The global financial crisis that began in 2007 has been the most severe since the Great Depression, and is more complex than that episode. Understanding this crisis and the responses of central banks and other authorities will help business decision-makers and investors assess financial opportunities and risks in normal times. This course is an MBA elective that examines lessons from the crisis as viewed by a market practitioner.

Several broad questions will be addressed over the semester:

- Why has the crisis been so deep, broad and prolonged? What were the sources of market failure? How do we assess financial conditions in a crisis? How do we distinguish between liquidity and solvency threats?
- What are the textbook responses to financial crises? Is there a conflict between the goals of financial stability and economic stabilization?
- How well did central bank policy function? How did the crisis affect policy transmission? Can central banks be effective when policy rates hit zero?
- What role has fiscal policy played in the crisis response?
- How will this crisis alter the financial system and its oversight? How will those changes affect the evolution of business and the economy?

International comparisons during the current crisis will be used to illuminate these key issues. Comparison and contrast with past crises and policy actions also will play an important role. Practical challenges from the experience of market participants will be highlighted and examined. Along the way, key concepts like information asymmetries and asset bubbles will be explored. The course will be conducted using a combination of lecture, discussion, and case analysis. The teaching style will be socratic, so active class participation will be key. On occasion, Stern faculty members may join class discussions regarding areas of their expertise.

The class also will have two special discussion sessions with outside participants: (1) former Treasury Secretary Robert Rubin will address the relationship between the fiscal and monetary authorities; and (2) Dr. Henry Kaufman (President of Henry Kaufman and Company Inc.) will examine the evolution of market risk-taking.

Schedule. B30.2343 meets on Tuesdays and Thursdays from 3:00pm to 4:20pm. The instructor is Kim Schoenholtz, who served as chief economist of one of the world’s largest financial institutions. He can be reached at 212-998-4030 and kermit.schoenholtz@stern.nyu.edu. Fixed hours will be on Tuesdays between 1:30pm and 2:30pm, and appointments can be arranged by email on other occasions.
Materials. Students are advised to have read the central bank policy chapters of a textbook on money and banking to understand the traditional functions and operating mechanisms of major central banks. Three possibilities are the textbooks of Ball, Cecchetti, or Mishkin. Some readings will be found in Acharya and Richardson, *Restoring Financial Stability*. Most of the crisis- and policy-related material will be available on the web. Powerpoint lecture notes will be distributed after class.

Specific articles and questions for class discussions will be posted and distributed by email. Students are expected to be prepared when a class discussion is announced. Twice during the semester, an unannounced, brief quiz will be used to encourage such preparation. Students are expected to keep abreast of developments in and policy responses to the global crisis, using resources like *Bloomberg*, the *Financial Times*, and the *Wall Street Journal*.

Requirements and grades. Students should have completed a course (or be able to demonstrate proficiency) in macroeconomics. Course grades will be based on the following with percentages indicated in parentheses:

- Preparation Quizzes and class participation (30%)
- Two assignments (35%): Each assignment will call for a two-page memo to a portfolio/liability manager anticipating a policy development and its implications or to a policymaker providing and justifying advice on a policy matter. Topics and instructions will be provided during the class.
- Group presentation and paper (35%) or Final Exam (depending on class enrollment)

Course Outline

Week 1
(1) Origin and propagation of the financial crisis
- Risk mispricing: dangers of extrapolation
- Information asymmetries: failure of delegated monitors
- Mis-incentives: private and public sources
- Balance sheet exposure, leverage and fire sale externality
- Systemic vulnerabilities: From Drexel and LTCM to Bear and Lehman
- International aspects

Week 2
(2) Compare and contrast: past crises and policies
   • Key financial and policy developments in the Great Depression
   • Japan’s asset bubbles: what policy did (and did not) do
     • Monetary and fiscal actions
     • Regulatory actions and zombie banks
   • Debt deflation (aka balance sheet recession)
   • Non-crisis case study: millennial equity bubble

(http://www.federalreserve.gov/newsevents/speech/bernanke20090113a.htm); Bernanke,

Week 3
(3) Financial conditions and monetary policy
   • Why do financial conditions matter?
   • What can a central bank do?
   • Did the Fed create the housing bubble?
   • Case study: the Greenspan “conundrum”


Special Session: Dr. Henry Kaufman will join a class discussion on the evolution of market risk-taking (schedule flexible).

Assignment one distributed.

Week 4
(4) Lender of last resort
   • Past liquidity crises (19th century, 1907, 1929-33)
   • Classical response: Bagehot
   • Automatic mechanisms: Lombard penalty window – did it work in the crisis?
   • Issues: maturity, collateral, counterparties
   • Is liquidity policy separable from conventional monetary policy?
   • Case study: convener of last resort – the LTCM episode


Assignment one due.
Week 5
(5) Policy rules and discretion
• Price stability, policy predictability and rule-like behavior (Taylor rule)
• Credibility and independence: steadying expectations
• Conventional policy transmission: interest rates
• What guides such deviations?
• Inflation vs. deflation: sources of instability
• Does the policy target depend on the state of price developments?

Reading: Bernanke, “Deflation: Making Sure ‘It’ Doesn’t Happen Here,”

Group presentations begin (depending on enrollment).

