"As Rappaport keeps on speaking out for the realities surrounding investment and speculation, our society will profit as it builds on his keen insights."

FROM THE FOREWORD BY **JOHN C. BOGLE**
FOUNDER OF THE VANGUARD GROUP

SAVING CAPITALISM FROM SHORT-TERMISM

HOW TO BUILD LONG-TERM VALUE AND TAKE BACK OUR FINANCIAL FUTURE

ALFRED RAPPAPORT
BESTSELLING AUTHOR OF CREATING SHAREHOLDER VALUE

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To Sharon

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PART 2

COMBATING SHORT-TERMISM

FOREWORD: SAVING CAPITALISM FROM SHORT-TERMISM

First, let me be clear: I am profoundly concerned about the overbearing focus of our financial markets on short-term movements in stock prices, at the expense of the traditional focus on the long-term creation of intrinsic corporate value. In truth—as experienced money managers understand—the stock prices that are seen in the marketplace are evanescent and ephemeral, while the intrinsic values created by corporate America are real and durable.

So it was with great pleasure that I read Professor Alfred Rappaport's splendid book on the vast array of market, corporate, and societal problems created by this relatively recent culture of "short-termism." We share a profound concern about the dominance of speculation over investment in today's financial markets, where swapping pieces of paper back and forth among market participants has overwhelmed Wall Street's traditional economic function of capital formation by a factor of 200 to 1.

I estimate the value of stock trading in the secondary (exchange) market at some $40 *trillion* in 2010, compared to about $200 billion of funding for new or additional issues of equity securities of existing corporations in the primary (new issue) market. When Wall

Street's role of providing funding for the most promising new companies and the most promising projects of established companies takes a back seat to countless waves of trading activities, we have to be concerned about whether the best interests of our society are being served.

What's more, in today's dominant culture of speculation, we've largely made the interests of shareholders subservient to the interests of the corporate-investment complex. Here's how Professor Rappaport puts it: "Investors expect corporate managers to allocate resources so as to maximize the long-term value of their companies and expect fund managers to construct portfolios that offer the highest risk-adjusted long-term returns. The incentives in place, however, typically reward corporate and investment managers for short-term performance rather than long-term value creation."

A little over a decade ago, in the 1999 edition of my book *Common Sense on Mutual Funds: New Imperatives for the Intelligent Investor*, I begin with these sentences: "Investing is an act of faith. We entrust our capital to corporate stewards with the faith—at least with the hope—that their efforts will generate high rates of return on our investments. . . . When we invest in a mutual fund, we are expressing our faith that the professional managers of the fund will be vigilant stewards of the assets we entrust to them."

But in the book's tenth anniversary edition (2009), however, I had second thoughts: "As the decade ending in 2009 comes to a close, it is hard to escape the conclusion that the faith of investors has been betrayed. The returns generated by our corporate stewards have too often been illusory, created by so-called financial engineering, and produced only by the assumption of massive risks. . . . What's more, far too many professional managers of our mutual funds have failed to act as vigilant stewards of the assets that we entrusted to them." These are the very concerns that are reflected throughout *Saving Capitalism from Short-Termism*.

However, *Saving Capitalism from Short-Termism* is not merely about what's gone wrong in our financial system. It includes page after page of clear, well-thought-out recommendations for improving the system in

the interests of investors. It is investors, after all, who are the ultimate suppliers of capital to corporations, and therefore the ultimate beneficiaries of an improved investment system. Included in the recommendations are the development of more rational financial incentives for corporate managers, paying those managers for building long-term value, taking into account the cost of capital, and controlling risks on the corporate balance sheet. For institutional money managers, new incentives would encourage investment rather than speculation, so that they would earn appropriate rewards for truly superior long-term (risk-adjusted) returns.

Thinking big, Al Rappaport also offers a sound methodology for supplying more useful information to investors. His "corporate performance statement" separates revenue and expenses into two distinct sections: (1) cash flows earned from operations (certain), and (2) accruals (uncertain). Accruals would be established based on estimates of future probabilities—for example, estimates of collections from receivables, restructuring charges, and future medical and pension liabilities. (The present methodology that corporations use to forecast future returns on their pension plan assets—largely based on historical returns—is, simply put, absurd.) In each of these cases, corporations would provide three estimates: most likely, optimistic, and pessimistic.

Yes, this change will be hard to bring about. (Tradition and inertia—let alone vested interests—are stern taskmasters!) But the corporate performance statement would express the truth that we all know, so well expressed a decade ago by Robert Bartley, legendary editor of the *Wall Street Journal*: "True profits are represented by cash—a fact—rather than reported profit—an opinion."

These issues are hardly new to Al Rappaport, or to me. We've been speaking out on them in books and journal articles for decades. He focuses his attention on the overriding importance of cash flow as a determinant of long-term investment returns (actually, cumulative future cash flows discounted by the appropriate interest rate, or DCFs). I've focused on dividing decade-long returns in the stock market into *investment* return (initial dividend yields plus the

subsequent annual rate of earnings growth) and *speculative* return (the 10-year annualized percentage change in return as reflected in the price that investors are willing to pay for each dollar of earnings, the familiar P/E ratio).

In the long run, it is economics, not expectations or emotions, that determines investment returns. No one has expressed this issue better than the late Peter Bernstein, the eminent author and economist, whom both Al Rappaport and I quote in our own writings: "Financial markets are nothing more than arenas where investors who need cash today can obtain it by selling the present value of future cash flows to other investors willing to wait for the cash payoffs from their capital. If you invest without expecting future cash flows, then you might as well collect art or play the slot machines." When the sound and fury of short-term, even momentary, fluctuations in stock prices obscure this certainty, it is counterproductive for investors who are striving to accumulate assets for their financial futures. Counterintuitive as it may seem, as I have often observed: *the stock market is a giant distraction to the business of investing.*

So enjoy this wonderful book, and absorb the wisdom that Professor Rappaport has accumulated over the years at the Kellogg School of Management at Northwestern University and from his extensive experience consulting with major corporations and investment firms. As he keeps on speaking out on the realities surrounding investment and speculation, our society will profit as it builds on his keen insights. I highly recommend *Saving Capitalism from Short-Termism* to you.

