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- EDWARD CHANCELLOR

VALUE INVESTING

Tools and Techniques for Intelligent Investment

JAMES MONTIER
WITH A FOREWORD BY BRUCE GREENWALD

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James Montier

WILEY

A John Wiley and Sons, Ltd., Publication

Registered office
John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, United Kingdom

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Library of Congress Cataloging-in-Publication Data

Montier, James.
Value investing : tools and techniques for intelligent investment / James Montier.
p. cm.
Includes bibliographical references and index.
ISBN 978-0-470-68359-0
1. Value investing. 2. Investment analysis. 3. Corporations–Valuation. I. Title.
HG4521.M7866 2009
332.6–dc22
2009027977

ISBN 978-0-470-68359-0

A catalogue record for this book is available from the British Library.

Typeset in 10/12pt Times by Aptara Inc., New Delhi, India
Printed in Great Britain by Antony Rowe Ltd, Chippenham, Wiltshire

To Wendy
With all my love

Contents

Preface

Part I: Why everything you learned in business school is wrong

In fairness I should have entitled Part I 'Why Everything you Learned in Business School is Wrong (unless you went to Columbia)'. Equally well I could have used the title 'Six Impossible Things Before Breakfast'.

The seductive elegance of classical finance theory is powerful, yet value investing requires that we reject both the precepts of modern portfolio theory (MPT) and almost all of its tools and techniques. The existence of MPT wouldn't bother me nearly as much as it does, if real-world investors didn't take its conclusions into investment practice. Sadly, all too often this is exactly what happens. Unfortunately, the prescriptions of MPT end up thwarting the investor. They lead us astray from the things on which we really should be concentrating.

Milton Freidman argued that a model shouldn't be judged by its assumptions but rather by the accuracy of its predictions. The chapters in Part I attempt to demonstrate that the basic edicts of MPT are empirically flawed. The capital asset pricing model (CAPM), so beloved of MPT, leads investors to try to separate alpha and beta, rather than concentrate upon maximum after tax total real return (the true object of investment). The concept that risk can be measured by price fluctuations leads investors to focus upon tracking error and excessive diversification, rather than the risk of permanent loss of capital. The prevalent use of discounted cash flow models leads the unwary down the road of spurious accuracy, without any awareness of the extreme sensitivity of their models. As Third Avenue Management put it: DCF is like the Hubble telescope, if you move it an inch you end up studying a different galaxy. Thus, following MPT actually hinders rather than helps the investor.

Part II: The behavioural foundations of value investing

MPT holds that all returns must be a function of the risk entailed. Thus, the believers in this approach argue that the outperformance of value stocks over time must be a function of their inherent riskiness. I've always thought that this was a classic example of tautological thinking. The chapters in Part II attempt to demonstrate an alternative perspective – that the source of the value outperformance is a function of behavioural and institutional biases that prevent many investors from behaving sensibly.

We will cover the most dangerous (and one of the most common) errors that investors make – overpaying for the hope of growth (or capitalizing hope if you prefer). The chapters in Part II also try to provide you with the tools to enable you to start thinking differently about the way

you invest. Value investing is the one form of investing that puts risk management at the very heart of the approach. However, you will have to rethink the notion of risk. You will learn to think of risk as a permanent loss of capital, not random fluctuations. You will also learn to understand the trinity of sources that compose this risk: valuation, earnings and balance sheets.

In Part II we will also try to introduce you to ways of overriding the emotional distractions that will bedevil the pursuit of a value approach. As Ben Graham said: 'The investor's chief problem – and even his worst enemy – is likely to be himself.'

Part III: The philosophy of value investing

The chapters in Part III set out the core principles involved in following a value approach. The first chapter lays out the 10 tenets of my approach to value investing, and details the elements you will need to be able to display if you intend to follow the value approach:

- Tenet I: Value, value, value
- Tenet II: Be contrarian
- Tenet III: Be patient
- Tenet IV: Be unconstrained
- Tenet V: Don't forecast
- Tenet VI: Cycles matter
- Tenet VII: History matters
- Tenet VIII: Be sceptical
- Tenet IX: Be top-down and bottom-up
- Tenet X: Treat your clients as you would treat yourself

The remaining chapters explore some of the issues in more depth, such as the need for patience, and the need to think independently. One of the most important chapters in Part III concerns the role of process versus outcomes. As we have no control over outcomes, the only thing we can control is the process. The best way to achieve good outcomes is to have a sensible investment process as this maximizes the chances of success. As Ben Graham said: 'I recall . . . the emphasis that the bridge experts place on playing a hand right rather than playing it successfully. Because, as you know, if you play it right you are going to make money and if you play it wrong you lose money – in the long run.'

