Praise for *Delivering Alpha*

Ochoa-Brillembourg's 30-year record—140 basis points above a portfolio of benchmarks, with 75 percent of rolling three-year periods yielding above-market returns—creates all the credibility necessary to make her book a primer for every serious investor. However, the real greatness of *Delivering Alpha* is how Ochoa-Brillembourg helps investors navigate the 25 percent of rolling three-year periods when they feel like failures. "There is no worse professional pain than underperforming your benchmarks." For Ochoa-Brillembourg this is where that battle for superior performance is won with philosophical vision and disciplined organization.

—PETER ACKERMAN, former head of special projects in the high yield and convertible bond department and head of international capital markets, Drexel Burnham Lambert

What a marvelous book! Smart, informative, intelligently wrought, and beautifully written. I've been in management for my entire career, running offices and divisions for two New York publishers as well as the *Washington Post* and the Library of Congress, and I have never read as engaging and illuminating a business book as Hilda Ochoa-Brillembourg's *Delivering Alpha*. Punctuated throughout with entertaining asides, from Albert Einstein to Oscar Wilde—as well as lessons from her personal experiences—this is a primer for anyone who wishes to understand leadership practices, investment markets, the building of prosperity, the economy as a whole, and the human component that underlies all these.

—MARIE ARANA, prizewinning author, most recently of *Bolivar: American Liberator*, and literary director, Library of Congress

Those of us who know her from her Venezuelan Quinceañera years know her as Mañanita: an unusually thoughtful girl. Now Hilda has become an unusually thoughtful and experienced portfolio manager, gifting us an unusually charming and expert account of what it takes to add value to life and portfolios alike. She teaches us it's more important over the long run to master the right piñata culture than to take home the most candies. A great lesson for the UN Security Council members. An admirable life and book.

—AMBASSADOR DIEGO ARRIA of Venezuela, former president of the UN Security Council

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In the sea of life, while many drift with the current, a brilliant few become the force of waves that crash the status quo and carry us forward. Hilda Ochoa-Brillembourg is one such force. *Delivering Alpha* captures the energy that imagined, developed, and nurtured an entity marked by integrity, innovation, and excellence in the pursuit of alpha. No matter one's investment acuity, readers will appreciate the illumination of ideas and the manifold skills needed to amplify that genius into practical and positive results.

—CAROL GREFENSTETTE BATES, cofounder and former managing director, Strategic Investment Group

I never see this. Ever. As if penning the last letter to her heirs, one of the great minds in global investing sets out everything she has learned in 40 years. Strategy, tactics, rules of thumb, avoidable mistakes, and the talent, psychology, and governance of great investment cultures. Hilda Ochoa-Brillembourg writes for experts and professionals. But there is enough here to make anyone, in the words of the English proverb, "healthy, wealthy, and wise."

—DAVID G. BRADLEY, chairman, Atlantic Media Group

Hilda Ochoa-Brillembourg has written a compelling insider's tour through professional, sophisticated investing. With wisdom, clarity, and the charming relief of personal stories—from childhood piñata theory to boardroom strategy—she unpacks how the best investors achieve strong, stable returns over time. *Delivering Alpha* allows all of us to learn from the very best.

—KATHERINE BRADLEY, founding chairman, CityBridge Education

It is widely acknowledged that good governance is critical to an organization's long-term success. Actually implementing such governance, however, is another matter entirely. In *Delivering Alpha*, Hilda Ochoa-Brillembourg expertly demonstrates not only *why* good governance matters, but also *what* it looks like and *how* it can be achieved. Any manager wishing to secure a strong and stable future for his or her organization will benefit from reading this book and absorbing Ochoa-Brillembourg's wisdom.

—ARTHUR C. BROOKS, president, American Enterprise Institute

The concepts and practices Hilda describes here were developed by bringing to the task of portfolio management the best analytical resources and experience-born judgment and insight we could find. It was exciting to be pioneering a new service model for large asset pools, and particularly satisfying to be doing so among respected, creative colleagues and friends. The

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only thing better than reading about it in this wonderful book was living it. Hilda offers the reader the opportunity to do both.

—MARY CHOKSI, cofounder and former managing director, Strategic Investment Group

Hilda Ochoa is one of the great investors of the last 30 years, and her book *Delivering Alpha* is a one-of-a-kind insightful journey into the facts, processes, and principles of delivering sustainable value-added in investing. And it's a pleasure to read.

—RAY DALIO, founder, co-CEO, and cochairman of Bridgewater Associates and author of the *New York Times* number one bestseller *Principles*

Delivering Alpha, like its author, Hilda, is a fountain of knowledge and wisdom. This book is a guide for institutional fiduciaries on how to create alpha over a generation time frame. Hilda's experience highlights how to combine the science of finance with pragmatic solutions to governance challenges that face institutional investors and how a culture of innovation renews the investment tools as well as renewing the governance relationships. The best reward is the enhanced wealth creation to the ultimate beneficiaries of our joint efforts.

—MICHAEL DUFFY, cofounder and former managing director, Strategic Investment Group

A one-of-a-kind book. Light on theory and serious on practice, *Delivering Alpha* is for any finance professional who wants to know how to add sustainable value to globally diversified institutional portfolios beyond what's learned in textbooks.

—RICARDO ERNST, Baratta Chair in Global Business, McDonough School of Business, Georgetown University

Over three decades, the ex-World Bank investment team led by Hilda Ochoa-Brillembourg has outperformed the market benchmark without generating any additional volatility. This well-constructed book lays out the thinking that underpinned this achievement. A mind-clearing and often mind-stretching read for investors.

—SEBASTIAN MALLABY, the Paul Volcker Senior Fellow in International Economics at the Council on Foreign Relations and author of *More Money Than God: Hedge Funds and the Making of a New Elite* and *The Man Who Knew: The Life and Times of Alan Greenspan*

Alpha is the holy grail of investment management. It is rare, difficult, elusive, and enormously valuable. Hilda is one of the very few managers who have delivered alpha consistently over a long period of time. Pay attention . . .

—JACK MEYER, former president and CEO of
the Harvard Management Company and founder CEO
of Convexity Capital Management

Hilda's book reflects both her investment acumen and creative instincts, which she translated into an enduring enterprise that continues to thrive years after her departure. As the investment environment evolves, the principles of analytical rigor, disciplined governance, innovation, and collaboration espoused in Hilda's book are her lasting legacy that guides us in the continuing pursuit of alpha for all of our clients.

—BRIAN A. MURDOCK, president and CEO
of Strategic Investment Group

Hilda Ochoa-Brillembourg's technical prowess as a finance professional is as impressive as her ability to combine the state-of-the-art techniques she masters with a deep understanding of human behavior. These pages are full of useful, actionable insights. A must-read.

—MOISÉS NAÍM, Distinguished Fellow, Carnegie Endowment,
and author of *The End of Power*

Every finance professional, portfolio manager, and individual investor should read this book. But so should everyone else who wants to know what it takes to build and run a successful organization focused on challenging problems in a highly competitive space. You will leave *Delivering Alpha* with new ways of thinking about investment risk and reward (pay special attention to "portfolio fit"!). But you'll also leave it with a rare wisdom—about managing organizations, recognizing and rewarding talent, decision making, and governance—that will serve anyone who aspires to build or lead a complex organization in a volatile world.

—DAVID NIRENBERG, executive vice provost,
Deborah R. and Edgar D. Jannotta Distinguished Service Professor,
Committee on Social Thought, The University of Chicago

The world is in the midst of a mutation. Changing times always create uncertainties and opportunities; geopolitically, socially, and, yes, for investment. The key is knowing how to sensibly approach an environment under

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transformation with both speed and depth. Through her exceptionally long and successful career, Hilda Ochoa-Brillembourg has navigated the shallow waters of a changing world using a particular approach based on principles tested and developed over time. *Delivering Alpha* is the product of that 30-year journey. It is an invaluable resource for investors during this time of global and societal transformation."

