

Special issue on Econophysics

The area of research described as “econophysics” is renewing a kinship between physicists and economists and financial practitioners, that has been lost since the 19th century when scientists such as Pascal and Halley made groundbreaking advances in the area. Now, new meetings are revealing new research opportunities outside the established pathways traditionally explored within economics and finance.

In December 2001, around 100 researchers from across the world attended the EPS meeting “Applications of Physics to Financial Analysis” (APFA3). This was held in the Museum of London Conference Centre which was chosen for its proximity to the City of London and its trading centres. The meeting was especially useful in bringing together roughly equal numbers of physicists, mathematicians and financial practitioners.

Taking part in the conference we had the impression that, whilst the relation between physics and applied finance may still be at an early stage, it is evolving very quickly. As in nature, a sign of evolution is the emergence of different and specialised branches, each with their own specific character. Papers covered a range of topics, including: market modelling, risk management, agent-based modelling, hedging in incomplete markets, benchmarking, performance measurement, foreign exchange markets, time series analysis and prediction, efficient market hypothesis, equilibrium and non-equilibrium markets, economic and financial networks, the valuation of derivatives, growth and bankruptcy.

The meeting was sponsored by the European Physical Society and the UK Institute of Physics. The invited speakers were J.Ph. Bouchaud, J.F. Muzy, K. Sneppen, G. Iori and S. Solomon. Articles outlining some of the more interesting advances in this field have been selected by the Guest Editors, from amongst the submitted articles, and after having been refereed, they are presented here in this edition of EPJ B.

APFA3 closed on a positive note. There was a feeling that links between academia and industry are healthy and that these new interactions between Physics and Finance are producing valuable scientific and economic results.

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