Part IV: The empirical evidence

Nassim Taleb talks about the need for empirical scepticism. This, in effect, is a desire to check your beliefs against the evidence. The two chapters in Part IV provide a very brief look at the evidence on value investing. The first looks at the proposition that an unconstrained global approach to value investing can create returns. The second considers a deep value technique, much loved by Ben Graham, and shows that it still works today (a direct response to those who argue that Graham's approach is outdated or outmoded). I could have included additional chapters in Part IV, but many excellent surveys on the evidence supporting value investing are easily available to the interested reader. The ultimate proof of the value approach is that almost all (if not all) of the world's most successful investors take a value approach. As Warren Buffett opined:

I would like you to imagine a national coin-flipping contest. Let's assume we get 225 million Americans up tomorrow morning and we ask them all to wager a dollar. They go out in the morning at sunrise, and they all call the flip of a coin. If they call correctly, they win a dollar from those who called wrong. Each day the losers drop out, and on the subsequent day the stakes build as all previous winnings are put on the line. After ten flips on ten mornings, there will be approximately 220,000 people in the United States who have correctly called ten flips in a row. They each will have won a little over $1,000.

Now this group will probably start getting a little puffed up about this, human nature being what it is. They may try to be modest, but at cocktail parties they will occasionally admit to attractive members of the opposite sex what their technique is, and what marvellous insights they bring to the field of flipping.

Assuming that the winners are getting the appropriate rewards from the losers, in another ten days we will have 215 people who have successfully called their coin flips 20 times in a row and who, by this exercise, each have turned one dollar into a little over $1 million. $225 million would have been lost, $225 million would have been won.

By then, this group will really lose their heads. They will probably write books on 'How I Turned a Dollar into a Million in Twenty Days Working Thirty Seconds a Morning.' Worse yet, they'll probably start jetting around the country attending seminars on efficient coin-flipping and tackling skeptical professors with, 'If it can't be done, why are there 215 of us?'

By then some business school professor will probably be rude enough to bring up the fact that if 225 million orangutans had engaged in a similar exercise, the results would be much the same – 215 egotistical orangutans with 20 straight winning flips.

I would argue, however, that there are some important differences in the examples I am going to present. For one thing, if (a) you had taken 225 million orangutans distributed roughly as the US population is, if (b) 215 winners were left after 20 days, and if (c) you found that 40 came from a particular zoo in Omaha, you would be pretty sure you were on to something. So you would probably go out and ask the zookeeper about what he's feeding them, whether they had special exercises, what books they read, and who knows what else. That is, if you found any really extraordinary concentrations of success, you might want to see if you could identify concentrations of unusual characteristics that might be causal factors.

Scientific inquiry naturally follows such a pattern. If you were trying to analyse possible causes of a rare type of cancer – with, say, 1,500 cases a year in the United States – and you found that 400 of them occurred in some little mining town in Montana, you would get very interested in the water there, or the occupation of those afflicted, or other variables. You know it's not random chance that 400 come from a small area. You would not necessarily know the causal factors, but you would know where to search.

I submit to you that there are ways of defining an origin other than geography. In addition to geographical origins, there can be what I call an intellectual origin. I think you will find that a disproportionate number of successful coin-flippers in the investment world came from a very small intellectual village that could be called Graham-and-Doddsville. A concentration of winners that simply cannot be explained by chance can be traced to this particular intellectual village.

Part V: The 'Dark Side' of value investing: Short selling

The recent market woes have led to the all-too-predictable backlash against short sellers. Indeed this pattern seems to have existed since time immemorial. As stated in *the New York Times*:

> In the days when square-rigged galleons plied the spice route to the East, the Dutch outlawed a band of rebels that they feared might plunder their new-found riches.

> The troublemakers were neither Barbary pirates nor Spanish spies — they were certain traders on the stock exchange in Amsterdam. Their offence: shorting the shares of the Dutch East India Company, purportedly the first company in the world to issue stock.
>
> Short sellers, who sell assets like stocks in the hope that the price will fall, have been reviled ever since. England banned them for much of the 18th and 19th centuries. Napoleon deemed them enemies of the state. And Germany's last Kaiser enlisted them to attack American markets (or so some Americans feared).
>
> Jenny Anderson, *New Yark Times*, 30 April 2008

However, far from being the Sith lords, the short sellers I have met are among the most fundamental-oriented analysts I have come across. These guys, by and large, really take their analysis seriously (and so they should since their downside is effectively unlimited). So the continued backlash against short sellers as rumour mongers and conspirators simply leaves me shaking my head in bewilderment. I can only assume that the people making these claims are either policy-makers pandering to shorted companies, or shorted companies themselves. Rather than being seen as some malignant force within the markets, in my experience short sellers are closer to accounting police – a job that the SEC at one time considered its remit.

