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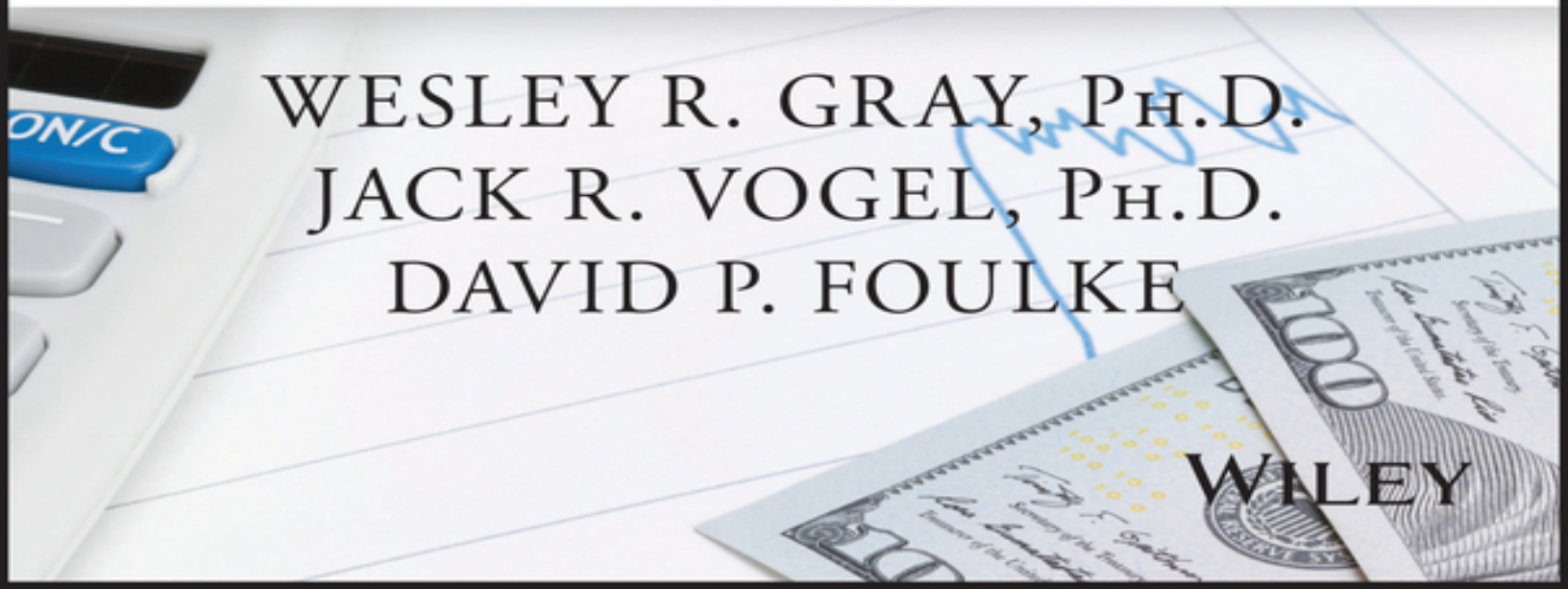
A Simple Solution to Build and Protect Your Wealth



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Published by John Wiley & Sons, Inc., Hoboken, New Jersey.

Published simultaneously in Canada.

Library of Congress Cataloging-in-Publication Data

Gray, Wesley R.

DIY financial advisor : a simple solution to build and protect your wealth / Wesley R. Gray, PhD, Jack R. Vogel, PhD, and David P. Foulke.

pages cm. – (Wiley finance series)

Includes index.

ISBN 978-1-119-07150-1 (cloth) — ISBN 978-1-119-12491-7 (epdf) – ISBN 978-1-119-12490-0 (epub)

1. Portfolio management. 2. Families–Economic aspects. 3. Wealth–Management. 4. Investment advisors. I. Vogel, Jack R., 1983- II. Foulke, David

P., 1966- III. Title.
HG4529.5.G736 2015
332.024–dc23
2015013795
Cover Design: Wiley
Cover Images: Investment charts with laptop © Nonwarit/Shutterstock;
Market graph, dollars and calculator © iStock.com/Niyazz

For those investors looking to get empowered through education.

