Seminar in Finance
Course Outline

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Overview

This is a fifteen week course in market microstructure and corporate finance. I plan to treat both parts separately.

Class Mechanics

I will indicate the papers/topics that I plan to cover and spend some time on paper specifics, and some time on *why* the papers were written. You will be responsible for figuring out the details of the papers. If I can get the technology to work, my overheads will be in .pdf form on catalyst.

Assignments etc.

There will be roughly three assignments for market microstructure and three for corporate finance. You will have a week to do them. Feel free to discuss the problems with your colleagues. I won't post formal solutions, but if there is confusion, will indicate how the problems could be solved. In addition, I expect a "referee report," on a current working paper for each of the topics (a total of two).

Office Hours

I typically don't have office hours, so feel free to drop by. Alternatively, you can contact me and set up a specific appointment.

1 Market Microstructure

Market Microstructure is the study of the price formation mechanism. In finance, as we are obsessed with prices, this seems a sensible place to start. As data are readily available, there is a voluminous empirical literature. Given that a lot of the models are very stylized and the operation of the markets so complex, the empirical work is aggressively reduced form. Needless to say, I won't cover the empirical work — this does not represent my comparative advantage.

General surveys of the field are

1. O'Hara, Maureen(1995), 'Market Microstructure Theory,' Blackwell (This is a book.)

2. Bruno Biais, Larry Glosten and Chester Spatt (2005), "Market Microstructure: A Survey of Microfoundations, Empirical Results, and Policy Implications." *Journal of Financial Markets* 8, May 217-264.

1.1 Why we need Market models

1. Grossman and Stiglitz, (1980), On the Impossibility of informationally efficient markets, *American Economic Review* Vol 70 p 393-408.

2. Reny and Perry,Toward a Strategic Foundation for Rational Expectations Equilibrium, University of Chicago working paper.

1.2 What is needed to generate trade

1. Milgrom and Stokey (1982), Information, Trade and Common Knowledge, *Journal of Economic Theory*, 26, 17-27.

2. Aumann, (1976), Agreeing to Disagree, *Annals of Statistics*, 4, 1236-1239.

3. Akerlof, (1970), The Market for Lemons, *Quarterly Journal of Economics*, Vol 84, No 3, p488-500.

4. Ausubel, (1990),Insider Trading in a Rational Expectations Economy, *The American Economic Review*, Vol 80, No 5 1022-1041.

5. Myerson and Sattherthwaite, (1983) Efficient Mechanisms for Bilateral Trade, *Journal of Economic Theory*, 29, 265-281

1.3 Classic Models

1. Glosten and Milgrom (1989), Bid, Ask and Transaction Prices in a Specialist Market with Heterogeneously Informed Trades, *Journal of Financial Economics*, 13, 71-100.

2. Kyle (1985), Continuous Auctions and Insider Trader, *Econometrica* 53, 1315-1336.

3. Kyle (1989), Informed Speculation with Imperfect Competition, *Review of Economic Studies* 56, 317-355

1.4 Static Order Placement In Limit Order Markets

1. K. Rock (1990), "The Specialist's Order Book and Price Anomalies," working paper Harvard University. (This paper is legendary)

2. Duane Seppi (1997) 'Liquidity Provision with Limit Orders and a Strategic Specialist," Review of Financial Studies 10, 103–150.

3. Larry Glosten (1994) "Is the Electronic Open limit Order Book inevitable," Journal of Finance 49,1127–1161 (YES)

1.5 Dynamic Limit Order Markets

1. Parlour, (1998) Price Dynamics in a Limit Order Market, *Review of Financial Studies* 11 789–816

2. Foucault (1999), "Order Flow composition and Trading Costs in a Dynamic Limit Order Market," *Journal of Financial Markets*

3. Foucault, T., O. Kadan and E.Kandel, (2005)"Limit Order Book as a Market for Liquidity," *Review of Financial Studies*, 18.

4. Goettler, R., C. Parlour and U. Rajan (2005), "Equilibrium in a Dynamic Limit Order Market,"*Journal of Finance*, 2005, Vol 60 No 5 p 2149–2192

5. Back, Kerry and S. Baruch, (2005), "Working Orders in Limit-Order Markets and Floor Exchanges," Texas, A& M Working Paper

6. Rosu, I., (2005) "A Dynamic Model of the Limit Order Book." U Chicago working paper.

1.6 Market Design and Competition between Markets

1. Bruno Biais, (1993) 'Price Formation and Equilibrium liquidity in Fragmented and Centralized Markets," Journal of Finance 48, 157–185.