This viewpoint was confirmed by an insightful study by Owen Lamont (2003) (then at Chicago University). He wrote a paper in 2003 examining the battles between short sellers and the companies they shorted. He examined such battles between 1977 and 2002 in the USA. He focused on situations where the companies being shorted protested their innocence by suggesting that they were the subject of a bear raid, or a conspiracy, or alleged that the short sellers were lying. He also explored firms that requested investigation by the authorities into the shorts, urged the stockholders not to lend shares out, or even set up repurchase plans (presumably to create a short squeeze). If I may paraphrase the immortal words of the Bard: 'Methinks he doth protest too much'!

Lehman provides a classic example. As the *Wall Street Journal* noted:

> 'What were they thinking? Lehman Brothers documents released Monday showed that in June, when the investment bank was negotiating to raise about $5 billion from the Korea Development Bank, senior Lehman executive David Goldfarb emailed Lehman Chief Executive Richard Fuld with a suggestion. The firm should 'aggressively' go into the stock market and use $2 billion of the proceeds to buy back stock, thereby 'hurting Einhorn bad!!'. He was referring to hedge fund short seller David Einhorn, a critic of Lehman. Mr. Fuld, who was testifying before Congress Monday, wrote back in agreement. Lehman didn't get the money and filed for bankruptcy protection instead.'

David Einhorn's response to such matters is a lovely line: 'I'm not critical because I am short, I am short because I am critical.'

The results Lamont uncovered in his study show the useful role played by short sellers. Figure 1 shows the average cumulative return to the shorted stock. In the 12 months after the battle started, the average stock underperformed the market by 24%. In the three years after the battle started, these stocks underperformed the market by 42% cumulatively! The shorts were right – too often it was the companies that were lying and conspiring to defraud investors, not the reverse!

The chapters in Part V section explore how to hunt for potential short opportunities, or if you never want to short, they provide you with some thoughts about the characteristics of stocks in which you don't what to be invested.

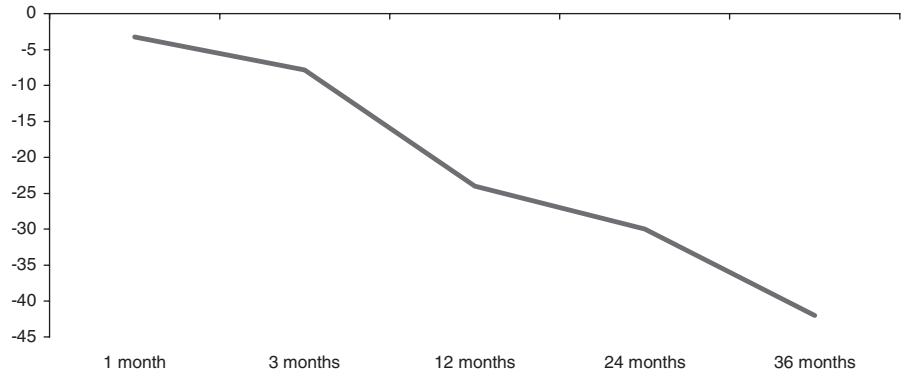

Figure 1 Lamont's shorts: cumulative market-adjusted returns (%)
Source: Lamont (2003). SG Equity research

Part VI: Real-time value investing

The proof of the pudding is always in the eating. The chapters in Part VI provide real-time analysis of the market's behaviour over one of the most turbulent periods in investing history. They are a case study in the power of value approach. If following a value-oriented approach works in such a market, it stands in good stead for the future. The topics covered here include: how to think about the risk of value traps; how to think about financial stocks from a deep value perspective; the role of cheap sources of insurance; why you need to act when markets are cheap and not be overcome by emotional paralysis; and the case against government bonds.

I hope this book provides you with a framework for thinking about how to invest, and show that such an approach pays dividends for an investor with the ability to think and act differently from the herd. As ever, only you can be the ultimate arbiter of my success. I would welcome your comments and feedback. I can be reached at james.montier@gmail.com.