—Wes, Jack, and David

Preface

This book is a synopsis of our research findings developed while serving as a consultant and asset manager for large family offices. By way of background, a family office is a company, or group of people, who manage the wealth a family has gained over generations. The term *family office* has an element of cachet, and even mystique, because it is usually associated with the mega-wealthy. However, practically speaking, virtually any family that manages its investments—independent of the size of the investment pool—could be considered a family office. The difference is mainly semantic. For example, the term *individual investor* is often a reference to the head of a household who manages a family's assets. This “individual investor” is a de facto family office—no matter whether this individual investor manages a $10,000 portfolio or a $5,000,000,000 portfolio. The goal is the same as for even the largest family office.

There are benefits and costs to being a family office. The key advantage a family office or, by extension, any individual investor, has over so-called “institutional” investors, is the ability to make long-term investment decisions that maximize after-tax, after-fee risk-adjusted performance, without fear of a misalignment of incentives—those who own the money are the best stewards of the money. By contrast, a professional institutional investor, or “hired gun,” is crippled by a misalignment between the incentives of the owners of capital and those of the investment manager, who has a separate incentive to keep his job, which can create a shorter-term perspective that can conflict with a long-term perspective. The decision that maximizes the after-fee, after-tax, risk-adjusted returns on

capital, while optimal for the owner of capital, is not always the optimal decision for a third-party investment manager.

The key disadvantages for a family office, or an individual investor, relative to an institutional investor, are the effect of taxes and a knowledge gap that is sometimes more closely related to perception than reality. But fear not; this book is meant to fill the knowledge gap by providing the reader with the tools to be successful and the confidence to minimize the use of “experts.” And taxes, while challenging, can be minimized by limiting trading activity, engaging in smart planning, and by following some of the simple rules we outline in this book.

Perhaps you are skeptical that you can manage your own wealth. After all, legions of wealth managers have probably told you repeatedly that you cannot. We are here to tell you that you can. We have been lucky to work with and learn from some superb family offices, and the people that run their organizations. The main finding from our experience is that complexity does not imply value—especially when talking about investments.

Many less wealthy investors are told that the mega-rich benefit from their access to arcane strategies, hedge funds, and private equity investments. We are here to tell you that this popular and widespread meme has been propagated by salesmen, not by evidence: access to overpriced, opaque, complex, tax-inefficient exposures typically managed by egomaniacs is not an advantage—it is a serious disadvantage!

What matters in investing are avoiding psychology traps and sticking to the FACTS (fees, access, complexity, taxes, and search), a framework we describe in Chapter 5. These simple concepts apply to everyone, not just the ultra-wealthy. The findings of this book are therefore applicable to the middle-class as well as to the mega-rich. Attempting

to maintain and grow wealth accumulated over a lifetime is a task that is equally daunting for both individuals and for big name family offices.

Our natural inclination is to succumb to the challenge of portfolio management and let an “expert” deal with the problem. For a variety of reasons we discuss in this book, we should resist this urge to go with our gut instinct. We suggest that investors maintain direct control, or at least a thorough understanding, of how their hard-earned wealth is managed.

Our book is meant to be an educational journey that slowly builds confidence in one's own ability to manage a portfolio. In our book, we explore a potential solution that can be applicable to a wide-variety of investors, from the ultra-high-net-worth to middle-class individual, all of whom are focused on similar goals of preserving and growing their capital over time.

Acknowledgments

We have had enormous support from many colleagues, friends, and family in making this book a reality. We thank our wives, Katie Gray, Meg Vogel, and Eliza Foulke for their continual support and for managing our chaotic kids so we could write our manuscript. We'd also like to thank the entire team at Alpha Architect, for dealing with the three of us while we drafted the initial manuscript. Tian Yao, Yang Xu, Tao Wang, Pat Cleary, Carl Kanner, and Xin Song—we are forever indebted! We'd also like to thank outside readers for their early comments: Sam Lee at Morningstar, Ben Carlson at AWealthofCommonSense.com, and Sam Taylor at Fidelity Investments. Finally, Edward Stern and his team at Hartz Capital, and Bob Kanner and his team at PUBCO, have been invaluable mentors in our endeavor to understand how one should operate a family office.