John C. Bogle
Founder, The Vanguard Group
Valley Forge, Pennsylvania
May 15, 2011

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I have for many years admired Jack Bogle's wise and uncompromising books and articles written on behalf of investors and I am deeply honored that he has agreed to write the Foreword to this book.

Many thanks to the McGraw-Hill team, in particular to Leah Spiro, who initially championed the book; to Mary Glenn, who skillfully steered the book through the publication process; and to Ron Martirano, Alice Manning, and Daina Penikas for their editorial assistance.

To my wife, Sharon, thank you for being such an inspiration to me and for your constant love and support. My fondest wish is that some of the ideas in this book will help shape a better future for our sons, Nort and Mitch, our daughter-in-law, Dolly, and our grandchildren, Ilana and Mikey, and for all the other members of their generations.

INTRODUCTION

Most people find accumulating sufficient funds for their children's education and their own retirement challenging and worrisome. The reasons for this widespread financial anxiety are not hard to understand: we're living longer, unemployment is high, greater tax burdens loom, and it's not clear how government programs, including social security and Medicare, will deliver the benefits that they promise. Today's retirement savers also face the distinct possibility that future market returns will be meaningfully below those that their parents enjoyed. Individuals will have to save more, delay retirement, and invest wisely in order to accumulate the money that they need to meet their financial goals.

In advanced market economies, individuals count on corporate and investment managers to build the value of their savings. Consequently, investors expect corporate managers to allocate resources in such a way as to maximize the long-term value of their companies and expect fund managers to construct portfolios that offer

the highest risk-adjusted long-term returns. The incentives that are in place, however, typically reward corporate and investment managers for short-term performance rather than long-term value creation. As a result, too many corporate managers are obsessed with quarterly earnings and the current stock price. Likewise, too many investment managers, fearing that poor short-term performance will cause fund withdrawals, focus excessively on quarterly performance relative to their benchmark and competing funds. These behaviors are not hard to understand. People do what they are rewarded for doing. Incentives matter.

Short-termism, the obsession with short-term results irrespective of the long-term implications, was a prime factor in the recent global financial crisis. If we as a society do not address it, not only will short-termism exacerbate future crises, but it will jeopardize the vitality of the economy, the financial security of individuals, and the dominance of the free-market system. This book's essential aim is to examine the causes and consequences of short-termism and to propose practical ways to combat it.

Part 1 of the book examines short-termism in publicly traded companies and the investment management community. Specifically,

- Chapter 1, "The Rise of Short-Termism," discusses how the obsession with short-term performance seriously compromises the potential of companies, the economy, and the savings that individuals need to accumulate for retirement. It then goes on to trace the evolution of the economy from the era of entrepreneurial capitalism, when owners managed and managers owned, to today's agency capitalism, where corporate and investment managers responsible for other people's money dominate public companies and the financial markets.
- Chapter 2, "Short-Termism Produces a Financial Crisis," details how outsized short-term financial incentives drove home

buyers, appraisers, mortgage lenders, credit rating agencies, investment banks, and institutional investors to take reckless, value-destroying risks that helped fuel the financial meltdown in 2007–2009. Each party acted in its own self-interest by responding to the incentives that it faced. The essential problem is that the corporate and investment communities have failed to adapt their business practices, and in particular their compensation practices, to an economy in which professional managers who are responsible for other people's money dominate.

- Chapter 3, "Corporate Short-Termism," explains how the ubiquitous maxim, "We manage to maximize shareholder value," is at odds with the way public companies actually operate. Managing for shareholder value means focusing on cash flow, not earnings; it means managing for the long term, not the short term; and, importantly, it means that managers must take risk into account. Instead, many managers seem obsessed with Wall Street's quarterly earnings expectations game and the short-term share price, thereby compromising long-term shareholder value. This chapter also answers the critics who contend that managing for long-term shareholder value exploits customers and employees, disregards social responsibility, and is impractical because capital markets are short-term-oriented.
- Chapter 4, "Investment Management Short-Termism," describes how quarterly performance measurement of fund managers encourages them to prefer the safety of performing acceptably close to their benchmark index over maximizing long-run shareholder returns. Ironically, the fear of underperforming the benchmark contributes to mediocre results, since funds cannot produce superior performance unless they veer from the benchmark. Short-term relative performance measurement not only encourages a short-term point of view, but also induces fund managers to follow the herd even when they are

convinced that stocks are mispriced, thereby exacerbating price bubbles and crashes.

Part 2 presents recommendations for reducing short-termism by aligning the interests of corporate and investment managers with those of their shareholders and beneficiaries. Specifically,

- Chapter 5, "Corporate Long-Term Performance Incentives," presents the troublesome disconnects between pay and performance that exist in virtually all publicly traded companies. The main problem is the practice of rewarding employees at every level of the organization for short-term performance rather than long-term value creation. This chapter presents incentive compensation plans for CEOs, operating-unit managers, and front-line employees that would encourage each to focus on creating long-term value as the governing objective of the company.
- Chapter 6, "Becoming a Long-Term Value-Creating Company," shows how to gain the commitment of senior management and the board and makes the case that the benefits of pursuing long-term value outweigh the risk of poor short-term share-price performance. The chapter goes on to present a dozen essential habits of long-term value-creating companies.
- Chapter 7, "An Overhaul of Corporate Financial Reporting," explains why corporate financial reporting has fallen short in achieving its principal objective of supplying capital providers and other financial statement users with information that is useful for estimating the magnitude, timing, and riskiness of future cash flows. The proposed corporate performance statement overcomes major shortcomings of the income statement by separating observable facts (historical cash flows) from uncertain estimates of future cash flows (accruals). It also advocates

reporting a range of estimates, including the most likely case, an optimistic view, and a pessimistic view, rather than bundling uncertainty into a single-point estimate that serves only to create an illusion of certainty.