Foreword

Books about investing, like this one by James Montier, are written, bought and read because they promise to make the reader riches. Sometimes the promise is explicit as in Joel Greenblatt's outstanding book *You Too Can Be a Stock Market Genius*. More often it is unstated but implied. In all cases, the promise has to come to terms with the single most important brute fact about investing. Only in Lake Wobegon, Minnesota (the mythical town created by the American humorist Garrison Keillor where all the children are above average) can all investors outperform the market. The average return of all investors must mathematically be equal, before management fees and trading costs, to the average return on all investment assets. This is not a statement of the once dominant, but increasingly widely discredited, academic assumptions that markets are efficient; that no individual can expect, except by luck, to outperform the collective wisdom of all other investors which is embodied in market prices. Some individual investors, most notably Warren Buffett, do earn above average returns by wide margins in many years. But what is inescapable is that these above average returns for some investors must always be offset by below average returns for others.

Another way to say this is that every time a reader of this book buys an asset, thinking that it will produce relatively high returns in the future, another investor is selling that asset thinking that it will produce relatively low returns in the future. One of them is always wrong. Any sound investment process must, therefore, begin by answering the question of why, more often than not, it places the user on the right side of the exchange. This is an investment imperative that is recognized to some extent. For example, the investment management course at Harvard Business School has for many years been built around the question, 'what is my edge?'. Unfortunately putting things in these terms poses too easy a challenge. Everyone is prone to think they have an edge. Eighty percent or more of James Montier's students expect to finish in the top half of his classes. Thirty percent of these will not. They are, by the way, relatively modest. When I carried out these surveys in class, typically ninety percent or more of my students expected to finish in the top-half of the class (but then I am undoubtedly an easier grader than James). Ninety-five percent or more of surveyed people typically think they have a better sense of humor than average. Almost by definition, investment managers, who are well-compensated and morally self-aware, must think they have some edge. Even amateurs who invest for themselves must expect to be compensated for their time and effort by out-performing a passive market index investment. Any 'edge' must stand-up to rigorous scrutiny and at least half of them will fail.

However, in another sense, the 'what-is-my-edge' question is too demanding. There are well-documented investment approaches that have been recognized for at least 75 years which, carefully followed, will enable any investor to outperform the market by a significant margin on average over many years. These approaches – falling generally under the name of Value Investing – are properly the subject of this excellent book.

The justification for repackaging these truths (in novel and entertaining form) is primarily that they are followed systematically by only a small minority of investors; a fraction that has been growing, if at all, only slowly over time. Also the effective application of value principles is an evolving discipline that has lead to both improved understanding of the factors involved and better ways of deploying them in practice. This book makes significant contribution to both areas.

The fundamental 'edge' that has enabled value investors consistently to outperform market returns by three percent or more is rooted in the psychology of individual investment behavior. Three factors are paramount. First, many investors have always been prone to reach for dramatic large returns whatever the cost to them on an average basis. Lotteries have succeeded in every society we know of and they have always been lousy investments. The investment equivalents of lotteries are growth stocks – the Microsofts, Intels, Ciscos and other less successful internet era stocks that promised instant wealth. Montier demonstrates once again how portfolios of such stocks have systematically underperformed the market both in the US, other developed countries, and more recently, in emerging markets. The corollary of this search for growth and glamour is the undervaluation of boring, low growth, obscure and hitherto disappointing investments. A second factor, loss aversion, reinforces this bias. Investors, like individuals in everyday life, irrationally shy away from ugly, threatening situations that are likely to lead to losses, but also in some instances to outsized gains. Subjects in psychological studies offered risky alternatives to stated sure gains embrace the sure gains. When offered the same alternatives, stated as sure losses (from higher starting points), they embrace the risks, being driven to do so by the prospect of 'losses'. In investing this means that ugly stocks with poor performance in threatened industries or circumstances are sold without consideration of whether there is any compensating upside potential. They tend, therefore, to be oversold and as Montier again demonstrates, portfolios of such stocks outperform the market as a whole in all countries and all extended time periods. A third basic human tendency reinforces these first two. Investors, like all human beings have difficulty dealing with uncertainty and do so badly. At the simplest level, they accept irrationally low returns for certain outcomes (even when the uncertainty is negligibly small) in both experiments and actual markets. More damagingly, they suppress uncertainty in a variety of ways. They extrapolate past trends with unwarranted confidence. They tend to treat attractive stocks as if they are attractive for sure. They treat unattractive stocks as if they are certain to fail. Reality is, of course, messier than this, as James Montier, thoroughly demonstrates. High fliers come down to earth in large numbers and death-bed recoveries are shockingly frequent. The result is to reinforce both the overvaluation of glamour stocks and the undervaluation of problematic ones. Value investors who eschew the former and embrace the latter must overcome all these deeply embedded psychological tendencies. It is not surprising, therefore, that they are a small, if well-off, minority.

