Economics of Crises

Module 4, 2022-2023

Instructor: Konstantin Styrin
Bank of Russia and NES
kstyrin@nes.ru

Course information

Course Website: my.nes.ru

Instructor's Office Hours: TBA

Class Time: TBA

Room Number: TBA

TA: Alexander Tishin atishin@nes.ru

Course description

Financial crises are a widespread and recurring phenomenon pertinent to both advanced and emerging market economies. The recent Global Financial Crisis of 2007-2009 severely hit many economies simultaneously triggering the worst recession since the Great Depression in many of them. This course offers an overview of theoretical and empirical studies of financial crises. It discusses causes and consequences of crises as well as most important economic mechanisms involved and analyzes best-practice policy tools for their prevention and resolution.

Course requirements, grading, and attendance policies

The requirements include two problem sets (30% of the final grade each) and the take-home final exam (40%).

Course contents

1. A brief historical overview of bubbles and crises.
2. Bubbles
   a. Rational bubbles without frictions
   b. OLG frictions and market incompleteness.

   c. Informational frictions
   d. Delegated investment and credit bubbles
   e. Heterogeneous-belief bubbles
   f. Empirical evidence on bubbles
   g. Experimental evidence on bubbles

3. Explaining financial crises
   a. Asset price booms and busts. What explains asset price bubbles? What triggers asset price busts?
   b. Credit booms and busts. What macroeconomic factors explain credit booms? What structural factors explain credit booms?
   c. Impact of asset price and credit busts
4. Types of financial crises
   a. Currency crises
   b. Sudden stops
   c. Foreign and domestic debt crises
   d. Bank runs and banking crises. History of bank runs. Deeper causes of banking crises. Bank runs as a sunspot phenomenon. Information-induced bank runs.
   e. Collateral/margin runs. Loss spiral. Marginal/haircut or leverage spiral. Contagion and flight to safety.
   f. Feedback effects between financial sector risk and sovereign risk
5. Measuring systemic risk.
6. Identification, dating, and frequency of crises
7. Real and financial implications of crises
8. Predicting financial crises
9. How can financial crises be prevented?
10. How can the costs of financial crises be mitigated?

Sample tasks for course evaluation

Information-Based Bank Runs.

Consider a one-good, three-period, two-agent economy in which the gross return is $r_1 (< 1)$ for an investment during the first year ($t = 0$ to $t = 1$), r_2 for an investment during the second year, and r_3 for an investment during the third year. Assume $2r_1 - 1 > 0$ and $2r_1 r_2 - 1 > 0$. The preferences can be of three types. If an agent is of type 1, her utility is $U(x_1)$. It is $U(x_1 + x_2)$ if she is of type 2, and $U(x_1 + x_2 + x_3)$ if she is of type 3. The probability that agent 1 is of type i and agent 2 is of type j is p_{ij}.

The (exogenous) banking contract allows each agent to withdraw the amount initially deposited without penalty during periods 1 and 2, but interest can be collected only if the agent waits until period 3.

1. Define a_t^i as the strategy that consists in withdrawing everything during period t. Write the matrix of payments when both agents initially deposit one unit.
2. Consider the restriction of the game to strategies a_1^i and a_2^i. What is the equilibrium if $r_1 > (2r_1 - 1)r_2$ and $1 > r_1 r_2$? Is this an efficient allocation?
3. Returning to the initial matrix, assume that $(2r_1 - 1)r_2 r_3 > 1$. Describe the equilibrium by establishing the optimal strategy for each type. Will there be any bank runs?

Course materials

Required textbooks and materials

Allen, Babus, and Carletti, "Financial Crises: Theory and Evidence," *Annual Review of Financial Economics*, 2009

Allen and Gale, *Understanding Financial Crises*, Oxford University Press, 2009 – selected chapters

Berger, Molyneux, and Wilson (Eds.), *The Oxford Handbook of Banking* 3/e, Oxford University Press, 2019 – selected chapters

Brunnermeier, Eisenbach, and Sannikov, "Microeconomics with Financial Frictions: A Survey," *Advances in Economics and Econometrics*, 2013

Brunnermeier and Oemke, "Bubbles, Financial Crises, and Systemic Risk," *Handbook of the Economics of Finance*, 2013

Claessens, Kose, Laeven, and Valencia (Eds.), *Financial Crises: Causes, Consequences, and Policy Responses*, IMF, 2014 – selected chapters

Freixas, Laeven, and Peydro, *Systemic Risk, Crises, and Macroprudential Regulation*, MIT Press, 2015 – selected chapters

Freixas and Rochet, *Microeconomics of Banking* 2/e, MIT Press, 2008 – selected chapters

Gertler and Gilchrist, "What Happened: Financial Factors in the Great Recession," *Journal of Economic Perspectives*, 2018

Gorton, "Financial Crises," *Annual Review of Financial Economics*, 2018

Lorenzoni, "International Financial Crises," *Handbook of International Economics*, 2014

Taylor, "Credit, Financial Stability and the Macroeconomy," *Annual Review of Economics*, 2015

*** MORE READINGS TO BE ADDED ***

Additional materials

Bordo, "Fiscal and Financial Crises," *Handbook of Macroeconomics*, 2016

Gorton, *Misunderstanding Financial Crises*, Oxford University Press, 2012

Gorton, "The History and Economics of Safe Assets," *Annual Review of Economics*, 2017

Kindleberger, *Manias, Panics, and Crashes: A History of Financial Crises*, Basic Books, 1978 (revised and enlarged, 1989; 3rd ed. 1996)

Reinhart and Rogoff, *This Time Is Different*, Princeton University Press, 2009

Academic integrity policy

Cheating, plagiarism, and any other violations of academic ethics at NES are not tolerated.