Aston Business School
Birmingham

BFM105 Market Microstructure

Academic Year 2012/13

Number of Aston Credits: 15

Number of ECTS Credits: 7.5

Staff Member Responsible for the Module:

Prof. Patricia Chelley-Steeley
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Availability: See 'office hours'
Or contact the Finance, Accounting & Law Group Administrator:
Mrs Rosaleen Shirley, Room ABS 404, Extension 3238

Pre-requisites for the Module:

Module available on MSc Finance and Investments only

Mode of Attendance:

On campus

Module Objectives and Learning Outcomes:

The aim of this module is to provide a thorough understanding of microstructure issues and how they influence financial markets. Microstructure models will be examined to determine the influence that liquidity, inventory and adverse selection has on trading costs. We will also study the development of trading mechanisms and examine how this has influenced competition between exchanges.

At the end of the course students should be able to:

- Describe different trading mechanisms
- Be able to place orders on different trading systems.
- Understand how trading costs are generated by different exchanges.
- Evaluate critically a trading mechanism
- Understand mathematical microstructure models
- Explain the effect that microstructure issues have on security returns.

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- Understand and critically evaluate how to measure adverse selection costs
- Be able to analyze microstructure data.
- Understand and evaluate the importance of liquidity

Module Content:

Week 1: The development of the London Stock Exchange and competition between European Stock Exchanges and High Frequency Trading.

Week 2: Comparing auction and dealer trading systems

Week 3: Empirical Microstructure Models

Week 4: Liquidity in Financial markets

Week 5: Components of the Spread.

Week 6: Estimating the bid-ask Spread

Week 7: Experimental Finance

Week 8: Financial Crash

Week 9: Revision

Week 10: **Examination**

Corporate Connections:

Prof. Chelley-Steeley has published over forty peer reviewed papers, over half of these are in the area of market microstructure. She regularly acts as a reviewer/discussant for journals and conferences in the area of market microstructure and is assistant editor for Journal of Behavioral Finance and on the Editorial board of Journal of Commerce and management.

International Dimensions:

This course will have a strong international focus and will specifically compare the different trading mechanisms at exchanges around the world including the recent development towards high frequency algorithmic trading. A strong focus will be on global

competition between exchanges and the issue of multiple stock exchange listing will be studied in depth.

Contribution of Research:

Professor Chelley-Steeley has published widely in the area of market microstructure. A small number of her papers are being used for discussion in the course. Her main field of interest is concerned with comparing the performance of different trading systems, an issue central to market microstructure. Professor Chelley-Steeley is director of the Aston Centre for Research in Experimental Finance. This research centre undertakes experimental research into market microstructure issues.

Ethics, Responsibility & Sustainability:

Issues relating to asset market trading and algorithmic trading will be considered.

Method of Teaching:

The module will be taught by lectures and understanding will be reinforced by the completion of a number of individual and group exercises and multiple choice questions.

Method of Assessment and Feedback:

This module will be assessed by a 2-hour unseen, closed-book, final exam. This will represent 70% of the module mark. In addition to this a project will be required which will account for 30% of the final mark respectively.

Feedback will be through feedback sheets and comments on Blackboard.

During the summative and formative assessment all of the module the following learning outcomes will be assessed.

Knowledge and understanding	**Professional/subject specific skills**
A1 Main decision making areas in finance and investments	C1 Use key decision-making tools in finance and investments
A2 Financial market structures and "dealing room" environments	C2 Apply main mathematical and statistical techniques in finance and investments analysis and research
A3 Mathematical and statistical	C3 Exhibit familiarity with financial

techniques used in finance

A5 International dimensions of finance

market trading systems and databases

Intellectual skills

B1 Problem solving
B2 Critical analysis
B3 Synthesis

Transferable/key skills

D1 Oral presentation skills
D2 Written presentation skills
D3 Time management
D4 IT skills
D5 Listening skills
D6 Information retrieval
D7 Data collection and collation

Learning Hours:

Contact hours	30
Directed Exercises	20
Directed Reading	60
Further Private Study	40
Total	**150**

The following essential and recommended readings are subject to change. Students should not therefore purchase textbooks prior to commencing their course. If students wish to undertake background reading before starting the course, many of the chapters/readings are available in electronic form via on-line library catalogues and other resources

Essential Reading:

O'Hara, M., *Market Microstructure*, Blackwell. (Lecture material 4 and 5)

A. Madhavan, *Market Microstructure: A Survey*, Journal of Financial Markets, 2000.

Lhabitant, Gregoriou, Stock Market Liquidity, Implications for Market Microstructure and Asset Pricing, Wiley.