Institutional forces reinforce these basic human tendencies. It is always more comfortable in the herd than outside. Institutions naturally tend to concentrate in the same overvalued kinds of stocks as individuals. This bias is reinforced by institutional incentives. Investment companies that perform at or near the level of their peers, because of investor inertia, usually do not suffer big losses of assets under management even if their long run performance is poor. If a fund

manager underperforms significantly the consequences are more dire. Simple risk mitigation, therefore, drives institutional money managers to mirror the portfolios of their competitors. Institutions must also market themselves which they do most effectively by telling stories about investments which hide underlying uncertainties, by emphasizing blockbuster winners, and by demonstrating their avoidance of potentially unattractive situations (known as window dressing). In doing this, they both reproduce individual investor biases and reinforce them.

In addition, institutions have a preference for selling reassuring methods that involve considerable mathematical complexity but are of dubious value in practice. They develop elaborate point forecasts of future variables as evidence of their statistical, economic and industry expertise. They build complex quantitative models, rooted in often out-dated academic orthodoxies, like the CAPM, to establish their mastery of risk management and of the latest investing technology. They offer complex derivative strategies of impenetrable mathematical intricacy. What they ignore are well-established historical regularities, basic qualitative economic principles and the reality of irreducible uncertainty. James Montier is particularly good about the shortcomings of these approaches and the opportunities they create for other investors.

The achievement of above average returns is not the sole measure of investment performance. Risk matters too and it is in the area of risk mitigation that this book is perhaps most valuable. Economies produce aggregate levels of risk that, like aggregate average returns, must be borne by investors as a whole. But, in contrast to average returns, poor investment strategies can actually create risk. The obvious example of this is gambling, whether in casinos or derivatives markets, which adds an element of uncertainty (and downside) to private wealth holdings that proper behavior could simply eliminate. Sadly most investors engage in behaviors that tend to increase rather than reduce risks. Perhaps the second most important fact about investing in practice is that for the typical investment fund average returns are six hundred basis points above returns that are weighted by the size of the fund (i.e. the return in a year when assets are $2 billion counts twice as heavily as the return for a year when assets are $1 billion). In part, this represents the negative effect on agility and choice of greater fund size. But it is also means that investors move into and out of funds at exactly the wrong times. And, these movements themselves amplify risks. Disciplined behavior that is not driven by the fashions of the moment is, as Montier shows, central to any useful risk mitigation strategy.

Diversification is equally important. Whether defined as variance or permanent impairment of capital, a diversified portfolio will have less downside than a concentrated one. Most of the events that lead to permanent impairment of the earnings capacity of investments are specific to particular firms, industries or countries – a drug kills patients, the newspaper business dies or a Marxist government seizes control of Venezuela. In a portfolio of five or fewer stocks, such an event will lead to painful losses. In a portfolio of fifty or more stocks the effect will be negligible.

This does not mean full diversification, since that involves buying the market as a whole and surrendering the benefits of a value strategy. But investors must be sufficiently diversified – holding at least 15 securities across a range of industries and countries – to obtain most of the risk reduction benefits that diversification provides. If, in addition to discipline and diversification, investors avoid overpaying for the glamour stocks of the moment, then permanent losses will arise only from permanently negative macroeconomic developments. As Montier shows these are rare. Even, in Japan through the 1990s, disciplined value approaches produced diversified portfolios with systematically positive overall returns. Negative macro-development – like the Great Depression – did produce near-permanent losses. But, while these cannot be anticipated with any degree of precision – especially with regard to timing – they do seem to

be preceded by extended periods in which most investors forget that such risks exist. Under such circumstances, there are strategies of portfolio construction – defensive stocks, short-term government notes, cash and gold – and purchases of assets with valuable insurance properties, usually derivatives which tend to be cheap when investors overall perceive little macro risk and they are probably most valuable, that can protect against a significant part of downside losses. Montier, who is heavily risk focused, does an outstanding job of identifying these strategies.

Taken as a whole, therefore, this book has four compelling things that recommend it to all investors. First, it lays out the principles of smart investment practices in a systematic and compelling way. Second it supports these prescriptions with a vast amount of relevant historical and experimental data. Third, it demonstrates clearly how to apply them to current investing challenges. And finally, while entertaining, it is repetitive. This final aspect may not seem much of a recommendation, but in fact it is one of the most important aspects of the book. I find that unless I say things to my students at least four times, most of them miss the point. Whether this is because the value approach to investing is so unnatural to most human beings or because they pay attention less than half the time, I do not know. But, in either case, repetition is essential to effectively conveying a value discipline and, in this book, James Montier does it as well as I have ever seen.

