

Scale-free nature of financial Systems

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There is a growing interest in the field of econophysics about the recent developments in networks.

It has been realized that many phenomena and social relations can be modeled through a network where agents represent the vertices and their relationships represent the edges. Strikingly enough these networks have in all the cases some constant statistical properties. In particular all of them seem to be characterised by a scale-free distribution of the number of edges per vertex (degree).

In this contribution we want to present the activity done in this field by our group on stock shareholding networks, stock price correlation network and interbank loan network.

We also present a possible explanation for the onset of scale-invariance in such financial systems.