Part One

Why You Can Beat the Experts

This book is organized into two parts. Part One sets out the rationale and evidence supporting simple, systematic processes. We begin by questioning society's reliance on “expert” opinion. Highlighting the evidence behind the performance of expert opinion, we explain why experts are self-interested and (surprise) are prone to the same behavioral biases that afflict all human beings. Finally, we highlight that experts often rely on stories, not facts.

Part Two outlines how individual investors, managing from $50 thousand to $5 billion, can beat the experts. We outline the reasons why a do-it-yourself (DIY) approach makes sense. Next, we outline various asset allocation frameworks and explain why a simple approach is probably most effective. Next, following this discussion, we explore simple evidence-based risk-management concepts, which help a DIY investor avoid large losses when investing his capital. Next, we outline ways in which a DIY investor can develop a systematic approach to add value to his equity portfolios by incorporating simple value-based and momentum-based security selection techniques. We then highlight techniques to implement approaches to momentum-based security selection processes. We move on to simple asset allocation frameworks, and we end with a discussion of simple, evidence-based risk-management concepts. Finally, we end Part Two by integrating the knowledge discussed on asset allocation, risk-management, and security selection into a full-fledged investment program with an overview of what we believe to be a reasonable DIY Financial Advisor solution.

Chapter 1
Are Experts Trying Too Hard?

> *"A speculator can always be beset by an unfathomable event—a constellation of unpredictable and unforeseen events—that leads to a disaster that seemingly was impossible, and it's always important to keep this in mind."*
>
> —Victor Niederhoffer, Commenting on the 1997 Asian Crisis[1]

It took Victor Niederhoffer many years of study and a lot of hard work to become widely known as an expert in financial markets. After graduating from Harvard and receiving his PhD in finance from the University of Chicago, he continued his ascent within academia, teaching at Berkeley for five years. As an academic, he authored numerous research papers on market anomalies and how one might profit from following clever trading strategies.

As Niederhoffer learned more, and became increasingly sophisticated, he sensed an opportunity to use his academic knowledge to make money. Retiring from academia in 1980, he chose to pursue a career as a practitioner in financial markets. His firm, Niederhoffer Investments, was so successful that he caught the notice of investing guru George Soros. Niederhoffer began working with Soros in the 1980s, advising him on commodities and fixed-income trading. Eventually, Soros allocated $100 million to his firm. During the early 1990s, it was rumored in the financial press that Niederhoffer had been generating returns of 30 percent, or more, *per year*.

In 1996, based on an illustrious track record and a distinguished trading career, Niederhoffer published his

personal cookbook, *The Education of a Speculator*, in which he revealed his approach to trading and making money in the markets. Who couldn't learn from this titan of finance? And he was a titan. When his book hit the shelves, Niederhoffer was among the best-known hedge fund managers in the United States, was at the pinnacle of his profession, and had become known as one of the foremost experts on investing worldwide. Niederhoffer was not only an expert, he was an expert's expert.

And so, in 1997, as a widely respected expert in financial markets, Niederhoffer may have been surprised when he experienced steep losses on a Thai currency bet. But Niederhoffer had experienced volatility before; he just needed to apply his prodigious investing skill and pull yet another rabbit out of a hat. While Niederhoffer had fallen behind during early 1997, his real problems began when he chose a risky strategy to recover from those losses: He began selling out-of-the-money puts on the S&P 500.[2]

Selling out-of-the-money puts has been likened to picking up nickels in front of a steamroller. You get a little bit of money (the nickel) for the contract, but you agree to purchase a stock at a future price (the steamroller). Everything works so long as the steam roller doesn't accelerate. However, should our steam roller operator drop his sandwich and inadvertently step on the gas (decrease the stock price), you could find yourself in a pressing situation…

This pressing situation can become downright perilous when market prices approach or fall below the put strike price. If you promise to buy a stock for $10 and its price on the open market is $5, you can be sure that your creditors will come to collect. And if you can't honor your promise to fulfill the contract, well, that's when you need to worry about the steamroller.

