THE SECRET OF FEAR AND GREED BEHIND FINANCIAL DECISION MAKING

Introduction

"Be fearful when others are greedy and greedy when others are fearful." (Warren Buffet)

This thesis is written in the context of the Master Finance and Risk Management, the focus goes to financial decision making. Following the example reported by de Freitas (2013), the paper elaborates a multidisciplinary research. This approach seems to be relevant on both scientific and social level. New research publications in the journal Neuron imply that many of the financial decisions are influenced by biological and neurological impulses. De Martino (in: de Freitas, 2013) states that it is no longer about 'which' decisions are made but 'how' decisions are made. In order to conduct a multidisciplinary research, Benedetto De Martino (a neuroscientist) teamed up with Peter Bossaerts (a finance professor) and Colin Camerer (a behavioral economist). "Collaboration between these academic disciplines was key" (de Freitas, 2013, p. 1). The emerging fields of Behavioral Finance and Neuroeconomics may contribute to the explanation of anomalies in financial markets. Both disciplines can be considered as a valuable supplement to the neoclassical financial theory. The latter one dominates financial analyses. "Behavioral finance takes explicit account of psychological factors that are excluded from the conventional financial analysis". The objective of this master thesis is to provide an insight into the research question: "What is the impact of fear and greed on financial decisions?" This theorem will be explored profoundly by putting into question following statements:

1) Fearful people take risk averse decisions while greedy people take risk seeking decisions.
2) Emotions influence the decision making of women more than men.
3) Women are more risk averse than men.
4) Older people tend to take more risk averse decisions than younger people.
5) The financial decision making of people with financial experience is less risk seeking than people without financial experience.

Neoclassical economics- A questionnaire tries to bring into the picture the interplay between financial decisions and behavioral characteristics. The statistical part of the

research is carried out by the means of SPSS.

Autonomous preferences, rational choices and the pursuit of self-interest are the main characteristics of the economic man (De Clercq, 2006). A second assumption of the neoclassical theory is the Efficient Market Hypothesis. This theorem, developed by Eugene Fama, can be summarized by the following sentence: “prices fully reflect all available information”.

Behavioral Economics- “Standard economics assumes that we are rational… But we are all far less rational in our decision making than standard economic theory assumes. Our irrational behaviors are neither random nor senseless—they are systematic and predictable. We all make the same types of mistakes over and over, because of the basic wiring of our brains.” The goal of behavioral economics is not to reject the neoclassical theory, but to complement it. Proponents of behavioral economics believe that the improvement of the psychological underpinnings of economic analysis will be beneficial for economics. This discipline could generate new theoretical insights which, in turn, could lead to better predictions of field phenomena and better policies. The incorporation of psychology is valuable because it describes the foundation of human desires, motivations and goals. Errors and biases, which affect a variety of investors, traders, strategists, managers and executives, find their explanation in psychology. The first step towards rational choices is to be aware of the impact of psychology on the financial environment and the financial decision making of oneself and others. Although the modern portfolio theory presumes a rational view of investors concerning risk and return, the bulk of them seem to be driven by their (irrational) emotions and motivations (Hart, 2008).

Neuroeconomics- “Neuroeconomics has the potential to fundamentally change the way economics is done.” The first comment is about the fear that “decision makers will become machines with no soul” The second one handles the issue of the hastily drawn conclusions that are based on limited data. The objective of neuroeconomists is to acquire a better understanding of how decision making is constructed. This could lead to improved predictions of which decisions economic agents make (Bernheim, 2009). “The brain is the ultimate black box”. Electro-encephalogram (EEG), positron emission tomography (PET) scanning and functional magnetic resonance imaging (FMRI) are commonly used. The first one “measures the electrical activity in the brain”, while the second one “measures the blood flow”. Camerer, Loewenstein and Prelec (2005) point out that the direct measurement could result in new theoretical constructs that challenge the current knowledge of the relation between mind and action.

