

"The Neural Basis of Financial Decision Making"

Prof. Camelia Kuhnen

Project Description:

Prof. Kuhnen conducts research in the new field of neurofinance. She studies the neural basis of financial risk-taking, in order to better understand the behavior of individual investors. Her recent research has shown that brain areas involved in emotion processing are also important for high-level decisions, such as investing in financial assets. She and co-author Brian Knutson from Stanford University have shown that activation in the nucleus accumbens, an old brain area that responds to expectations of rewards of primitive nature such as food, helps predict the decision to make risky investments. Activation in the anterior insula, a brain area that responds to potentially aversive cues in the environment, helps predict the decision to make riskless investments. Excessive activation in these area is correlated with making errors in portfolio allocation decisions. Thus, the same old brain structures that dictate behavior in primitive circumstances, such as seeking food or avoiding encounters with predators, also participate in the decision to seek or avoid financial risk, and may lead to errors in investment. Prof. Kuhnen is also studying the neural basis of overconfidence in the context of financial decisions, as well as the impact of aging on the ability to make economic choices that involve the assessment of risk and rewards.