- Chapter 8, "Long-Term Performance Incentives for Investment Managers," begins with the fact that because active management is considerably costlier than passive management, actively managed funds must underperform index funds in the aggregate. Since only a small fraction of funds will be able to beat their benchmark indexes over a sustained period, actively managed equity funds will have to make meaningful changes if they are to continue to attract investment dollars in the future. One promising possibility is a move from fees based on the market value of assets managed (where fees are paid irrespective of relative fund results) to performance fees that align the interests of managers with those of long-term fund shareholders. The chapter concludes with a discussion of the difficult task of isolating skill from luck when measuring the performance of investment managers.
- Chapter 9, "Tilting the Odds in Favor of Better Long-Term Returns," shows how skilled fund managers with long investment horizons can improve their chances of outperforming their benchmark indexes over time. Highly concentrated funds with holdings that are meaningfully different from the broad market indexes tend to outperform funds that simply mimic their benchmark. The chapter shows how investors and investment managers can uncover the cash flow expectations that stock prices imply so as to identify the most attractive buy and sell opportunities.

This book is intended for a broad audience. It is directed to the individuals who can make the biggest difference in the urgent

battle against short-termism—corporate executives, board members, institutional investors, and accounting standard-setters. The book is also aimed at employees, management consultants, investment bankers, public accountants, corporate governance activists, and others offering services to value-seeking organizations. Finally, I hope public policymakers, business-school professors and students, and readers concerned about their financial future will be persuaded to embrace the longer-term time horizons needed for a healthier economy that benefits all.

PART 1

CAUSES AND CONSEQUENCES OF SHORT-TERMISM

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CHAPTER 1

THE RISE OF SHORT-TERMISM

"Take care of this quarter's numbers, and the future will take care of itself." This oft-repeated adage captures the essence of the short-termism that the corporate and investment communities practice. Corporate executives obsess over meeting Wall Street's quarterly earnings expectations. Investment managers worry about how their quarterly performance stacks up against a benchmark, like the S&P 500 Index, and against the performance of other similar funds.

The problem is that focusing on the short term and paying scant attention to or simply ignoring the longer-term consequences doesn't take care of the future. It's true that paying inadequate attention to what needs to be done in the short term can compromise the long term. But focusing excessively or exclusively on the short term can be fatal.

The destructive impact of short-termism has reached crisis proportions because business has failed to adapt its practices to

an economy that is increasingly dominated by professional managers who are responsible for other people's money. We urgently need practical means of combating short-termism and revitalizing the economic future.[1] This chapter, and the next three beyond it, will examine the underlying causes and the consequences of short-term behavior. We will begin here with a discussion of what makes short-termism such a destructive force in today's economy, followed by a brief history of important changes in the business and investment communities over the past century that have fueled short-termism. The second section of this book will tackle the formidable task of addressing and correcting the problems ahead of us.

The Tyranny of Short-Termism

Short-termism means choosing a course of action that is best in the short term, but that is suboptimal, if not out-and-out destructive, over the long term. And it is certainly not new. The practice has persisted over the entire span of human history, from ancient days, when people didn't live long enough to worry about the long term and focused on immediate needs, such as hunger, to today's craving for instant gratification in the face of damaging long-term consequences. Drug abuse, overeating, smoking, and spending rather than saving are vestiges of that ancient attitude. In addition, psychological research confirms that people are not adept at choosing among uncertain distant outcomes because of uneven emotion, limited information, and cognitive biases. These biases include groupthink, overconfidence, and interpreting information in a way that confirms one's prior beliefs.

In the business community, short-termism has gone from a simmer to a boil. *Human nature has not changed, but the business environment has.* Behaviors in this new environment have pushed short-termism to the point where it constitutes a crisis that threatens to undermine economic growth, individual well-being, and possibly even the free-market system. The outmoded notion that patience is a virtue that is essential to long-term prosperity is now too often trumped by an obsession with short-term results, irrespective of the longer-term consequences.

Examples of how time horizons are shrinking, undermining long-term-oriented decisions, are rife. For instance, the average tenure of CEOs in the world's top 2,500 public companies has dropped from 8.1 years to 6.3 years during the first decade of the twenty-first century, further reinforcing their focus on short-term performance.[2] CEOs today may well expect their tenure to be even shorter. Also, rapid technological innovation and intense global competition have widened the gap between winners and losers in competitive markets, and have encouraged organizations to think in shorter time frames.[3] It seems paradoxical, however, to suggest that short-term thinking is a consequence of increased competition because competition is a good thing and is the trademark of dynamic market economies. We must look elsewhere to understand why short-termism has become such a destructive force.

In advanced economies like the United States, individuals rely on corporate and investment managers to increase the value of their savings. However, there are inevitably conflicts of interest. What is best for corporate managers may not serve the long-term interests of shareholders and promote the company's

health. What is in the best interests of investment managers may not serve the long-term interests of mutual fund shareholders and pension fund beneficiaries. More broadly, what is in the best interests of corporate and investment managers, or at least is perceived to be in their best interests, may not serve the collective interests of the economy—a sobering lesson that the recent global financial meltdown delivered forcefully.

The main problem is the practice of rewarding managers for short-term performance rather than longer-term value creation. This practice is antithetical to the fundamental principle that individuals should bear the consequences of their choices. Moreover, what contributes to good performance in the short run often increases risk and leads to poor performance in the long run. For instance, a company can cut spending on research and development to boost this year's earnings, thereby setting the stage for disappointing earnings in the future. The obsession with short-term performance promotes decisions that threaten the vitality of companies, the economy, the standard of living, and investment returns over the long haul.

These damaging consequences are growing at a most inopportune time. Expanding life expectancies are increasing the savings that individuals will need for retirement. Companies that used to provide defined-benefit pensions and postretirement healthcare benefits have unloaded these financial burdens onto employees. Finally, social security and Medicare will become insolvent within the next few decades unless there is a strong economy to support the tax base. If short-termism persists, the prospects for a strong economy will shrink.

Can we persuade short-term thinkers who are hardwired with serious cognitive limits to meaningfully reduce the rampant

short-termism in the corporate and investment communities? There are two important reasons for optimism. First, today's economic short-termism emerges mainly from misguided organizational incentives rather than from the cognitive limits of decision makers. Second, incentives matter—if we change incentives, we should expect a change in behavior.

From Entrepreneurial to Agency Capitalism

Until the beginning of the twentieth century, the U.S. economy consisted mainly of businesses that a single individual, a small group of individuals, or a family owned and managed. This was the era of entrepreneurial capitalism. In the words of the celebrated Harvard business historian Alfred D. Chandler, Jr., "owners managed and managers owned." Whether the short-term behavior of the owner-managers of this era was a rational response to a highly risky environment or the result of cognitive failure, the important point is that the owner-managers had to live with the consequences of their behavior.

