

On the possibility of informationally efficient markets when investors trade on incomplete, cumulative information

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An important and desired feature of capital markets is informational efficiency, which is given when market prices reflect the fair value of an asset. Intuitively, markets will only be efficient when the ratio of good-informed traders as well as the number of traders is high. Contrary to this intuition, we present a model where market prices are fully efficient (market price is identical to the fair value at any time), although the vast majority of agents trade on incomplete subsets of information. This result even holds if the number of agents is very small.

The model is an agent-based simulation of an asset market with heterogeneously informed agents based on a model proposed by Schredelseker (2001). We show that our setting is an equilibrium - the most important characteristics of our efficient setting emerge endogenously when agents maximize their individual performance with help of genetic programming. Equilibrium trading strategies are characterized by giving more weight to the most exclusive piece of information an agent receives. This protects them from making joint mistakes with other market participants and avoids herding