Information, contracts and competition
Applications to financial markets

Master Course by A. Chassagnon (20H),
University Tor Vergatta

The course discusses the role of information in markets, with emphasis on financial markets and on Moral Hazard. No background beyond first year standard microeconomic and game theory is required.

I propose in the following a (tentative) list of the main topics covered in the course.

1 An introduction to mechanism

This part of the course introduces the idea of Mechanism, generalizing prices, in a very simple example. We first look to the Aghion Bolton mechanism, and then we introduce broadly contracts in financial economics.

- Aghion, P., & Bolton, P. (1987). Contracts as a Barrier to Entry. *The American Economic Review*, 77(3), 388-401.

- *The Microeconomics of Banking.* By X. FREIXAS and J. C. ROCHET. MIT Press, Cambridge, Mass. 1997.

2 Theoretical foundations : on games with commitment

This part of the course introduces the Principal Agent Model, and describes the situation where there is no constraint on the possibility to design an allocation scheme by the principal (monopolist). The general structure is investigated in :

- Myerson, R. (1982) : Optimal Coordination Mechanisms in Generalized Principal-Agent Problems, *Journal of Mathematical Economics*, 78(1), 1-15.

- Forges, F. (1986) : An approach to communication equilibria,

3 The Lender-Borrower Relationship

Direct access by firms to financial markets has experienced strong development in recent years. This sections reviews the choice between Market debt and Bank debt in a Lender-Borrower relationship, explains the role of risk sharing with the Features of Bank Loans and present the to ex post moral hazard framework, in which verification (or disclosure) of enterprise performance is costly and a lender has to pay a monitoring cost.

- Townsend, R.M., 1979. Optimal contracts and competitive markets with costly state verification. *Journal of Economic Theory* 21(2), 265-293.

- Gale, Douglas and Hellwig, Martin (1985), "Incentive-Compatible Debt Contracts I : The One-Period Problem", *Review of Economic Studies* 52, 647-64

4 Competition under asymmetric information

This part studies issues related to competition in financial markets under asymmetric information. We examine briefly the Adverse Selection case, and then, the Ex Ante Moral hazard setting.

An example of financial markets where competitors are allowed to screenis :

- Bester, H. (1985), "Screening and Rationing in Credit Market with Imperfect Information", *American Economic Review*, 75,850-855.

When considering credit markets, the difference with the point of view presented in Section 1 is that the focus is not anymore on the structure of financial securities, but rather on the aggregate implications of asymmetric information. A reference work is :

- Holmstrom, Bengt and Tirole, Jean, 1997. "*Financial Intermediation, Loanable Funds, and the Real Sector*," The Quarterly Journal of Economics, MIT Press, vol. 112(3), pages 663-91, August.

When efficiency issues are considered, a general reference is given by :

Grossman, Sanford J and Stiglitz, Joseph E, 1980. "On the Impossibility of Informationally Efficient Markets," *American Economic Review*, American Economic Association, vol. 70(3), pages 393-408, June.

5 Multiple principals

This is a complex issue, in which we allow the Borrower, in a competing environment, to contract with multiples lenders. Indeed, when firms negotiate with a bank, they commonly have access to a wide range of financial offers : loans of different size, maturity, interest rate and repayment schedule, with or without guarantees, or associated credit lines. It comes that financial instruments available to lenders drive to very different equilibria.

- Attar, Andrea, Catherine Casamatta, Arnold Chassagnon, and Jean-Paul DÃ©camps, “Multiple Lenders, Covenants and Strategic Default,” 2017. TSE working paper.

- Attar, Andrea, Catherine Casamatta, Arnold Chassagnon, and Jean-Paul DÃ©camps, “Contracting Sequentially with Multiple Lenders : the Role of Menus," forthcoming in *Journal of Money, Credit and Banking*, 2018.

- Bisin, Alberto and Danilo Guaitoli, “Moral Hazard and Nonexclusive Contracts,” *RAND Journal of Economics*, 2004, 35(2), 306-328.

- Parlour, Christine and Uday Rajan, “Competition in Loan Contracts,” *American Economic Review*, 2001, 91(5), 1311-1328.