Entrepreneurial capitalism changed abruptly around the beginning of the twentieth century, when American railroad and industrial companies grew rapidly. A small group of New York banks, led by J. P. Morgan, initially financed the large amounts of capital that these companies needed for expansion. The result was concentrated ownership and interlocking directorates, which raised widespread concern that the "money trust" was wielding its considerable power to crimp healthy competition among the industrial oligopolies that it controlled. The public outcry for greater regulation culminated in the Clayton Act of 1914, which prohibited directors from serving on the boards of competitors.

This legislation, combined with the significant increase in the number of individual investors during the 1920s, ended the era of bank-dominated governance of American corporations.

The subsequent dispersion of corporate ownership came with a wholesale change in management. Large enterprises required more managers who were skilled in operations, administration, marketing, and finance. These professional managers became a permanent fixture of the modern, large corporation. A diffuse and largely passive shareholder base allowed managers to enjoy a high degree of autonomy and limited accountability. The combination of weak owners and powerful managers launched the era of managerial capitalism.

In a perfect world, managers would follow Warren Buffett's golden rule: "Behave as if the corporation you serve had a single absentee owner, and do your best to further his long-term interests in all proper ways." Self-interest undeniably plays a significant role in economic behavior. Predictably, the separation of ownership and control triggered important conflicts between the interests of shareholders (principals) and those of managers (agents).[4] As a consequence of these agency conflicts, there was no assurance that managers would put the interests of shareholders first. This set the stage for what we call *redistributional short-termism*, where the short-term behavior of agents redistributes wealth from principals to agents.

The first phase of managerial capitalism ran from the beginning of the 1920s until the takeover movement of the mid-1980s. During this time, individual investors owned the majority of corporate shares. For example, individuals owned 93 percent of U.S. equities in 1945 and still owned 56 percent in 1986, in spite of the rapid growth of pension funds and mutual funds in the 1970s

and early 1980s. Individual investors generally looked for solid returns from dividends and share-price appreciation. Corporate managers, on the other hand, were concerned primarily with the company's continuing stability and growth. Stability provided employment security for career managers, while growth offered opportunities for promotion and increased compensation.

But here's the rub: managing for maximum long-term shareholder return differs sharply from managing for continuing stability. Managers who are unwilling to tolerate even the slightest risk of corporate failure will reject value-creating investments with moderate risk if they threaten the company's stability. Redistributional short-termism occurs when managers place their preference for near-term stability ahead of the long-term interests of shareholders.

Because management compensation typically increases commensurate with the size of the business, growth can be an important management goal. However, growth can add value, destroy value, or simply be value-neutral. As a result, uncritical acceptance of a growth strategy can damage a company's long-term competitive position and its future shareholder returns. The pursuit of growth without credible prospects for value creation is also evidence of redistributional short-termism. Thus, a myopic focus on stability can lead managers to underinvest by forgoing significant value-creating opportunities, while a preoccupation with increasing corporate size can cause managers to overinvest in value-destroying growth strategies. In both cases, managers are pursuing their own interests at the potential expense of the interests of the company and its shareholders.

Since the 1960s, social activists, consumer activists, and environmentalists have argued that corporations should serve

broader public interests as well as shareholder interests. This is called the *stakeholder model*, and it attempts to balance the interests of everyone with a stake in the company. It also makes it easier for corporate managers to justify uneconomic diversification. For instance, during the 1960s, companies pursued misguided mergers and overinvested in declining core businesses, moves that hurt shareholders but benefited other constituencies. Corporate diversification means more jobs for employees—in the short run. Suppliers enjoy the prospect of additional business, and local communities get a larger tax base as a consequence of the company's increased size. Also, CEOs can bask in the favorable personal recognition and praise that they receive for the business decisions that they make based on social criteria. Critics charge that balancing stakeholder interests is simply rhetoric by entrenched managers who are seeking to deflect attention from poor returns for shareholders.

Failure to manage for value during the 1970s and 1980s was not lost on the stock market. After six decades of relative tranquility, managerial capitalism came under siege. The market dispassionately penalized companies that engaged in ill-advised diversification or failed to generate the highest return on their assets. Such inattention to shareholder interests led to a value gap, the difference between the potential value of the company if managers operated it to maximize shareholder value and its actual stock market value. A positive value gap invited well-financed corporate raiders, such as Carl Icahn and T. Boone Pickens, to bid for such companies, replace their management, and redeploy capital more productively. The threat of takeover forced many CEOs to place an overdue priority to delivering value for shareholders

when they quickly realized that the best takeover defense was a credible plan for creating greater value than the raiders could.

The excesses of the 1980s takeover movement—acquirers paying unwarranted acquisition premiums financed by too much debt—sowed the seeds of that movement's demise. As they entered the 1990s, CEOs of public companies were relieved to see Wall Street raiders move offstage. But it was not to be business as usual. Corporate ownership in the United States continued to shift from individuals to institutions, largely pension and mutual funds. From 1986 to 2006, direct ownership by individuals dropped from 56 percent to 27 percent, with a corresponding rise in institutional ownership. Most of the institutional increase came from the growth in equity mutual funds, which was largely the result of 401(k) and other individually directed retirement accounts.[5]

The rise of institutional ownership ushered in the era of *agency capitalism* as agency conflicts spilled over from the realm of companies and product markets to investment management firms and financial markets. With the institutionalization of savings, another layer of agents was added, thereby further increasing the distance between investors and their money.[6] The simple economy of owner-managers was long gone. There were now two *new* agency conflicts. There was the recently introduced conflict between professional investment managers and fund shareholders saving for retirement. In an ironic twist, the classic agency conflict between the interests of corporate managers and those of shareholders, depicted by Adam Smith and by Berle and Means, underwent a dramatic sea change. The dominant corporate shareholders, institutional investors, were now agents,

not principals. *When both sets of agents, corporate and investment managers, have a common short-term performance agenda, there is little reason for conflict. The conflict is now between corporate managers and the retirement-saving principals in whose interests the investment managers are supposed to act.*

Short-termism is a rational choice for investment and corporate managers whose job security, labor-market reputation, and compensation are tied to near-term performance. So it's important to consider what kind of financial and nonfinancial incentives motivate managers.

