Behavioural Investing

A practitioner's guide to applying behavioural finance

James Montier

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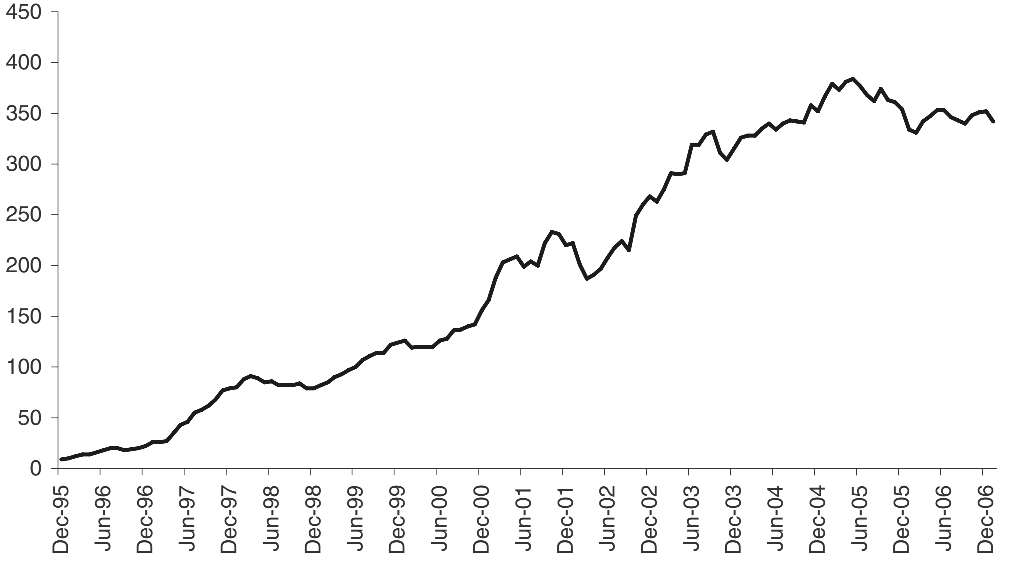
To Connor
The best nephew a proud uncle could hope for

Contents

Preface

This book represents the first six years of an ongoing research project. The aim of this project was to truly understand the psychology of finance and investing and explore its implications for practitioners. There can be little doubt that behavioural finance has never been more popular among professional investors. Certainly, if my diary is any guideline, the subject is still in much demand. The chart below shows the number of times in a rolling 12-month period the words behavioural (or behavioral) finance appear in the press.



I reached the conclusion that I was a natural pessimist while looking at this chart, as the first thing that entered my mind was – it's a bubble. An optimist would presumably conclude that it was a growth industry! I certainly hope the latter interpretation holds true.

My first book on the subject (*Behavioural Finance*, Wiley, 2002) was really the result of a series of lectures I had given to students. This book draws together research written for a professional audience whose time for reading research is highly limited. For this reason each chapter is written to 'stand alone' to allow the reader to dip in and out at will. Each chapter also aims to deal with a practical issue of relevance to the professional investor. However, despite the independent nature of the chapters, I have chosen to group them together into themes, representing the seven major thrusts of my ongoing research project.

I Common Mistakes and Basic Biases

The title here gives the gist. In many ways one of the most powerful insights offered by the literature on judgement and decision making is that we are all prone to the potential pitfalls that psychologists have spent years documenting. Indeed, when I give a lecture to professional investors, those who probably get the most out of the talk are those who identify themselves as the perpetrators of behavioural mistakes. The chapters in this section aim to explore some of the most common biases, and suggest some simple ways in which we might be able to mitigate our susceptibility.

II The Professionals and the Biases

Among some there is a view that the individual investor is the source of all behavioural mispricing. However, I suspect this is far from true. Indeed there are now a number of papers (such as Jackson, Glushkov) that argue convincingly that the professionals may well be the noise traders. The aim of this section is to demonstrate that professional investors are just as likely to suffer behavioural biases as the rest of us. Indeed, in as much as they are experts in their field, they may well be even more overconfident and overoptimistic than lay people.