—ANA PALACIO, former Spanish Minister of Foreign Affairs and former senior vice-president and general counsel of the World Bank Group

After a successful career in the highest stratospheres of global finance, Hilda Ochoa's gift to the world is *Delivering Alpha*. Her framework for managing funds and delivering results, including the innovative Fit Theory, will become a must-read for business students and the most sophisticated asset managers. But it's her humility, humor, and honesty that makes the work compelling. The added bonus is a set of practical and battlefield-tested tools for investment committees and boards to raise their game to the highest standards, which has been a hallmark of Hilda's entire career.

—DOUGLAS PETERSON, president and CEO, S&P Global

In this insightful and psychologically astute book, a masterful investment strategist shows us, step by step, how to achieve a portfolio that is the right fit for the specific investor. Leavening complex theory with personal anecdotes, *Delivering Alpha* is like a rare feast that is both delicious and good for you.

—NORMAN E. ROSENTHAL, M.D., clinical professor of psychiatry at Georgetown University Medical School and author of *Super Mind*

The Bible on risk management. Full of rich, juicy anecdotes from an industry insider. If you are a serious investor, run, don't walk, and buy a copy.

—DAVID M. SMICK, CEO of Johnson Smick International, Inc., and author of the *New York Times* bestseller *The World Is Curved*

Hilda Ochoa-Brillembourg pioneered the use of alternatives in institutional portfolios, adding a rich set of opportunities for forward-thinking investment professionals. Unlike Warren Buffett, who seems overly concerned with gross fees, Hilda recognizes that superior managers overcome the fee burden to produce excess returns for their partners. She further knows that great teams identify winners. In fact, her multidecade record of adding value

for her clients proves the point. While her discussion of the nuts and bolts provides valuable background for portfolio management practitioners, the central takeaway from her book is that effective governance underpins success. Without a high-quality investment committee focused on the right issues and without a top-notch investment staff executing on the right plan, portfolio management will fail. *Delivering Alpha* belongs on the bedside table of every serious practitioner of asset management. Read it and learn!

—DAVID F. SWENSEN, chief investment officer, Yale University, and author of *Pioneering Portfolio Management: An Unconventional Approach to Institutional Investment*

Thirty-plus years—from my 90-plus years perspective not so long, but long enough to experience enormous changes in the world at large and in the financial world in particular: unbridled enthusiasm to corrosive doubts, the triumph of free markets to costly dependence on official rescues of shaky institutions; reasoned and successful investment strategies have never been more challenged. This book is a reassuring collection of ideas, unlike the sagas of greed, misplaced loyalties, and fraud that have characterized too much of "Wall Street" in recent years. *Delivering Alpha* highlights the value of being open to new approaches, adapting to perpetual, sometimes tumultuous changes. This is a good, thoughtful book.

—PAUL VOLCKER, former chairman, Federal Reserve

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DELIVERING ALPHA

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DELIVERING ALPHA

Lessons from 30 Years of

Outperforming

Investment Benchmarks

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HILDA OCHOA-BRILLEMBOURG

New York Chicago San Francisco Athens London Madrid
Mexico City Milan New Delhi Singapore Sydney Toronto

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To life and freedom, to Arturo, and to our children
and grandchildren who make it all worthwhile.

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Preface

THE FIRST QUESTION you are asked when you write a book is, "Who is it for?" This book is for any finance professional who wants to know how to add sustainable value to globally diversified institutional portfolios beyond what's learned in textbooks. It's for investment committees and board members who would like to be better fiduciaries by increasing their understanding of the impact of their actions on portfolio returns. It's for professionals who have already been exposed to the basic principles of portfolio management—valuation, expected returns, volatility, correlations, and diversification—and who want to learn the limits of modern portfolio theory and how experienced practitioners can profitably depart from standard academic theory.

The book is intended as a practical guide to building intelligent, sensible, and sensibly managed portfolios; to creating a decision-making governance structure and process that reduces errors and correctly assigns responsibilities and incentives; to selecting the most astute, competent, dedicated fiduciary boards and agents to help you manage your portfolio over time; and to terminating managers and reversing errors. It is light on theory and serious on practice. We hope it helps readers develop a better understanding of the process by which you can deliver *alpha*, risk-adjusted excess returns, fairly consistently over time. Over the long run, well-managed globally diversified portfolios can add sustainable value over a purely passively managed option, net of all costs and without significant increases in volatility—sometimes with lower volatility.

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A Bit of History

My colleagues and I have managed assets for corporate, nonprofit, and family groups for over 40 years. That includes our time at the World Bank, whose pension fund we managed for 20 years, first inside (1976–1987) and then at Strategic Investment Group (1987–1995), the firm we founded in 1987. Over the 30 years through late 2017, Strategic outperformed its benchmarks for all major asset classes and for total balanced portfolios more than 75 percent of the time on a rolling three-year basis. The investment team underperformed the benchmarks in only 4 of 30 years. The value added has accrued with less volatility than the benchmarks exhibited. This outperformance was achieved under widely diverse client needs and circumstances and while dealing with differing, sometimes less than ideal, governance—that is, the organizational setup, the timing, and the manner and quality of the decision-making process in use by those responsible for approving policy and monitoring performance.

From Strategic's inception, its governance structure was designed to complement or supplement, and in all cases strengthen, our clients' governance. Optimal governance structures are rare and in my experience persist only in exceptional cases. Judging by its performance, Yale University seems to be one of those few cases. Yale's sustainable value added is a testament to its strong governance as well as to the skills and tenure of chief investment officer David F. Swensen's group. Optimal governance structures are robust and supportive of skilled service providers. They are long-term oriented while responsive to short-term needs, and they are committed to innovation and independent thinking.

Strategic was founded to provide focused, fact-based, comprehensive investment management services based on global asset allocation with multiple managers of assets and dynamic risk management. Our "open architecture" asset management structure—offering clients financial products from other firms as well as our own oversight—was rare at the time as an outsourcing option but is now the model most commonly used in the institutional world. Parts of certain chapters of this book describe specific services offered by Strategic as well as others. I do so only when I believe that is the most

useful information I can offer in each case, and I try to include enough information for readers to make that judgment for themselves. I have an ethical duty to alert you that past performance should not be construed as an assurance of future success. The assumptions and tables throughout the book simply illustrate how the data might all come together into a strategic framework. They're not forecasts, recommendations, or samples of any particular investor portfolio. As the narrative makes abundantly clear, each investor and market brings a unique set of needs and opportunities.

Delivering Alpha reflects on what I believe have been the major contributors adding value and keeping a competitive advantage over time despite increasingly complex capital markets and competitive forces. I document some important concepts to help fiduciaries correct some of the less constructive habits of governance and financial theory I have observed. Innovation and independent thinking are central to this refinement and improvement. Decision-making tools and capital market knowledge should be continually refined and improved.

I want this to be a concise, useful book, to be snacked upon, depending on your particular interests and concerns. It is not a treatise on investment theory, of which there are so many, a few of which I list in the Bibliography. The knowledge I wish to share is nuanced and subtle. The right path has many ambiguous junctures where certainty is elusive. Nuanced knowledge based on experience and wisdom might turn off readers in search of black-and-white arguments. Those arguments are attractive to beginners in the field, who should stay away from any form of active management and go for minimum cost, broadest diversification, and passive management. Delivering alpha requires subtly timed and textured investment decisions. But even passive management requires some subtlety and wisdom, not always characteristics of rookies. Quite often, academically inclined amateurs, along with a few tenured academic theorists, opt for total indexing at the exactly worst possible time, after the markets have gone through a long, unsustainable rally and have become extremely overvalued. This is a case of a little knowledge being dangerous. This behavior happens regularly, particularly but not exclusively with retail investors who flock to equity or bond index mutual funds and

exchange-traded funds (ETFs) after a couple of years of outstanding returns only to face significant losses when prices fall.