In late October, Niederhoffer's out-of-the-money November puts were trading at $0.60, but the Asian financial crisis continued to unfold and began to rattle US markets. The value of his puts quadrupled to $2.40, although they were still over 15 percent out of the money. Niederhoffer was confident, stayed the course, and left his position intact (he had come back from worse than this).

The following week, the S&P plunged by 7 percent, and the implied volatility of the puts skyrocketed. The puts were both closer to being “in the money” *and* had more implied volatility (the market believed the chance of them ending in the money was greater). Each of these effects made them more expensive. With this put valuation double-whammy, the value of Niederhoffer's puts exploded, which was very bad, since Niederhoffer had sold them. In just over a week's time, Niederhoffer's short position had moved against him by a factor of 25 times or more. This extreme move proved to be too much, even for the master. Shortly thereafter, Niederhoffer had a margin call that he could not meet; his fund's account had gone bankrupt.[3]Cue the steamroller.

How can it be that Victor Niederhoffer—a noted academic, a respected financial expert, a lion on Wall Street, and a financial press darling—could bankrupt his fund by pursuing a volatile options strategy that first year business school students are cautioned against as being too risky? And what did this say about Niederhoffer's expertise?

Some might argue that once Niederhoffer took losses on his Thai currency bet, his incentives changed and affected his perspective. Facing such losses, perhaps this risky option strategy seemed like a reasonable response. Perhaps it was at this point that Niederhoffer became a slave to his emotions, and therefore ceased to be an expert. Perhaps he

simply believed in his innate abilities. Perhaps he just wanted to take on more risk. We will never know.

Yet we rely on experts like Niederhoffer because they are supposed to have superior knowledge! They, given their expert credentials, should reach the right conclusion more often than we, the nonexperts. Once Niederhoffer went bust, surely his expert credentials were revoked by the masses and relegated to nonexpert status, right?

Mustafa Zaida, a professional investor who ran a European hedge fund, apparently didn't think so. In 2002, Zaida seeded a new offshore fund called the Matador Fund, with Niederhoffer directing the trading activities. Zaida reportedly commented, “He's definitely learned his lesson.” It's hard to know exactly what Zaida's thinking was here, but he clearly believed Niederhoffer still maintained at least some degree of expertise.

The Matador Fund performed well initially, compounding at high rates for several years and growing to $350 million. Then in 2007, during the credit crisis, Matador reportedly lost more than 75 percent of its value. As had happened in 1997, Niederhoffer's account was liquidated. He had “blown up” for the second time in about a decade.[4] And while these episodes were highly public, there are less public rumors that Niederhoffer blew up a third time, although we don't know whether to give much credence to such rumors.

Regardless, for fairly extended periods of time, Niederhoffer definitely appeared to be an expert; he generated high returns, seemingly without excessive downside risk. But did he eliminate the possibility of extreme downside outcomes? No. This was emphatically not the case, as he empirically demonstrated his ability to be steamrolled, not once, but twice.

Some might argue that if Niederhoffer told investors, “You may lose all your money pursuing this strategy, but it will give you high returns,” then they were not really relying on his expertise to protect them from bankruptcy. But perhaps this is beside the point. If you are aware of a strategy that compounds at 30 percent, but you know that every few years there will be a year when you lose all of your money, then that is not a strategy worth pursuing. Any expert who recommends such a strategy should not be considered an expert in financial matters.

Of course, there is an alternative explanation here. Maybe Niederhoffer wasn't an expert at all. Maybe Niederhoffer just chose risky strategies that made him look like a genius while they were working, but when he blew up, he demonstrated that he wasn't doing anything special at all. The emperor was revealed to have no clothes. All the fancy academic pedigrees, the studies and papers, the published book, the high returns—in short, all the things that made Niederhoffer an “expert,” were perhaps really just an illusion. Perhaps there really was no “expertise” involved, whatsoever. Certainly, after several bankruptcies, that conclusion seems reasonable.