2. Biais B. D. Martimort and J. Rochet (2000), "Competing Mechanisms in a Common Value Environment," Econometrica 68, 799-838.

3. Parlour and Seppi (2001) "Liquidity based Competition for Order Flow." *Review of Financial Studies.*

2 Liquidity

1. Acharya, Viral An L. Pedersen,(2005), "Asset Pricing and Liquidity Risk," *Journal of Financial Economics* Vol 77, pp375–410

2. Amihud, Yakov and Haim Mendelson, 1985, "Asset Pricing and the Bid Ask Spread," *Journal of Financial Economics*, 17, 31–56

3. Brennan, M. J. and A. Subrahmanyam, 1996, "market Microstructure and Asset Pricing, *Journal of Financial Economics* 41, 441-464

4. Easley, D. S. Hvidkjaer and M. O'Hara (2002), Is information risk a determinant of Asset returns, *The Journal of Finance* 58, 2185–2210.

5. Pastor, L. And R. Stambaugh, 2003, "Liquidity risk and Expected Stock Returns, *Journal of Political Economy* 111 642-685.

6. Chordia, T. R. Rolla nd A. Subrahmanyam, 2000, "Commonality in Liquidity,"*Journal of Financial Eocnomics*, 56, 3-28.

7. same, , 2001, "Market Liquidity and Trading Activity, " *Journal of Finance*, 56, 501-530.

3 Auctions

3.1 Survey Papers

1. Wolfstetter, Elmar (1996) Auctions: An introduction, Journal of Economic Surveys, Volume 10, No. 4 p1-420.

2. Milgrom, Paul (1989), Auctions and Bidding: A primer, Journal of Economic Perspectives Vol 3. No. 3 p 3-22.

3. McAfee R. Preston and McMillan (1987), Auctions and Bidding, Journal of Economic Literature, 25, 381-192.

4. Krishna, Vijay, "Auction Theory," Academic Press 2002. This is a good book.

5. Klemperer, Paul (2004) "Auctions: Theory and Practice,"Princeton. This is also a book, but chapters are available online.

3.2 Seminal papers

1. Milgrom, Paul R. and Robert J. Weber,(1982) A Theory of Auctions and Competitive Bidding, Econometrica Vol 50 Issue 5, 1089–1122.

2. Milgrom(1981), Rational Expectations, Information Acquisition and Competitive Bidding, Econometrica, 49, 921-43.

3.3 Treasury auctions

1. Wilson, (1979) Auctions of Shares, *Quarterly Journal of Economics*, Vol 93 No 4. p 675-689.

2. Back and Zender, (1993), Auctions of Divisible Goods, *Review of Financial Studies*, 6 p733-764.

3. Wang and Zender, (2002), Auctioning Divisible goods, *Economic Theory*, 19, 673-705.

4. Kremer, and Nyborg, (2004), Underpricing and Market Power in Uniform Price Auctions,*Review of Financial Studies*, 17, 849-877

5. Nyborg and Strebulaev, 2004, Multiple Unit Auctions and Short Squeezes, *Review of Financial Studies* 17, 545-580

6. Bikhchandani and Huang, (1989), Auctions with Resale, *Review of Financial Studies*, Vol 2, no3 p311-339

7. Vickery, William, " Counterspeculation, Auctions and Competitive Sealed Tenders," *Journal of Finance*

3.4 IPOS

1. Rock,(1986), Why are new issues underpriced, *Journal of Financial Economics*, 15, 187-212.

2. Benveniste and Spindt, (1989), How Investment Bankers Determine the Offer Price and Allocation of New Issues, *Journal of Financial Economics*, 24, 343-361.

3. Parlour, C. A. and U. Rajan, "Rationing in IPOs"(2004) *Review of Finance*.

Sequence of Topics

The sequence of topics will be:

1. Failings of Standard Asset Pricing Models or why we need microstructure
2. The bare minimum to generate trade or no–trade theorems
3. Classic Models: Glosten & Milgrom and Kyle ('85)
4. Static Models of Order Placement
5. Dynamic Limit Order Markets
6. Liquidity or what it all means for asset pricing
7. General Overview of Auctions

8. Discriminatory and Uniform Price auctions
9. Collusive Equilibria: Back and Zender,
10. Multiple Unit auctions and beyond
11. Price Formation in other Markets: e.g., IPOs.