Convictions, particularly simple ones, are severely tested from time to time. Most people fail those tests! To paraphrase Josh Billings, certainty is much more dangerous than uncertainty.[1] Greed and fear more than wisdom guide the emotions of almost every human being when markets appear irresistibly alluring or frightening. Randomness, abundant in life, allows disciplined investors to take advantage of extreme valuation anomalies, banking on historic cycles that generally drive markets to revert to mean values.

The investment world sails on many myths—and many inspiring, motivating, big, and lasting lies. Here are three among those that we will challenge in these pages.

- **Myth number one: Markets are fairly valued.** Given the wide levels of volatility around "fair" price, that fair price is as fair as the chance that a reality TV star will stay married for more than seven years: 50–50? 80–20? Zero? How could prices be fair, when over 30-plus years we have found more than 100 active managers beating benchmarks pretty consistently, and we have done so ourselves? It must mean that experienced players get a very unfair, but well-deserved, advantage against impulsive or inexperienced investors.
- **Myth number two: Diversification is the only free lunch.** Diversification is a wise strategy, but whether it is a free lunch depends largely on whether the asset you are diversifying into is overvalued. Correlations are anything but stable, and they tend to go to 1 when we need diversification the most. The best free lunch is the meal left at the table by panicked investors. The profitable pickings come from actively focusing on purchasing cheap assets after a crash when bargains are abundant.
- **Myth number three: The coming decades of predicted slow growth and high volatility do not bode well for equity markets.** In fact, there is little correlation between economic growth and equity returns, because growth expectations are priced pretty quickly into multiples. There is no better place to add value than a no-growth, politically charged, opinionated, volatile marketplace. You get many chances at the roulette table to

buy low and sell high because quarterly volatility is high and the markets keep adjusting prices to compensate for the volatility. I look forward to the next 20 years with tempered enthusiasm.

I'm keenly aware that the future is for those who live in it; they will develop their own theories in response to market and world events as well as to their own professional development and needs. Every generation is entitled to repeat past mistakes and learn anew from its own. Governments and regulations will change and affect investment opportunities. But I have learned four timeless lessons: *Timing*, *market awareness*, *price*, and *relative value to the investor (goodness of fit)* are critical drivers of effective investment decisions. Investors will rediscover them and dispute them at their own peril.

My experience has been enriched by the work of a highly trained and experienced global investment team with access to the most talented external managers in all asset classes. Responsibilities have been actively transferred to the team by the firm's founding partners over many years, but particularly since 2002. I gradually ceded management and research responsibilities until my retirement as CEO in 2014. Keen awareness of the inexorable passage of time and the force of retirement needs, as well as the intellectual growth and readiness of our successors, guided an explicit effort to transfer knowledge and culture. We fully expected the founders would be bested by their successors. This has clearly been the case. Technological and cognitive advances are the renewable and expanding real wealth of the human species.

The added value delivered over many years for long-term clients, past and present, didn't depend on good or bad luck, though we experienced both. I feel emboldened to summarize our experience because there is now strong evidence of repeatable skill, beyond 30 years, including the time during which we initiated the process at the World Bank pension fund and the intervening years of refinement and improvement. The process reflects the knowledge and expertise accumulated over the professional lifetimes of many smart and dedicated investors, during a period in which we have enjoyed free, highly competitive, and globally traded security markets. We have lived at a time in which world capital markets increased fivefold in less than 25 years. I believe many elements of our approach will succeed in less

conducive times ahead, as they happily did during and after multiple market crises including the crash of 2008. But be warned: this approach has not been tested in extraordinarily extended market disruptions such as the ones experienced in world wars. Holding large amounts of well-diversified cash to invest sporadically in uniquely mispriced opportunities might be the way to handle periods of extended market dysfunction.

The growth in financial assets and increasingly sophisticated products supporting their development allowed us to take advantage of market inefficiencies where we found them, mostly in newly securitized assets, emerging management styles, and orphaned assets with bright prospects. But we have been just as driven to make use of inexpensive, passively managed market products where there have been few inefficiencies to exploit.

Importantly, the investment process has been tested with clients possessing impeccably robust investment governance *and* some with flawed governance. Flawed governance can take many forms, but most commonly it shows in impulsive decision making, reward systems that discourage measured risk taking, slow responses to improved policy choices, and behavior driven by fear and greed. We learned from both kinds of governance. Surprisingly and quite counterintuitively, I have found bad governance tends to persevere, while great governance can come to an abrupt halt. After a period of good followed by bad governance, there is some hope of returning to good governance. As suggested by the historian Barbara Tuchman, it's much easier to reconstruct a society destroyed by war than to build one from scratch; but in the case of weakened business governance structures, the right glue may be lost for a long time. That's why good governance should be furiously defended and preserved. Like virtue, it can withstand a lot, but once lost it is hard to fully regain.

The Piñata Strategy

The strategies we develop to accomplish our objectives, including building and managing portfolios that will meet investment goals, arise from many forces: heredity, opportunities, experience, and chance. Some memories are particularly telling. For me, none is as poignant as my recollection of piñatas and the strategy I developed to cope successfully with their challenge.

I was born and raised in Caracas, Venezuela, in a middle-class family. My father was a pilot who evolved into an airline executive. My mother stayed at home, vocally disappointed by not having been allowed to become a physician. When I was about six, piñata parties were not necessarily fun, at least not for me. Mother would dress me up in itchy, cumbersome dresses, while the boys wore comfortable pants. They could hit the piñata and make a run for the candies that spilled out. The girls with their pretty dresses were at a serious disadvantage.

So what was a girl to do? Was it to be first at the bat and watch the following action comfortably from a safe place (it was easy to get hit randomly by the bat)? Was it to break the piñata and feel like a hero? Was it to get the most candies? I tried all three strategies and concluded that getting the most candies should, indeed, be the benchmark by which I judged my own success. Knowing my objective made the experience fun and worth pursuing.

Developing the best strategy to get the most candies became clear by observing piñata dynamics. I determined to be among the three to five last players to hit the piñata. It was important not to be the one to break it open: The last one to break it, the hero, lost valuable time getting to the candies. Being second or third from the last meant one could break it a bit, satisfying the lust of the crowd, but still have time to get to the optimal position to capture the most candy when the piñata broke. As it broke, I would run quickly to where the candies were falling and squat on the ground with my puffy skirt spread widely. I would scoop as many candies I could get under the skirt, wait for all the kids to move away, and bring all the candies from under my skirt into the pouch of my gathered skirt, now transformed into a generous sack. Thus I turned the major disadvantage of a large, puffy dress into an effective candy-gathering weapon.

At the party, a couple of kids would always end up crying because they didn't have enough candies, which gave me the opportunity to share my winnings with them. Whether these were the sentiments of a budding philanthropist or just a sense of fairness, it gave me great pleasure to share the wealth. For me, success meant not how many candies I could take home but rather that I could win the piñata game! Years later at Harvard Business School, I learned that the Piñata Strategy was an early use of SWOT anal-

ysis—an approach to corporate planning based on an analysis of strengths, weaknesses, opportunities, and threats.[2]

As I grew up, it became clear that life was a bit more complex than a piñata. But the core elements of those early findings have remained with me to this day: clarity of mission and clarity of strategy in an uncertain world are critical to success.

Key among my findings is the distinction between decisions that are reversible and those that are not. Incremental decisions, such as my trying out different approaches to the piñata until I found the one that best accomplished my mission, are highly reversible. With many piñatas a month, I could try different strategies. Small, reversible decisions should not be feared. Revolutionary changes—such as having kids or dramatically changing your portfolio policy—are expensive or impossible to reverse and should be pondered carefully.

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Introduction

The Incredible Ride

ANY COMPILATION OF lessons ought to be read in the context in which they were learned. Any investment strategy ought to be designed to fit the prevailing macroeconomic and market environment. Our experiences are no exception.

