

Baruch College, Zicklin School of Business, CUNY
Microstructure, Fin 83200 Fall 2019

Instructor: Professor Robert Schwartz, 646-312-3467
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Office Hours: Monday and Wednesday 1:30 – 3:30, and by appointment
Classroom and time: Vertical Campus, VC 10-210, Wednesday, 10:00 – 12:00

Academic Integrity

The Department of Economics and Finance fully supports Baruch College's policy on Academic Honesty, which states, in part:

Academic dishonesty is unacceptable and will not be tolerated. Cheating, forgery, plagiarism and collusion in dishonest acts undermine the college's educational mission and the students' personal and intellectual growth. Baruch students are expected to bear individual responsibility for their work and to uphold the ideal of academic integrity. Any student who attempts to compromise or devalue the academic process will be sanctioned.

Additional information can be found [here](#).

Any infringement of this rule will be treated as a serious violation of Academic Integrity. Any suspected academic dishonesty in this regard will result in a grade of F on the exams and most likely an F in the course as well. Students should also understand that a report of suspected academic dishonesty will be sent to the Dean of Students' office and becomes a permanent part of the student's file.

Students with Disabilities and Other Special Needs

Students with disabilities are supported in their academic studies by Baruch College's Office of Services for Students with Disabilities according to their Mission Statement:

The Office of Services for Students with Disabilities exists to provide reasonable accommodations to students with disabilities to ensure they have equal access to the college's programs and services. Through student intake, faculty consultation, and outreach to the community, students can develop interpersonal, social, vocational and emotional growth.

Students who feel that they may need a reasonable accommodation based on a disability should contact the staff at the Office of Services for Students with Disabilities, Newman Vertical Campus, Room 2-271, or by phone at (646) 312-4590. More information is available on their website [here](#).

Course Description:

The seminar will consider selected topics in equity market microstructure, with attention paid to their microeconomics underpinning. Particular focus will be given to the way in which fundamental information, liquidity needs, and noise trading interact in the generation of trades and, more specifically, to how buy/sell orders are written and translated into trades in the context of alternative market structures. Much attention will be given to issues including liquidity formation, price discovery, and price volatility. Market efficiency and public policy issues concerning the regulation of market structure

will also be discussed. A computerized trading simulation software (TraderEx) will be presented and an in-class, networked trading session conducted.

Suggested Course Materials:

The Equity Trader Course, Schwartz, Francioni and Weber, John Wiley & Sons, 2006.

Micro Markets: A Market Structure Presentation of Microeconomic Theory, Schwartz, John Wiley & Sons, 2010.

Outline:

1. (8/28) Introduction to course, thoughts about market efficiency, and reflections on teaching Economics and Finance

“Sparking Excitement about Economics,” Schwartz, *BizEd*, July – August 2011.

“A Challenge for Our Equity Markets: Can Liquidity be Augmented, Volatility Better Controlled, and Price Discovery Sharpened?” Schwartz, *Journal of Banking Regulation and Banking*, December, 2016.

“Trading Goes to College,” Deniz Ozenbas and Robert A. Schwartz, *BizEd*, February 5, 2019.

2. (9/4, 9/11) Overview of Market Microstructure

“Security Market Microstructure: The Analysis of a Non-Frictionless Market,” Francioni, Hazarika, Reck and Schwartz, *The Handbook of Quantitative Finance*, C.F. Lee and Alice Lee, Editors, Springer Science+Business, 2010.

“Microstructure of Equity Markets,” Alan, Bildik, and Schwartz, in *Market Microstructure in Emerging and Developed Markets*, The Kolb Series in Finance, John Wiley & Sons, Inc., Baker and Kiyamaz, editors, 2013.

3. (9/18) Continuous Order Driven Markets

The Equity Trader Course, Chapter 3.

"The Ecology of an Order Driven Market," Handa, Schwartz and Ashish Tiwari, *The Journal of Portfolio Management*, Winter 1998.

4. (9/25) Periodic Call Auctions

The Equity Trader Course, Chapter 4.

Schwartz and Wu, “Equity Trading in The Fast Lane: The Staccato Alternative,” Invited Editorial, *Journal of Portfolio Management*, Spring 2013.

“A Call Auction’s Impact on Price Formation and Order Routing: Evidence from the Nasdaq Stock Market,” Pagano, Peng, and Schwartz, *Journal of Financial Markets*, 2014.

5. (10/2) Price Discovery

“Price Discovery: The Economic Function of a Stock Exchange,” Alan and Schwartz, *Journal of Portfolio Management*, 2013.

Schwartz, Wolf, and Paroush, “The Dynamic Process of Price Discovery in an Equity Market,” “The Dynamic Process of Price Discovery in an Equity Market,” *Managerial Finance*, Volume 36, Issue 7, 2010 pp. 554-565.

No class on 10/ 9.

No class on 10/16 (Monday’s schedule followed).

6. (10/23, 10/30) Volatility

“The Evolving Quality of the Equity Markets: An Intraday Volatility Analysis,” Alan, Hua and Schwartz, paper in process.

“Combatting Turbulence in the Equity Market: Get the Listed Companies on Board,” Alan, Mahoney, and Schwartz, *Journal of Portfolio Management*, Summer, 2015.

“A Liquidity Program to Stabilize Equity Markets,” Alan, Mask, and Schwartz, *Journal of Portfolio Management*, Winter, 2015.

No class on 11/6

7. (11/13) Liquidity

“Liquidity: An Elusive Variable,” Robert A. Schwartz, Reto Francioni, Giuseppe Nuti, and Peter Weber, working paper.

“Do HFT Firms Provide Two-Sided Liquidity?” Ozenbas and Schwartz, *Journal of Portfolio Management*, Summer 2018.

8. (11/20, 11/27) Simulated Trading and Trading Education

(11/20 Class meets in the SFSC, Wasserman Trading Floor)

The Equity Trader Course, Chapter 1.

“From Theory to Application: “Using Simulation to Better Understand Price Determination in a Non-Frictionless Equity Market,” Hua, Schwartz and Sipress, *Journal of Portfolio Management*, Fall 2017.

“Trading Rooms: A Bridge to Reality,” Ozenbas and Schwartz, *BizEd*, March-April 2014.

“How Securities are Traded: A Hands-On Introduction Using *TraderEx*,” Schwartz and Weber, draft, 2019.

9. (12/4) Liquidity’s Implications for Asset Pricing

“Resiliency and Asset Pricing,” Hua, Peng, Schwartz, & Alan, *Review of Financial Studies*, forthcoming.

10. (12/11) Market Efficiency, Public Policy Issues, and Further Discussion

Micro Markets, Chapters 7 and 8.

“The SEC’s 1997 Order Handling Rules and Beyond: The Perspective of the Landmark Regulation’s Chief Architect,” Lindsey, Byrne, and Schwartz, *Journal of Portfolio Management*, Spring, 2016.

11. (12/18) Final Exam