In the early 1990s, corporate boards, with the encouragement of institutional investors, became convinced that the surest way to align the interests of managers and shareholders was to make stock options a large component of executive compensation. Another impetus for doing this was the 1993 Internal Revenue Service regulation that disallowed tax deductions for salaries exceeding $1 million, but made an exception for performance-based incentive compensation, including stock options. By the end of the decade, stock options accounted for more than half of total CEO compensation for the largest U.S. companies. Options and stock grants also constituted almost half the remuneration of directors. Relatively short vesting periods, coupled with the belief that reported short-term earnings fuel stock prices, persuaded many executives to manage earnings and to exercise their options early, effectively cashing out opportunistically. The common practice of accelerating the vesting date for a CEO's options at retirement added a further incentive to focus on short-term performance. In another case of unintended consequences, the swell of options and stock holdings may well have shrunk the already-short time horizons of corporate executives.

Think of it this way: senior executives effectively exchanged largely fixed compensation and high job security for more variable (but significantly increased) compensation and lower job security. During the 1990s, some managers created huge amounts of value and built some remarkably successful businesses from scratch. But no matter what the annual reports and investor relations releases say, the 1990s were also a time when many executives masqueraded as shareholder value champions while obsessing over short-term performance.[7] However, management performance and governance shortcomings took a backseat as investors watched the stock market rise annually at a double-digit clip.

The climate changed dramatically in the new millennium, when accounting scandals and a steep stock market decline triggered a rash of corporate collapses. The ensuing erosion of public trust prompted a swift regulatory response—most notably, the 2002 passage of the Sarbanes-Oxley Act (SOX), which requires companies to institute elaborate internal controls and makes CEOs and CFOs directly accountable for the veracity of the company's financial statements. Yet despite increased regulation, the focus on short-term performance persists. A survey of 401 financial executives conducted in 2005 revealed that companies manage earnings with more than just accounting gimmicks: a startling 80 percent of respondents said that they would decrease value-creating spending on research and development, advertising, maintenance, and hiring in order to meet earnings benchmarks. More than half of the executives would delay a new project even if it entailed sacrificing value.[8]

This brings us to the present. Short-termism is sometimes cited as a factor contributing to the global financial crisis, but it is not new. Short-termism has been an established business

practice since the takeover era of the 1980s, if not earlier. The value-destroying consequences of short-termism persist even when the economy is relatively stable. It's just that short-term behavior is largely concealed from investors. For example, no management team discloses that it has rejected value-creating investment opportunities in order to meet short-term earnings goals. Typically, the damaging results of risky, short-term-oriented behavior become obvious only after the company's stock price has collapsed. Short-term-oriented behavior isn't just associated with asset bubbles; it has become an ingrained part of a business culture that produces observable and unobservable misallocations of resources.

It is tempting to look at history and conclude conveniently that financial crises are as inevitable as death and taxes.[9] However, to dismiss the latest crisis as just another inevitable bust following a period of unbridled euphoria would be neither accurate nor instructive.[10] The scale, complexity, and, most important, the commanding role of agents entrusted with managing other people's money combined to make the 2007–2009 financial crisis an informative case study of the devastating effect of short-termism. In the next chapter, we show how a chain of agents motivated by perverse short-term incentives produced this crisis of epic proportions.

Notes

1 A number of prominent think tanks and professional organizations representing public companies and institutional investors have addressed the problem of short-termism. Their interest in the topic predates the beginning of the global economic crisis. Since 2004, the Aspen Institute Business and Society Program has actively promoted long-term value creation by facilitating

dialogue among corporations, organized labor, institutional investors, and government, academic, and judicial leaders. In 2007 it published *Long-Term Value Creation: Guiding Principles for Corporations and Investors.* This was followed by its 2009 publication *Overcoming Short-Termism: A Call for a More Responsible Approach to Investment and Business Management*, accompanied by an impressive list of signatories that included John C. Bogle, Warren Buffett, Ira Millstein, Peter G. Peterson, and Felix G. Rohatyn. Short-termism is also a hot-button issue for the CFA Institute because its principal constituencies, money managers and financial analysts, are understandably concerned about value-destroying corporate practices. The institute has sponsored conferences ("Breaking the Short-Term Cycle," 2006) and published surveys on short-termism (*Short-Termism Survey: Practices and Preferences of Investment Professionals*, May 2008). The Conference Board published *Time to Deal with Short-Termism* in 2006, and the Committee for Economic Development (CED) published *Built to Last: Focusing Corporations on Long-Term Performance*, 2007. The U.K.-based Marathon Club, whose purpose is to stimulate pension funds, endowments, and other institutional investors to be more long-term in their thinking and actions, presents its views in *Long-Term, Long-Only Investing: A Consultation Paper*, 2006.

2 Ken Favaro, Per-Ola Karlsson, and Gary Neilson, "CEO Succession 2000–2009: A Decade of Convergence and Compression," *Strategy+Business*, Summer 2010.

3 In *The Fable of the Sharks* (Suffolk, U.K.: Arima Publishing, 2005), Eduard Gracia makes a convincing case for the link between "winner-take-all" markets and short-termism.

4 Adam Smith identified the conflicts that arise in the corporate form of organization in his 1776 classic, *The Wealth of Nations*, stating that since corporate managers are "managers of other people's money rather than of their own, it cannot well be expected that they should watch over it with the same anxious vigilance as if it were their own money." The classic study of the separation of ownership and control of the corporation, *The Modern Corporation and Private Property*, by Adolph A. Berle and Gardiner C. Means, was published in 1932 by Harcourt, Brace & World. In 1937, the British Nobel Prize–winning economist Ronald Coase published his landmark article, "The Theory of the Firm," *Economica*, vol. 16, no. 4, pp. 386–405, in which he explained that firms exist because they can reduce transaction costs that emerge during production and exchange, thereby capturing efficiencies that individual entrepreneurs cannot. Michael C. Jensen and William H. Meckling formalized the concept of agency costs in "Theory of the Firm: Managerial Behavior, Agency Costs and

Ownership Structure," *Journal of Financial Economics*, Vol. 3, No. 4 October 1976, pp. 305–360.