It has been quite a ride for investors since the oil crisis of the seventies. That shock brought the U.S. economy to its knees and, along with amazing competition from Japan, forced a restructuring of corporate America. The restructuring was facilitated by Michael Milken and his team at Drexel Burnham Lambert and their innovative use of junk (aka high yield) bonds. Through high-yield financing, it became surprisingly easy to acquire and break up the inefficiently managed conglomerate structures that had come to dominate corporate strategy in the previous decades. The expense of high-yield debt motivated acquirers to control costs and capital budgets and focus on earnings growth for the individual component companies. CEOs were forced to be less imperial portfolio managers and more focused company managers.

While not wholly constructive—the upheaval led to Milken's conviction for illegal stock parking and Drexel's bankruptcy—ousters and replacements of managements financed by high-yield debt ended the American era of uncompetitive management complacency. Now, when complacency reappears, it can

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often be corrected (again, not always constructively) by activist investors with access to ample financing to displace boards and management. Sometimes just the threat of corporate activism can be enough to force more efficient behavior from management.

As the microeconomic picture was improving, on the macroeconomic front growth prospects were transformed by the passage of ERISA (the Employee Retirement Income Security Act of 1974) and a burst of human capital formation as the baby boomers, professional women, and increased numbers of immigrants joined the labor force. ERISA forced corporations to fund their defined benefit pension plans, sharply boosting long-term institutional savings and investment in the United States. That provided additional sources of growth capital and financial innovation in traditional and less traditional markets. The rewards to capital investment were endangered, however, by inflationary pressures dating back to the oil crisis and excessive government spending during the Vietnam War, bringing about the political and economic need to appoint a determined inflation buster and one of the most virtuous U.S. public servants, Paul Volcker, to a revolutionary stewardship at the Federal Reserve from 1979 to 1987. The U.S. and world inflationary spirals were controlled rapidly (and violently for Latin American debt holders). The shift in monetary policy was accompanied in 1981 by record bond yields and therefore record low bond prices, allowing us to tilt our portfolios in favor of long-term bonds and capture extraordinary returns when inflation was subdued.

Restructuring corporate America, controlling inflation through tight monetary policy, increasing competition through deregulation, breaking up major monopolies, and getting past the costs of the Vietnam War created years of noninflationary growth that showcased the vitality of free markets. (No wonder Ronald Reagan's presidency is regarded with such admiration by friends and not a few foes.) Along with the sustainable military superiority of the developed democracies, resurgent Western economies eventually helped bring down the totalitarian USSR, opening world markets to almost unprecedented increases in growth, trade, and financial assets.

When markets show sustained growth and development, new opportunities for profitable investments appear. Private assets are securitized and

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become easily tradable. We took advantage of newly securitized assets, including real estate, private equity, international equities, emerging markets, high-yield bonds, and hedge funds, because they tended to be attractively priced. However, in time, as assets like these become more liquid and popular, market efficiency cuts down opportunities to add value through active management. That can increase the impact of management selection for each asset class. Choosing asset managers well requires observing pricing inefficiencies, identifying new management styles, and understanding the environment in which active managers are operating. The process by which a decision maker for a pension fund, endowment, or family assets may seek new asset classes and control the manager mix is covered in Parts II, III, and IV.

Recent decades have been a period of extremely active securitization. More than 100 stock and bond markets emerged, and derivative securities exploded in number and size to become household names among large institutional investors. Investable assets including bank deposits increased fivefold in a quarter century, from $48 trillion in 1990 to $252 trillion in 2015.[1] Since the fall of the Berlin Wall, world GDP has almost tripled from around $28 trillion to $78 trillion in 1990 constant international dollars, while world trade has quadrupled. Its share of world GDP has grown from 39 to 60 percent.[2] This was a singularly exciting period to be an investor. But competition also became increasingly fierce, with some of the world's sharpest competitive minds entering the lucrative and growing investment field.

Without such growth in trade, GDP, and investable assets, it would have been harder to achieve attractive absolute returns. And even though value added—alpha—is more critical when returns are low, alpha might have been more volatile. Along the way we experienced bull and bear markets, bubbles and crashes in the United States and abroad that tested every conviction of seasoned investors.

It was a period of relative world peace and historically unprecedented expansion of wealth, with the attendant set of market abuses and regulatory backlash. It was also a period in which extreme poverty collapsed from 37 percent of the world's population in 1990 to under 10 percent in 2015,[3] underscoring the value of free trade, competition, and investments in health and education as incomparable sources of wealth creation and poverty

reduction. Reduced poverty and rising wealth increase competition for the management of savings pools. Competition, an extreme quality of liquid financial markets, forces finance professionals to remain technically savvy and innovative. Qualitative experience and quantitative tools need constant updating.

While its benefits are obvious, high growth also increases income inequality and may give rise to political and financial instability. Understanding the sources of inequality and potential political and financial volatility may be more critical in managing portfolios over the next 10 to 20 years than it was from the 1990s to 2008. Let's first try to understand why high growth brings inequality. As Albert-László Barabási documented in his book *Linked: The New Science of Networks*,[4] the higher the growth rate, the more all of us benefit, but the larger will be the spread between those closest to the growth vectors (absolute and relative winners) and those farther from the action (relative losers). The clearest example of this phenomenon is the internet. In a perfectly equal internet world, traffic would be equally distributed. In fact, despite no barriers to entry, 10 percent of the websites soon attracted more than 90 percent of the traffic.

An increase in social envy, workforce displacement and unemployment, political unrest, populism, and extremism may be the price we pay for rapid innovation and high growth, particularly when the growth slows down. That's been the environment since 2008 and the one we may continue to experience over the next decade or two; much will depend on whether the millennial generation, those born between 1980 and 2000, gets to enjoy its own demographic dividend—the increase of income over expenses that baby boomers enjoyed in their forties and fifties. Much will depend as well on how we manage global human resources and migration policies. Managing through political and capital market uncertainty is covered in Part V.

Inequality and how societies deal with it aren't the only potential risks. Faced by increasing radical, populist, or just outright destructive views of Western free market systems after the 2008 global market collapse, central banks moved to defend growth and democracy by flooding developed economies with liquidity. Gushing liquidity reduced interest rates to encourage

investment, consumption, growth, and employment. The massive injection has, however, dramatically increased the government's role in the economy and significantly decreased expected returns on bonds and equities. Unwinding nearly zero interest rate monetary policies around the world puts us in unknown territory.

Our expectations for investment returns, volatilities, and correlations might now be for lower returns and erratic volatility of returns, rather than simply using long-term historical figures and projecting more of the same. This is a subject elaborated in Part II.

No Tree Grows to Heaven: Threats to Growth

The 2008 crash proved that too much leverage can be lethal to investors, borrowers, and lenders alike. Financial intermediaries and U.S. homebuyers had borrowed too much. Excessive leverage sparked the backlash of increased regulations and controls over financial intermediaries, now likely to be reviewed. Thankfully, nonfinancial corporations weren't overleveraged. They retained the productive capacity to maintain slow but steady growth despite the collapse of a few financial intermediaries.

The threat of social radicalization and authoritarian regimes is the highest we have observed in the last 50 years. It presents a real challenge to the well-being of humanity and investment portfolios. The challenge comes in the form of so-called Knightian uncertainty (outcomes for which we cannot measure the odds—unlike risks, which are situations where we can't know the outcome but can predict the odds).[5] Unpredictability will accentuate a need to identify fairly priced assets that "fit" particular global uncertainties and our own existing portfolios and that add insulation against political shocks. We develop these concepts in Parts I and III.