Of course, this story is not meant to pick on Niederhoffer. Like all experts, Niederhoffer is only human. But as we will highlight over the next few chapters, humans are systematically flawed. And so if humans are systematically flawed, why do we still rely on experts for all of our most important decisions?

Why Do We Rely on Experts?

> *“If you do fundamental trading, one morning you feel like a genius, the next day you feel like an idiot…by 1998 I decided we would go 100% models…we slavishly follow the model. You do whatever it [the model] says no matter how smart or dumb you think it is. And that turned out to be a wonderful business.”*
>
> —Jim Simons, Founder, Renaissance Technologies[5]

Let's start off by examining our coauthor, Wes Gray, a person many would consider an “expert.” In fact, in many respects, Wes is eerily similar to Vic Niederhoffer. Wes graduated from an uber-prestigious undergraduate business program at the Wharton School of the University of Pennsylvania and earned an MBA and a PhD in finance from the University of Chicago—sound familiar? Well, it should: This is essentially the same academic training as Vic Niederhoffer.

Upon completion of his PhD, Wes entered academia and spent four years as a full-time tenure-track professor. Wes resigned his post as a full-time academic because he raised almost $200 million in assets from a multibillion-dollar family office and a handful of other ultra-high-net-worth families. This is all uncannily similar to how Niederhoffer started his career. Vic also did his time as a professor, and then left academia after a billionaire (i.e., Soros) gave him a large slug of capital. Let's hope the similarity in the stories between Vic and Wes ends at this stage. The last thing Wes wants to do is blow up multiple asset management firms and lose investor capital. He is also deathly afraid of steamrollers.

Clearly, some people believe Wes is an “expert” and are willing to let him manage a large amount of capital without a multi-decade track record. But why might investors' future experiences differ between Vic and Wes? On paper, the two Chicago finance PhDs are virtually the same. It has

been said that the definition of insanity is doing the same thing over and over again and expecting a different outcome. So should we avoid an expert like Wes because he is essentially a carbon copy of Vic?

We think the key difference between Wes and Vic is not related to their financial expertise. The difference is related to their skepticism with regard to their own expertise. On most discretionary, day-to-day aspects of investing, for example, picking individual stock picks or the direction of interest rates, Wes believes firmly that he is completely wrong almost all of the time, whereas Vic believed he could master the markets. And while an expert with no faith in his or her ability sounds counterintuitive, it is actually invaluable because this approach to being an expert minimizes the chance for overconfidence. In fact, Wes has established internal firm structures to ensure that he is reminded on a frequent basis that he is a terrible expert in this sense. But why would an expert systematically convince himself that he is not an expert? The reason Wes engages in this peculiar behavior is explained in a quote often attributed to Mark Twain, “It ain't what we don't know that causes us problems; it's what we know for sure that simply ain't so.”

An expert, or any market participant, must acknowledge his own fallibility and must constantly remind himself why he is flawed. This is very difficult to do consistently, since our natural inclination is to believe we are better than average. Unfortunately, on average, we are only going to be average. The ability to question one's own convictions, even when they are firmly held, turns out to be a very useful thing in investing.

The next example highlights how our minds can tell us something with 100 percent confidence, when in fact, what our mind is telling us is 100 percent incorrect.

Figure 1.1 highlights this point.[6] Stare at box A and box B in the figure. If you are a human being you will identify that box A is darker than box B.