Week 6
(6) Policy at zero rates
• Managing expectations (e.g. leaving Gold Standard, policy commitments)
• Quantitative easing
• Credit easing: quasi-fiscal actions
• Cooperation with fiscal authority: promise and pitfalls
• Exit strategies – preserving independence and the role of interest payments on reserves

Reading: Mishkin, “Is Monetary Policy Effective During Financial Crises?”
(www.aeaweb.org/annual_mtg_papers/2009/retrieve.php?pdfid=200); and Schoenholtz,

Week 7
(7) Complexities of the policy framework
• Multiplicity of policy goals: housing, financial stability, economic stability
• Balkanization of financial stability framework and regulatory competition
  o Domestic
  o International
• Heightened information needs in a crisis
• Special case: ECB vs multiple national fiscal/supervisory agents in euro area
• Are central banks the natural regulator?

Reading: Cecchetti and Schoenholtz, “How Central Bankers See It: The First Decade of
ECB Policy and Beyond” (section on financial stability), June 2008.

Special Session: Former Treasury Secretary Robert Rubin will join a class discussion on
the relationship between the fiscal and monetary authorities (schedule flexible).
Week 8
(8) Regulation
- Source of instabilities: regulated and unregulated entities
- Why do we have special workout rules for financial intermediaries?
- Regulatory holes: shadow banking system
- Mispriced guarantees: GSEs, deposit insurance, systemic risks
- Regulatory competition: domestic and international
- Sources of pro-cyclicality (“financial accelerator”): capital requirements, risk management (volatility, market to market, leverage)
- Policy predictability vs. ad hoc responses
- Risks of over-regulation


Assignment two distributed.

Week 9
(9) Costs of financial crises
- Public absorption of intermediaries’ balance sheet losses
- Fiscal sustainability
- Cyclical shortfalls
- Threats to long-run growth
- How to contain risks?

Reading: Reinhart and Rogoff, “The Aftermaths of Financial Crises” (January 2009)

Assignment two due.

Week 10
(10) Future of regulation and the financial system
- Viral nature of financial crises
- What is systemic? Who should have access to the LOLR?
- Reducing vulnerability to individual failures
- Strengthening market mechanisms through transparency
- Pricing systemic risks: capital, leverage and liquidity requirements
- How to reduce pro-cyclicality
- International considerations

Week 11
(11) Possible long-term economic and policy implications
   • Reduced intermediation
     o Higher equilibrium spreads
     o Lower risk-free policy rate
     o Reduced debt intensity?
   • Economic volatility: end of the Great Moderation?
   • Should policymakers respond to asset bubbles apart from implications for price stability?


Week 12
(12) Contemporary challenges and wrap-up
   • Topical issues of the day
   • Review
Group Presentation and Paper

If the class size is appropriate, a group presentation and paper will be part of the course requirement. Groups should consist of four students. Groups should form at the first class and choose a topic immediately and schedule a date for their presentation. Presentations will begin in the fifth week of class. The group membership, choice of topic (see list below) and preferred date should be proposed by email to the instructor, who will allocate topics on a first-come first-served basis. Date preferences will be respected as far as possible, but adjustments will have to be made to fit in with the curriculum. Each group is expected to meet with the instructor in advance of its presentation to discuss the topic. It is the group’s responsibility to make an appointment.

The assignment consists of four parts:

1. **Powerpoint presentation** to be emailed to kermit.schoenholtz@stern.nyu.edu one week ahead of class. The instructor will review and comment on your presentation, and a revised version will be posted on Blackboard ahead of class.

2. Any **required reading** for the class should be sent to the instructor at least one week ahead of class. A web link or a file is best. This reading should be something substantive that you recommend to your classmates. Familiarity with both the readings and the presentations will be expected on the final exam. Materials should not exceed a total of ten pages. A short, informative article will be best. The quality of your choice will be part of the presentation grade.

3. The **class presentation** should last 20-30 minutes including Q and A. The presentation should explain the background and then address the question posed.

4. A **short paper** is due no later than two weeks after the presentation. The essay should address the question and take a position. It should be five pages long including tables and references.
Possible Presentation Topics

Proposals for alternative topics must be approved before the project starts.

- What features do most financial crises have in common? What is the most important distinguishing feature of the current crisis?

- Can we reliably detect asset price bubbles?

- To what extent did (pick one: financial deregulation; global imbalances; tax distortions; regulatory distortions; public sector guarantees) contribute to the current financial crisis?

- How can we efficiently distinguish financial innovation that aids welfare from innovation that boosts systemic risks?

- Assess the importance of different factors that made banks unwilling to lend to each other in this crisis.

- Under what conditions should central banks let the policy rate drop to zero?

- If the central bank policy rate is near zero, is there a desirable sequence of unconventional policy responses from the central bank? If so, what is it and why?

- What is the appropriate distribution of responsibility between monetary and fiscal authorities if the most effective policies involve extensive resource allocation and “picking winners?”

- When and how should central banks exit from quantitative easing? credit easing? Do these unconventional policies pose a serious threat to central bank independence?

- Were there missing markets that might have mitigated the financial crisis? If so, why were they missing?

- How can we make financial markets less subject to seizing up without sacrificing efficiency?

- How can we efficiently measure systemic risks?

- How can we improve the reliability of “delegated monitors?” You may choose to focus on one or more such monitors.

- How can we better price the explicit and implicit financial guarantees made by the public sector? You may choose to focus on one or more such guarantees.