The deceleration of the fast, overleveraged global economic growth experienced through mid-2007 has disillusioned many and created both anarchical populist movements and extreme liberal and conservative responses. The pendulum seems to have swung not completely but certainly against the free-market-driven world equilibrium of the 1990s and early 2000s. The

resulting macroeconomic and political developments will create price and valuation swings—and opportunities to take advantage of price corrections. Importantly, these opportunities can only be seized if investors carry sufficient liquidity in their portfolios and have diversified risks well. This subject is covered in Part V.

Major economies face other significant challenges not yet properly addressed: aging populations in the developed world, India, and China; the need to design wise immigration and training policies to help rebalance those age demographics in the United States, Europe, and Japan; employment disruptions from technological breakthroughs; insufficient savings for health and retirement needs; increasing terrorist threats; nuclear proliferation; an eruption of rogue political leaders not seen since the mid-twentieth century; slow growth and possible deflation—or inflation if we overcorrect for deflationary threats—and the longer-term challenges of climate uncertainty.

All these factors point to a world of lower returns, larger migrations, and volatility shocks. It is a world in which asset diversification is most critical, and yet there are now few reasonably priced diversifying assets. The silver lining in the market corrections certain to come is that they will create opportunities to diversify risks at reasonable and even attractive valuations. In this likely scenario of diminished returns, higher volatility, and Knightian uncertainty, every building block covered in the six sections of the book is critical to achieving an outcome in which you add to rather than detract from market returns. The quality of governance covered in Part VI is a central ingredient for sustaining returns in an era of increased uncertainty.

Clearly, we may not have seen the end of this phase of history. These cycles take 20 to 30 years, a generation, before we learn from and correct our generational mistakes. Barring world wars, societies should find their path to growth, social connectedness, and freedom over time. That's how human beings iteratively move toward social equilibrium and growth after they have tried and failed with extreme alternatives. But first we must grapple with a time in which Knightian *uncertainty* is as high as or higher than measurable *risks*. The way to look at the shape and management of measurable risks and unmeasurable uncertainty is taken up in Part V.

Initial Proof of Concept

We learned our initial skills at the World Bank pension fund and developed some of our first tools and lasting beliefs there. Some of the methods we developed while at the World Bank may still be in use, with increasing levels of precision and subtlety honed by experiential wisdom. Most of the tools have been developed by our talented successors, and we are proud of that intergenerational accomplishment.

Our strong World Bank returns were based on three major concepts:

- Expected alpha from placing certain assets with small, specialized external investment management boutiques, which could effectively compete with large money center banks. Surprisingly, boutiques temporarily hurt our equity segments in the three years through 1986. Smaller active-management firms tended to equal-weight their investments, favoring small-capitalization stocks rather than the larger-cap stocks that make up broad market indexes. That experience taught us that every investment style has its cycle, and the best predictor of a cycle may be the relative valuation of the style (undervalued styles offer better prospects) and the popularity of the segment (the less the better).
- The search for significantly undervalued *newly securitized* assets, such as hedge funds, high-yield bonds, and international equities including emerging markets. These investments not only increased returns but also helped reduce total portfolio volatility.
- Efficiently diversifying into cheaper assets and managing market risks. We bet heavily on bonds in 1981–1982 when long-term yields reached 15 percent. This bet worked wonderfully in less than a year. And in the mid-eighties we took an extreme bet to underweight Japan. The Japan decision decimated our relative non-U.S. equity returns for several years but paid off significantly in 1989. A more granular and nuanced scaling of risks based on these experiences helped us deliver less volatile returns since.

For the 11-plus years I worked at the World Bank, the application of these three concepts required new analytical tools, a strong, trustworthy

governance structure, and attention to recruiting and developing insightful colleagues with diverse educational and cultural backgrounds. The outcome, as reported in the World Bank Staff Retirement Plan annual report for 1986, was 330 to 560 basis points per year of value added relative to the median performance of the 100 largest pension funds in the United States.[6] This performance often placed the World Bank pension fund in the top percentile of that universe. We continued to develop and employ strategies, analytical tools, and decision-making processes that delivered sustained value added for our clients. Identifying and developing human capital have been central. Part VI adds color to aspects of cultural development and human capital management that can contribute greatly to better governance and decision making.

Sources of Value Added, Net of Fees

The ability to generate value added continued as the firm's founders transferred knowledge and responsibilities to the successor teams. As Figure I.1 shows, rolling three-year total balanced-portfolio returns exceeded benchmarks more than 76 percent of the time. Underperformance was concentrated in periods of high market returns; these tend to coincide with periods of overvaluation such as 1998–1999, when we reduced valuation risks prior to market corrections.

Figure I.2 shows that one can add value with lower volatility and a better Sharpe ratio. Sharpe ratios compare returns with units of risk (volatility).

Seemingly small amounts of yearly value added, compounding over time, are significant to wealth creation. Strategic's risk-adjusted returns were 35 percent higher than the benchmarks (0.65 versus 0.49). Thanks to the magic of compound returns, this outperformance has big consequences. An investment of $100 over 30 years would yield a terminal value of $1,402 versus $952 invested in the policy benchmark, a 46 percent increase in terminal wealth. Even 1 percent makes a really big difference over time. A single point of compound value added to an 8 percent benchmark return adds 20 percent to terminal wealth in 10 years.

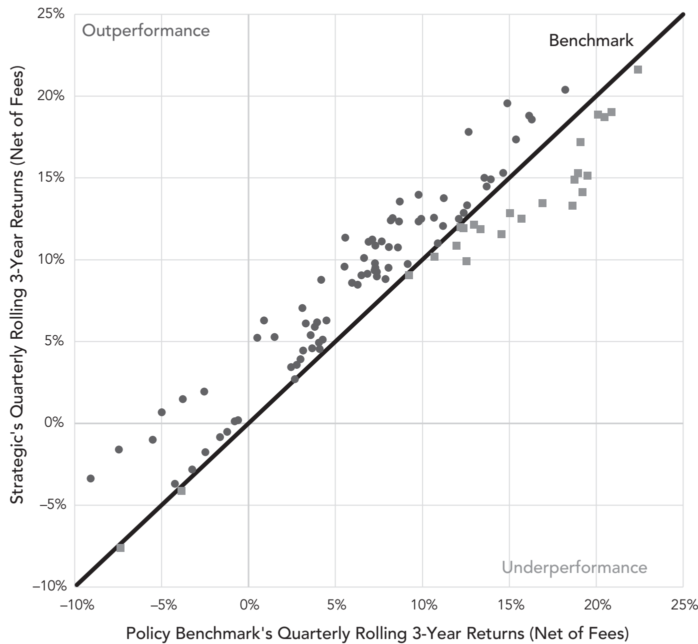
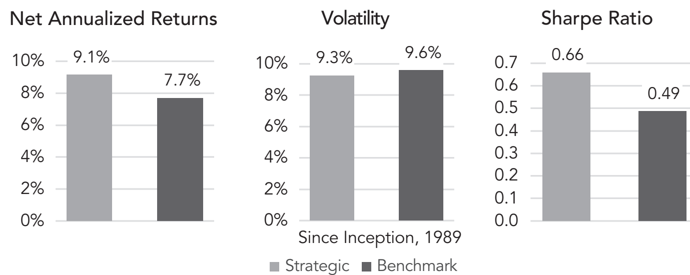


FIGURE I.1 Strategic's quarterly returns versus benchmarks, 1991–2017



Source: Strategic Investment Group.*

FIGURE I.2 Decades of excess returns without added volatility.

Strategic Investment Group's composite global balanced portfolio generated 1.4 percent of net-of-fee value added per year from 1989 through March 2018, without raising portfolio volatility. The net value added was not just at the total portfolio level but also across individual asset classes. Returns are net of all fees for balanced portfolios. The portfolios include an efficiently diversified mix of U.S. and international equities, fixed income, hedge funds, private equities, venture capital, real estate, and commodities, measured against broadly accepted market indexes and client-approved dollar-weighted benchmarks.