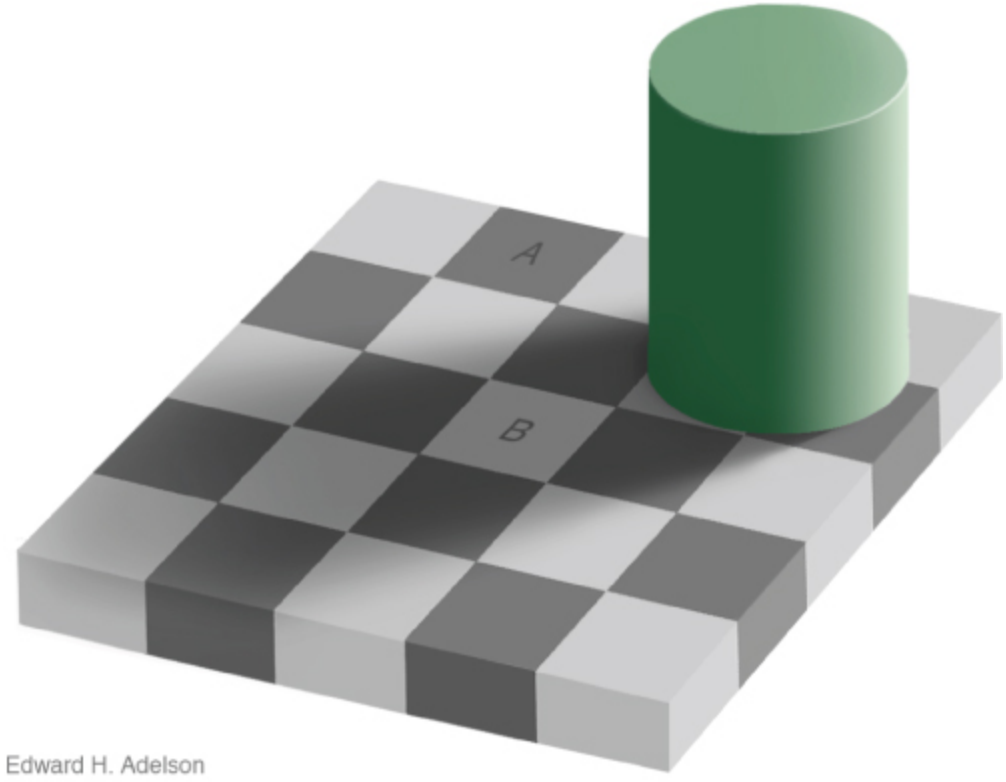

Figure 1.1 Ed Adelson Checkerboard Illusion

Then ask yourself:

"How much would I bet that A is darker than B?" Would you bet $5? $20? $100?

Or perhaps you would borrow money from a bank, and leverage your bet up 10 times and bet $1,000,000 on this bet. Why not, right? It is a *guarantee*.

We know how a human approaches this question, but how does a computer think about this question? A computer identifies the red-green-blue (RGB) values for a pixel in box A and the RGB values for a pixel in B. Next, the computer tabulates the results: 120-120-120 for box A; 120-120-120 for box B. Finally, the computer compares the RGB values

of the pixel in A and the pixel in B, identifies a match, and concludes that box A and box B are the exact same color. The results are clear to the computer.

So which is it? After taking into consideration the results from the computer algorithm, would you still consider A darker than B? We don't know about you, but we still think A looks darker than B—call us crazy. But then that's what makes us human—we aren't perfect.

The sad reality is the computer is correct, and our perception is wrong. Our mind is being fooled by an illusion created by a vision scientist at MIT, Professor Ed Adelson. Dr. Adelson exploits local contrast between neighboring checker squares, and the mind's perception of the pillar as casting a shadow. The combination creates a powerful illusion that tricks every human mind. The human mind is, as succinctly stated by Duke Psychology Professor Dan Ariely, “predictably irrational.”

That may seem to be a strong statement. Perhaps the illusion as revealed in Figure 1.2 has convinced you that our minds may not be perfect in certain isolated settings (yes, the parallel bars are the same color from top to bottom). Or perhaps it has only persuaded you to believe that while a subset of the population may be flawed, you still possess a perfectly rational and logical mind. Don't be too sure, as a well-established body of academic literature in psychology demonstrates conclusively that humans are prone to poor decision-making across a broad range of situations.

