

# Mergers and Acquisitions and Some Other Topics in Microeconomics

## Project leaders:

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The research seminar will be mostly devoted to an important field of economics: Mergers and Acquisitions. Topics 1 and 2 are concerned with the product market and consumer welfare effects of M&As. Topic 3 is devoted to the analysis of the acquisition process itself: the behavior of the target's and the acquirer's management and the implications for shareholder value. Topics 4 and 5 are related to other fields of microeconomics.

The students are supposed to choose a topic from list below or suggest another topic of interest. Below a brief introduction to the M&A field is provided.

Mergers and acquisitions play a crucial role in economic activity. In a typical M&A transaction there is a "target" and the "acquirer". If the target's and the acquirer's management both agree on the terms of the deal, the acquisition is considered friendly. If the target's management resists the acquisition, the acquisition (takeover) can be made via a direct offer to the target's shareholders to sell their shares to the acquirer. In such a case the takeover is hostile. There is no a common understanding of how good takeovers are for a society. On the one hand, usually they make the production and distribution of product more efficient and may create various other synergies. On the other hand they lead to more concentrated industry which reduces the social welfare. There is also no clear understanding of effect of mergers and acquisitions on R&D. Moreover it remains unclear whether takeovers improve the welfare of the acquirer's shareholders, and whether the target's resistance to a hostile takeover is beneficial for the target's shareholders.

## The methodology

Our approach mainly uses elements of the theory of dynamic games in discrete and continuous time together with the Nash Equilibrium and Perfect Bayesian (Sequential) Equilibrium concepts. The solution of a typical model requires good understanding of the related mathematical tools. Numerical simulations might be necessary when analytical results are infeasible. Also empirical work on mergers and acquisitions is welcomed.

## Suggested list of Master Thesis topics

### 1. Interaction of consumer loyalty and merger

It is well known that the degree of consumer loyalty to some firm plays a significant role for profits collection of the firm. As a result it is expected that the merger process will be highly affected by the degree of consumer loyalty. In the current project it is expected to perform a study of such a relationship.

### 2. Merger in an industry with differentiated products

In this research an industry with many firms is considered. These firms are supposed to have heterogeneous characteristics. The purpose is to find what merger process more likely takes place.

## Preliminary Readings for topics 1 and 2

Andrade, G., and E. Stafford (2001) "New Evidence and Perspectives on Mergers", *Journal of Economic perspectives*, 15: 103-120

Bradley, M., A. Desai and E.H. Kim (1988) "Synergistic Gains from Corporate Acquisitions and Their Division Between the Stockholders of Target and Acquiring Firms." *Journal of Financial Economics*, 21: 3-40

### **3. Takeovers under asymmetric information**

In a recent attempt of Microsoft to acquire Yahoo! Yahoo's board of directors rejected Microsoft's offer for Yahoo's shares despite the fact that the offer had a premium above 60% over the pre-offer market price. In order to persuade Yahoo's board to cooperate, Microsoft threatened the board to make a direct offer to Yahoo's shareholders, ignoring the board's opposition. The board remained inexorable even after Microsoft raised the offer price by a few percent. Ultimately, instead of making a direct offer to Yahoo's shareholders, Microsoft withdrew the bid, hereby renegeing on its threat.

This story raises several interesting questions:

1. Why did the board, who was supposed to act in the interest of the shareholders, oppose a 60% premium offer? Did they believe Yahoo! was severely undervalued by the market? Was it just a way of bargaining for a higher price? Or did they actually have incentives not to act in the shareholders' interest?
2. Why was the board's approval crucial for Microsoft so that Microsoft preferred to withdraw from the takeover upon the board's rejection to recommend the offer to the shareholders?