*Unless otherwise noted, the sources of all performance and market benchmark estimates in this book are Strategic Investment Group and/or client-approved benchmark index providers.

Strategic's staff has included diverse economists, engineers, statisticians, actuaries, modelers, financial analysts, and portfolio theorists, educated at some of the world's most demanding, respected, and diverse universities. As a group, the staff has read most of the relevant literature and research papers by academics and practitioners. To do well, you need to understand the analytical tools that have been developed by the greatest minds over the last 300 years, ranging from statistical and probability theory to macroeconomic policy, and you need to understand portfolio theory from classical to Keynesian to behavioral economics. Wisdom and insight can come from the most unexpected places. We have spent thousands of hours reading and listening to knowledgeable and sometimes obscure experts, from the halls of academia to the corridors of journalists and practitioners, analyzing premortem and postmortem daily market events. If 10,000 hours marks the threshold of expertise in any field, many of the senior investment principals have booked multiples of those threshold hours of focused attention to the topic of adding value to investment portfolios. Insightful expertise beats data mining and any theoretical construct over time. Hours of expertise increase the sample size and statistical relevance of your conclusions. And at all times one should keep an open mind, a certain amount of intellectual innocence and curiosity to nurture informed intuition and creativity. Be open to surprises and new opportunities. *Don't allow expertise to blind you to innovation and creativity.*

Experience teaches us what we know and what we don't or can't know. Most importantly it has taught me that expertise and fact-based analysis are critical in controlling the human and sometimes destructive impulses that drive many of our actions. Impulses should first trigger thought and analysis, including a deep, unbiased search for facts and insight, and subsequently drive focused, disciplined action.

I now reflect from the vantage point of having worked in a highly experienced, disciplined investment organization that uses passive and active external managers to compete in one of the most competitive arenas: global capital markets. We haven't been alone in our portfolio management journey. As arguably the first dedicated outsourcer for complex, competitively robust global portfolios, we have been surrounded by some of the best minds in the

business, including the hundreds of outstanding specialist external managers we hired over time to help us manage our clients' portfolios. Creating a culture of trust that fosters acquiring and sharing insights is a critical component of good governance.

In the past 40 years we have met and discussed investments in every asset class with thousands of managers. We have seen dozens of asset classes and many more investment approaches emerge and decline. Markets destroyed by wars and revolution were rebuilt and opened after the fall of the Soviet Union in the late eighties and in dozens of emerging markets in Asia, Eastern Europe, the Middle East, Africa, and Latin America.

Our willingness to serve on corporate and nonprofit boards has been valuable in developing lasting governance qualities. We have observed how decisions are made by some of the best and best-intentioned decision makers, along with unfortunately some poor ones.

As I reflect on four decades of experience, I feel much gratitude to those I have worked with and for, and I feel I owe my colleagues, peers, clients, future clients, and newcomers to the investment field a well-reasoned summary of what I have learned. I'll also try to sum up the things we may never know.

What I Have Learned

Here are 10 lessons I have learned and around which I have organized the six sections of this book.

1. Price Is Not Value

The value of an asset to any particular investor may be lower or higher than the price (or fair value) of the asset in the marketplace, depending on the correlation of that asset to the investor's legacy (existing) portfolio and needs. This is true even if the investor agrees with market forecasts. Many portfolios contain legacy assets or structures (and reflect client needs) that cannot be easily or cost-effectively changed. Financial theory is insufficient to understand the relationship between market prices and investors' utility curves,

which lead to different "fair values" (multiple equilibrium pricing) for the same asset depending on the investor. Assets have a *market price* available to all buyers but have a different relative *value* to different buyers. Part I offers a shortcut formula I have found useful to begin identifying assets that fit your legacy portfolio better than other assets.

There is a brilliant moral assessment of flawed characters we encounter in life in Oscar Wilde's swipe at people who know "the price of everything and the value of nothing." In investing as in life, theory may teach you how the market sets the *price* of assets, but it will not fully tell you whether that price equals the *value* of that asset when added to *your* existing portfolio. In the world of efficient-market believers, this first lesson is probably the most controversial of my findings and possibly the most relevant. The difference between market value and value to an investor might help explain the gap between multiple equilibriums in efficient and inefficient markets—those conditions where different investors are willing to pay different prices for similar assets at the same time.

The value of an investment to a particular buyer will be determined by the *market price*, the *expected return and risks*, and the *correlation of that marginal investment to your legacy portfolio.* Few institutional portfolios start with cash. And even if one does, once you have built an optimal portfolio structure from cash, you have a legacy portfolio to contend with. Every new asset added to the legacy portfolio may have a different value to your portfolio than it has to the market at large. The largest factor influencing such value, other than price, expected return, and risk, is the *correlation* of the asset to the rest of your portfolio. When a certain type of investor (e.g., a corporate buyer) is crowding into an asset to the point of overpricing it for other classes of investors (e.g., an endowment), the investor with no strategic interest in it should give it a pass. The asset fits one investor better than the other investor.

2. But Watch the Price

The price you pay for an asset is one of the most important determinants of the risk embedded in owning the asset. We don't ever know the perfect price for an asset, but we do know that an asset will likely be overpriced and more

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risky than average if its valuation is at a historic peak, or more than two standard deviations from historic fair value. Mean reversion for asset prices is a safe bet if you allow sufficient time for it to happen—except in times of war or extended market closures. Postmodern financial theory accepts that markets are not always fairly valued, as behavioral biases affect investors' rational choices and move markets away from fair value. Almost any management style works if the horizon is long enough, if you stick with the discipline, and if the timing of implementation isn't terrible. Put simply, almost any style works if you initiate it at a reasonable price and give it the requisite time to show its value.

There are some exceptions. Based on the valuable empirical finding that assets will tend to revert to a trending mean over time, we have found that pure *momentum* styles tend to create more extreme losses than gains over time. Momentum styles are those that invest more in securities whose prices are appreciating at a constant or increasing rate, hoping to detect when the trend is showing signs of reversing so as to pull out of the asset promptly. Momentum styles are generally used in fast-moving commodity-based investments, which don't lend themselves to fundamental price analysis (discounted cash flow) because they offer no cash flows to be discounted. One can employ a momentum technique if applied in combination with price-sensitive styles. In those cases, momentum is a valuable second filter.

If you pay a fair price, you will be fine over time. If you overpay, you may never fully recover your investment, and yet the best course of action may be to stay with the investment unless it is still grossly overvalued. Relative valuation should guide your decisions looking ahead. Much academic theory tries to prove that price-sensitive ("value") investing will pay off more frequently than momentum investing, because momentum investors will generally overpay for the assets they buy. But sometimes cheap assets remain cheap for a really long time (the so-called value trap). Identifying emerging momentum out of the value trap is important to avoid being caught for a long time in a cheap asset that isn't going anywhere.

According to Robert Shiller's analysis, cyclically adjusted P/E ratios (based on 10-year normalized real earnings) can help estimate the range of future long-term returns.[7] Starting with a relatively low P/E of 8, the expected

return would hover around 15 percent per year over the next 10 to 15 years, within a range of 8 to 18 percent. As adjusted P/E ratios rise from 8 to 20, expected returns drop to a range of 0 to 12 percent, with a mean value slightly above 5 percent. At starting P/E ratios of 30 to 40, it's difficult to clear positive returns for the next 10 to 15 years. Risks in asset classes other than equity are also dependent on the level of overvaluation or undervaluation at the time of purchase.

3. Don't Bet the House

We can't be certain of anything, regardless of how strong the evidence. Our experience has validated academic uncertainty theories regarding tail events (extreme, unexpected occurrences). Such events happen very infrequently but can be devastating if your portfolio isn't prepared to survive them. Still, portfolios should not be managed around tail events, because they are not the most likely outcome; portfolios should be managed so that risks taken are not devastating in an extreme scenario. We have to manage for the probable, but make sure unlikely events won't destroy our ability to reinvest in the probable. To this end, in this book I expand on the academic understanding of the limits and optimal manner of risk taking and liquidity management. Liquidity generally is either greatly overvalued or undervalued; valuing it properly is critical to handling uncertainty properly. Uncertainty is taken up in most sections of the book dealing with optimal policy, risk and liquidity management, and asset-class structuring (Parts II, IV, and V).