5 Some fund management companies, such as Fidelity and Vanguard, are freestanding organizations, but 41 of the 50 largest fund companies are now controlled by financial conglomerates.

6 Hedge funds and private equity funds are indirectly "owned" by employees and retirees through investments by pension funds, thus introducing another layer of agents. Funds also rely on consultants for investment-manager hiring recommendations and on proxy advisory firms such as ISS and Glass Lewis for voting recommendations on governance issues. The proliferation of agents has added substantially greater complexity and more conflicts of interests to the economy depicted by Berle and Means in 1932.

7 During the early 1990s, there was great concern that short-termism, ineffective corporate governance, and the high cost of capital were causing the United States to lose its competitiveness relative to Japan, Germany, and other powerful industrial nations. The best-known expression of this concern was Harvard professor Michael E. Porter's report that synthesized the research of 25 academics, *Capital Choices: Changing the Way America Invests in Industry* (Washington, D.C.: Council on Competitiveness, June 1992). Michael Jacobs, who served as director of corporate finance at the U.S. Treasury Department during the first two years of the first Bush administration, showed how short-term myopic behavior stymied American competitiveness in *Short-Term America: The Causes and Cures of Our Business Myopia* (Boston: Harvard Business School Press, 1991). For an overview of the problem, see Kevin J. Laverty, "Economic Short-Termism: The Debate, the Unresolved Issues, and the Implications for Management Practice and Research," *Academy of Management Review*, Vol. 2, No.3 July 1996.

8 John R. Graham, Campbell H. Harvey, and Shiva Rajgopal, "The Economic Implications of Corporate Financial Reporting," *Journal of Accounting and Economics*, vol. 40, 2005.

9 Over the past three decades, financial markets have been plagued by the following crises: the 1982 Mexican financial meltdown that threatened major American banks; the 1984 savings and loan crisis; the stock market crash in October 1987; the 1990s turmoil in the credit markets triggered by the Mexican peso crisis in 1995, the collapse of the Thai baht in 1997, the South Korean debt crisis in 1997, and the Russian debt default in 1998, which led to the demise of Long-Term Capital Management; the bursting of the high-tech bubble in 2000; and the global economic crisis that began with the collapse of the subprime mortgage market in 2007–2008. For a comprehensive

examination of these crises, see Henry Kaufman, *Road to Financial Reformation: Warnings*, *Consequences*, *Reforms* (Hoboken, N.J.: John Wiley & Sons, 2009), pp. 133–151.

10 The latest crisis was different, for example, from the 1990s dot-com boom in several ways. First, the dot-com boom was based on the introduction of a general-purpose technology that affected the entire economy. Similar boom-and-bust patterns were observed before with the introduction of canals, railroads, automobiles, and computers. Second, debt played a critical role in the 2007–2009 financial crisis, but not in the dot-com bust. Finally, the asset at the core of the recent crisis—real estate—is a significant item on the consumer's balance sheet. So, when real estate values took a dive, highly leveraged homeowners were hurt badly. By contrast, despite a 75 percent decline in the Nasdaq average, the dot-com bust did not lead to a financial crisis.

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CHAPTER 2

SHORT-TERMISM PRODUCES A FINANCIAL CRISIS

There's been no shortage of postmortems about the recent global financial meltdown, with the government and the private sector sharing ample blame. Commentators with a liberal slant emphasize the role of greedy, ethically challenged bankers on Wall Street, while free-market devotees highlight the misguided policies of an overreaching government. There were, of course, plenty of culprits and system failures in both the public and the private sectors. However, the sources of the problems in the two sectors differ. Ideology and political expediency are the main drivers of public-sector behavior, while economics dominates the conduct of private-sector organizations. This chapter examines this difference and makes the case that an *essential cause* of the epic collapse was a collection of perverse, short-term financial incentives.[1] These faulty incentives drove a chain of

private-sector accomplices to take reckless risks with other people's money.

As professors Carmen Reinhart and Kenneth Rogoff[2] show in their study of 66 countries over the past 800 years, financial crises occur with alarming consistency and have striking similarities. Excessive accumulation of debt by governments, corporations, and households is a common harbinger of financial collapse. But the crisis that began in 2007, while similar to those of the past, was different in some important ways. Recent developments in communications technology, financial engineering, and the rising prominence of the institutional investment community altered the economic landscape. Ultimately, though, the incentives were the essential difference. Raghuram Rajan, a University of Chicago economics professor and former chief economist at the International Monetary Fund, sums it up well:

> What enveloped all of us was not some sort of collective hysteria or mania. Somewhat frighteningly, each one of us did what was sensible given the incentives we faced. Despite mounting evidence that things were going wrong, all of us clung to the hope that things would work out fine, for our interests lay in that outcome. Collectively, however, our actions took the world's economy to the brink of disaster, and they could do so again unless we recognize what went wrong and take the steps needed to correct it.[3]

Incentives were not a root or initiating cause of the economic meltdown, but as we will demonstrate, they were an essential contributing factor.

Red Flags

We begin with why most people ignored the portents of an impending disaster. When people believe that an outcome was much more predictable that it actually was, they are suffering from hindsight bias. Hopefully we will not be charged with hindsight bias if we suggest that the economic risks were on the radar screens well before the crisis unfolded in 2007. For example, consider the prescient statement, from 1999, about Fannie Mae's move to ease credit requirements on the loans that it purchased from lenders: "In moving, even tentatively, into this new area of lending, Fannie Mae is taking on significantly more risk, which may not pose any difficulties during flush economic times. But the government-subsidized corporation may run into trouble in an economic downturn, prompting a government rescue similar to that of the savings and loan industry in the 1980s."[4]

Prior to the beginning of the crisis in 2007, highly regarded business leaders, professional investors, and academic economists, including Warren Buffett, Henry Kaufman, investment manager Jeremy Grantham, Edward Chancellor, New York University professor Nouriel Roubini, and Yale professor Robert Shiller, issued well-publicized warnings that the toxic combination of a runaway housing bubble and highly leveraged financial institutions would lead to an economic disaster.[5] Nor should we overlook the active group of short sellers who bet billions of dollars that a large number of mortgage borrowers would default.[6]

But the cautious pundits and the short sellers were not alone. Plenty of ordinary citizens watched television commercials offering mortgages for up to 125 percent of a home's value and

sensibly questioned whether this was just too good to be true. What were the CEOs of lending institutions thinking? Didn't they recognize that they were on a collision course with disaster? The herd mentality that produces bubbles makes it difficult to listen to doomsayers. But more important, it was in each CEO's self-interest to worry about quarterly earnings targets and the company's stock price and let someone else worry about problems that might surface down the road, such as collecting the mortgage payments. As Upton Sinclair commented a century ago, "It is difficult to get a man to understand something when his salary depends on his not understanding it."

