Financial Crises
ECON 43370
Spring 2019

Location and Times:
Debartolo Hall 336
Tuesday and Thursday 3:30-4:45

Instructor:
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Personal website
Course website on Sakai
Office hours: Wednesdays 2:00 – 3:15 pm
Thursdays 1:15 – 2:30

Course Overview: The financial system intermediates between savers and investors and a well-functioning financial system is critical for the performance of modern economies. Intermediation ameliorates informational asymmetries between savers and investors and provides savers with short term, highly liquid assets that are backed by longer term, less liquid investments (a process called liquidity or maturity transformation). A financial crisis occurs when savers doubt the soundness of intermediaries, no longer wish to hold short term debt issued by those intermediaries, and consequently run en masse in a search of safe, highly liquid assets. This forces intermediaries to delever and cut back on lending, often resulting in crippling economic contractions.

Financial crises are a recurrent theme in economic history, both in the United States and around the globe. This course focuses on crises in the United States. Historical details differ – in the mid-19th century, runs were on banknotes in search of specie (gold and silver); in the late 19th and early 20th centuries runs were on deposits in search of currency; and in the most recent crisis the run centered on short term wholesale funding sources (repurchase agreements, commercial paper, etc.) of the so-called shadow banking sector. While the details differ, the fundamental nature of crises is the same – a mismatch between the liquidity of the assets and liabilities that intermediaries hold. A central theme of this course, reflected in the assigned readings, is that crises are a structural feature of economies with highly developed systems of financial intermediaries. We can learn from the past and use those insights to design institutions and policies for the future.

The course will be divided into three related parts. The first third of the course will provide a broad and historically-based overview of financial crises. We will start by making sure we are all on the same page with regard to the basics of banking, money, and finance. We will present a stylized version of the celebrated Diamond and Dybvig (1983) model of bank runs as an organizing framework. Then we will work through a new book by Gary Gorton and Ellis Tallman called *Fighting Financial Crises*. The book offers a historically-centered narrative of the commonalities of financial crises and the tools best-suited to prevent/mitigate them.

The second part of the course will be an in-depth analysis of the Great Depression and Great Recession, with the focus mostly on the more recent event and the resulting policy responses. We will work through David Wessel's gripping narrative of the crisis, *In Fed We Trust*. This book provides some nice detail on specifics of the crisis and goes into depth on the thought processes and decision-making that went into the policy responses. We will also read a couple of papers about specifics on the policy responses.

The third part of the course builds off the first two. It focuses on designing institutions and policies to deal with crises. We will motivate the externalities giving justification to some form of financial regulation and supervision. We will discuss the existing regulatory framework and the areas where it did (and in many cases still does) have holes. We will also work through the *Squam Lake Report*, a book produced by leading financial economists offering recommendations for reform and regulation of the financial system.

This course will be discussion-based and student-centric. Indeed, as discussed below, students will be leading many of the lectures. Active participation is vital, and students can and should participate in all class meetings. There is no such thing as a bad or dumb question. As it satisfies the writing intensive requirement, this course will also feature a writing component. Two shorter papers will be due after the first and second parts of the course. A final longer term paper, incorporating the first two shorter essays, will be due at the end of the term. Though there will be no formal exams, there will be several random pop quizzes to test comprehension and to make sure you are keeping up with the readings.

We will be reading three books and several papers. All of the papers are available online. There are different options for getting access to the books – note that I have not placed an order with the bookstore, as an online solution will almost certainly be cheaper. For at least one of the books (Gorton and Tallman) there is a relatively inexpensive, online option. Even purchasing hard copies of all three books will sum up to less than a typical textbook would cost.

I am available for office hours at the times noted above, though I am generally in my office during business hours. Please email if you'd like to set up an appointment at an alternative time. I enjoy getting to know students on a personal level and would be happy to meet you for lunch or coffee. Given the small class size, I may also organize some class social events over the course of the term.

In-Class Presentations: A key feature of this course is that it will be largely *student-led* and *discussion-based*. This will not be your typical economics lecture where I, your humble professor, stand at the front of the room waxing eloquently, writing equations on the board, and drawing graphs. There will be some of this, but a large component of the class will be based on students playing the role of the professor. Each student will be required to lead one class lecture based on assigned readings listed in the detailed course outline below. You will be required to produce slides (in PowerPoint, Word, Beamer, or something similar) to be distributed to the rest of the class the night prior to the assigned lecture. These should be emailed to me by 5:00 pm the day prior to the lecture, at which point I will upload the slides to Sakai. You should plan on approximately a one hour presentation (certainly not longer than this, though it's fine if you finish a little early). Your presentation should summarize (in some detail) the readings for that day, put them in the context of the other readings and topics covered in the course, offer some critiques of the central conclusions/points of the readings, and conclude with some questions/topics for class discussion. Other students can and should interject with clarifying questions and comments during your presentation, so you should budget for this when preparing. The remaining fifteen minutes of the class will be a general discussion of the readings open to the entire class, hopefully inspired by the questions/topics you conclude your presentation with.