4. Potholes Are Unavoidable

Intelligent diversification is the best way to control risk, even though the more you diversify, the more likely you are to step in a pothole. The mishap should have only a small impact on your portfolio but can embarrass and shame decision makers. Some perceptive recent academic theory on fragile and robust (resilient) structures, developed by observing biological evolution, deals properly with this issue. We need to be aware of the inherent but manageable weaknesses of robust structures. Attention to diversity and diver-

sification of risks is central.[8] Despite what Warren Buffett might say, many small and good bets are the most important source of superior returns and portfolio robustness for institutional portfolio managers. Multiple bets allow you to add new assets, new styles, and volatile but diversifying risks without subjecting the portfolios to outsize volatility and fragile (highly uncertain) outcomes. Buffett's unique skills over more than 60 years are supported by the preferred pricing that his well-established brand can command on purchases. From time to time there may be opportunities to place a larger bet in an asset that is undervalued (big game hunting), or away from an asset that is expensive, but those large bets—5 to 10 percent of total multi-asset-class assets in a single bet—should have uniquely high certainty, evidenced by a two-plus standard deviation from fair value.

5. Fraud Is Also Unavoidable

Though probably less frequent in U.S. capital markets than in the markets of other countries, fraud is a peril everywhere. You have to protect against it. The best protection is through thorough due diligence and intelligent diversification of risk—limit the amount placed in any one asset (stock or bond issue) or manager.

6. We Need Guardrails Against Volatility

The impact of annual volatility on wealth creation compounds at geometric rates over time and tends to be grossly underestimated by the average investor. Portfolio volatility can be measured by calculating the standard deviation of annual returns. Volatility is caused by often reversible changes in market prices, as well as losses created by active trading or unrecoverable capital impairments. Not understanding compound interest and how to temper yearly volatility can be your greatest source of loss of principal over time. Managing volatility requires separating expected market returns and risks (returns to beta) from excess active returns and risks (alpha), an exercise that few investors engage in as thoroughly as they should. (See Parts IV and V.)

7. Adversity Can Be a Gift

Efficiently rebounding from a loss demands as much effort as managing risks efficiently. Many high-level decision makers freeze for longer than necessary after a loss or, worse, flee from well-conceived but now threatened investment beliefs and miss the opportunity to recover. Our experience confirms behavioral finance findings on "interrupted rationality" or prior rational decisions, superseded by "new rationality," and the relevance of governance structures in maintaining discipline. Recovering from a loss by rebalancing your portfolio to sustain the intended policy is critical to superior performance. Figure I.3 shows an example of the importance of rebalancing equal-weighted portfolios regularly to benefit from market volatility. The critical topic of risk management in containing as well as rebounding from loss is covered in Part V.

	Return	Standard Deviation	Valued Added
U.S. Capitalization Weighted	9.7%	15.3%	0.0%
Rebalanced Equal Weighted	11.5%	17.4%	1.8%

FIGURE I.3 Theoretical value added by rebalancing.

Roughly speaking, a rebalanced equal-weighted portfolio adds 1.8 percent a year over a market-weighted U.S. equity portfolio, both absolutely and risk adjusted. (Robert D. Arnott, Jason Hsu, Vitli Kalesnik, and Phil Tindall, "The Surprising Alpha from Malkiel's Monkey and Upside-Down Strategies," *Journal of Portfolio Management*, Summer 2013.)

8. It's Hard to Beat Markets, but Experts Can Do It

Active management can outperform passive management fairly consistently in expert hands. Passive management of marketable assets is appropriate for inexperienced and average players. But you have to be sensitive to valuations when initiating passive strategies to avoid paying peak prices. Active management can be particularly rewarding when you are dealing with segmented markets where competition is restricted by regulation or other drivers. *In certain markets, significant, lasting segmentation creates pricing anomalies* that can be exploited by the experienced, undogmatic investor who is unconstrained

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by inflexible governance rules or other limitations, some self-imposed.[9] The high-yield market is an example, but other markets too face fragmented supply and demand that fail to bring prices to equilibrium levels. The buyout market has experienced sustained fragmentation, as has the market for emerging technologies. Given the relative discount at which these assets can be purchased by the unconstrained investor, or by "preferred" intermediaries that offer a competitive advantage to the future of the asset (contacts, synergies, management expertise), these assets can provide a permanent or medium-term advantage to a class of investor. In addition to high yield and hedge funds, private equity and venture capital are fairly fragmented markets in which some preferred intermediaries capture pricing advantages. Part III discusses strategic and tactical tilts to take advantage of mispriced assets and different management styles.

9. Alpha Hides in Small Places

"Texturing" your exposure is another subtle but important component of adding alpha. For example, a manager's stock-picking skills might be hidden by her holding too much cash (which she might need to act promptly on opportunities). Offsetting the cash exposure without restricting the manager's ability to trade would call for increasing market exposure by use of equity futures. But some investors might wrongly pass on such a manager unless she can avoid holding any cash; that would hinder her ability to trade in a timely manner.

10. Watch Out for Bad Apples

Many times, poor governance inflicts more damage on portfolios than underperforming managers. Markets and managers recover from cyclical losses (mean reversion at work), but portfolios don't easily recover from permanent losses created by bad governance decisions. Common symptoms of poor governance by a board or investment committee are:

- High manager turnover.
- Frequent committee or staff turnover.

- A focus on what seems to have worked in the past three to five years.
- Persistently negative or zero value added over seven years.
- Managers fired after relatively brief but painful underperformance.
- Simplistic rules for hiring and firing managers.
- An episodic, beauty-contest process for hiring managers.
- A paint-by-the-numbers silo approach to asset-class structuring, which overlooks crossover opportunities. Bucketing styles—value, growth, small cap, etc.—is not a bad first cut, but you have to be alert to periods in which the opportunities are found between the buckets (investments that don't fit well in one or another bucket) or in different buckets.[10]
- High management costs relative to value added.
- Conflicts of interest among fiduciaries.

Portfolio theory and industry practice haven't sufficiently factored in the impact of poor governance, so prevalent in so many places, and remedial actions. The filters used in recruiting the committee members who approve policy and oversee governance are generally quite poor or inappropriate, frequently explaining the poor quality of decision making at the top. And the value added or detracted by investment committee decisions is seldom measured. Part VI offers suggestions for selecting and maintaining superior governance structures.

Essential as it is to sustainable returns, good-to-great governance is vulnerable to "bad actor"' actions by individual trustees, committee members, or staffers. Bad actions can stem from ignorance, big egos, bad faith, or hubris. While ignorance can become self-evident, big egos may be protected by authority or by their own dangerous, preclusive use of influence, which is much harder to protect against. Not enough work has been done in behavioral science to identify the reasons that even great institutions tragically retain bad actors for so long, and what might be done about it.

What We Do Not Know: Four Safety Tips

As important as it is to refine your knowledge of likely outcomes, it's also critical to know the limits of your knowledge. What you don't know can kill

you. Sometimes improbable, extremely bad outcomes happen. Managing your risks around them is most challenging. Here are four cautions to keep in mind:

1. Don't Believe in Crystal Balls

We don't know the future with any certainty. We can only assign probabilities to various future scenarios. A highly overpriced or underpriced asset can remain so for many years. Markets and management style cycles don't have a predictable end; they might last two to seven or more years. That's why you should bet only at extremes and diversify the risks over many different types of bets with different uncertain investment horizons.

