

# Chapter 17

## Behavioral Finance in Theory and Practice

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### ABSTRACT

*Behavioral finance is a new approach in finance literature. The main idea is that investors are not as rational as they are assumed to be. Therefore, financial markets could be better understood by using models that capture the effects of both rational and irrational investors. The critics of behavioral finance could be grouped into two main categories: limits of arbitrage and psychological factors. This chapter concentrates on both challenges and possible contributions of behavioral finance theory to the modern finance theory, which is mainly based on rational expectations theory and efficient market hypothesis.*

### INTRODUCTION

*Behavioral finance, which, as the years go by, is looking less and less like a minor subfield of finance and more and more like a central pillar of serious finance theory. Robert J. Shiller*

In Modern Finance literature, much of economic and financial theory is based on the notion that individuals act rationally and consider all available information in the decision-making process. However, researchers have uncovered a surprisingly large amount of evidence that this is frequently not the case. Dozens of examples of irrational behavior and repeated errors in judgment have been documented in academic studies. This con-

troversy in the field of Modern Finance involves the evolution of what has become known as behavioral finance. Researchers are publishing an increasing number of academic articles devoted to the potential applications of these new findings. Interest in the topic was triggered by two major developments: increasing empirical evidence that existing financial theories are deficient in fundamental ways, and the development of prospect theory by Daniel Kahneman and Amos Tversky in 1979. Prospect theory presents a brief model of decision-making with an alternative to subjective expected utility which makes assumptions of more realistic behavior.

This new approach, called behavioral finance, has emerged in the financial environment as a

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response to the difficulties faced by the traditional paradigm. In broader terms, behavioral finance argues that some financial phenomena can be better understood by using models in which some agents are not fully rational. More specifically, it analyzes what happens when we relax one, or both, of the two tenets that underlie the finance view of rationality. In some behavioral finance models, agents hold beliefs that are not completely correct, most commonly because of a failure to properly apply Bayes' law. In other models, agents hold correct beliefs but make choices that are normatively questionable. Contrary to EMH theory, human decision-making is the starting point for behavioral finance.

It is possible to define behavioral finance as a sub discipline of behavioral economics which incorporates findings from psychology and sociology into its theories. One of the crucial properties of modern finance is the use of few tools to explain many different situations in real life. Behavioral finance is also constructed with few tools that have many uses. Some of the tools of behavioral finance are identical to those of modern finance, but some are different because they reflect a different model of human behavior. The tools of behavioral finance include susceptibility to frames and other cognitive errors, varying attitudes toward risk, aversion to regret, imperfect self-control, and preferences as to both utilitarian and value-expressive characteristics (Statman, 1999-1, p. 19). In the literature, there is considerable research which provides evidence about the insufficiencies of modern financial theories in financial markets. Thus behavioral finance models are developed to explain investor behavior or market anomalies when rational models provide insufficient explanations (Glaser, Moth and Weber, 2003, p. 2). To understand the research agenda, methodology, and contributions, in the following subsections, behavioral finance theory will be discussed in broader terms.

First of all, this section will explain Behavioral Finance Theory, focusing on the main topics of

this newly developing area of Modern Finance. These main topics include the following: non-behavioral finance built on the efficient market hypothesis; anomalies in financial markets beginning with evidence of inefficiency in the financial markets; limits to arbitrage operations in real world financial markets, and the impossibility for rational traders to consistently offset the effects of noise traders; psychological evidence showing that individuals do not always behave rationally in their decision-making processes; and applications of behavioral finance theory to some important subjects in finance.

## **BEHAVIORAL FINANCE: THEORETICAL BACKGROUND**

The field of behavioral finance is not new. At the core of behavioral finance is the idea that the principle derived from these social sciences can be useful to improving knowledge of the behavior of the financial market. Many investors have long considered that psychology plays a key role in determining the behavior of markets (Brabazon, 2000, p. 2). During the classical period, economics had a close link with psychology. Economists began to distance themselves from psychology during the development of neo-classical economics as they sought to reshape the discipline as a natural science, with explanations of economic behavior deduced from assumptions about the nature of economic agents. The concept of homo economicus was developed and the psychology of this entity was fundamentally rational. Nevertheless, psychological explanations continued to inform the analysis of many important figures in the development of neo-classical economics, such as Francis Edgeworth, Vilfredo Pareto, Irving Fisher and John Maynard Keynes (Cornicello, 2004, p. 24).

Psychology had largely disappeared from economic discussions until the 1950s. Later, a number of factors contributed to the resurgence of its use

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