Each student is required to read all assignments for each lecture, not just those readings related to the lecture the student is leading. As discussed in more depth below, five random pop quizzes will be given over the course of the term to test comprehension. These will be short, objective in nature, and administered at the very beginning of class (so come on time). There is also a participation component to the final grade, so students should be prepared to discuss readings even if they are not leading that day's discussion.

The dates and readings for each of the eighteen student-led discussions are listed below in the detailed course outline. I will initially allow students to voluntarily choose dates on which they are going to lead the class. Under the "Calendar" tab in Sakai, I have created "events" on the days of student presentations. I have granted students permission to edit these events; you may sign up for an event by typing in your name inside the parentheses. This is first come, first served (kind of like a withdrawal of demand deposits!). Any students who have not signed up to lead a class discussion by the end of the day on January 22 (one week after the first day of class) will be *randomly assigned to a date by me*.

Writing Intensive: This course satisfies the writing intensive requirement. To that end, there will be three writing assignments due at different points in the term. The first two assignments (due February 12 and April 2) are shorter assignments on themes laid out below and should be a minimum of four and a maximum of eight typed, one-and-a-half spaced pages with 12 point font. Figures (though not required) do *not* count towards the length requirements. The prompts are (intentionally) somewhat open-ended and you can and should take them in whatever directions you deem appropriate. You should attempt to incorporate the readings leading up to the due date in these essays. The work of others should be appropriately cited. You may, but are not required to, bring in data, other sources not assigned in the class, or a model into your essays.

The final term paper (due May 7) should be a minimum of twelve and a maximum of twenty typed, one-and-a-half spaced pages with 12 point font. It is described below and should integrate the first two shorter assignments (on which you will be given feedback).

> **Prompt for First Writing Assignment:** Doug Diamond (2008) says that "financial crises are everywhere and always due to problems of short term debt." Write an essay framed

around this quote. Some of the questions you should address in your essay are the following. What is short term debt? Why is it prevalent? What makes short term debt liquid (or illiquid)? Why is short term debt subject to runs? What is the difference between illiquidity and insolvency? Are runs necessarily irrational? Why do runs pose threats to economic performance? How does the existence of a central bank influence the decision to run or not? Would we be better at dealing with runs without a central bank?

Prompt for Second Writing Assignment: Ben Bernanke (2002) said to Milton Friedman on the occasion of his 90th birthday: "Regarding the Great Depression. You're right. We did it. We're very sorry. But thanks to you, we won't do it again." Write an essay framed around this quote. Some of the questions you should address in your essay are the following. What are the ways in which the Depression and Great Recession were similar? In what ways were they different? Offer a summary, evaluation, and brief critique of the Federal Reserve's actions during the Great Recession. Did Bernanke keep his promise to Friedman? What do you think Bernanke would have done differently given the benefit of hindsight? Where there things that Bernanke would have liked to have done but lacked the legal authority?

Final Writing Assignment: The final term paper should integrate the first two essays (on which you will have been given feedback) into a final paper. The final paper should have a coherent introduction and a conclusion tying things together. The main body should have three components. The first two components should be revised (and integrated into the larger whole) versions of the first two essays – the first component defining what a financial crisis is, why we have them, and why they are costly; and the second component summarizing the two principal crises of the last hundred years (the Depression and Great Recession), discussing the ways in which they were similar and the ways in which they were different, with a focus on the different policy interventions by the Bernanke-led Federal Reserve in the Great Recession. The third component should discuss policy changes, regulation, and institutional design to reduce the frequency of, and mitigate the severity of, financial crises going forward. It should address the following questions. How ought financial firms to be regulated? How powerful should the Federal Reserve be? If short term debt is the source of crises, should we eliminate short term debt? Should we fundamentally change what a bank is? Can we actually prevent financial crises, or are they an inherent feature of market economies that can only be dealt with once they occur?

These writing assignments are intentionally open-ended. You are free to take them where you wish, and indeed I hope you do not all take them in a similar direction. It is my hope that I will learn from your essays and the diversity of opinion that you express. There are no right or wrong answers. It is desirable to express opinion, and where possible opinions should be backed up with facts or logical reasoning. It is also fine (and appropriate) to not take a strong stand on an issue in one direction or the other – the world is not as black and white as we would sometimes like it to be. Grades for writing assignments will be based upon (i) the coherence of the arguments set forth, (ii) the extent to which the essays integrate the course materials and readings, and (iii) the quality and professionalism of the exposition.

