

Some words about my PhD studies

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- Replicating complexity and explaining the nuts and bolts -

Context:

Classical financial theory, with its roots in market efficiency theory, cannot explain many of the empirical facts observed in real financial markets. Some say that this theoretical framework is not suited to the task and has slowed down academia and regulators in the process of assuring the best quality for our financial markets.

The effects of the breach between real-life financial markets and a regulatory (and academia) vision of financial markets are not negligible. They have paved the way for events impacting the real economy with great violence starting from the tulip bubble in 1637 up through the 2008 subprime crisis.

Research focus:

Our research draws on the work of Nobel Prize winners Kahneman and Tversky which prove that investors are not as rational as we believed they are. They use the term “bias” to identify investors’ beliefs that have no rational explanation. One simple example of such a bias is hindsight. Hindsight means that, ex-post, we will justify our ex-ante choices and often will fool ourselves into thinking that our ex-ante analysis was correct and that external events have changed the expected outcome.

In our study we focus on modelling real investors’ behaviour (including biases) in a multi-agent simulation of a financial market. Simply said, we are making small computer programs that replicate the way investors act/react to information/price changes in a financial market

Research application:

Our financial market simulation will help us observe the discrete links between micro features of investors and aggregate market parameters. These observations can help us propose regulatory advice that can improve market efficiency and decrease the risk of future price bubbles.