As long as homeowners made their mortgage payments on time, the participants in the mortgage game—lending organizations, appraisers, credit rating agencies, Wall Street investment banks, and investors in mortgage-backed securities—prospered. But falling home prices, rising mortgage defaults, higher interest rates, and significant tightening of credit triggered the mortgage crisis in the summer of 2007. The crisis led to layoffs not only in financial services and housing, but in other sectors across the economy. Homeowners, taxpayers, terminated employees, corporate shareholders, bondholders, mutual fund shareholders, and pension fund beneficiaries suffered the devastating consequences of short-termism.

Public-Sector Culprits

As the crisis unfolded, commentators in the business press, politicians, and former government regulators began the blame game in earnest. The critics typically chose Congress and the Federal

Reserve Bank as their top culprits in the public sector. Some even blamed China for keeping interest rates in the United States artificially low by channeling its large trade surpluses into Treasury bonds. Popular culprits in the private sector, discussed in the next section, included home buyers, appraisers, lenders, rating agencies, corporate boards of directors, Wall Street investment banks, and institutional investors.

Congress

As we stated earlier in the chapter and will discuss in detail later, one of the essential causes of the crisis was deeply flawed incentives in the private sector.[7] But make no mistake about it: public-sector culprits—principally Congress and the Federal Reserve—magnified the deleterious impact of those incentives. You can trace the origin of the housing crisis back to Congress's passage of the Community Reinvestment Act of 1977. This law outlawed "redlining," the practice of refusing to grant mortgages to people in inner-city and low-income neighborhoods, and encouraged banks to expand homeownership by extending mortgages to borrowers with credit scores that were too low to qualify for conventional loans.

This subprime lending gained momentum during the years of the Clinton administration as Congress aggressively pushed Fannie Mae and Freddie Mac to increase the number of mortgages they extended to low- and moderate-income families. During the administration of George W. Bush, lenders further eased credit standards, regulation of financial institutions was lax, and the Federal Reserve kept interest rates low. Combined, these

practices certainly contributed to the housing bubble and the subsequent financial disaster, but that's only part of the story. Commercial bank executives, believing that they could significantly increase their companies' profits and their own compensation, pushed the federal government's affordable housing mandate to risky extremes. Those activities, along with short-term-oriented actions by credit rating agencies, Wall Street investment banks, and institutional investors, ultimately led to a financial disaster that spewed devastating collateral damage onto millions of innocent people worldwide.

The Federal Reserve

Where was the Fed when the signs of a looming economic disaster were flashing across the radar screen? Alan Greenspan, the Fed chairman, insisted that central bankers could not distinguish between an asset bubble and a tolerable price expansion. He therefore rejected the suggestion that the Fed fight the housing bubble.[8] Ben Bernanke, who succeeded Greenspan as chairman in 2006, shared this mindset.

Only after the bubble burst did Greenspan recognize the error of his ways. On October 23, 2008, he testified before Congress. Evoking a line from the classic film *Casablanca*, he conceded that he was "in a state of shocked disbelief" at the unanticipated meltdown of markets. "I made a mistake in presuming that the self-interest of organizations, specifically banks and others, were such as that they were best capable of protecting their own shareholders and their equity in the firms."[9] Regrettably, the interests of managers and shareholders often clash, and corporate governance systems do a poor job of handling the conflicts.

The Fed's models failed to account for how these conflicts affect both individual organizations and the global economy. As a consequence, the Federal Reserve relied on financial markets to self-correct, which allowed the housing market to spin out of control. Some commentators contend that a blind faith in free-market ideology trumped the obvious warning signs of an impending storm. Or perhaps Greenspan just neglected the advice of William McChesney Martin, Jr., chairman of the Fed from 1951 to 1970, who stressed that the Federal Reserve's job is "to take away the punch bowl just when the party gets going." A third possibility is that Greenspan thought that long-term economic growth was so important that he was willing to take extraordinary short-term risks to achieve it. In any case, the Fed was an enabler of the crisis.

Government Bailouts

Critics also maintain that the government's implicit assurance that it would rescue institutions that were deemed "too big to fail" played a prime role in the financial crisis.[10] The argument is that risk takers who expect to be immune from large losses will take on greater risks. It's a classic case of "heads I win" and "tails you lose." If risky bets by large financial institutions win, the executives of these firms are rewarded handsomely. But if the bets lose, taxpayers will bail out the company. Economists regard the expectation that profits will be privatized and losses socialized as an example of the moral hazard problem.

As the critics point out, the federal government's track record on bailouts planted the seeds of moral hazard. Notable bailouts over the past half century include Penn Central Railroad (1970),

Lockheed Aircraft (1971), Chrysler (1980), savings and loan institutions (1989), Long-Term Capital Management (1998), and the airline industry (2001). In a speech before the Economic Club of New York in December 2002, Greenspan affirmed the moral hazard issue by reiterating his position that the Fed could not confidently identify bubbles and suggesting that "dealing aggressively with the aftermath of a bubble appears to be the most likely alternative to avert long-term damage to the economy."[11] The message was crystal clear: allowing financial institutions to fail would cause greater harm to the economy than bailing them out. Paradoxically, critics also alleged that the Fed's reluctance to explicitly endorse the policy of moral hazard inhibited it from acting sooner to alleviate the crisis. Damned if you do and damned if you don't.

