Course on *Financial Crises*

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Syllabus

Course Description and format: The course reviews the main theories of financial crises and their applications to various aspects of the financial systems. The course is divided in three parts. The first part presents the basic concepts of bank fragility and contagion. The second part introduces basic elements of asset pricing and applies them to the analysis of financial stability, interbank market functioning and central bank intervention. The third part concerns capital regulation and bank capital structure.

Grading: The final grade will be based on a sit-in exam (55%) and a research outline (40%). Participation in class will also be considered (5%). The sit-in exam will consist of 4 questions, from which 3 have to be answered. The research outline has to be no more than 5 pages. More information on the research outline and the overall evaluation will be provided during the course.

Course material: The course will be based on articles and on the book entitled *Understanding Financial Crises* by Franklin Allen and Douglas Gale. The material denoted with (*) in the list below will be discussed in class. The other references constitute additional basic literature on each topic. Additional references may be provided during the course.

Background useful reading

Reinhart, C., and K. Rogoff (2009) *This Time is Different: Eight Centuries of Financial Folly*, Oxford and Princeton: Princeton University Press.

Outline of the topics

1. Brief introduction to the crisis started in 2007

(*) Allen F. and E. Carletti (2010) "An Overview of the Crisis: Causes, Consequences and Solutions," *International Review of Finance*, 10(1), 1-26.

Brunnermeier, M. (2009). "Deciphering the Liquidity and Credit Crunch 2007-08," *Journal of Economic Perspectives*, 23, 77-100.

2. The role of banks as providers of liquidity insurance and their vulnerability to runs

(*) Diamond D.V. and P.H. Dybvig (1983), "Bank Runs, Deposit Insurance and Liquidity," *Journal of Political Economy*, 91, 401-419.

(*) Jacklin C.J. and S. Bhattacharya (1988), "Distinguishing Panics and Information-based Bank Runs: Welfare and Policy," *Journal of Political Economy*, 96, 568-592.

Chari V.V. and R. Jagannathan (1988), "Banking Panics, Information and Rational Expectations Equilibrium," *Journal of Finance*, 43, 749-763.

(*) Goldstein, I. and A. Pauzner, (2005). "Demand-Deposit Contracts and the Probability of Bank Runs," *Journal of Finance*, 60, 1293-1327.

3. Financial contagion

(*) Allen F. and D. Gale (2000), "Financial Contagion," *Journal of Political Economy*, 108, 1-34.

(*) Allen F. and D. Gale (2007) *Understanding Financial Crises*, Oxford University Press, 2007 – chapter 10.

(*) Allen F., A. Babus and E. Carletti (2009) "Financial Crises: Theory and Evidence," *Annual Review of Financial Economics*, 1, 97-116.

Acharya V. and T. Yorulmazer (2008), "Information Contagion and Bank Hearding," *Journal of Money, Credit and Banking*, 40(1), 215-231.

Brusco S. and F. Castiglionesi (2007). "Liquidity Coinsurance, Moral Hazard and Financial Contagion," *Journal of Finance*, 62, 2275-2302.

Chen Y. (1999), "Banking Panics: The Role of the First-Come, First-Served Rule and Information Externalities," *Journal of Political Economy*, 107, 946-968.

Freixas, X. and B. Parigi and J. Rochet (2000). "Systemic Risk, Interbank Relations and Liquidity Provision by the Central Bank," *Journal of Money, Credit and Banking*, 32, 611-38.

Rochet, J. and X. Vives (2004). "Coordination Failures and the Lender of Last Resort: Was Bagehot Right after All?" *Journal of the European Economic Association*, 2, 1116-1147.

4. Financial networks

(*) Allen, F., A. Babus and E. Carletti (2011) "Financial Connections and Systemic Risk," mimeo, European University Institute

Allen F. and A. Babus (2008). "Networks in Finance", working paper 08-07, Wharton Financial Institutions Center, University of Pennsylvania, forthcoming in P.Kleindorfer and J. Wind (eds.), *Networks-based Strategies and Competencies*, Wharton School Publishing.

Babus A. (2007). "The Formation of Financial Networks," Discussion Paper 06-093, Tinbergen Institute.

Dasgupta, A. (2004). "Financial Contagion through Capital Connections: A Model of the Origin and Spread of Bank Panics," *Journal of the European Economic Association*, 6, 1049-1084.

5. Asset markets and cash in the market pricing

Allen F. and E. Carletti (2008). "The Role of Liquidity in Financial Crises," 2008 Jackson Hole Conference Proceedings, Federal Reserve Bank of Kansas City, 379-412.

Allen F. and D. Gale (1994). "Limited Market Participation and Volatility of Asset Prices," *American Economic Review*, 84, 933-955.

Allen F. and D. Gale (1998). "Optimal Financial Crises," *Journal of Finance*, 47, 1245-1284.

(*) Allen F. and D. Gale (2005). "From Cash in the Market Pricing to Financial Fragility," *Journal of the European Economic Association*, 3, 535-546.

(*) Allen F. and D. Gale (2007). *Understanding Financial Crises*, Oxford University Press, 2007 – chapters 3 and 4.

6. Cash in the market pricing and financial stability: Applications

(*) Carletti E. and A. Leonello (2011). "Credit Market Competition and Interbank Liquidity," mimeo, European University Institute.

