

HOMO ECONOMICUS MEETS HOMO SAPIENS

How financial decision-makers can profit from psychological science

BY TANJA WRANIK*



Financial decision-making is a key human behavior. We decide to work for or to invest in specific companies and organizations because we believe they have a positive value. And because not everyone works for or invests in the same organizations, there must be flexibility in how this value is defined or calculated. The money we have or earn supports our human needs and desires, and the way we spend and save our money will influence and be influenced by our identity, our social group and the environment we live in. In short, many questions of a financial nature also have to do with our human nature, and vice versa.

Human decision-making is a complex process and has been studied extensively in several disciplines including finance, economics, psychology, management, medicine and engineering. Until recently, the theories developed in each discipline were based on different assumptions about human nature, or focused on different aspects of the decision-making process. This meant that decision-making models were sometimes oversimplified or failed to include crucial variables.

Fortunately, economists and psychologists realized that they were interested in similar questions and that they could learn from each other. Consequently, the fields of behavioral economics and behavioral finance were born. Since then, researchers have shown that the study of psychology and other social sciences can shed consi-

derable light on many puzzles in finance and economics, as well as explain stock market anomalies such as market bubbles and crashes.

The most recent financial crisis also has led forward-thinking and courageous financial professionals to question traditional models and to look for new ideas to gain competitive advantage. The financial sector's interest in psychology is growing and it is worth considering how professionals can integrate psychological principles into their practice.

INDIVIDUAL DECISION-MAKING IN THE DOMAIN OF FINANCE

Classical economic theory proposes that individuals will make their financial decisions based on the perceived utility of a choice, on the expected value of the outcome, and based on preferences and (usually) some form of constraint, such as the amount of money available. Moreover, much economic and financial theory is based on the notion that individuals act rationally and consider all available information during the decision-making process. These theories and assumptions, as well as technological advances and large amounts of available data, have led to increasingly complex statistical models to predict financial decisions in a wide range of domains.

The problem is that actually observed human behavior rarely resembles the predictions. Why?

Past research has shown that humans are prone to numerous biases when making financial decisions. For example, some investors prematurely sell their winners while hanging onto losers; some trade too much, others too little. Most investors are overconfident, tend to overvalue objects they possess and to be influenced by how information is presented. This means that the way in which information is learned or conveyed changes preferences and choices, sometimes dramatically. Hope, euphoria, and greed can cause investors to ignore information and therefore overvalue stocks or take irresponsible risks; uncertainty, fear, and disgust can lead to

overreaction to news, the rapid selling of stocks and the refusal to spend (or lend) money. These and many other emotional and cognitive biases influence the human decision-making process in both positive and negative ways.

Some researchers believe these human "flaws" are consistent, predictable, and can be exploited for profit. The problem is that there are so many "predictable" flaws that it is hard to know which ones a particular investor will fall prey to in a decision context. Others have argued that these common cognitive and emotional biases only influence naïve investors and will not affect seasoned experts - and that if this is the case, then there is little reason to worry about biases and other psychological processes and characteristics in the financial industry.

The reality is that financial experts are also human beings. Indeed, research comparing professionals and non-professionals has generally found that both groups are prone to biased responses; in some cases, professionals even show stronger biases than novices. Understanding psychological processes underlying financial decision making may be just as - or even more - useful for professionals than for non-professionals. An illustration concerning risk taking follows.

RISK TAKING

Research in economics and finance has focused a great deal of attention on understanding risk taking behaviors in financial markets. Much of this research has been motivated by the observation that stocks have significantly higher average long-term returns than bonds. Thus, a major research question has been to understand why investment in stocks is not as high as risk aversion would predict, and to identify factors that explain and minimize risk aversion. The main message has generally been that risk aversion is a liability, and that "healthy" risk taking is an asset.

In real life, the observation that returns from stocks are higher than returns from bonds is based on long-term averages, and obviously investment in stocks might be

more or less advantageous during certain periods compared to others. This means that investors also need to know when to reduce risk levels, and when to cut their losses. Indeed, the latest financial crisis has shown just how important deliberation, adaptation, and restraint can be.