Menkveld, A., (2011), Foresight Driver Review, Electronic Trading and Market Structure, available from Social Science Research Network, SSRN abstract=1986892.

Amihud, Yakov, Haim Mendelson and Lasse Heje Pedersen, Liquidity and Asset Prices, Foundations and Trends in Finance, now.

The Trading Systems

deJong, Frank Theo Nijman and Ailsa Roell (1995), A Comparison of the Cost of Trading French Shares on the Paris Bourse and on SEAQ International. European Economic Review vol 39 p1277-1301.

M. Pagano and A. Roell, Trading systems in European stock exchanges: current performance and policy options, Economic Policy, 1992.

M, Pagano, The changing microstructure of European equity markets, Centre for Studies in Economics and Finance, 1997.

Huang, R.D., and H.R. Stoll, (1996), Dealer Versus Auction Markets: A Paired Comparison of Execution Costs on NASDAQ and the NYSE, Journal of Financial Economics 41, 313-357.

Chelley-Steeley, P.L. (2005), "Noise and the Trading System: The Case of SETS", European Financial Management, 3,pp389-425.

London Stock Exchange. On-line Trading Guides.

A. Madhavan, Market Microstructure: A Survey, Journal of Financial Markets, 2000.

Harris, Larry "Trading and Exchanges Market Microstructure for Practitioners" Oxford University Press. Chapter 2-7.

Liquidity

Amihud, Yakov, 2002. Illiquidity and stock returns: cross-section and time-series effects. Journal of Financial Markets 5, 31-56.

Amihud, Y., Mendelson, H., Lauterbach, B., 1997. Market microstructure and securities values: evidence from the Tel Aviv Exchange. Journal of Financial Economics 45, 365-390.

Amihud, Y., Mendelson, H., Pederson, L., H., 2005. Liquidity and Asset Prices. Foundations and Trends in Finance.
Intraday Trading Patterns in Stock Markets

McInish, H. T., & Wood, A. R (1992). An Analysis of Intraday Patterns in Bid/Ask Spreads for NYSE Stocks. The Journal of Finance, Vol 47, No 2, p753-764.

Owain ap Gwilym and Charles Sutcliffe, High Frequency Financial Market Data. Sources, Applications and Market Microstructure.Risk Executive Report- Risk Books ISBN 1 899332 49 9 Page 63-78.

Determinants of the Bid-Ask Spread

Copeland, T., and D. Gali, (1983), Information effects and the bid-ask spread, Journal of Finance 38, 1457-1469.

Ho, T., and Stoll, H., (1983), The Dynamics of the Dealer Under Competition, Journal of Finance, 38 1053-1074.

Glosten L., and P., Milgrom (1995), Bid Ask and Transaction Prices in a Specialist Market with Heterogeneously Informed Traders, Journal of Financial Economics.

O'Hara, M., Market Microstructure, Blackwell.

The Roll Measure of the Spread

Roll, R., A Simple Measure of the Effective Bid-Ask Spread in an Efficient Market, Journal of Finance 39 1127-1139.

Choi, J.Y., D. Salandro and K. Shastri (1988), On the Estimation of Bid-Ask Spreads: Theory and Evidence, Journal of Financial and Quantitative Analysis vol 23.

Experimental Finance

Friedman, D., and S. Sunder, Experimental Methods A Primer for Economists. Cambridge University Press (Chapter 1-4)

Schnitzlein C.R. (1996), Call and Continuous Trading Mechanisms under Asymmetric Information: An experimental investigation, The Journal of Finance, vol 51 613-636.

Theissen, E., (2000), Market Structure, Informational Efficiency and Liquidity: An Experimental Comparison of Auction and Dealer Markets, Journal of Financial Markets p333-363.

The Financial Crisis 2006-8

Acharya V, and M. Richardson, (2009), Causes of the Financial Crisis, Critical Review, Vol 21 No 2+3 195-210.

AIIFL(Asian Institute of International Financial Law(AIIFL)) Faculty of Law The University of Hong Kong Working Paper No 3 January 2009 by Douglas Arner . The Global Credit Crisis of 2008: Causes and Consequences.

A Primer on the Role of Securitization in the Credit Market Crisis of 2007. John D. Martin. Working Paper Baylor University. Available from SSRN http://ssrn.com/abstract=1324349.