Main drivers of Irrational Behavior- "There is an old saying on Wall Street that the market is driven by just two emotions: fear and greed. Although this is an oversimplification, it can often be true. Succumbing to these emotions can have a profound and detrimental effect on investors' portfolios and the stock market." The ability to become a successful investor can be undermined by the power of emotions. This leads to actions which are opposite to what market participants should do. In order to better understand the financial market dynamics, Westerhoff (2004) created a behavioral stock market model, 1) The processing of stimuli, 2) The anatomy of the brain, 3)Automatic versus controlled systems.

Greed- "Greed may (and will) tempt you to take more risk than you are normally comfortable with in your portfolio." The giddy excitement that goes together with triumph is the feeling that every investor wishes to pursue. As a consequence, investors enjoy the feeling of risk. In a positive aroused state they are prone to succumb to foolish risk (Cowen, 2006). Investors become greedy when they see others making money.). Li and Wang (2013) denote the ascending trend in the market as bullish. Greed turns out to be one of the factors that cause a financial crisis. Optimistic investors are inclined to expand their purchasing. This, in turn, leads to prices that go up and trading activities that enlarge.

Are there any measurable hormones that predict the level of risk-taking?- Using saliva samples, scientists can measure both the level of cortisol and testosterone. When someone experiences stress, cortisol is released into the brain. This hormone makes him more alert. Both risk and uncertainty, which are measurements of market volatility, show a connection with the level of cortisol. Testosterone, on the other hand, increases someone's fearlessness and willingness to take risk.

Fear- "Fear is the emotion that stops us from doing things that might be too risky. In the right quantity, fear is obviously an emotion that we need, but when fear becomes too great we can be prevented from doing things that might be necessary." This emotion triggers the automatic 'fight or flight' response, which constitutes a basic reaction of all mammals (Lo A. W., 2011). Lee and Andrade (2011) point out that fearful investors tend to sell their stocks earlier. So, fear can be seen as a bearish behavior to which investors act. This results in decreasing stock prices, called a bear market. They settle for low-risk, low-return securities. In quest of the less risky assets, investors sell their current portfolio to avoid further losses. When greed has the upper hand, investors bid up the stock prices to an excessive level.

Conclusion- The presence of greed in financial markets can be recognized by features such as increased asset purchases, resulting in rising prices, and expanding trading activities (Lo C.-S., 2013). On a behavioral point of view, greed can be linked to over optimism and overconfidence (Li & Wang, 2013, and Nofsinger, 2005), imprudent risk-taking (Barton, 2013) and Social Dominance Orientation. Anxiety, fear and pessimism prevent people from taking risks (Kuhnen C. M., 2009). Risk-averse behavior can neurologically be explained by the anterior insula (Kuhnen & Knutson, 2008) and the amygdala (Rajmohan & Mohandas, 2007). Whether the fight or the flight response occurs, depends on the prevailing hormone. Testosterone encourages the approaching behavior, while cortisol incites the avoidance behavior. People can overcome fear and greed by learning how these emotions work. Based on Goodman (2013), three specific guidelines can be given. Firstly, when taking risks, a combination between research and gut feeling is the key. Decisions based on only weighing the pros and cons or only gut reactions are doomed to fail. Secondly, people must set manageable goals. When the goals are set too high, people experience fear because they guess they won't be able to achieve them. When the goals are set too low, people become overconfident, which may result in greed. Thirdly, it is better to be surrounded by people who act in an opposite way. Fearful people should surround themselves with risk-takers, while greedy ones should be surrounded by risk-averters; people become overconfident, which may result in greed. Thirdly, it is better to be surrounded by people who act in an opposite way. Fearful people should surround themselves with risk-takers, while greedy ones should be surrounded by risk-averters. All in all: "To reach goals, be more logical and take a scientific view of your emotions" (Chen, 2014, p. 1).

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