



Cognitive limits and regulation of financial products and markets

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Cognitive limitations and strategies: what consequences for product and market design?

Short vs. long term markets

Narratives or visual explanations

Bottom up and top down complexity of the fallacies of composition and de-composition

Short vs. long term strategies/markets

Narratives are a necessary tool to fix our beliefs, but they are not equally relevant in the short and longer term

Short term strategies can be pre-fixed, examples: running from the bear, fish swarm (subprime), conjectural dynamics, hedging strategies

They depend on prior beliefs and assumptions about the environment, but in the short term this does not appear too problematic (Meese Rogoff 1983 fx markets, random walk)

Short vs. long term strategies/markets

Longer term strategies are much more vulnerable to misperceptions and wrong priors

D. Tuckett: shifts in dominant narratives precede shifts in price, volume and volatility measures

Questions: can this be made operational? Can we do something about the fact that long term in financial markets is very short term compared to other environments? Need for longer term narratives (the great moderation, the financial cycle)



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Would narratives, and hence the vulnerabilities they entail, be less important if we had better visual explanations?

Peirce: we use geometrical forms, symbols at a deeper level when fixing our beliefs compared to language concepts and whole narratives

CSS/GSS stresses the role of visualization both in terms of shapes and colours



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Bottom up and top down complexity of the fallacies of composition and de-composition

Wolfram: rule 30: degree of complexity of outcomes not a good guide for complexity of the rule generating the outcome

The same rule with different initial inputs produces qualitatively, structurally different outcomes

This form of structural instability is now well understood in complex system science, but prior beliefs in structural stability of model explanations continues to be widespread in economics and finance

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Take short term behaviour into account in simulation models, strengthen institutions that can embody longer term narratives (Bretton Woods)

Narratives or visual explanations

Continue work on visual explanations both for supervisory purposes and for retail product design

Bottom up and top down complexity of the fallacies of composition and de-composition

Further the transition to heterogeneous agent-based modelling approaches