III The Seven Sins of Fund Management

The aim of this section was to examine a typical large institutional fund management organization and assess its vulnerabilities to psychological critique. The first step on the road to reform is to be able to identify the areas of weakness in the current structure. Issues such as an overreliance on forecasting, the illusion of trading, wasting time meeting company managements, and the dangers of overtrading are covered here.

IV An Investment Process as a Behaviour Defence

If the previous section represented a long list of don'ts, then this section is an attempt to provide a list of dos. It is concerned with investment philosophy/process. Since we cannot control the return on an investment (much as we would like to be able to do), then the best we can do is create a process that makes sense. Here we explore contrarian strategies and value investing as a framework for mitigating behavioural biases. As I am also an empirical sceptic, this section contains many empirical chapters based on demonstrating the principles discussed.

V Bubbles and Behaviour

Of all the areas of behavioural finance none captures the public's imagination like bubbles. This section explores a paradigm for analysing and assessing bubbles and their paths. It is a good demonstration of the constancy of human behaviour. Every bubble in history has been slightly different, but the underlying characteristics and processes are amazingly similar.

VI Investment Myth Busters

A popular TV show concerned two 'mad' scientists who loved nothing more than to explode urban myths. This section represents my attempt to do something similar in finance. We have a bad habit of accepting theories as fact within finance, and of accepting statements as if they were truths. The chapters here try to expose some of the believable but incorrect beliefs that many investors seem to share.

VII Corporate Governance and Ethics

We often interpret other actions as evidence of their underlying nature. However, when people find themselves in a situation, we fail to understand the impact that has on their behaviour. So, rather than bad apples it is more often than not bad barrels, and the chapters here explore how social psychological insights can improve our understanding of corporate governance. We also explore one of economics' most cherished beliefs – that incentives work – from a psychological perspective, and the results are intriguing, suggesting that optimal incentives are more difficult to design than many economists would have us believe.

VIII Happiness

This section deals with two of the most popular and most controversial notes I have written. They tackle the heresy of money not equalling happiness, which is clearly anathema to many who work in finance. These chapters explore the issue of what makes us happy, and what we can do to increase our level of happiness. These may seem like unusual topics for a researcher employed by an investment bank, but they were borne out of a belief that some of the most miserable people in the world seem to work in the field of finance.

Only you as reader will be able to judge how well I have achieved my aim of applying behavioural finance. Your comments and feedback would be most welcome and I can be contacted via my e-mail address: James.Montier@Googlemail.com

Acknowledgments

I am never sure who reads acknowledgements. Notwithstanding, there are several people to whom I owe a debt of gratitude. Firstly, my friend and colleague Albert Edwards. It was Albert who had the foresight to see that behavioural finance would be of interest to professional investors, and was prepared to support me in pushing the boundaries of what might be regarded as acceptable research. He also read most of the papers contained herein, and provided many useful suggestions to improve them, and challenge me.

Next, I must thank my co-authors on numerous of the empirical chapters in Section IV, Rui Antunes and Sebastian Lancetti of the Dresdner Kleinwort Quant team. Both gentlemen have more skill at dealing with data and quant models in their little finger than I have in my entire being. They both helped to take my ideas and turn them into raw hard numbers, to satisfy even the most demanding of empirical sceptics.

The head of the Quant team, Andrew Lapthorne, not only graciously allowed me to publish one of his papers (as Chapter 33) but also read almost every paper in the collection and commented on all of them. Andy has been a great sounding board for my ideas over the years, and I thank him very much.

Kathy Alexandrou deserves special mention. She is responsible for taking my work and turning it into the notes that Dresdner Kleinwort clients have been reading. She is a true wizard of turning charts into works of art, and keeping me on track with my notes.