Bruce Greenwald

Part I

Why Everything You Learned in Business School is Wrong

1

Six Impossible Things before Breakfast, or, How EMH has Damaged our Industry*

The efficient markets hypothesis (EMH) is the financial equivalent of Monty Python's Dead Parrot. No matter how much you point out that it is dead, the believers just respond that it is simply resting! I wouldn't really care if EMH was just some academic artefact, but as Keynes noted, 'practical men are usually the slaves of some defunct economist'. The EMH has left us with a litany of bad ideas, from CAPM to benchmarking, and risk management to shareholder value. The worst of its legacy is the terrible advice it offers on how to outperform – essentially be a better forecaster than everyone else. It is surely time to consign both the EMH and its offshoots to the dustbin of history.

- Academic theories have a very high degree of path dependence. Once a theory has been accepted it seems to take forever to dislodge it. As Max Planck said, 'Science advances one funeral at a time'. The EMH debate takes on almost religious tones on occasions. At one conference, Gene Fama yelled 'God knows markets are efficient!' This sounds like a prime example of belief bias to me (a tendency to judge by faith rather than by evidence).
- The EMH bothers me less as an academic concept (albeit an irrelevant one) than it does as a source of hindrance to sensible investing. EMH has left us with a long list of bad ideas that have influenced our industry. For instance, the capital asset pricing model (CAPM) leads to the separation of alpha and beta, which ends up distracting from the real aim of investment – 'Maximum real total returns after tax' as Sir John Templeton put it.
- This approach has also given rise to the obsession with benchmarking, and indeed a new species, Homo Ovinus – whose only concern is where it stands relative to the rest of the crowd, the living embodiment of Keynes' edict, 'That it is better for reputation to fail conventionally, than succeed unconventionally'.
- The EMH also lies at the heart of risk management, option pricing theory, and the dividend and capital structure irrelevance theorems of Modigliani and Miller, and the concept of shareholder value, all of which have inflicted serious damage upon investors. However, the most insidious aspects of the EMH are the advice it offers as to the sources of outperformance. The first is inside information, which is, of course, illegal. The second, is that to outperform

*This article appeared in Mind Matters on 17 June 2009. The material discussed was accurate at the time of publication.

you need to forecast the future better than everyone else. This has sent the investment industry on a wild goose chase for decades.

- The prima facie case against EMH is the existence of bubbles. The investment firm, GMO defines a bubble as at least a two-standard-deviation move from (real) trend. Under EMH, a two-standard-deviation event should occur roughly every 44 years. However, GMO found some 30 plus bubbles since 1925 – that is slightly more than one every three years!
- The supporters of EMH fall back on what they call their 'Nuclear Bomb', the failure of active management to outperform the index. However, this is to confuse the absence of evidence with the evidence of absence. Additionally, recent research shows that career risk minimization is the defining characteristic of institutional investment. They don't even try to outperform!

What follows is the text of a speech to be delivered at the CFA UK conference on 'Whatever happened to EMH?', dedicated to Peter Bernstein. Peter will be fondly remembered and sadly missed by all who work in investment. Although he and I often ended up on opposite sides of the debates, he was a true gentleman and always a pleasure to discuss ideas with. I am sure Peter would have disagreed with some, much and perhaps all of my speech, but I'm equally sure he would have enjoyed the discussion.

THE DEAD PARROT OF FINANCE

Given that this is the UK division of the CFA I am sure that The Monty Python Dead Parrot Sketch will be familiar to all of you. The EMH is the financial equivalent of the Dead Parrot (Figure 1.1). I feel like the John Cleese character (an exceedingly annoyed customer who recently purchased a parrot) returning to the petshop to berate the owner:

> E's passed on! This parrot is no more! He has ceased to be! 'E's expired and gone to meet 'is maker. 'E's a stiff! Bereft of life, 'e rests in peace! If you hadn't nailed 'im to the perch 'e'd be pushing up the daisies! 'Is metabolic processes are now 'istory! 'E's off the twig! 'E's kicked the bucket, 'e's shuffled off 'is mortal coil, run down the curtain and joined the bleedin' choir invisible!! This is an ex-parrot!!

The shopkeeper (picture Gene Fama if you will) keeps insisting that the parrot is simply resting. Incidentally, the Dead Parrot Sketch takes on even more meaning when you recall Stephen Ross's words that 'All it takes to turn a parrot into a learned financial economist is just one word – arbitrage'.