Course Evaluation: Grades for the course will be based on five different components. These are discussed below:

In-Class Presentation: 20 percent of course grade. Half of this component will be based on an assessment of the quality of the in-class presentation, while the other half will be based on the quality of the slides provided to the rest of the class. This will be graded on a A+, A, A-, B+, etc. scale.

In-Class Participation: 10 percent of course grade. This component will be based on my subjective assessment of the quality of your in-class participation, not including the in-class presentation. The quality, not the quantity, of comments is what is most important. It will be assigned at the end of the term, and will also be based on a A+, A, A-, etc. scale.

In-Class Pop Quizzes: 20 percent of course grade. There will be five random pop-quizzes administered in the first ten minutes of class. These will be objective in nature (true/false and multiple choice questions) based on material from the readings/lectures/discussions from the previous two class meetings and readings to be discussed on the day the quiz is given. The quizzes will be graded on a numeric 100 point scale. You may drop the lowest quiz score in calculating the final grade. Only students with approved, excused absences may take a quiz outside of the normal time slot. Otherwise, if you are absent the day of a quiz, you will have to use that quiz as your drop.

Short Writing Assignments: 30 percent of course grade. Students will complete two shorter papers due at the end of the first and second parts of the course (February 12 for the first assignment, April 2 for the second). These papers should be a minimum of four and a maximum of eight pages in length. Each paper contributes equally (i.e. 15 percent each). The assignments are discussed in more depth above. They will be graded on a A+, A, A-, B+, etc. scale.

Final Term Paper: 20 percent of course grade. The final term paper should be a minimum of twelve and a maximum of twenty pages. It will be due in my office by noon on May 7 (the official final exam slot). The final writing assignment is discussed in more depth above. It will be graded on a A+, A, A-, B+, etc. scale.

Mapping Assignment Letter Grades into Points: Letter grades for different components of the course will be mapped into numeric scores as follows:

A+	100
A	96
A-	92
B+	88
B	85
B-	82
C+	78

C	75
C-	72
D	65
F	50 (an F is for an assignment that is completed but unacceptable. Failure to turn something in results in a 0)

Mapping Semester Point Totals into Final Letter Grade: Let g be the weighted point total a student accumulates for the entire term. The final letter grade will be assigned as follows:

A	$g \geq 94$
A-	$90 \leq g < 94$
B+	$87 \leq g < 90$
B	$83 \leq g < 87$
B-	$80 \leq g < 83$
C+	$77 \leq g < 80$
C	$73 \leq g < 77$
C-	$70 \leq g < 73$
D	$60 \leq g < 70$
F	$g < 60$

Detailed Course Outline: Below is a detailed outline of lecture topics and relevant course readings. Links to these readings may be found at the end of the syllabus.

1. **Overview of Banking, Money, Finance, and Financial Crises**

Day	Topic	Reading(s)
Jan 15	Introduction	Lecture slides
Jan 17	Banking, money, finance	Lecture slides
Jan 22	Banking, money, finance and the Diamond-Dybig model of bank runs	Lecture slides, Diamond (2007)
Jan 24	Continue Diamond-Dybvig model	Lecture slides, Diamond (2007)
Jan 29 (student run class)	The Past, the Clearinghouse, and Panics	Gorton and Tallman (2018), Chapters 1-3
Jan 31 (student run class)	Policy, Information, and Too Big to Fail	Gorton and Tallman (2018), Chapters 4-6
Feb 5 (student run class)	Premia, Beliefs, and the Aftermath	Gorton and Tallman (2018), Chapters 7-9
Feb 7 (student run class)	Fighting and ending crises	Gorton and Tallman (2018), Chapters 10-12

2. The Great Depression and the Great Recession

Day	Topic	Reading(s)
Feb 12	Overview of Great Depression	Romer (1993), Calomiris (1993)
Feb 14	Overview of Great Recession	Mishkin (2011), Taylor (2014)
Feb 19 (student run class)	Lehman and a history of the Fed	Wessel Chapters 1-2
Feb 21 (student run class)	Greenspan and Bernanke	Wessel Chapters 3-4
Feb 26 (student run class)	Early stages of panic	Wessel Chapters 5-8
Feb 28 (student run class)	Unusual and exigent, Fannie and Freddie	Wessel Chapters 9-10
March 5 (student run class)	Bailouts	Wessel Chapters 11-12
March 7	No class	Early spring break
March 19 (student run class)	ZIRP and promise to Friedman	Wessel Chapters 13-14
March 21 (student run class)	Evaluating Fed policies in Depression and Recession	Blinder (2014), Bordo (2014)
March 26 (student run class)	TARP and AIG	Calomiris and Khan (2015) and McDonald and Paulson (2015)
March 28 (student run class)	Fannie Mae, Freddie Mac, and Politics	Frame, Fuster, Tracy, and Vickery (2015) and Swagel (2015)

