

# Topics on Financial Economics

Piero Gottardi  
European University Institute

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**Objectives of the course:** The course will investigate the consequences of various kinds of 'frictions' in financial arrangements (from the absence of some markets to limited commitment, agency problems and informational asymmetries) for the properties of equilibrium allocations and risk sharing to the functioning of financial markets in competitive environments. The course will present first the basic 'tools' used in the analysis, and proceed then to examine various recent papers on the above topics as well as various applications.

**Examination:** The evaluation of students taking the course for credit will be based on: (i) the presentation of one paper and the discussion of one paper to the class; (ii) performance in the homework assignments (iii) participation in class.

**TA:** Vincent Maurin

## 1 Risk Sharing with Complete and Incomplete Markets

### 1.1 Two Period Exchange Economies

- Arrow Debreu equilibria and competitive equilibria with sequential trading.
- Complete vs. incomplete financial markets.
- No arbitrage properties
- Stochastic discount factors
- Efficiency Properties of Competitive Equilibria
- Fully Insurable Risk and Sunspot Equilibria
- Value of Information

Magill, M. and W. Shafer: Incomplete Markets, in W. Hildenbrand and H. Sonnenschein (eds.), *Handbook of Mathematical. Economics.*, vol. IV (ch. 30).

Magill, M. and M. Quinzii (1996): *Theory of Incomplete Markets*, MIT Press (ch. 2, 4)

Davila, Julio, Jay H. Hong, Per Krusell, and José-Víctor Ríos-Rull. 2012. “Constrained Efficiency in the Neoclassical Growth Model With Uninsurable Idiosyncratic Shocks.” *Econometrica*, 80(6), 2431–2467.

Hirshleifer, J. (1971): The Private and Social Value of Information and the Reward to Inventive Activity, *American Economic Review* 61, 561-574.

## 1.2 Firms and Corporate Finance

- Firms’ optimal decisions with incomplete markets
- Optimal capital structure and Modigliani Miller Theorem

Mas-Colell, A., M. Whinston and J. Green (1995): *Microeconomic Theory*, Oxford University Press (ch. 19.G)

Tirole, J. (2006): *The Theory of Corporate Finance*, Princeton University Press (ch. 3,6),

Allen, F. and D. Gale (1988): Optimal Security Design, *Review of Financial Studies* 1 229-263.

Allen, F. and D. Gale (1991): Arbitrage, Short Sales and Financial Innovation, *Econometrica* 59 1041-1068.

Bisin, A., P. Gottardi and G. Ruta (2011): Equilibrium Corporate Finance: Makowski meets Prescott and Townsend, [http://www.eui.eu/Personal/Gottardi/EqmMakowski\\_October2011.p](http://www.eui.eu/Personal/Gottardi/EqmMakowski_October2011.p)

## 1.3 Infinite Horizon Economies

- Again on the Equivalence between Arrow Debreu Equilibria and Equilibria with Sequential Trades
- Debt Constraints and Ponzi Schemes
- Risk Sharing with Incomplete Markets
- Bubbles

Ljungqvist, L. and T. Sargent (2004): *Recursive Macroeconomic Theory*, II Ed., MIT Press (ch. 8, 13, 17).

Levine D. and W. Zame (1996): "Debt Constraints and Equilibrium in Infinite Horizon Economies with Incomplete Markets", *Journal of Mathematical Economics* 26, 103-131.

Levine D. and W. Zame (2001): Does Market Incompleteness Matter?, *Econometrica* 70, 1805-1840. [a simpler version of this paper is at <http://www.dklevine.com/papers/nether2.pdf>]

Santos, M. and M. Woodford (1997): Rational Asset Pricing Bubbles, *Econometrica* 65(1), 19-58.

## 1.4 Private Information over Aggregate States (Insider Trading)

Mas-Colell, A., M. Whinston and J. Green (1995): *Microeconomic Theory*, Oxford University Press, 1995 (chapter 19.H)

Grossman, S. and J. Stiglitz (1981): On the Impossibility of Informationally Efficient Markets, *Amer. Econ. Rev.*, 393-408.

Grossman, S. and J. Stiglitz (1976): Information and Competitive Price Systems, *Amer. Econ. Rev.*, 246-253.

# 2 Risk Sharing in Markets with Frictions

## 2.1 Limited Commitment and Default

### 2.1.1 Limited Punishments for Default

Dubey, P., J. Geanakoplos and M. Shubik (2005): Default and Efficiency in a General Equilibrium Model with Incomplete Markets, *Econometrica* 73, 1-37.

Chatterjee, S., D. Corbae, M. Nakajima and V. Rios-Rull (2007): A Quantitative Theory of Unsecured Consumer Credit with Risk of Default, *Econometrica* 75 (6), 1525-1589.

### 2.1.2 Borrowing Constraints

Kehoe, T. and D. Levine (1993): Debt Constrained Asset Markets, *Rev. Econ. Studies*, 865-888.

Kehoe, T. and D. Levine (2001): Liquidity Constrained vs. Debt Constrained Markets, *Econometrica*, 575-598

Alvarez, F. and U. Jermann (2000): Efficiency, Equilibrium, and Asset Pricing with Risk of Default, *Econometrica*, 775-798.

Hellwig, C. and G. Lorenzoni (2009): Bubbles and Self-Enforcing Debt, *Econometrica* 77(4), 1137-1164.

