





🖬 Citations 🔟 Metrics 🔒 Reprints & Permissions Read this article <

## Abstract

We discuss several models in order to shed light on the origin of power-law distributions and power-law correlations in financial time series. From an empirical point of view, the exponents describing the tails of the price increments distribution and the decay of the volatility correlations are rather robust and suggest universality. However, many of the models that appear naturally (for example, to account for the distribution of wealth) contain some multiplicative noise, which generically leads to non-universal exponents. Recent progress in the empirical study of the volatility suggests that the volatility results from some sort of multiplicative cascade. A convincing 'microscopic' (i.e. trader based) model that explains this observation is however not yet available. It would be particularly important to understand the relevance of the pseudo-geometric progression of natural human time scales on the long-range nature of the volatility correlations. Related research 1

People also read

Recommended articles

Cited by 129

	~
Information	tor
Information	

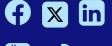
## Open access

Authors Overview **R&D** professionals **Open** journals Editors **Open Select** Librarians **Dove Medical Press** Societies F1000Research **Opportunities** Help and information Reprints and e-prints Help and contact Advertising solutions Newsroom Accelerated publication All journals Books Corporate access solutions

## Keep up to date

Register to receive personalised research and resources by email

Sign me up





Copyright © 2025 Informa UK Limited Privacy policy Cookies Terms & conditions

Taylor & Francis Group an informa business

Accessibility

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