

Stochastic Trading Strategies in the Heterogeneous Agents Model

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Heterogeneous agents model with the stochastic beliefs (predictor or trading strategy) formation and the Worst out Algorithm (WOA) is considered. The belief consists of a trend, bias and memory length. These three parameters are stochastic. There are forty trading strategies on the market and the WOA replaces periodically the trading strategy that has the lowest performance level of all strategies presented on the market by the new one. The new trading strategy that enters the market has the same stochastic structure as the initial strategies. It was shown that implementation of a different stochastic structure of agents' memory can significantly change price returns behaviour. Uniform, Weibull and Beta memory length distribution functions are applied. This paper shows an influence of the agents' memory as a stochastic process on the heterogeneous agents model with the WOA, mainly the persistence of price returns time series measured by the Hurst exponent.

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