The EMH supporters have strong similarities with the Jesuit astronomers of the 17th century who desperately wanted to maintain the assumption that the Sun revolved around the Earth. The reason for this desire to protect the maintained hypothesis was simple. If the Sun didn't revolve around the Earth, then the Bible's tale of Joshua asking God to make the Sun stand still in the sky was a lie. A bible that lies even once can't be the inerrant foundation for faith!

The efficient market hypothesis (EMH) has done massive amounts of damage to our industry. But before I explore some errors embedded within the approach and the havoc they have wreaked, I would like to say a few words on why the EMH exists at all.

Academic theories are notoriously subject to path dependence (or hysteresis, if you prefer). Once a theory has been adopted it takes an enormous amount of effort to dislocate it. As Max Planck said, 'Science advances one funeral at a time.'

Figure 1.1 The dead parrot of finance!
Source: SG Global Strategy.

The EMH has been around in one form or another since the Middle Ages (the earliest debate I can find is between St Thomas Aquinas and other monks on the 'just' price to charge for corn, with St Thomas arguing that the 'just' price was the market price). Just imagine we had all grown up in a parallel universe. David Hirschleifer did exactly that: welcome to his world of the Deficient Markets Hypothesis.

> A school of sociologists at the University of Chicago is proposing the Deficient Markets Hypothesis – that prices inaccurately reflect all information. A brilliant Stanford psychologist, call him Bill Blunte, invents the Deranged Anticipation and Perception Model (DAPM), in which proxies for market misevaluation are used to predict security returns. Imagine the euphoria when researchers discovered that these mispricing proxies (such as book/market, earnings/price and past returns), and mood indicators (such as amount of sunlight) turned out to be strong predictors of future returns. At this point, it would seem that the Deficient Markets Hypothesis was the best-confirmed theory in social science.
>
> To be sure, dissatisfied practitioners would have complained that it is harder to actually make money than the ivory tower theorists claim. One can even imagine some academic heretics documenting rapid short-term stock market responses to news arrival in event studies, and arguing that security return predictability results from rational premia for bearing risk. Would the old guard surrender easily? Not when they could appeal to intertemporal versions of the DAPM, in which mispricing is only corrected slowly. In such a setting, short window event studies cannot uncover the market's inefficient response to new information. More generally, given the strong theoretical underpinnings of market inefficiency, the rebels would have an uphill fight.

In finance we seem to have a chronic love affair with elegant theories. Our faculties for critical thinking seem to have been overcome by the seductive power of mathematical beauty. A long long time ago, when I was a young and impressionable lad starting out in my study of economics, I too was enthralled by the bewitching beauty and power of the EMH/rational expectations approach (akin to the Dark Side in Star Wars). However, in practice we should always remember that there are no points for elegance!

My own disillusionment with EMH and the ultra rational *Homo Economicus* that it rests upon came in my third year of university. I sat on the oversight committee for my degree course as a student representative. At the university I attended it was possible to elect to graduate with a specialism in Business Economics, if you took a prescribed set of courses. The courses necessary to attain this degree were spread over two years. It wasn't possible to do all the courses in one year, so students needed to stagger their electives. Yet at the beginning of the third year I was horrified to find students coming to me to complain that they hadn't realized this! These young economists had failed to solve the simplest two-period optimization problem I can imagine! What hope for the rest of the world? Perhaps I am living evidence that finance is like smoking. Ex-smokers always seem to provide the most ardent opposition to anyone lighting up. Perhaps the same thing is true in finance!

THE QUEEN OF HEARTS AND IMPOSSIBLE BELIEFS

I'm quite sure the Queen of Hearts would have made an excellent EMH economist.

> Alice laughed: 'There's no use trying,' she said; 'one can't believe impossible things.'
>
> I daresay you haven't had much practice,' said the Queen. 'When I was younger, I always did it for half an hour a day. Why, sometimes I've believed as many as six impossible things before breakfast.
>
> Lewis Carroll, *Alice in Wonderland*.

Earlier I alluded to a startling lack of critical thinking in finance. This lack of 'logic' isn't specific to finance; in general we, as a species, suffer belief bias. This a tendency to evaluate the validity of an argument on the basis of whether or not one agrees with the conclusion, rather than on whether or not it follows logically from the premise. Consider these four syllogisms:

1. No police dogs are vicious
   Some highly trained dogs are vicious
   Therefore some highly trained dogs are not police dogs.
2. No nutritional things are inexpensive.
   Some vitamin pills are inexpensive.
   Therefore, some vitamin pills are not nutritional.
3. No addictive things are inexpensive
   Some cigarettes are inexpensive
   Therefore, some addictive things are not cigarettes.
4. No millionaires are hard workers
   Some rich people are hard workers
   Therefore, some millionaires are not rich people.