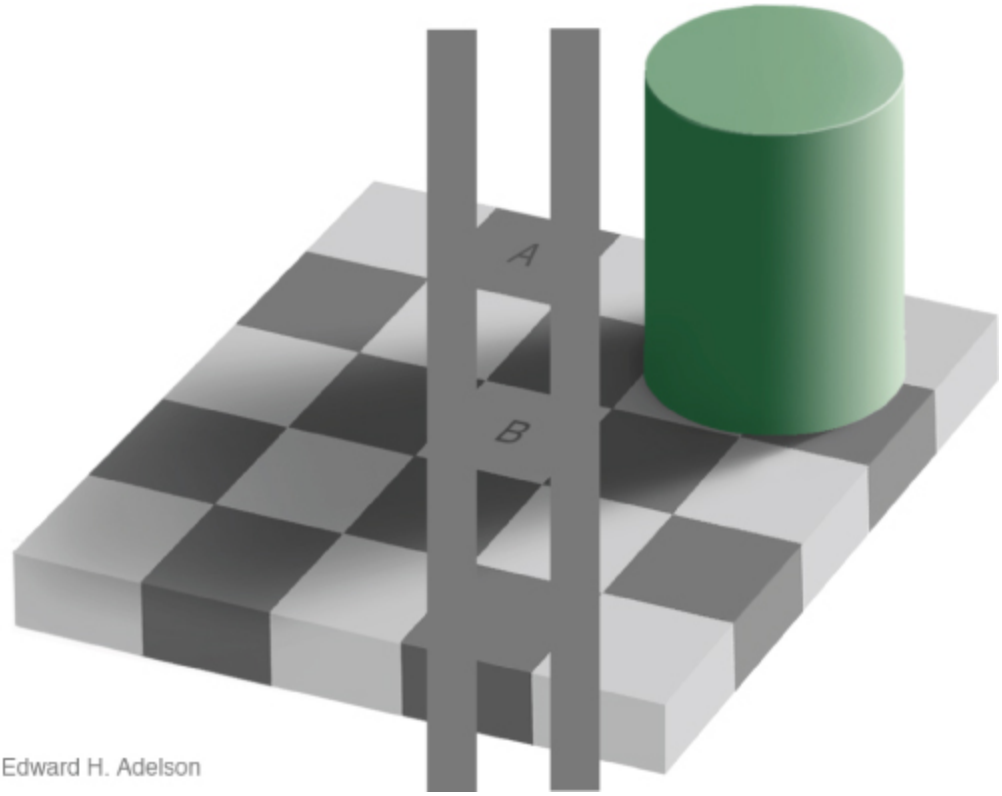

Figure 1.2 Ed Adelson Checkerboard Illusion Answer

But what about experts? Surely, experts are beyond the grip of such cognitive bias? We often assume that professionals with years of experience and expertise in a particular field are better equipped and incentivized to make unbiased decisions. Unfortunately for experts, and for those who rely on them, the academic evidence is unequivocal: systematic decision-making, which relies on models, outperforms discretionary decision-making, or experts. We will come back to this point in a moment, but first let's discuss some other reasons experts might not always provide flawless advice.

What Are the Experts' Incentives?

When paying a financial expert to manage your money, a good question to ask is the following: What are the experts' incentives? This is important to know, because even if the

expert has true knowledge about financial markets, misaligned incentives can destroy an *edge* the expert has, or make the expert look better than he really is. Here are a few examples of when experts' incentives might not be properly aligned:

- *Focusing on short-term vs. long-term results*. Consider a financial expert creating a value strategy with an assumed “edge,” or ability to beat the market in the long run. This expert can decide to invest in 200 of her best stock ideas or 50 of her best stock ideas. The expert faces a trade-off between these two approaches. On one hand, the expert knows that, over the long-haul, buying the cheapest 50 value stocks will be a better risk-adjusted bet than the 200-stock portfolio, since the larger portfolio would be dilutive to performance in the long run. On the other hand, the expert also understands that the 50-stock portfolio has a higher chance of losing to a standard benchmark in a given year, which will could cause her to lose clients in that year. The expert, who assumes, correctly, that most investors focus on short-term results, will opt for a 200-stock portfolio in order to minimize downside risk (and retain clients), and thus, will create a suboptimal product that doesn't fully leverage her expertise. In effect, the expert is indeed an expert, but there is an incentive alignment problem between the expert and investors that negates the benefits of her expertise.
- *Exploiting authority to generate business*. Let's say we have two financial experts. One expert shows up in a pair of jeans and a sweatshirt and states that simply investing in the S&P 500 from 1927 to 2013 has a return of 9.91 percent on average. The second expert shows up in an Armani suit, with his research team of PhDs (also in suits) behind him, and tells you that with his