Quantitative Finance

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/rquf20

Market Microstructure in Practice

by Charles-Albert Lehalle and Sophie Laruelle, World Scientific Pub Co Inc (2018). E-book. ISBN: 978-981-3231-14-6.

Nataliya Bershova

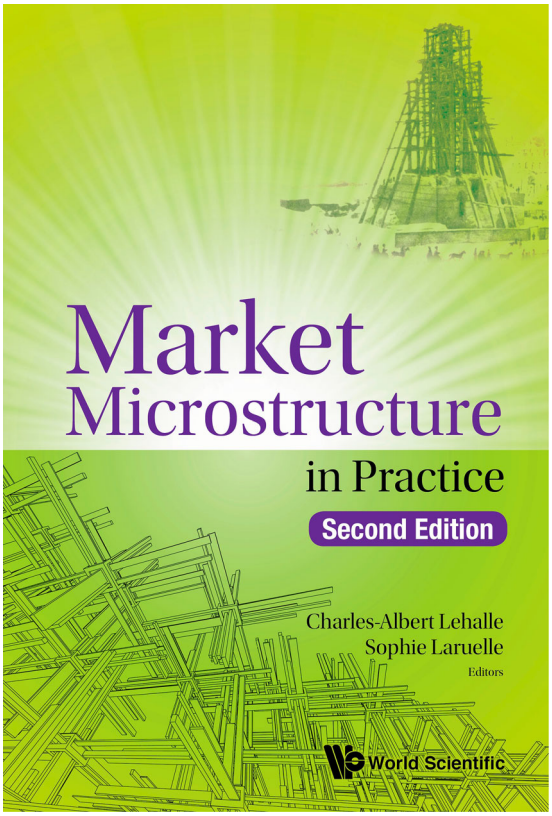
To cite this article: Nataliya Bershova (2022) Market Microstructure in Practice, Quantitative Finance, 22:9, 1593-1594, DOI: 10.1080/14697688.2022.2080103

To link to this article: https://doi.org/10.1080/14697688.2022.2080103

Quantitative Finance, 2022
Vol. 22, No. 9, 1593–1594, https://doi.org/10.1080/14697688.2022.2080103

Routledge
Taylor & Francis Group

Book review



Market Microstructure in Practice, by Charles-Albert Lehalle and Sophie Laruelle, World Scientific Pub Co Inc (2018). E-book. ISBN: 978-981-3231-14-6.

The acceleration of disruptive technology innovation has resulted in an increasing market fragmentation, speed, and potentially systemic risk. We have observed the proliferation of new trading platforms and order types that offered innovative order matching engine rules. The trading environment has been developing and increasing its dependence on, and deployment of, algorithmic trading strategies that not only process market data and execute trades, but also make independent trading decisions about where, when, and how to work out an order. Disruptive technologies allowed for creating algorithmic strategies to respond almost instantaneously to new information and resulted in previously unattainable execution speed of microsecond level.

With increased market speed and fragmentation, traders responded with developing ever more complex execution models that attempt to maximize liquidity capture while moving the price as little as possible. In time, different algorithmic strategies inhabited the market system and made it more diverse and complex. This has brought more challenges for regulators to find their way in this new market ecosystem to cope with systemic risk.

In a nutshell, disruptive technology innovation enabled transforming the meaning and operation of market liquidity. Understanding what liquidity means and how it can be measured in today's market is the focus of discussions among practitioners, academics, and regulators as it helps to gain more insight into price formation processes. Nevertheless, one thing is clear – in today's market liquidity is a multi-facet and complex concept with dynamics that evolves across time and across different trading venues.

This book provides a detailed perspective on liquidity that is based on the authors' extensive scholar-practitioner expertise. While liquidity is the central focus, the book covers a lot of diverse phenomena and concepts of market microstructure and shapes the subject matter into a coherent body of

knowledge. The book also helps the reader understand practical aspects of an optimal trading structure and smart order routing logic. Throughout the book, Charles-Albert Lehalle and Sophie Laruelle support discussions with real-world data and analysis.

Charles and Sophie's book is exceptional in the way that they approach a step-by-step explanation of how a process works and how a concept is used in practice. For example, the authors argue that market share is not obvious liquidity metrics, demonstrating its link to trading optimization. They show different market share measurements and provide detailed summaries and conclusions.

The book is a great education resource for a broad audience of market participants looking for a well-balanced mixture of practitioner's wisdom and data-driven theoretical understanding. 'Market Microstructure in Practice' also provides a chronology of main changes in market microstructure over the last several decades. The authors equip the readers with up-to-date knowledge of market microstructure for further discussion about efficiency of ever evolving markets.

Nataliya Bershova
Bernstein, Head of Execution Research, NJ, USA

Nataliya Bershova is a Head of Execution Research at Sanford C. Bernstein. In this role, she is responsible for developing quantitative execution research and model-based logic for global electronic equity trading. Her areas of expertise are quant trading strategies, market impact/alpha modeling and market microstructure. Nataliya has buy and sell side quant research experience with both systematic and discretionary trading. Nataliya rejoined Bernstein from Citadel LLC where she was Director of Equity Execution Research and responsible for quant modelling related to development of Citadel's proprietary algo and evaluation of broker electronic products across global fundamental and quant equity funds.

She holds a Ph.D. in Economics and M.S. in Applied Mathematics. Nataliya is the co-inventor of a trading patent on methods and systems related to securities trading. She has publications on equity market microstructure topics in academic journals.