These four syllogisms provide us with a mixture of validity and believability. Table 1.1 separates out the problems along these two dimensions. This enables us to assess which criteria people use in reaching their decisions.

As Figure 1.2 reveals, it is the believability not the validity of the concept that seems to drive behaviour. When validity and believability coincide, then 90% of subjects reach the correct conclusion. However, when the puzzle is invalid but believable, some 66% still accepted the conclusion as true. When the puzzle is valid but unbelievable only around 60% of subjects accepted the conclusion as true. Thus we have a tendency to judge things by their believability rather than their validity – which is clear evidence that logic goes out of the window when beliefs are strong.

All this talk about beliefs makes EMH sound like a religion. Indeed, it has some overlap with religion in that belief appears to be based on faith rather than proof. Debating the subject can also give rise to the equivalent of religious fanaticism. In his book '*The New Finance: The Case Against Efficient Markets*', Robert Haugen (long regarded as a heretic by many in finance) recalls a conference he was speaking at where he listed various inefficiencies. Gene Fama was in the audience and at one point yelled; 'You're a criminal . . . God knows markets are efficient.'

Table 1.1 Validity and belief

		Belief	
		Believable	Unbelievable
Logic	**Valid**	Dogs (VB)	Vitamins (VU)
	Invalid	Cigarettes (IB)	Millionaires (IU)

Source: SG Equity Strategy.

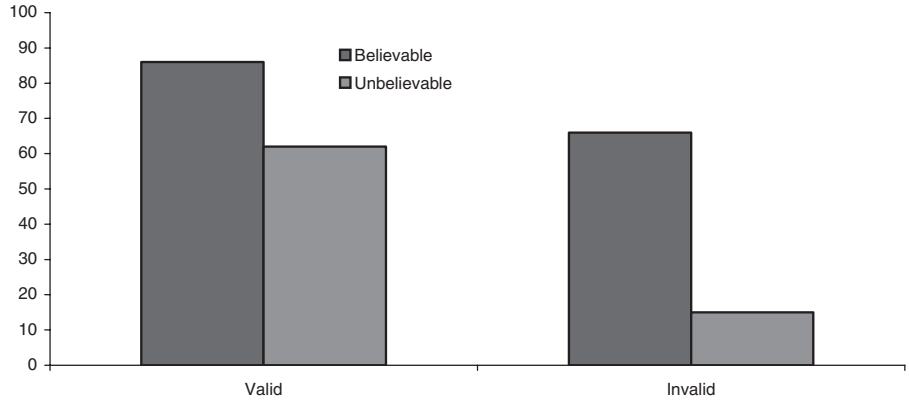

Figure 1.2 Percentage accepting conclusion as true
Source: Evans *et al*. (1983).

SLAVES OF SOME DEFUNCT ECONOMIST

To be honest I wouldn't really care if EMH was just some academic artefact. The real damage unleashed by the EMH stems from the fact that, as Keynes long ago noted, 'practical men... are usually the slaves of some defunct economist.'

So let's turn to the investment legacy with which the EMH has burdened us: first off is the capital asset pricing model (CAPM). I've criticized the CAPM elsewhere (see Chapter 2), so I won't dwell on the flaws here, but suffice it to say that my view remains that CAPM is CRAP (completely redundant asset pricing).

The aspects of CAPM that we do need to address here briefly are those that hinder the investment process – one of the most pronounced of which is the obsession with performance measurement. The separation of alpha and beta is at best an irrelevance and at worst a serious distraction from the true nature of investment. Sir John Templeton said it best when he observed that 'the aim of investment is maximum real returns after tax'. Yet instead of focusing on this target, we have spawned one industry that does nothing other than pigeon-hole investors into categories.

As the late, great Bob Kirby opined, 'Performance measurement is one of those basically good ideas that somehow got totally out of control. In many cases, the intense application of performance measurement techniques has actually served to impede the purpose it is supposed to serve.'

The obsession with benchmarking also gives rise to one of the biggest sources of bias in our industry – career risk. For a benchmarked investor, risk is measured as tracking error. This gives rise to Homo Ovinus (Figure 1.3) – a species who is concerned purely with where he stands relative to the rest of the crowd. (For those who aren't up in time to listen to Farming Today, Ovine is the proper name for sheep.) This species is the living embodiment of Keynes' edict that 'it is better for reputation to fail conventionally than to succeed unconventionally'. More on this poor creature a little later.

While on the subject of benchmarking we can't leave without observing that EMH and CAPM also give rise to market indexing. Only in an efficient market is a market cap-weighted