I am also grateful to the research management at Dresdner Kleinwort who have allowed me to publish research that I believe no other bank would have permitted. They also very kindly allowed me to reproduce the notes you will read between these covers.

Amanda Keogan, Jane Atterbury and Cally Smith deserve applause for managing to get me everywhere on time, and back again. At one time or another all these ladies have had the responsibility for looking after my travel and diary. They have all done a sterling job, and I thank them all.

The many academics who provided the papers (both from finance and psychology) that are quoted within these pages also merit a huge thank you. Without their work this book would not have been possible. As Newton said: "If I have seen further it is by standing on the shoulders of giants."

Jenny Ward of the Dresdner Kleinwort EMIS team has managed to unearth a large number of weird and wonderful papers that I have requested over the years, and I thanks her for all her help.

Also, a huge thank you to all the clients who have expressed their interest in my work over the last six years. Without your support I am under no illusion that I would have been dispensed with years ago. It is your interest in behavioural finance that has kept me employed. Long may it continue!

On a personal note, I would also like to thank my friends and family. They have to put up with me dashing off to scribble down notes and ideas at the oddest of times. A special thanks goes to my parents and my nana for their unconditional love, and to Wendy who encouraged me to write this book and put up with me while I did so. She also read many of the chapters, corrected my English, and questioned me thoroughly. Thanks babes, couldn't have done it without you.

To anyone I have forgotten to mention, my apologies and thanks. All errors and omissions remain the sole responsibility of the author.

SECTION I

Common Mistakes and Basic Biases

1

Emotion, Neuroscience and Investing: Investors as Dopamine Addicts*

Understanding what happens in our brain when we make decisions may help us to learn to overcome some of the mistakes we make. Emotions are key. Our ability to exercise self-control over such impulses is limited and decreases with use! Too often we succumb to our hard-wired tendencies to focus on the short term and herd.

- Emotional decision-making is the default option for our brains. However, we all like to think that we only use logic to arrive at our decisions. In fact without emotion we would be largely incapable of making any decisions, but all too often we allow emotion to rule unchecked. Welcome to the human condition!
- Neuroscientists have recently uncovered two particular traits of significance to investors. The first is that we are hard-wired for the short term. We tend to find the chance of short-term gains very attractive. They appear to stimulate the emotional centres of the brain, and release dopamine. This makes us feel confident, stimulated, and generally good about ourselves.
- The second is that we appear to be hard-wired to herd. The pain of social exclusion (i.e. betting against everyone else) is felt in exactly the same parts of the brain that feel real physical pain. So pursuing contrarian strategies is a little bit like having your arm broken on a regular basis!
- Self-control over these impulses is very hard. Psychologists have found that self-control is a limited resource. The more we use it, the less we have left to deal with the next occasion when self-control is required.
- The good news is that we continue to make brain cells pretty much throughout our lives. And our brains aren't fixed forever, we can rearrange the neurons (a process called plasticity). We aren't doomed, we can learn, but it isn't easy!

*This article appeared in *Global Equity Strategy* on 20 January 2005. The material discussed was accurate at the time of publication.

What goes on inside our heads when we make decisions? Understanding how our brains work is vital to understanding the decisions we take. Neuroeconomics is a very new field that combines psychology, economics and neuroscience. That may sound like the unholy trinity as far as many readers are concerned, but the insights that this field is generating are powerful indeed.

Before I head off into the realms of neuroscience I should recap some themes we have explored before that provide the backdrop for much of the discussion that follows. One of the most exciting developments in cognitive psychology over recent years has been the development of dual process theories of thought. All right, stay with me now, I know that sounds dreadful, but it isn't. It is really a way of saying that we tend to have two different ways of thinking embedded in our minds.

SPOCK OR McCOY?

For the Trekkies out there, these two systems can, perhaps, be characterized as Dr McCoy and Mr Spock. McCoy was irrepressibly human, forever allowing his emotions to rule the day. In contrast, Spock (half human, half Vulcan) was determined to suppress his emotions, letting logic drive his decisions.