Interestingly enough, there has been little research to examine how investors react during unfavorable or changing market periods, and if and how investors are able to adapt their risk taking accordingly. Therefore, in a recent study conducted at the University of Geneva and in collaboration with the Toulouse School of Economics, we examined how students and professionals adapt to changing markets. To investigate who is more likely to adapt their investment behavior to changing market conditions, we also measured personality and self-efficacy (belief in one's ability to make good decisions in an investment task). We expected that investment behavior in changing markets could be predicted by a combination of experience (students, professionals), personality (anxiety, optimism, impulsivity, and openness to experience), and self-efficacy.

In this study, professionals and students made real investment decisions in two types of markets, one with a positive expected value (which we will call a "good market"), and one with a negative expected value (which we will call a "bad market"). Participants received clear information concerning the probabilities of earning money if they chose to invest their amount in each market, and were then asked to make 15 investment decisions per market condition. Economic logic would predict that there should be no (or little) investment in the bad market, and larger investments in the good market. Moreover, we expected the professionals to adapt more effectively to market conditions than students. Finally, we expected that professionals would attain higher overall earnings than students.

The results tell a different story. First, neither the professionals nor the students adapted to the changing markets. They did not invest less in the bad market than in the good market, despite complete information concerning probabilities and

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the corresponding expected value. Moreover, professionals had lower earnings than students.

Why didn't the professionals adapt to clearly changing market conditions? One explanation can be found in examining the risk levels. Professionals generally made larger investments in both markets than students. This effect seems to be partially due to differences in experience, and partially due to psychological characteristics.

First, self-efficacy, or the belief in one's ability to make good investment decisions, was generally related to higher levels of risk, and professionals had – probably not surprisingly – significantly higher levels of self-efficacy than students. People are generally overconfident in their own abilities, and investors and analysts are particularly overconfident in areas in which they have some knowledge. However, increasing levels of confidence frequently have no correlation with greater success. Moreover, studies show that men consistently overestimate their own abilities in many areas including athletic skills, abili-

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ties as a leader and ability to get along with others. Money managers, advisors and investors are consistently overconfident in their ability to outperform the market; however, most fail to do so. This means that the greater level of confidence that comes with experience may not always be an asset, especially in changing market conditions.

Second, past research has shown that those who choose to enter the financial professions tend to self-select according to specific personality characteristics such as optimism, low anxiety, impulsivity and sensation-seeking. Generally, traits such as optimism and low anxiety are considered assets for risk taking; however, we found that optimism and low anxiety were also a liability in unfavorable markets, leading to unreasonable levels of risk. Impulsivity was a liability in both favorable and unfavorable markets, leading to high risk on unfavorable markets, and low risk in favorable markets. In other words, the traits that are valued for risk taking can also be a liability in downturns. Among the personality traits we examined, only openness to experience was an asset in unfavorable markets, leading to adjusted risk taking. Openness to experience includes broad interests and being imaginative, complex, and insightful.

In conclusion: both professionals and non-professionals are subject to a wide range of biases, and a better understanding of

the psychological factors underlying financial decision-making could allow institutions to create conditions for optimal risk adjustment in changing markets. In this light, we are currently working with financial partners to integrate psychological considerations into their selection and training, as well as into their standard practices of checks and balances.

CLIENT RELATIONS

The banking and financial industry is a service industry, and client relations should have high priority. This means building trust, providing expert advice and working to meet the needs and interests of the client. Unfortunately, the recent financial crisis has greatly damaged clients' confidence in the financial industry, and the re-establishment of trust remains a major challenge for many institutions.

As already discussed, clients and professionals are potentially subject to similar biases; however, professionals also have specialized knowledge from which clients can benefit. To build trust, professionals need to coordinate the needs of their clients with their institutions' desire to make as much money as possible. These goals can easily be incompatible; but many private banks and institutions specialized in long-term retirement products know that putting the clients first can have positive long-term economic advantages.

For example, some clients prefer to save their money; other clients prefer to invest their money. Respecting a client's wish to save money generally leads to lower short-term profits because the institution cannot benefit from portfolio management fees. Consequently, interest rates for savings accounts are often kept deliberately low in order to push clients toward investment accounts and related fees. Despite this financial incentive, however, many clients are conscious that investment always means risk, and not everyone can afford to take risks or wants to take risks. Interestingly, respecting the decision to save, or even encouraging some clients to save rather than invest, can lead to increased trust. The institution can then benefit from a positive reputation and attract new

clients, some of whom will want to invest. Thus, respecting clients' wishes can lead to positive long-term financial results for the institution. This can only work if incentive schemes for advisors encourage long-term rather than short-term results.

