates Committee Roundtable, Federal Reserve Bank of New York, November 2, 2017.
<https://www.newyorkfed.org/medialibrary/media/newsevents/speeches/2017/Frostpresentation.pdf>

Classes 18–19 (Nov 19 and 21): Monetary Policy Innovations and Issues

1. Kuttner, Kenneth N., 2018. Outside the Box: Unconventional Monetary Policy in the Great Recession and Beyond, *Journal of Economic Perspectives* 32 (4, Fall): 121–146.
<https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.32.4.121>
2. Gagnon, Joseph E., 2016. Quantitative Easing: An Underappreciated Success, Peterson Institute for International Economics Policy Brief 16-4, April 2016.
<https://piie.com/system/files/documents/pb16-4.pdf>
3. Williamson, Stephen, 2017. Quantitative Easing: How Well Does This Tool Work, *The Regional Economist*, Third Quarter 2017. Federal Reserve Bank of St. Louis.
https://www.stlouisfed.org/~media/publications/regional-economist/2017/third_quarter_2017/qe_lead.pdf

Classes 20–21: Where are we today? What are the vulnerabilities of the current regime?

Class 20 (Nov 26):

Overall Assessment

1. Duffie, Darrell, 2018. Financial Regulatory Reform After the Crisis: An Assessment, *Management Science* 64 (10, October): 4835–57 <https://doi.org/10.1287/mnsc.2017.2768>

Banks

2. Bank for International Settlements Committee on the Global Financial System, 2018. Structural Changes in Banking after the Crisis, CGFS Paper 60, January 2018.
<https://www.bis.org/publ/cgfs60.pdf>

Lender of last resort

3. Scott, Hal S., 2015. The Federal Reserve: The Weakest Lender of Last Resort Among Its Peers, *International Finance* 18 (3): 321–342
<https://onlinelibrary.wiley.com/doi/epdf/10.1111/infi.12075>
4. Tucker, Paul, 2014. The Lender of Last Resort and Modern Central Banking: Principles and Reconstruction. Keynote paper in *Re-thinking the lender of last resort*, BIS Paper 79 (September): 10–42. https://www.bis.org/publ/bppdf/bispap79b_rh.pdf

Regulating Systemic Non-Banks

5. Johnson, Simon, and Antonio Weiss, 2017. The Financial Stability Oversight Council: An Essential Role for the Evolving US Financial System, Peterson Institute for International Economics Policy Brief 17-20, May 2017. <https://piie.com/system/files/documents/pb17-20.pdf>
6. U.S. Department of the Treasury, 2017. Financial Stability Oversight Council Designations, Response to the Presidential Memorandum issued April 21, 2017, November 17, 2017.
<https://www.treasury.gov/press-center/press-releases/documents/pm-fsoc-designations-memo-11-17.pdf>
7. Kress, Jeremy C., 2018. The Last SIFI: The Unwise and Illegal Deregulation of Prudential Financial, *Stanford Law Review Online* 71 (December): 171–182.
<https://review.law.stanford.edu/wp-content/uploads/sites/3/2018/12/71-Stan.-L.-Rev.-Online-Kress.pdf>

Class 21 (Dec 3): Resolution

SIFIs

1. Lee, Paul L., 2015. Bankruptcy Alternatives to Title II of the Dodd-Frank Act—Part 1, *The Banking Law Journal* (October): 437–487.
https://www.debevoise.com/insights/publications/2015/10/bankruptcy-alternatives_dodd_frank-act

CCPs

2. Singh, Manmohan, and Dermot Turing, 2018. Central Counterparties Resolution—An Unresolved Problem, IMF Working Paper 18/65, March 20, 2018.
<https://www.imf.org/en/Publications/WP/Issues/2018/03/20/Central-Counterparties-Resolution-An-Unresolved-Problem-45727>

Classes 22–23 (Dec 5 and 10)

Team Presentations

Four teams will present on topics that they choose. Each topic will be unique to the particular team and subject to my approval. Students not on each particular team will question the presenters and critique the presentations.

Potential Topics (but teams can pick other topics subject to my approval)

- Lehman Brothers. Should it have been kept afloat?
See Laurence M. Ball: *The Fed and Lehman Brothers: Introduction and Summary*, NBER Working Paper 22410, July 2016. <https://www.nber.org/papers/w22410.pdf> **AND** *The Fed and Lehman Brothers: Setting the Record Straight on a Financial Disaster*, Cambridge University Press, 2018. Contrast to what Bernanke, Geithner, and Paulson have argued. Who is right? Does it matter?
- How should the Federal Reserve respond to asset bubbles?
- Has Too Big to Fail been effectively ended?
- What holes persist in the safety and soundness of the financial system? What should we be most worried about and why? What should we do about it?
- What reforms should be pursued that have not been implemented? Examples might include tougher limits on compensation, how we penalize firms for bad conduct.
- Does quantitative easing work?

Class 24 (Dec 12): Lessons from the Financial Crisis. A Summing Up.