

## **Introduction**

Behavioral finance is the study of the influence of psychology on the behavior of the people who practice financial transactions and the successive effect on financial markets. Behavioral finance is an interesting subject because it is instrumental in explaining market dynamics and why and how they might be inefficient. (Sewell, 2001).

In 1912 a famous psychologist by the name of Selden wrote the book "Psychology of the Stock Market". He established it on the belief that the price movements on the exchanges are dependent to a large degree on the mental attitude of both the investing and trading public' (Selden, 1912).

Later on, it was discovered that, people methodically overreach to unexpected and dramatic news events resulting in substantial inefficiencies in the stock market. This was both profound and surprising. (De Bondt & Thaler, 1985)

Specifically, behavioral finance is made up of two building blocks: cognitive psychology and limits to arbitrage. Cognitive psychology refers to the processes that people use in thinking (Benartzi & Thaler, 2001). There is a large volume of psychology literature alluding to the fact that people make systematic errors in the way that they think: they tend to be overconfident (Shiller, 2001) and put too much credence on recent experience (Barber & Odean, 2001). Distortions may also be created by their preferences. Behavioral finance employs this school of thought; instead of the haughty approach that distortions should be ignored. (Thaler, 2002). Limits to arbitrage refer to prediction of the circumstances under which arbitrage forces will be effective, and when they won't be. (Hirshliefer, 2001). (Shleifer & Robert, 2007)

The terrorist attacks in the United States on September 11, 2001 moved the topic of terrorism to the front-lines of academic and public attention (Froot, 2009). Thinking changed and now considers it as a geopolitical risk that affects the global economy and financial markets. (Lenain et al., 2002). Little is known about how this heightened terrorist threat affects the stock prices of individual firms (Rita & Warr, 2002). Becker and Rubinstein, 2004 have suggested, that it may divulge itself in the psychological fear of terrorism which can affect economic behavior

## **Methodology**

Behavioral finance is a new paradigm of finance which seeks to supplement theories of finance by introducing behavioral aspects to the decision-making process (Siegel, 2008). Contrary to Markowitz and Sharpe's approach, behavioral finance deals with individuals and ways of gathering and using information (Shefrin, 2006). Behavioral finance seeks to understand and predict systematic financial market implications of psychological decision process (Grinblatt 2001). In addition it focuses on the implication of psychological and economic principles for the improvement of financial decision-making (Olsen, 2007)

## **The prospect theory**

This is a mathematically formulated alternative to the theory of expected utility maximization. It is the basis of behavioral finance. The utility theory offers a representation of truly rational behavior under certainty. However, despite the attractiveness of this expected utility theory, it has systematically failed to predict human behavior at least in certain circumstances hence the invention of the prospect theory. (Kahneman & Tversky, 2000).

## **Value function**

Another foundation of the prospect theory is the value function. The value function is defined on deviations from a reference point and is normally concave for gains (implying risk aversion), commonly convex for losses (risk seeking) and is generally steeper for losses than for gains. Decision weights are generally lower than the corresponding probabilities, except in the range of low probabilities (Kahneman & Tversky, 2000).

## **Framing**

(Kahneman & Tversky, 2000) showed that the psychological principles that govern the perception of decision problems and the evaluation of probabilities and outcomes produce predictable shifts of preference when the same problem is framed in different ways.

## **Conclusion**

The purpose of this study was to find out whether behavioral finance can explain the equity markets after a terrorist attack. Market participants have for a long time relied on a notion of efficient markets and rational investor behavior when making financial decisions (Abadie & Javier, 2003). However, the notion of fully rational investor behavior always maximizing their utility and demonstrating perfect self control is becoming inadequate as examples of market inefficiencies in the form of anomalies have been observed in past decades.

According to Cummins, D. (2005) The stock price reaction of publicly-traded firms that have been affected or targeted by a terrorist attack to provide average estimates of the losses caused by these events. Using a global sample of 75 individual firms, an average estimated decrease in market capitalization of \$401 million occurred per attack. Therefore, there exists a relationship between terrorism attacks and the stock markets. (Cummins, 2005)

Behavioral finance can help to explain equity markets after a terrorist attack. This is majorly due to the fact that, by using the prospect theory and heuristics, it can explain the psychological factors that affect the investment decision-making process and how these processes can lead to speculation. (Harrison, 2009) The prospect theory asserts that people are risk lovers for losses and risk averse only for levels of wealth above a certain reference point. This means that, some investors prefer to gamble with the possibility of gain when faced with a certain loss (Finucane, 2000).

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