Consequently, the more institutions can learn about a client's needs and preferences, the better they can tailor their advice. Normally, clients' needs and wishes are based on a discussion concerning their assets, their financial goals and their risk tolerance. Little is known about the wide range of psychological characteristics that can predict saving and investment decision-making. We therefore conducted a study with a financial institution in the US that specialized in retirement investment, and examined psychological characteristics of 3,000 clients. Specifically, we studied the ways in which personality, impulsivity, and emotional intelligence influence clients' real retirement decisions over a five-year period. The results are rich in content and beyond the scope of these pages. Interested readers are therefore in-

vited to read the freely available full report published by the CFA Institute (www.cfa-pubs.org/doi/abs/10.2470/rf.v2009.n1.)

The main finding, however, was that psychological characteristics were significantly related to risk taking and trading frequency, as well as to several other financial behaviors. These influences were also much greater than we initially expected and remained strong even after controlling for gender, education level and wealth. Thus, clients vary on a wide spectrum of psychological characteristics, these characteristics can be measured, and they influence real savings and investment decisions.

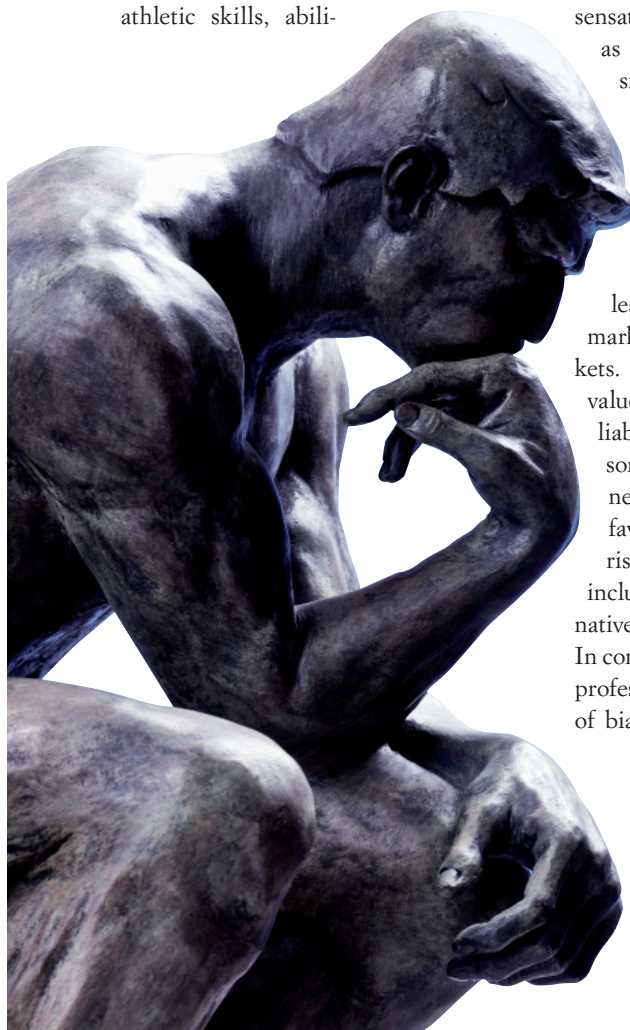
This was one of the first empirical examinations of how psychological characteristics influence clients' real behavior, and more research is needed. In addition, some of the results are peculiar to the US market. However, the main message is that psychological characteristics merit more consideration when designing services that are specifically tailored to the needs of the client. We are therefore currently work-

ing with private investment institutions in Switzerland to examine psychological factors and to apply current knowledge to the improvement of existing practices.

CONCLUSIONS

Psychological processes, biases and characteristics play a significant role in how financial decisions are made. Current knowledge can assist in recruitment and training practices within financial institutions, can be used to redesign incentive schemes to foster both long- and short-term financial goals, and can facilitate optimal client relations. There is still much to learn, and continued collaboration between psychology and finance should lead to many theoretical and practical innovations in the domain of financial decision-making. +

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