Kocherlakota, N. 2008. "Injecting rational bubbles," *Journal of Economic Theory*, 142(1), pages 218-232

Kehoe, P. and F. Perri (2004): Competitive Equilibria with Limited Enforcement, *Journal of Economic Theory*, vol. 119(1), pages 184-206.

### **2.1.3 Collateralized Lending**

Geanakoplos, J. (2009): The Leverage Cycle, mimeo, Cowles Foundation,  
[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1441943##](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1441943##)

Gottardi, P. and F. Kubler (2014): Dynamic Competitive Economies with Complete Markets and Collateral Constraints, [http://www.eui.eu/Personal/Gottardi/collcomrev\\_Jan-2014.pdf](http://www.eui.eu/Personal/Gottardi/collcomrev_Jan-2014.pdf)

Kilenthong, W. and R.M: Townsend (2009): Market Based, Segregated Exchanges in Securities with Default Risk,  
<http://townsend.uchicago.edu/papers/Market%20Based%20Segregated%20Exchanges.pdf>.

Kiyotaki, N. and J. Moore (1997): Credit Cycles. *Journal of Political Economy*, 105(2), pp. 211-48.

Krishnamurthy, Arvind (2003): Collateral Constraints and the Amplification Mechanism, *Journal of Economic Theory* 111(2), pp. 277-292.

Lorenzoni, G. (2008): Inefficient Credit Booms, *Review of Economic Studies* 75 (3), 809-833

### **2.1.4 Agency Costs, Liquidity**

Bernanke, B. and M. Gertler (1989): Agency Costs, Net Worth and Business Fluctuations, *American Economic Review*, 79, 14-31.

Kiyotaki, N. and J. Moore (2008): Liquidity, Business Cycles and Monetary Policy,  
<http://www.princeton.edu/~kiyotaki/papers/ChiKM6-1.pdf>

James Dow, Gary Gorton and Arvind Krishnamurthy (2005): Equilibrium Investment and Asset Prices under Imperfect Corporate Control, *American Economic Review* **95**(3), 659-681.

Gorton, G. and P. He (2006): "Agency-Based Asset Pricing", mimeo

## **3 Financial intermediation**

### **3.1 Competitive equilibria with Financial Intermediation**

Diamond, D., and P. Dybvig (1983) Bank runs, deposit insurance, and liquidity, *Journal of Political Economy*, 91, 401-419.

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

Allen, F. and D. Gale (2004a): Financial Intermediaries and Markets, *Econometrica* 72, 1023—1061.

Holmstrom, B. and J. Tirole (1997): Financial Intermediation, Loanable Funds and the Real Sector, *Quarterly Journal of Economics* 112, 663-691.

### 3.2 Financial Contagion

Allen, F., & Gale, D. (2000): Financial contagion. *Journal of Political Economy*, 108 (1), 1-33.

Acemoglu, D., Ozdaglar, A., & Tahbaz-Salehi, A. (2013): Systemic risk and stability in financial networks, Working Paper 18727, National Bureau of Economic Research. <http://www.nber.org/papers/w18727>.

Alvarez, F., & Barlevy, G. (2013): Mandatory disclosure and financial contagion. Tech. rep., University of Chicago. <https://econresearch.uchicago.edu/sites/econresearch.uchicago.edu/files/>

Cabrales, A., Gottardi, P., & Vega-Redondo, F. (2014): Risk-sharing and contagion in networks, <http://www.eui.eu/Personal/Gottardi/robustcontagion-090414.pdf>

Elliott, M., Golub, B., & Jackson, M. O. (2014): Financial networks and contagion. *The American Economic Review*, Forthcoming. [http://www.its.caltech.edu/~melliott/papers/financial\\_n](http://www.its.caltech.edu/~melliott/papers/financial_n)

Freixas, X., Parigi, B. M., & Rochet, J.-C. (2000): Systemic risk, interbank relations, and liquidity provision by the central bank. *Journal of Money, Credit and Banking*, 32 (3), 611-638. <http://www.jstor.org/stable/2601198>.

Gai, P., Haldane, A., & Kapadia, S. (2011). Complexity, concentration and contagion. *Journal of Monetary Economics*, 58 (5), 453-470. <http://ideas.repec.org/a/eee/moneco/v58y2011i5p4470.html>

Gofman, M. (2014): Efficiency and stability of a nancial architecture with too-interconnected-to-fail institutions. Tech. rep., University of Wisconsin-Madison.

[https://mywebspaces.wisc.edu/gofman/web/SMM/Gofman\\_Financial\\_Architecture.pdf](https://mywebspaces.wisc.edu/gofman/web/SMM/Gofman_Financial_Architecture.pdf)

Shin, H. (2009): Securitisation and financial stability. *Economic Journal*, 119, 309-332, <http://ideas.repec.org/a/ecj/econjl/v119y2009i536p309-332.html>.

Shin, H. S. (2008): Risk and liquidity in a system context. *Journal of Financial Intermediation*, 17 (3), 315-329. <http://ideas.repec.org/a/eee/jfinin/v17y2008i3p315-329.html>

Young, H. P., & Glasserman, P. (2013). How likely is contagion in financial networks? Economics Series Working Papers 642, University of Oxford, Department of Economics.

URL <http://ideas.repec.org/p/oxf/wpaper/642.html>

## 4 Papers for presentation