

Perspectives in Behavioral
Economics and the Economics of
Behavior

A FAST AND FRUGAL FINANCE

**Bridging Contemporary
Behavioral Finance and
Ecological Rationality**

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Foreword

As far as we know, traders and investors have always used heuristics, including the pioneers of *technical analysis* and Benjamin Graham, whose book *The Intelligent Investor* was praised by Warren Buffet as being by far the best ever written on investing. Peter Lynch has suggested that lack of name recognition is grounds for eliminating a stock from consideration, which is a version of the *recognition heuristic* used more generally by humans and animals.

The science of heuristics was founded by the polymath Herbert A. Simon and is anchored in the distinction between situations of risk and uncertainty, commonly attributed to Frank Knight. Risk means that the future state space of all possible events and their consequences and probabilities is knowable, such as when buying a lottery ticket, or playing roulette. In situations of risk, probability theory provides the tools for calculating rational expectations. In situations of uncertainty, by contrast, this degree of certainty is not discernable, such as when entrepreneurs make investment decisions in high-stake and changing environments. Here the science of heuristics can provide tools for decision making.

Leonard Savage, John Maynard Keynes, and others made similar distinctions and restricted probability theory, and the theory of rational expectations, to well-defined situations of risk. Not so in modern finance theory, where the distinction between risk and uncertainty is rarely made. Following the portfolio allocation framework of Harry Markowitz and Robert Merton, it is generally assumed that all risks can be measured, priced, and hedged. The grand mathematical edifice created by finance theory is admirable; but in the uncertain world of financial markets a castle built on sand.

Five years after the distinguished macroeconomist Robert Lucas declared in his 2003 Presidential Address to the American Economic Association that the central problem of preventing depression had finally been solved, the greatest economic crisis since the Great Depression hit. George Soros noted in his *The Crash of 2008 and What It Means* that modern finance has totally misinterpreted how financial markets operate and that rational expectations theory is no longer taken seriously outside academic circles. One might think that by now the prevailing paradigm would have been replaced and the systematic study of how to deal with uncertainty would have begun.

With a few exceptions, such as the Bank of England's program "Taking uncertainty seriously" on developing simple heuristics for a safer financial world, the paradigm has unfortunately remained in place. Paradoxically, behavioural finance helps to retain it. Behavioural finance emerged with the goal of eliminating the psychological blind spot in modern finance; but largely ended up portraying psychology and heuristics as the source of irrationality.

Instead of systematically studying how successful investors make decisions, the mainstream of behavioural finance took *Homo economicus* as the benchmark for rational behaviour and attributed deviating behaviour to flaws in the human mind rather than in finance theory. Since the 1980s, the list of such "anomalies" and "cognitive biases" has rapidly expanded; Wikipedia currently list nearly 190 items. Using these makes it possible to blame the crisis of 2008 or the prevalence of obesity, or other societal problems, on people's shortcomings, without calling the theory into question.

Behavioural finance would have followed a different route had it followed the ideas of Herbert A. Simon. Simon's version of behavioural finance is based on two principles: taking uncertainty and heuristics to handle its effects seriously. In order to take heuristics seriously, one needs to replace terms such as availability with formal models of heuristics in order to test how well these actually perform.

The systematic study of the adaptive toolbox of heuristics began in the mid-1990s and revealed that under uncertainty, simple heuristics are often better at predicting than complex strategies. This surprising result is called the less-is-more effect and contradicts the assumption that ignoring part of the information always implies a cognitive bias in decision-making.

Harry Markowitz appears to have instinctively understood this effect for his own retirement investments, as he did not rely on his Nobel-prize winning mean-variance portfolio method but rather on the $\frac{1}{N}$ heuristic "Allocate the money equally across all N assets" to provide for his own family's needs. Subsequent studies showed that $1/N$ can outperform the mean-variance portfolio in terms of the Sharpe Ratio and other criteria. The key reason is that under uncertainty, fine-tuned optimisation models tend to be fragile and overfit noise, thereby creating illusions of certainty.

Demonstrating a less-is-more effect is, however, only the first step; the second is to prove the conditions under which it can be expected or not, a topic that is addressed by the study of the ecological rationality of heuristics. In this way, the study of heuristics is both descriptive for instance, it analyses how successful investors make decisions in the "real world" and

prescriptive; that is, it answers the question of under what conditions a simple heuristic should be used in place of a complex strategy. *A Fast and Frugal Finance* is the first volume of its kind to undertake such an adventure. Each chapter provides a fresh look at the application and use of heuristics as useful, efficient, and successful tools for decision-making in different areas of finance. If we want to learn from the crisis and finally take uncertainty seriously, this is the time to rethink finance, and behavioural finance in particular.

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