

2019 FTG Summer School

Lecture on Informational Frictions in Decentralized Markets

by Vincent Glode

Most financial assets are traded in over-the-counter (OTC) markets, where transactions typically occur bilaterally between a buyer and a seller. A large literature has focused on the impact of search frictions on how trade occurs in these markets (cf. Duffie, Garleanu, and Pedersen 2005). In this lecture, we will instead study the effects of asymmetric information and imperfect competition on OTC trading interactions. Allowing for asymmetric information is necessary to capture the heterogeneity in traders' expertise observed in many OTC markets (e.g., municipal bonds, corporate bonds, credit and interest-rate derivatives) whereas assuming imperfect competition (i.e., the use of market power) is necessary to capture the high concentration of asset holdings and trading observed in those same markets.

We will start the lecture by studying a canonical model of bilateral trading between two asymmetrically informed agents (cf. Myerson and Satterthwaite 1983; Samuelson 1984; Biais and Mariotti 2005). We will cover how the presence of asymmetric information, combined with different allocations of bargaining power, can lead to inefficient trading outcomes. We will then emphasize how traders' incentives to use their market power and to acquire superior information contribute to the illiquidity of OTC markets (cf. Hirshleifer 1971; Glode, Green, and Lowery 2012; Glode and Lowery 2016).

Next, we will analyze how the impact of these frictions on the social efficiency of trade can be reduced through:

- i) network formation (cf. Spengler 1950; Glode and Opp 2016; Glode, Opp, and Zhang 2019),
- ii) voluntary disclosure (cf. Grossman 1981; Milgrom 1981; Glode, Opp, and Zhang 2018),
- iii) market design (cf. Glosten and Milgrom 1985; Glosten 1989; Zhu 2012; Glode and Opp 2019).

Whenever appropriate, we will discuss how the theoretical predictions produced by these papers relate to phenomena that have been empirically documented in OTC markets. We will also discuss the modeling choices that contributed to making the models tractable and what was done by the authors of these papers to convince the readers of the robustness of the results.

Reading List:

Biais, B., and T. Mariotti, 2005, Strategic Liquidity Supply and Security Design, *Review of Economic Studies* 72: 615-649.

Duffie, D., N. Garleanu, and L. Pedersen, 2005, Over-the-Counter Markets, *Econometrica* 73: 1815-1847.

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Glode, V., C. Opp, and X. Zhang, 2019, On the Efficiency of Long Intermediation Chains, *Journal of Financial Intermediation* 38: 11-18.

Glosten, L., 1989, Insider Trading, Liquidity, and the Role of the Monopolist Specialist, *Journal of Business* 62: 211-235.

Glosten, L., and P. Milgrom, 1985, Bid, Ask and Transaction Prices in a Specialist Market with Heterogeneously Informed Traders, *Journal of Financial Economics* 14: 71-100.

Grossman, S., 1981, The Informational Role of Warranties and Private Disclosure about Product Quality, *Journal of Law and Economics* 24: 461-483.

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

Milgrom, P., 1981, Good News and Bad News: Representation Theorems and Applications, *Bell Journal of Economics* 12: 380-391.

Myerson, R., and M. Satterthwaite, 1983, Efficient Mechanisms for Bilateral Trading, *Journal of Economic Theory* 29: 265-281.

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Spengler, J., 1950, Vertical Integration and Antitrust Policy, *Journal of Political Economy* 58: 347-352.

Zhu, H., 2012, Finding a Good Price in Opaque Over-the-Counter Markets, *Review of Financial Studies* 25: 1255-85.