2. Count On the Unexpected—Black Swans and Fat Tails

We don't know if or when we will have another world war and what shape it might take. War is destructive of human and financial capital. Public stock and bond markets all but vanished during World War II in Europe. Cybersecurity risks appear to be an immediate threat, but we can't rule out physical, even nuclear, attacks. Wars erupt in surprising ways when "new rising powers challenge the ascendancy of established powers."[11] Chaotic natural events can destroy years of management success in a surprisingly short time. That's why you need many types of assets, hoping that when shocks come, one of them will offer a source of funds to readjust your portfolios to a new state of the world. A 5 percent allocation to a few "safe" assets (whatever they may be!) may offer enough leverage to fulfill adjustment needs, assuming that leveraging tools, such as futures, are trading at fair prices.

3. It's Risky to Kill a Snake

Committee members, institutional leaders, and others with egotistical agendas can create havoc. We don't know how to neutralize them effectively. The fate of whistle-blowers is generally unhappy. There is understandable reluctance to uncover bad actors in any organization. People observing bad actors tend to wait until the bad acts are evident to all and are stopped by

"someone." This can take a very long time. If you are in a leadership position, you need to cut your losses as soon as you detect that a bad actor has taken control of a process. Either dilute the culprit's influence or find ways of moving him or her out of the way of good governance. If you're not in a leadership position, you may need to wait and see, and you may eventually need to resign your position if change is not possible and your fiduciary duty is compromised by staying.

4. Great Art Is Hard to Judge

We don't know the exact point where expertise beats theory. We suspect it has to do with assessing valuations looking forward and learning to build portfolios where risks are intelligently taken and diversified. Most modern portfolio theory echoes Hippocrates' oath to "first do no harm." It rightly starts with the concept that markets are relatively efficient and that it's hard if not impossible to add any value to a passively managed "market" portfolio, while it's easy to subtract value by active trading, paying management fees and brokerage commissions, and making mistakes. Charles D. Ellis gave us the holy book on passive management, *Winning the Loser's Game*,[12] and Jack Bogle at Vanguard gave us the first set of cost-efficient index fund vehicles with which to implement the concept. An investor who is not an expert in the art and science of investing should manage assets mostly by investing in market-indexed, passive portfolios. But even passive management requires discipline and foresight that the average investor may not have. As with yo-yo dieting, you end up worse off by being undisciplined and acting impulsively at moments of distress. Intelligent passive management requires the wisdom to interpret the right time for implementation.

There is no worse professional pain than underperforming your benchmarks. Losing the game makes you feel "broken, gut-shot," as Andre Agassi reflected after losing to Boris Becker.[13] That pain, though unavoidable, keeps alive the memory of what went wrong and why. In the six sections that follow, I will share the wisdom of many smart, experienced people, accumulated over many years of gains and a few painful losses. I will take on the challenge of questioning the tyranny of "perfect" markets. Once in a while,

opportunities do arise to add value by tilting portfolios and, more often, selecting active managers with demonstrated skill.

Ours Is One of the Noblest Professions

Money and anything to do with it have been tainted throughout history as a necessary evil. In addition to serious, ethical service providers, it attracts certain unsavory, greedy characters and often seems to be unfairly distributed. But money is one of the surpassingly beneficent creations of the human race, and those managing it responsibly should be recognized for their contribution to human progress. Einstein is supposed to have said that compound interest is the most powerful force in the universe. *Understanding the power of compound interest is among the greatest human achievements,* because innovation depends on accumulating and compounding financial and human capital (knowledge). And without innovation, growth is limited.

I believe dedicated investment managers have contributed with their insight and service to a most noble professional endeavor. Managing personal and institutional savings is among the most important, sustainable ways to bring hope for the future, to grant people options in arranging their lives, and to build the economy, while reducing the substantial risks we all face in the span of our lives. Building the wealth that fuels economic and personal growth and opens up opportunities for all is critically important to secure our future.

In dozens of years of practice, I have, thankfully, found the profession reasonably clean of fraudulent or unethical behavior, despite the embarrassing scandals that appear from time to time. Because investment performance is reviewed monthly against challenging benchmarks, investment management tends to attract professionals who want to prove their ability to add measurable value over time. By contrast, other financial fields are more congenial to professionals who want to go for the rewards of "serial kills"—giant one-time deals. Their performance is not measured by clients that gave them the mandates over many years, and they are usually paid for each "kill" rather than for cumulative long-term performance. Serial killings attract more opportunistic players, and potentially more predatory behavior that is anything but noble.

Ethical behavior, however, does not guarantee good performance. It's hard to outperform market averages. Large, inexperienced institutional investors

are handicapped relative to right-sized, experienced players. In most cases, performance failures stem from perceived pressure to serve clients' impulses and satisfy what clients *want*, even if it isn't what they *need*. Systemic risks are created by asset managers' increasing allocations to illiquid investments that don't match clients' redemption needs and by managers' adding undue leverage. These risk factors have been properly identified by the SEC in recent pronouncements.

The reality that half or more of all investors underperform market averages may not just be a mathematical truism (because the average is based on the sum of all investors' scores). Despite their hard work, a large number of mutual funds serving mostly retail investors—often more than half and seldom fewer than 40 percent—tend to underperform, and investors who chase top fund performers are not rewarded in the years after they have shown top results (see Figure I.4).

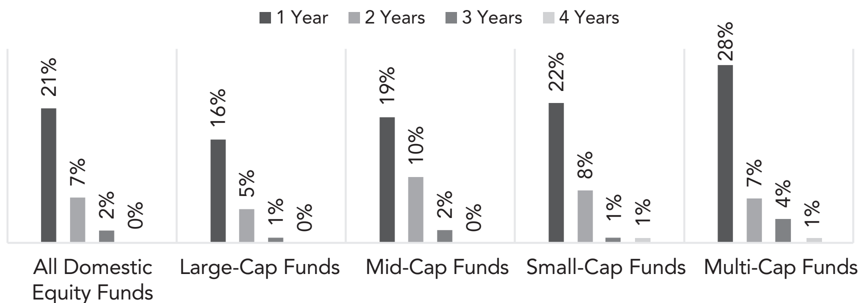

FIGURE I.4 Percentage of top-quartile funds remaining in the top quartile after one, two, three, and four years. Source: Standard & Poor's (as of 9/30/2015).

Looking at these results was an additional motivation to write this book. Throughout its six sections, in addition to touching on theory and practice, I compare and contrast what we did, sometimes behaving quite differently from the average fiduciary for the best of reasons: you can only outperform markets and peers if you behave intelligently and differently. Market averages can be outperformed through superior skills relative to those of inexperienced and emotional players; access to underpriced, newly securitized assets; efficiently managing risks and volatility through sensible portfolio construc-

tion and rebalancing; and, importantly, paying attention to how different assets fit your own legacy needs and portfolio.

What Comes Next

The chapters of this book follow the sequence of the elements of design and process that contribute to meeting investment objectives and adding value.

- **Part I. Portfolio Fit Theory: The Value of an Investment to *Your* Portfolio.** Understanding how different assets fit specific portfolio and investor needs, taking into consideration the investor's return requirements, risk tolerances, and competitive advantages
- **Part II. Building the Right Policy Portfolio.** Identifying the mix of assets that is most likely to meet investor objectives, given competitive pressures, market developments, and competitive strengths
- **Part III. Structuring the Asset Class.** Knowing how and when to slightly vary, or tilt, a policy portfolio's allocations to asset classes and manager styles, depending on your own and your service providers' skills and perceived market inefficiencies
- **Part IV. Selecting and Terminating Managers.** Retaining managers with best fit and expected value added
- **Part V. Measuring and Managing Risks.** Carefully assessing and scaling risks relative to expected returns and to your own ability to add value
- **Part VI. Built to Last: Leadership Attributes, Creative Management, Succession Planning, and Transitions.** Putting in place the appropriate governance structure and processes to increase the level of responsibility and rewards given to decision makers and improving the process by which human resources are managed

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