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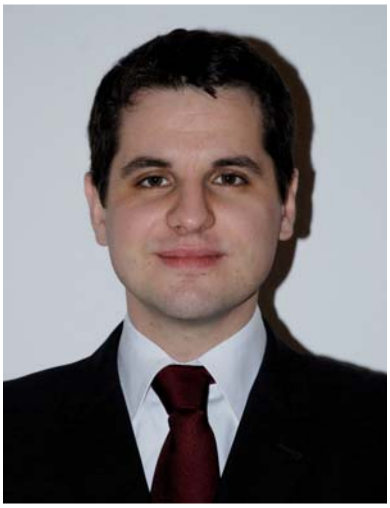
Behavioural finance shows: the decisions of investors is not strictly rational

Homo economicus or not?

■ Simona Bochsler, appunto communications, Glattbrugg/Zürich

How can the reactions of the investors facing the actual crisis at the stock markets be explained? What role do the media play? «denaris» spoke with Professor Enrico De Giorgi from the University of Lugano who explained the central concepts of behavioural finance. He showed that investors are not trading always rationally.



Enrico De Giorgi, Assistant Professor at the University of Lugano

Mister De Giorgi, why do investors tend to overreact, facing the actual development at the stock markets?

Enrico De Giorgi: Overreaction occurs when investors excessively react to new information. As a consequence, securities are over- or undervalued, i.e., prices do not correctly reflect available information on fundamentals.

Empirical studies show that prices display overreaction in the long-term, which means that prices overreact to consistent patterns of news pointing in the same direction.

Two main behavioural theories explain overreaction. The first uses *over-confidence* and *self-attribution bias*, two well documented psychological biases. Overconfident investors tend to attribute higher precision to their private information, and consequently overreact to it.

Self-attribution bias leads investors to further increase their overconfidence when private information is confirmed by public news, while their overconfidence is only moderately reduced when public information contradict their private information.

The second theory uses representativeness bias: people tend to form beliefs based on how representative a given observation is for a given population. According to the representativeness bias, investors tend to consider good (bad) news as representative for the future performance of companies with positive (negative) past returns and overreact to them.

«People tend to form beliefs based on how representative a given observation is for a given population.»

Professor Eugene Fama from the University of Chicago has formulated the efficient market hypothesis (EMH) which states that financial markets are efficient. According to behavioural finance, financial markets can be inefficient. What are the main arguments against the EMH?

The main arguments of behavioural finance against the efficient market hypothesis (EMH) refer to the growing empirical evidence contradicting the hypothesis and the serious challenges to its theoretical foundations. Eugene Fama defined an efficient financial market as one in which security prices always fully reflect the available information. The theoretical foundations are *investors' fully rationality* and *unlimited arbitrage*.

Rational investors, who value each security by its fundamental value, immediately respond to new information by bidding up or down prices, which will then fully incorporate new information. If irrational investors (who over- or underprice securities) exist, *arbitrage opportunities arise* for rational investors, who exploit them, bringing over-valuated (under-valued) securities down (up) to the fundamental value.

Behavioural finance emerged as a new research field from the conviction that some observations can be better understood if models depart from the assumptions of fully rationality and unlimited arbitrage. The argument that investors might not be fully rational is supported by psychology, which provides huge evidence that people systematically deviate from rationality and describe the way these deviations occur.

The statement that real-world arbitrage is not unlimited is supported by empirical observations of persistent mispricings. Typical examples are shares with identical fundamental risks traded on different markets at different prices and price jumps occurring after inclusion of a stock in the S&P 500.

Is the behaviour of the investors driven by herd instinct?

There are several examples from everyday life suggesting that people's behaviour is influenced by herd impulses. For instance, we often choose which restaurants to attend, or which clothes to dress, according to which

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ones are more popular or in fashion.

Empirical studies show that herd behaviour also affects investors' decisions. Herd behaviour is not necessarily irrational. For instance, it can arise when a group of investors possess similar information. Also, some investors might infer information from past trades of better-informed market participants and will then follow similar strategies. A study from Russ Wermers even shows that mutual funds are rewarded by «joining the herd».

Nevertheless, herd behaviour might also generate a group behaviour that is irrational, like market bubbles. Recently researchers from INSEAD Paris argued that the technology bubble of the nineties was caused by the herd behaviour among traders. They showed that mutual fund managers with high incentives to herd, as, for example, those with their performance evaluated with respect to the performance of other mutual funds, have increased their investment in «bubble stocks».

How would you define cognitive dissonance and how does it influence the decision taking of investors?

According to the social psychologist Leon Festinger people feel uncomfortable when they hold contradictory pieces of knowledge in their mind. As a consequence people try to reduce the mental inconsistency by ignoring information that might further increase mental conflicts.

In the context of portfolio decisions, cognitive dissonance might lead investors to overreact to information which confirms their previous beliefs. Vice versa they «underreact» to information which contradict them. William Goetzmann and Nadav Peles showed that mutual investors have positively biased perceptions of funds' past performance. This result helps to explain why they tend to remain in mutual funds which performed poorly.

«Investors tend to adjust their beliefs about future performances in order to justify their past choices.»

Investors tend to adjust their beliefs about future performances in order to justify their past choices. This behaviour is irrational and might lead to future losses.

Do the media influence the investors' decisions?

The media can play a significant role, in particular for individual investors. One way individual investors deal with the difficult task of choosing among thousands of different stocks is by focusing on stocks which attract their attention. Since attention-grabbing events are often reported in the media, we expect that media influences the choice of individual investors. Several empirical studies confirm this hypothesis. One of them showed that the trading volume of stocks mentioned during the Midday Call on CNBC increase on average fivefold the minutes after the mention.

What are the main principles of behavioural finance to keep in mind?

First, real investors differ from the homos economicus and deviations from rationality are systematic. Second, real-world arbitrage is risky and limited, and sophisticated investors cannot fully exploit existing mispricings.

Penguins are gregarious animals that forage and nest in groups. Empirical studies show that herd behaviour also affects investors' decisions. (Photo: Emperor Penguins)

Enrico De Giorgi is Assistant Professor at the University of Lugano and Founding Partner of the company BhFS Behavioural Finance Solutions GmbH. His research interests are behavioural finance, evolutionary finance, and risk management.