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Herding and zero-intelligence agents in the order book dynamics of an artificial double auction market

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HIGHLIGHTS

- Effects of herding on the order book dynamics is studied by an agent-based model.
- The tail of the distribution of volatility is enhanced by herding.
- The autocorrelation time of the volatility is shorter than agents' memory.
- Herding reduces the chance for a small imbalance to produce a large price change.
- The spread-volatility relation in our model is different from empirical data.

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