



Quantitative Finance >

Volume 11, 2011 - Issue 7

2,961 206

Views CrossRef citations to date Altmetric

Review Articles

Econophysics review: II. Agent-based models

Anirban Chakraborti , Ioane Muni Toke, Marco Patriarca & Frédéric Abergel

Pages 1013-1041 | Accepted 08 Nov 2010, Published online: 24 Jun 2011

Cite this article <https://doi.org/10.1080/14697688.2010.539249>



Full Article

Figures & data

References

Citations

Metrics

Reprints & Permissions

Read this article

Share

Abstract

This article is the second part of a review of recent empirical and theoretical developments usually grouped under the heading Econophysics. In the first part, we reviewed the statistical properties of financial time series, the statistics exhibited in order books and discussed some studies of correlations of asset prices and returns. This second part deals with models in Econophysics from the point of view of agent-based modeling. Of the large number of multi-agent-based models, we have identified three representative areas. First, using previous work originally presented in the fields of behavioral finance and market microstructure theory, econophysicists have developed agent-based models of order-driven markets that we discuss extensively here. Second, kinetic theory models designed to explain certain empirical facts concerning wealth distribution are reviewed. Third, we briefly summarize game theory models by reviewing the now classic minority game and related problems.

Keywords:

Acknowledgements

The authors would like to thank their collaborators and the two anonymous reviewers whose comments greatly helped to improve this review. A.C. is grateful to B.K. Chakrabarti, K. Kaski, J. Kertesz, T. Lux, M. Marsili, D. Stauffer and V.M. Yakovenko for invaluable suggestions and criticism.

Notes

†Security Exchange Commission.

‡Computer Assisted Trading System.

†National Market System.

‡Markets in Financial Instruments Directive.

†Encyclopædia Britannica. Retrieved 17 June 2010 from Encyclopædia Britannica Online.

Related research

People also read

Recommended articles

Cited by
206

Information for

Authors
R&D professionals
Editors
Librarians
Societies

Opportunities

Reprints and e-prints
Advertising solutions
Accelerated publication
Corporate access solutions

Open access

Overview
Open journals
Open Select
Dove Medical Press
F1000Research

Help and information

Help and contact
Newsroom
All journals
Books

Keep up to date

Register to receive personalised research and resources
by email

 Sign me up

  

  

Copyright © 2026 Informa UK Limited Privacy policy Cookies Terms & conditions

Accessibility



Registered in England & Wales No. 01072954
5 Howick Place | London | SW1P 1WG