Acharya V. and T. Yorulmazer (2008). "Cash-in-the-Market Pricing and Optimal Resolution of Bank Failures," *Review of Financial Studies*, 21, 2705-2742

Allen F. and D. Gale (2007). *Understanding Financial Crises*, Oxford University Press, 2007 – chapter 5.

Allen F. and D. Gale (2004). "Financial Fragility, Liquidity and Asset Prices," *Journal of the European Economic Association*, 2, 1015-1048.

7. Interbank markets and central bank intervention

(*) Allen F., E. Carletti and D. Gale (2009). "Interbank Market Liquidity and Central Bank Intervention," *Journal of Monetary Economics*, 56(5), 639-652.

Gale, D. and T. Yorumalzer (2011). "Liquidity Hoarding," mimeo, New York University.

Bhattacharya S. and D. Gale (1987). "Preference Shocks, Liquidity and Central Bank Policy," in W. Barnett and K. Singleton (eds.), *New Approaches to Monetary Economics*, Cambridge University Press, 69-88.

Brunnermeier M. and L. Perdersen (2009). "Market Liquidity and Funding Liquidity," *Review of Financial Studies*, 22(6), 2201-2238.

Flannery M. (1996). "Financial Crises, Payment System Problems and Discount Window Lending," *Journal of Money, Credit and Banking*, 28, 804-824.

Gorton H. and L. Huang (2004). "Liquidity, Efficiency and Bank Bailouts," *American Economic Review* 94, 455-483.

Heider F., M. Hoerova and C. Holthausen (2009). "Liquidity Hoarding and Interbank Market Spreads: The Role of Counterparty Risk," mimeo, European Central Bank, Frankfurt.

Holmstrom, B. and J. Tirole (1998), "Private and Public Supply of Liquidity," *Journal of Political Economy*, 106, 1-40.

8. Mark-to-market accounting

(*) Allen F. and E. Carletti (2008) "Mark-to-Market Accounting and Cash-in-the-Market Pricing," *Journal of Accounting and Economics*, 45(2-3), 358-378.

Plantin, G., H. Sapra and H. Shin (2008) "Marking to Market: Panacea or Pandora's Box?, *Journal of Accounting Research*, 46, 435-460.

9. Capital regulation

Dell'Ariccia G. and R. Marquez (2006). "Competition among Regulators and Credit Market Integration," Journal of Financial Economics, 2006, 79, 401-430.

(*) Allen, F., E. Carletti and R. Marquez (2011). "Credit Market Competition and Capital Regulation," *Review of Financial Studies*, 2011, 24(4), 983–1018.

Thakor, A. and H. Mehran (2011). "Bank Capital and Value in the Cross-Section," ," *Review of Financial Studies*, 2011, 24(4), 1019–1067.

Allen, F. and E. Carletti (2013). "Deposit and Bank Capital Structure," mimeo, European University Institute.

Other useful material

Acharya V., D. Gromb and T. Yorulmazer (2012). "Imperfect Competition in the Inter-Bank Market for Liquidity as a Rationale for Central Banking," American Economic Journal: Macroeconomics, 4(2), 184-217.

Acharya V., D. Gale and T. Yorulmazer (2010). "Rollover Risk and Market Freezes", forthcoming, *Journal of Finance*.

Acharya V. and S. Viswanathan (2010). "Leverage, Moral Hazard, and Liquidity", *Journal of Finance*, 2011, 66, 99-138.

Allen F. and E. Carletti (2006). "Credit Risk Transfer and Contagion," *Journal of Monetary Economics*, 53, 89-111.

Cai J. and A. Thakor (2008). "Liquidity Risk, Credit Risk and Interbank Competition", mimeo, Washington St. Louis.

Castiglionesi F., F. Feriozzi and G. Lorenzoni (2010). "Financial Integration and Liquidity Crises", mimeo, University of Tilburg.

Castiglionesi F. and W. Wagner (2010). "The Optimality of Interbank Liquidity Insurance", *Journal of Financial* Intermediation, forthcoming.

Castiglionesi F. and W. Wagner (2010). "Turning Bagehot on His Head: Lending at Penalty Rates When Banks Can Become Insolvent", mimeo, University of Tilburg.

Diamond D. and R. Rajan (2009). "Illiquidity and Interest Rate Policy", mimeo, University of Chicago.

Duffee, G. and C. Zhou (2001). “Credit Derivatives in Banking: Useful Tools for Managing Risk?” *Journal of Monetary Economics*, 48, 25-54.

Ewerhart C. and J. Tapking (2008). “Repo markets, counterparty risk and the 2007/2008 liquidity crisis”, working paper series 909, European Central Bank, Frankfurt am Main.

Freixas X., A. Martin and D. Skeie (2009). “Bank Liquidity, Interbank Markets, and Monetary Policy,” Review of Financial Studies, 24(8), 2656-2692.

Morrison, A.D. (2005). “Credit Derivatives, Disintermediation and Investment Decisions,” *Journal of Business*, 78:2, 621-647.

Parlour, C. and G. Plantin (2008). “Loan Sales and Relationship Lending,” *Journal of Finance*, 63:3, 1291-1314.