Preface

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For many people around the world, the 2008 financial crisis produced much personal misfortune and hand-wringing. For many economists, however, there was a sense of existential crisis that shook a belief system that had been carefully cultivated over years, if not decades. This belief system is based, more or less, on the following: economic models are flawed, as all models are flawed, but, like good models, they retain the correct stylized facts about the real world. Among this set of models, few are so influential, both within the professional world and with the broader public, as the efficient market hypothesis. Understanding the marketplace in real life, however, means understanding the interaction of a multitude of distinct groups of players. These individuals vary in their risk attitudes, market experience, and financial sophistication. They may exhibit cognitive biases and fallacies that can be far removed from the rational investor that standard economic and financial theories assume.

In the past, it has been convenient to sweep these differences under the rug with the useful fiction of "efficient markets." As we are increasingly learning, however, and as has been dramatically illustrated by events over the past two years, many of these biases, rather than being a series of random mistakes by novice and unseasoned investors, are deeply ingrained in human psychology and biology. In some cases, people (including economic theorists!) persist in such behavior even when they are confronted with persuasive logical arguments to the contrary, and indeed cannot offer a clear rationale for their behavior.[1] In the delightful words of Daniel Ellsberg, which would appear very much out of place in today's academic journals, the theorists, "having looked into their hearts, found conflicts with the axioms and decided . . . to satisfy their preferences and let the axioms satisfy themselves."

In the past two decades, researchers have started to put back the psychological foibles of decision makers. This injection of psychology into economics, popularly known as "behavioral economics," has become influential enough that Cass Sunstein, coauthor of the book *Nudge* with behavioral economics pioneer Richard Thaler, is now "regulatory czar" under President Obama.[2] One has even heard the proclamation that "we're all behavioralists now." More recently, the introduction of brain research has given rise to yet another field, "neuroeconomics." Indeed, at this point there is a veritable flood of tools from the biological sciences, from genomics to pharmacology, waiting to enter the fertile grounds of neuroeconomics. Perhaps surprisingly, it has been the economists who are most active in resisting these new entries. Unlike the natural sciences, where the growth of interdisciplinary fields such as biophysics and physical chemistry is rarely greeted with tomes discussing the philosophical underpin-

nings, behavioral economics and neuroeconomics are criticized for not being sufficiently like the good old-fashioned economic theories that rest on the assumptions of the rational man and infinite cognitive capacity. Old habits apparently do die hard.

Still, no matter how persuasive and formidable the intellectual edifice may be, this new science of decision making will be judged based on both the accuracy of its predictions and the practical applications that it engenders. It is therefore gratifying to see an experienced author and market veteran like Bob Koppel bridging the gap and translating what has been almost exclusively academic research to a practical level that will appeal to investors, novice and experienced alike. In his latest book, *Investing and the Irrational Mind*, Koppel marshals an impressive array of evidence from the latest research in behavioral economics and neuroeconomics. This is research, particularly in neuroeconomics, that few investors have heard of, much less know how to use to their advantage.

This is not to say that behavioral economics and neuroeconomics provide facile answers or magical formulas for success. Indeed, such wishful, fallacious thinking is amply documented in this book and is partly to blame for our current economic malaise. And in any case, we are still in the early days of behavioral economics and neuroeconomics. As I see it, the success of intellectual ideas is not altogether different from the diffusion of new products in the marketplace, and it goes through several distinct stages. First, the intellectual edifices are built, but they are known by only a small group of academics or leading industry users. Next, they become the domain of early adopters, in this case perhaps some vanguard group of investors. Finally, and only for the most successful ideas, their use becomes so widespread that en-

tire institutions are built around these ideas. Quantitative finance provides a perfect illustration of this process. Beginning with luminaries such as Harry Markowitz and Fischer Black, we have now reached a point where it is difficult to imagine life without the institutions that have been built upon financial models of risk and valuation. Behavioral economics, I think, has now reached the second stage, while neuroeconomics is still in the first stage with glimpses of moving to the second.

It is difficult, however, to see behavioral economics and behavioral finance moving squarely into the third stage. Behavioral economics has remained a collection of findings and treatments, albeit powerful ones, that do not lend themselves to the type of systematic day-to-day operations that distinguishes institutions. The great promise of neuroeconomics is that it will one day provide a rich array of quantitative information that can be integrated into the day-to-day operations of a trading floor. That is, one day we may be able to build institutions that take into account the individual or collective genetic, physiological, and brain responses of the individuals that make up the institution, in the same way that financial instruments litter the current investment landscape.

That day remains a twinkle in the eyes of a small group of academics and forward thinkers like Bob Koppel. In the meantime, Bob has given us a work that presents a plethora of new ideas and data in an enjoyable and accessible manner. Simply put, to succeed in today's market, an investor needs to not only digest the relevant information from the market, but also take into account the imperfect machinery that is his own brain. This book provides a guide to doing that.