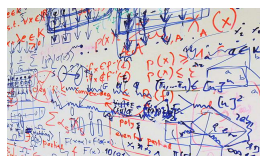


## Summary

In many economic decision models, informative signals play an important role as a source of information for financial decision makers. We investigate three important aspects of signals. In a first step, we analyze which information on trading screens is used and processed by traders and how. With the knowledge thus gained, we have written a study that analyzes the influence of these nudges on trading strategies in order to specifically highlight relevant information and thus support investors in their decisions. It is shown that the color representation and the complexity of the signal have a high influence on the trading success. In a second step, we use eye-tracking technology to analyze which information is considered particularly important by traders and which gaze paths are followed before trading decisions are made. In the third part we leave the individual level and analyze how information is shared within a network and which strategies are used, respectively which influence these dynamics have on the market efficiency as a whole. It turns out that in networks where information must be shared, more efficient markets emerge. If the possibility exists to use the sharing of information strategically, this is also done, which leads to inefficiencies in the markets.

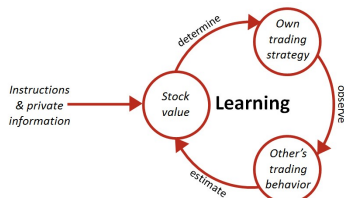
## Key research questions and main results

RQ1: What kind of information is perceived as a price signal?



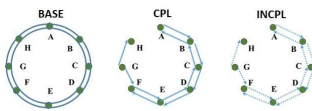
- Information signals should be easy to process for the human decision maker
- Quick and effortless processing is more important than higher quality of the signal
- The visualization of information on trading screens influences decision behavior
- Market efficiency is also influenced by information visualization.

RQ2: How does deliberately chosen salience of signals influence trading behavior?



- Decision Making behavior can be analyzed with eye-tracking technology to determine what information is important to a decision maker
- We analyze at which part of the trading screen decision makers focus, how long they look there and if they follow a decision pattern.
- We also allow decision makers to choose which information they want to see.

RQ3: Are there spillover and network effects in the acquisition of costly information in experimental financial markets?



- Relaxing structural assumptions in regard to information dissemination (complete or incomplete) and matching structure (partner and stranger matching) affects model outcomes
- Sharing frequency is very sensitive to information dissemination mechanisms
- Market and price efficiency are driven by strategic considerations of sharing information in networks

## Methodology: Experiments in Finance

Experimental Finance has highly gained in importance as a method of studying human behavior in Finance and Economics over the last years, with several researchers receiving Nobel prizes. Experiments are used either when real-world empirical data is not existent or extractable like the decision-making process of a single individual; or when specific effects should be analyzed isolated from other potential influential factor, which is also often not achievable on aggregated market data.

## Academic papers created in this project:

- [1] Angerer, M. & Szymczak, W. (2021): Cognitive effort and market efficiency: How visualization affects pricing behavior in markets, Working Paper.
- [2] Szymczak, W.; Angerer, M. & Stöckl, T. (2021): On the impact of trading strategy nudges in financial markets. An experimental study, Working Paper.
- [3] Angerer, M.; Herrmann-Romero, M. & Szymczak, W. (2022): Ally, or Rival? Information Sharing in Trading Networks, Working Paper.
- [4] Angerer, M.; Herrmann-Romero, M. & Szymczak, W. (2022): Costs of information in trading networks, Working Paper.
- [5] Angerer, M.; Herrmann-Romero, M., Liegel, S. & Stöckl, T. (2022): "Eye of the tiger" - what information is relevant to asset traders. An eye-tracking study, Working Paper.