McCoy's approach would seem to be founded in system X. System X is essentially the emotional part of the brain. It is automatic and effortless in the way that it processes information – that is to say, the X-system pre-screens information before we are consciously aware that it even made an impact on our minds. Hence, the X-system is effectively the default option. The X-system deals with information in an associative way, and its judgements tend to be based on similarity (of appearance) and closeness in time. Because of the way the X-system deals with information it can handle vast amounts of data simultaneously. To computer nerds it is a rapid parallel processing unit. In order for the X-system to believe that something is valid, it may simply need to wish that it were so.

System C is the "Vulcan" part of the brain. To use it requires deliberate effort. It is logical and deductive in the way in which it handles information. Because it is logical, it can only follow one step at a time, and hence in computing terms it is a slow serial processing unit. In order to convince the C-system that something is true, logical argument and empirical evidence will be required, and Table 1.1 provides a summary of the main differences between the two systems.

This dual system approach to the way the mind works has received support from very recent studies by neuroscientists who have begun to attach certain parts of the brain to certain functions. In order to do this, neuroscientists ask experiment participants to perform tasks while their brains are being monitored via electroencephalograms (EEG), positron emission topography (PET) or, most often of late, functional magnetic resonance imaging (fMRI). The outcomes are then compared to base cases and the differences between the scans highlight the areas of the brain that are being utilized.

Table 1.2 lays out some of the major neural correlates for the two systems of thinking that we have outlined in Table 1.1. There is one very important thing to note about these groupings: the X system components are much older in terms of human development. They evolved a long time before the C-system correlates.

THE PRIMACY OF EMOTION

This evolutionary age helps to explain why the X system is the default option for information processing. We needed emotions far before we needed logic. This is perhaps best explained

Table 1.1 Two systems of reasoning

System One/X-system/Reflexive/Intuitive	System Two/C-system/Reflective
Holistic	Analytic
Affective (what feels good)	Logical?
Associative – judgements based on similarity and temporal contiguity	Deductive
	Slow, serial processing
Rapid parallel processing	Abstract images
Concrete images	Changes with speed of thought
Slower to change	More highly differentiated
Crudely differentiated – broad generalization	More highly integrated – cross context processing
Crudely integrated – context-specific processing	
Experienced passively and preconsciously	Experienced actively and consciously
Automatic and effortless	Controlled and effortful
Self-evidently valid: "Experiencing is believing" or perhaps wishing is believing	Requires justification via logic and evidence

Source: Modified from Epstein (1991).

Table 1.2 Neural correlates of the two reasoning systems

X-system	C-system
Amygdala	Anterior cingulate cortex
Basal ganglia	Prefrontal cortex
Lateral temporal cortex	Medial temporal lobe

Source: DrKW Macro research.

by an example using fear, which is one of the better understood emotions.[1] Fear seems to be served by two neural pathways. One fast and dirty (LeDoux's low road), the other more reflective and logical (the high road), and the links to the two systems of thinking outlined above are hopefully obvious.

Imagine standing in front of a glass vessel that contains a snake. The snake rears up, the danger is perceived, and the sensory thalamus processes the information. From here two signals emerge. On the low road the signal is sent to the amygdala, part of the X system,[2] and the brain's centre for fear and risk. The amygdala reacts quickly, and forces you to jump back.

However, the second signal (taking the high road) sends the information to the sensory cortex, which, in a more conscious fashion, assesses the possible threat. This is the system that points out that there is a layer of glass between you and the snake. However, from a survival viewpoint, a false positive is a far better response than a false negative!

Emotions: Body or Brain?

Most people tend to think that emotions are the conscious response to events or actions. That is, something happens and your brain works out the emotional response – be it sadness, anger,

[1] Largely thanks to the work of Joseph LeDoux, see his wonderful book the *Emotional Brain* (1996) for details.
[2] Also know as the limbic system.