*The goal of this project* would be to analyze how various information asymmetries between the parties to a takeover affect its dynamics and outcome. The target's managers may be better informed about the true value of the company under the current management. They are also likely to have private knowledge of the private benefits they derive from their positions. On the other hand, the target's potential value under the acquirer's management as well as the private benefits that the acquirer's managers would derive from the acquisition are known better to the acquirer. Hence, one suggested topic is:

#### **3.1 Dynamics of takeover process, information revelation, and the outcome of takeover**

In many cases the transfer of control over a company occurs not via a tender offer to the target's shareholders, but by purchasing a stake of the company from the existing largest shareholder. The existing literature does not give an answer on what determines the choice of the way in which a control transfer occurs. Hence, another possible topic is:

#### **3.2 Negotiated block trades vs. tender offers: effects of information asymmetries on the choice of the control transfer mode**

The relevant papers are:

#### **4. Multiple blockholders. Protection of minority shareholders vs. costly fights for control.**

Some corporations with concentrated ownership have several large shareholders (blockholders), each of them having a non-trivial power in the firm. In Russia the examples of such companies would be those in which Alfa Group has a large stake (like Vimpelcom).

Empirical papers do not provide conclusive evidence on the effect of such structures on a firm's performance, while theory on the topic is scarce. Balance of power and competition for votes of other shareholders reduces the chances of opportunism by any single blockholder, thereby protecting small shareholders (Block and Hege (2001), Bennedsen and Wolfenzon (2000), Gomes and Novaes (2005)). On the other hand, multiple blockholders can engage in wasteful struggles for control, which we often observe in Russia. Additionally, conflicts between them may lead to inefficient deadlocks (Gomes and Novaes (2005)), like in the ongoing conflict between Alfa and Telenor in Vimpelcom.

*The goal of the project* is to improve on the existing literature by developing a model that would endogenize the emergence of structures with multiple blockholders and their behavior as a function of legal environment and firm-specific characteristics. Based on Gomes and Novaes (2005) and

Radaev and Stepanov (2006) the model is supposed to incorporate a fight for control between the blockholders under asymmetric information.

### **5. Smart subordinates, stupid bosses: strategic interactions in a hierarchy under the threat of replacement**

This topic looks at the situation when a (middle-level) principal in an organization may be afraid of being replaced by a more talented subordinate. It is in the interest of a stupid principle to keep it secret that his subordinate is smarter than him or probably even to fire such subordinate before his talent is revealed (to the principal's own boss or to the market). At the same time, it may be in the interest of a smart subordinate to reveal his talent as soon as possible so that he could take the place of the principal. On the other hand, a smart subordinate may prefer to pretend being mediocre in order to show he is not a threat to the principal.

*The goal of the project* would be to build a model that would provide predictions about the behavior of the principal and the subordinate depending on their talents, structure of the organization and the external environment. The model should also provide predictions about the optimal design of communication and distribution of authority in an organization.

The relevant papers are Friebel and Raith (2004), Sonin and Yegorov (2006), Prendergast (1993).

#### **Preliminary Readings for topics 3-5**

Burkart, M., and F. Panunzi, 2006, "Takeovers", ECGI Finance working paper #118/2006

Hirshleifer, David, 1995, "Mergers and Acquisitions: Strategic and Informational Issues," in Robert A. Jarrow, Vojislav Maksimovic and William T. Ziemba (eds.), *Handbook of Operations Research and Management Science*, Vol. 9, Chapter 26, 839-885, Elsevier Science North Holland, Amsterdam.

Gomes, A., and W. Novaes (2005) "Sharing control versus monitoring as a corporate governance mechanism", PIER Working paper, University of Pennsylvania Law School.

Radaev A. and S. Stepanov (2006) "Agency Problems and Multiple Large Shareholders", NES working paper

Prendergast, Canice, 1993, "A Theory of "Yes Men"", *The American Economic Review*, Vol. 83, No. 4, pp. 757-770

Friebel, Guido, and Michael Raith, 2004, "Abuse of Authority and Hierarchical Communication", *The RAND Journal of Economics*, Vol. 35, No. 2, pp. 224-244

Egorov, Georgy, and Konstantin Sonin, 2006, "Dictators and Their Viziers: Agency Problems in Dictatorships", CEFIR WP#43.