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Emotions and Personalities of the Financial Markets

Both standard economic theory and behavioral finance lack the capacity to account for many moves of the financial markets. A new research stream called "Emotional Finance" analyzes the effects of emotions and personal imprinting on economic decision making.

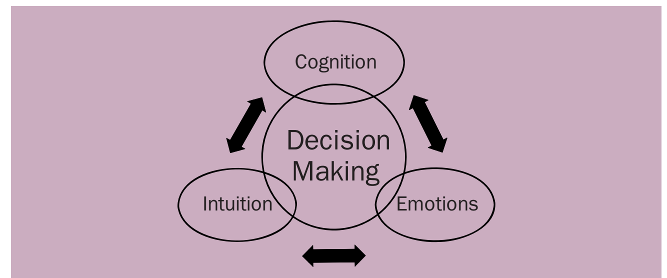
Financial Markets often behave in a way that can neither be explained by standard economic theory (taking preferences and expectations as given and assuming frictionless processing of information) – nor by the current state of Behavioral Finance research (which introduces cognitive biases into information processing). Due to the incomplete explanatory power of rationality and cognition for human decision making (and subsequent for market behavior), its other determinants deserve the attention of the Finance research community.

In general, decisions result from the interaction of (1) cognition, (2) intuition and (3) emotion.

(1) Cognition as the "process of thought" describes conscious reasoning. It is precise, enables abstract thinking and comes with tremendous analytical power for specific situations. Due to the functioning of the human brain, cognition is restrained by its limited ability to perceive processes and remember information, by biases that unconsciously manipulate information and by motivation and concentration. Therefore, the human mind has problems when facing complex decisions that involve more than a few factors. This is especially true if these factors have nonlinear interdependencies.

(2) Intuition alias gut feeling or instinct describes decisions that rely on preconscious information processing. Intuition combines information that cannot be expressed in letters or figures easily like impressions of an overall situation with past experiences into a broad picture. It is difficult to verbalize the process of intuitive decisions and their results emerge in the consciousness as feelings or thoughts. On the one hand, intuition seems to be superior to the mind in situations where subjective assessments are important and where factors have nonlinear correlations. On the other hand, intuition is too unspecific for many situations that require precise results. Additionally, intuition is restricted to an individual's experiences and associations which might not be suitable for all situations, especially when they are new ones.

(3) Emotions are the result of the communication between the sub-consciousness and the consciousness and only partially controllable. Another way of communication might be thoughts, images or feelings. Emotions are a quick way of assessing situations or people, putting them in relation to the individual self and taking the corresponding action. By doing so, the occurrence of emotions influences both, preferences and cognition. Recent findings show that the absence of emotions can prevent rational decision making and that sometimes, emotional decisions are superior to rational ones. Emotions answer the question: What/who is it? And: What does that mean to me?



The new research stream called "Emotional Finance" dives deeper into both, general and differential psychology, and analyzes the effects of emotions and personal imprinting on economic decision making. Emotions exhibit a preparatory function for our behavior via a motivational effect. Motivation turns into volition, and that influences our preferences, decisions and actions. Additionally, emotions are an important communication medium. Individual feelings are not only recognizable by others; they can even be induced in other persons. This interpersonal transmission of sentiment is an everyday phenomenon: sharing the fear of a danger with the hero of a movie film or getting euphoric while watching a football team winning the championship are obvious examples. Emotions are likely to be spread out among members of a group, which in turn intensifies the level of individual experience via a feedback effect. This might be even more the case if the group is not heterogeneous and randomly assembled, but features high identification by the group members through e.g. common interests, motives and values – like in financial markets. While there is no generally accepted categorization of the term emotion, psychologists agree that human beings develop their emotionality by learning and by personal imprinting. Thus, the emotional inner life is an integral part of the individual personality.

Robert Plutchik defined one well known classification of emotions. He identified four pairs of base emotions that are common to all people over the world.

1. Joy / Sadness
2. Trust / Disgust
3. Fear / Anger
4. Surprise / Anticipation

These base emotions can then be combined into higher emotional states whose description would exceed the scope of this article. In general, emotions fulfill the following four functions in economic contexts:

1. Interpretation and organization (e.g. fear as limit for one's actions)
2. Mobilization and allocation (e.g. liking as choice heuristic)

3. Sensation seeking and avoiding (e.g. risk seeking for neural stimulation)
4. Communication

Simply spoken, emotions for a human being are similar to the operating system of a computer. The four functions mentioned above define the range in which an individual's higher abilities like language and reason "operate". Abilities that are not "programmed" cannot be executed. Thus, emotions are an integral part of all human decisions.

First investigations of functional relationships between emotions and economic decision making reach back several decades. It is known that investors in positive moods are risk averse and those in negative ones are risk seeking. Furthermore, interpersonal relationships have an influence on economic decision making. People are willing to accept reduced returns in order to avoid negative emotions like frustration or anger. Other experiments revealed that investors judge losses graver when they are in a positive emotional state in comparison to when they are in a neutral emotional state.

Important for the investigation of the complex interaction of emotions and rationality were the findings of the American researcher Antonio Damasio and his team in 1994. During a test series they discovered that test persons who had limited emotional capabilities (due to brain damages) could not adapt their investment decisions to experiences of augmented risk levels and quickly went bankrupt. Test persons with full emotional capabilities adapted their behavior to the increased risks and did not go bankrupt.

At the beginning of this millennium, first experiments that linked emotionality to trade success commenced. In a pilot project, ten professional traders were attached to machines that measured their physical emotional reactions during real time trading sessions. Their results indicate that higher physiological reactions to trading come with lower trading returns. They also discovered that traders in general had a high level of physiological reactions towards trading. In a follow-up study, the emotional wellbeing of 33 participants of a day trader preparatory class was observed for one month. These findings supported the assumption of negative correlation between the amplitude of emotional reactions and the trade return of the previous experiment.

Concluding this introduction to Emotional Finance, it should be remarked that this is not a purely scientific endeavor. Understanding the dynamics of capital markets caused by sentiment is of great importance for investors, creditors, debtors, financial institutions and also regulators: an important function of governmental bail-out plans – besides the provision of necessary funds – is the restoration of trust and the feeling of safety. The sudden breakout of panic on a global scale in the fall of 2008 and the current Euro instability demonstrate in an impressive and painful manner how essential emotional stability is for the functioning of the economic system. However, it should be made clear that the responsibility for emotionally stable markets is primarily with the market participants themselves – and not with the regulation authorities. Interaction in financial markets does not only affect balance sheets, prices, risk exposures or other quantitative measures – it leaves an emotional footprint, as all interaction in humans' social life does. Performing research in Emotional Finance might create awareness for this, and will hopefully help to better understand the relationship between the capital markets' emotions, personalities, and actions – towards a financial system that incorporates empathy into economic calculus.

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