SPRINGER NATURE Link

Log in

Menu Search Cart

Hierarchical structure in financial markets

Published: 17 August 2012

Volume 11, pages 193–197, (1999) Cite this article

Save article

View saved research ›

The European Physical Journal B - Condensed Matter and Complex Systems

Aims and scope →

Submit manuscript →

R. N. Mantegna [1,2]

7022 Accesses 1786 Citations 13 Altmetric Explore all metrics →

Abstract

I find a hierarchical arrangement of stocks traded in a financial market by investigating the daily time series of the logarithm of stock price. The topological space is a subdominant ultrametric space associated with a graph connecting the stocks of the portfolio analyzed. The graph is obtained starting from the matrix of correlation coefficient computed between all pairs of stocks of the portfolio by considering the synchronous time evolution of the difference of the logarithm of daily stock price. The hierarchical tree of the subdominant ultrametric space associated with the graph provides a meaningful economic taxonomy.

This is a preview of subscription content, log in via an institution to check access.

Access this article

Log in via an institution

Subscribe and save

Springer+ from €37.37 /Month

- Starting from 10 chapters or articles per month
- Access and download chapters and articles from more than 300k books and 2,500 journals
- Cancel anytime

View plans

Buy Now

Buy article PDF 39,95 €

Price includes VAT (Poland)

Instant access to the full article PDF.

Institutional subscriptions

Explore related subjects

Discover the latest articles, books and news in related subjects, suggested using machine learning.

Capital Markets | Mathematics in Business, Economics and Finance | Mathematical Finance | Quantitative Finance | Sociology of the Financial Market | Topology

Author information

Authors and Affiliations

Istituto Nazionale per la Fisica della Materia, Unità di Palermo, 90128, Palermo, Italy

R. N. Mantegna

Dipartimento di Energetica ed Applicazioni di Fisica, Università di Palermo, Viale delle Scienze, 90128, Palermo, Italy

R. N. Mantegna

Corresponding author

Correspondence to R. N. Mantegna.

Rights and permissions

Reprints and permissions

About this article

Cite this article

Mantegna, R.N. Hierarchical structure in financial markets. *Eur. Phys. J. B* **11**, 193–197 (1999). https://doi.org/10.1007/s100510050929

Received	Revised	Published
24 March 1999	28 June 1999	17 August 2012

Issue date

September 1999

DOI

https://doi.org/10.1007/s100510050929

PACS. 02.50.Sk Multivariate analysis

89.90.+n Other areas of general interest to physicists

Search

Search by keyword or author

Navigation

Find a journal

Publish with us

Track your research