3. Financial Regulation and Policy to Prevent/Mitigate Crises

Day	Topic	Reading(s)
April 2	Overview of financial regulation	Lecture slides
April 4	Micro vs. Macroprudential regulation	Lecture slides; Hanson, Kashyap, and Stein (2011)
April 9 (student run class)	Regulation before, during, and after the crisis	Blair and Delfin (2014), Bailey and Elliott (2014)
April 11 (student run class)	A run-free system	Cochrane (2014)
April 16 (student run class)	Systemic Regulator	French et al (2010) Chapters 1-3
April 18 (student run class)	Capital, Compensation, Resolution	French et al (2010) Chapters 5-8
April 23 (student run class)	CDs, Derivatives, Prime Brokers	French et al (2010) Chapters 9-11
April 25	Open discussion / wrapping up	None
April 30	No class	Work on papers

Reading List with Links:

Bailey, Martin and Douglas Elliot. "How is the System Safer? What More is Needed?" 2014. In *Across the Great Divide: New Perspectives on the Financial Crisis*, ed. Martin Bailey and John Taylor, pg. 165-195.

Blair, Sheila and Ricardo Delfin. "How Efforts to Avoid Mistakes Created New Ones." 2014. In *Across the Great Divide: New Perspectives on the Financial Crisis*, ed. Martin Bailey and John Taylor, pg. 15-36.

Blinder, Alan. "Federal Reserve Policy Before, During, and After the Fall." 2014. In *Across the Great Divide: New Perspectives on the Financial Crisis*, ed. Martin Bailey and John Taylor, pg. 90-102.

Bordo, Michael. "The Federal Reserve's Role Before, During, and After the 2008 Panic in the Historical Context of the Great Panic." 2014. In *Across the Great Divide: New Perspectives on the Financial Crisis*, ed. Martin Bailey and John Taylor, pg. 103-126.

Calomiris, Charles. "Financial Factors in the Great Depression." 1993. *Journal of Economic Perspectives* 7(2), 61-85.

Calomiris, Charles and Urooj Kahn. "An Assessment of TARP Assistance to Financial Institutions." 2015. *Journal of Economic Perspectives* 29(2), 53-80.

Cochrane, John. "Toward a Run-Free Financial System." 2014. In *Across the Great Divide: New Perspectives on the Financial Crisis*, ed. Martin Bailey and John Taylor, pg. 197-249.

Diamond, Douglas. "Banks and Liquidity Creation: A Simple Exposition of the Diamond-Dybvig Model." 2007. *Federal Reserve Bank of Richmond Economic Quarterly* 93(2), 189-200.

Frame, W. Scott, Andreas Fuster, Joseph Tracy, and James Vickery. "The Rescue of Fannie Mae and Freddie Mac." 2015. *Journal of Economic Perspectives* 29(2), 25-52.

French, Kenneth et al. *The Squam Lake Report*. 2010. Princeton University Press: Princeton, NJ.

Gorton, Gary and Ellis Tallman. *Fighting Financial Crises.* 2018. University of Chicago Press: Chicago, IL.

Hanson, Samuel, Anil Kashyap, and Jeremy Stein. "A Macroprudential Approach to Financial Regulation." 2011. *Journal of Economic Perspectives* 25(1), 3-28.

McDonald, Robert and Anna Paulson. "AIG in Hindsight." 2015. *Journal of Economic Perspectives* 29(2), 81-106.

Mishkin, Frederic. "Over the Cliff: From the Subprime to the Global Financial Crisis." 2011. *Journal of Economic Perspectives* 25(1), 49-70.

Romer, Christina. "The Nation in Depression." 1993. *Journal of Economic Perspectives* 7(2), 87-102.

Swagel, Phillip. "Legal, Political, and Institutional Constraints on the Financial Crisis Policy Response." 2015. *Journal of Economic Perspectives* 29(2), 107-122.

Taylor, John. "Causes of the Financial Crisis and Slow Recovery." 2014. In *Across the Great Divide: New Perspectives on the Financial Crisis*, ed. Martin Bailey and John Taylor, pg. 51-65.

Wessel, David. *In Fed We Trust*. 2009. Crown Business: New York, NY.