

World Scientific Lecture Notes in Finance – **Vol. 4**

Lecture Notes in Market Microstructure and Trading

Peter Joakim Westerholm

University of Sydney, Australia



NEW JERSEY • LONDON • SINGAPORE • BEIJING • SHANGHAI • HONG KONG • TAIPEI • CHENNAI • TOKYO

CONTENTS

<i>Preface</i>	v
<i>Author's Note</i>	vii
Part 1. Securities Trading and Markets	1
Introduction Lecture in Trading in Securities Markets and Advanced Market Microstructure Theory — The Economics of Trading	3
Lecture 1. Introduction to Securities Trading and Markets	23
A. Trades, Traders, Securities and Markets	23
B. Securities Trading	25
C. Bargaining	27
D. Auctions	27
E. Introduction to Market Microstructure	31
F. Orders, Liquidity and Depth	32
G. Day Trading	34
Lecture 2. Institutional Trading	41
A. Institutions and Market Impact	41
B. Registered Investment Companies	43
C. Unregistered Investment Companies	47

Lecture 3.	Execution Costs	51
A.	Execution Costs	51
B.	Algorithmic Trading, Dark Pools and High-frequency Trading (HFT)	57
C.	Stealth and Sunshine Trading	57
D.	Trade Evaluation and VWAP	59
E.	Evaluating Investment Performance vs. Trade Execution Performance	63
Lecture 4.	Market Fragmentation and Regulation	67
A.	Exchanges and Floor Markets	67
B.	Over the Counter Markets and Alternative Trading Systems	72
C.	Reasons for Fragmentation	74
D.	Crossing Networks, Upstairs Markets and Dark Trading	83
E.	Regulation	88
Lecture 5.	Adverse Selection and Market Making	93
A.	Information and Trading	93
B.	Noise Traders	104
C.	Adverse Selection and the Spread	108
Lecture 6.	Behavioral Finance	113
A.	Rational Investor Paradigms	113
B.	Prospect Theory	114
C.	Behavioral Finance	117
D.	Neurofinance: Getting into the Investor's Head . . .	125
E.	The Consensus Opinion: Stupid Investors, Smart Markets?	126
Lecture 7.	Random Walks, Risk and Arbitrage	131
A.	Market Efficiency and Random Walks	131
B.	Risk	134

C. Arbitrage	135
D. Limits to Arbitrage	138
Lecture 8. Arbitrage in Real Trading Markets and Hedging	141
Lecture 9. Market Efficiency	149
Lecture 10. Trading Gone Wrong	171
A. Illegal Insider Trading	171
B. Front Running and Late Trading	176
C. Bluffing, Spoofing and Market Manipulation	176
D. Rogue Trading and Rogue Traders	184
E. Trading and Ponzi Schemes	185
Lecture 11. Revision and Exam Preparation	187
Part 2. Advanced Application and Research	193
Lecture 12. Linking Market Microstructure to Mainstream Finance	195
Lecture 13. Limit Order Markets	209
Lecture 14. Liquidity Providers: Dealing and Market Making	221
Lecture 15. Liquidity, Volatility and Transparency	231
Lecture 16. The Glosten–Milgrom and Kyle Models	249