Despite popular perception, there are three reasons to believe that eliminating the safety net of government bailouts would not have meaningfully affected the amount of risk that managers assumed. The executives of financial institutions exhibited overconfidence. Demonstrating confidence is helpful, if not essential, when counterparties depend on you to deliver on mammoth financial promises. Traders and managers in the financial sector, of course, do not lack for confidence. But confidence is a two-edged sword. It's highly desirable for people who are trying to build a successful business. On the other hand, when their confidence becomes overconfidence that borders on hubris, managers can destroy the businesses that they helped build, causing serious damage to the economy. Nothing breeds overconfidence like the euphoria of success. It's hard to imagine that executives of financial institutions, riding a crest of highly profitable years, had much concern over whether the government would bail them out

if they failed. Moreover, CEOs are in danger of losing their jobs and reputations if they fail, with or without a bailout.

While competing fiercely, financial institutions with similar business models also succumbed to thinking and behaving as a group. Social bias drives herd behavior when managers act in their self-interest based in part on how they see other managers acting in their own interests. Competitors that follow the same strategy—for instance, investing in mortgage-backed securities—tend to underestimate their own risk. If everyone is doing the same thing, everyone suffers when things go wrong. As John Maynard Keynes, the famed economist and investor, explained decades earlier: "Worldly wisdom teaches it is better for reputation to fail conventionally than to succeed unconventionally." The risks that financial institutions took are more convincingly explained by groupthink than by the anticipation of a bailout.

Finally, the argument that bailouts pose a moral hazard assumes that the primary concern of managers is the long-term health of their companies. Bailouts attempt to rescue companies from their current difficulties and to restore them to sustainability. CEOs surely would like to see their companies prosper over the long term. But long-term prosperity can hardly be CEOs' primary objective when their incentive pay rewards them so handsomely for short-term performance, even if that performance endangers the company's longer-term viability.[12] *The bottom line is that the source of moral hazard is not public-sector bailouts but private-sector incentive structures.*

Consider the question of whether managers would take fewer excessive risks if there were no bailouts. We don't think so. The evidence suggests that overconfidence, groupthink, and short-term performance incentives dictate the level of managerial risk

taking and that eliminating bailouts would not meaningfully affect that risk-taking behavior.

Private-Sector Culprits

The public sector played a major role in the events leading up to the crisis; however, private-sector participants—home buyers, appraisers, mortgage lenders, credit rating agencies, corporate boards, Wall Street investment banks, and institutional investors—played a more direct and significant role. Market participants are rarely stupid; they respond to incentives. So in order to understand their behavior, you have to consider their incentives. Each private-sector culprit responded to incentives that offered outsized short-term rewards that overwhelmed the long-term risks.

A mix of short-term incentives was the cause of the excessive risks that companies took. These incentives not only rewarded managers for delivering quarterly earnings and near-term share-price increases, but also served as performance measures for promotion within the organizations. These perverse incentives governed the values of large, public companies and encouraged managers to take reckless, value-destroying risks. Such risks led to the failure of once-celebrated financial institutions like Bear Stearns, Lehman Brothers, Merrill Lynch, and AIG. Decimated shareholders, fired employees, and taxpayers, the groups that shouldered the burden of the financial losses, were justifiably outraged to find that executives were paid multimillion-dollar bonuses even as their companies spiraled toward insolvency.[13] This egregious remuneration in the face of failure was the ultimate assault on the principle of pay for performance.

Labeling individuals who pursued their self-interest as culprits may seem unduly harsh. But the actions of these culprits, while individually rational, led to calamitous outcomes that were dreadfully harmful for society as a whole. Individuals doing right for themselves did wrong for others.

One clear example is the subprime mortgage debacle, which led to a credit crisis that ultimately resulted in a global economic implosion. The process started when the incentives for private-sector culprits encouraged taking on excessive risk. It's not too difficult to see how events unfolded.

Home Buyers

The process began with people who bought homes that they could not afford. Soaring house prices, low introductory teaser rates, low or no down payments, and limited or no verification of their income and assets enticed these borrowers to act. Many of the home buyers were simply caught up in the frenzy and had no idea what they were getting themselves into. For some borrowers, the day of reckoning came when the teaser rates were reset to higher rates, leading to monthly payments that they could not afford on a house that was falling in value. Homeowners who were unable to refinance their mortgages at a lower interest rate had no choice but to default on their obligations. Whether borrowers had acted with willful or genuine ignorance, the result was the same: they owned a house that they could not afford. As a consequence, they faced the risks of losing their home and ruining their credit. Knowingly or not, however, borrowers were a party to redistributional short-termism when shareholders of financial institutions and taxpayers ultimately absorbed their

losses. Not unlike corporate managers, homeowners had incentives that encouraged them to take imprudent risks with other people's money to achieve a short-term gain.

Appraisers

The next culprit, the appraisers, entered the picture when buyers and borrowers needed a valuation to justify the loan. Mortgage brokers and banks steered business to real estate appraisers who were known to provide generous valuations. Appraisers focused on getting deals done to collect their fees, and turned a blind eye to the potentially harmful consequences of their inflated valuations. This added fuel to the housing bubble.

Lenders

This leads to the lenders who originated, packaged, and distributed subprime mortgages. The question is why banks and other lending institutions yielded to government pressure and made loans to individuals with dicey credit. A look at fees is a good place to start. Lenders earned fees for mortgage origination, fees for packaging the mortgages, and profits from selling the mortgages. These contributed significantly to near-term earnings and boosted the incentive compensation of bank employees and executives. Another major factor was that lending institutions didn't have to eat their own cooking. They transferred their loan default risk by quickly selling a substantial majority of their mortgages to Fannie Mae, Freddie Mac, and Wall Street investment banks.

Since the loans were off the lenders' balance sheets soon after the lenders originated them, they had little incentive to carefully examine the creditworthiness of prospective borrowers.

Some banks opted to hold on to a meaningful fraction of their loans to provide comfort to the investment banks that purchased the remaining loans. These banks typically chose to keep the loans with the highest yields and greatest risk in order to further boost short-term earnings. For some, this was a fatal mistake. These loans defaulted quickly as home prices plummeted, triggering huge—and, in some cases, mortal—losses. The lure of immediate financial rewards predisposed managers to discount the extraordinary riskiness of the loans that they themselves had originated. On top of all this, banks financed these low-quality mortgage loans with short-term debt, thus speeding up the day of reckoning.

All the large global banks had risk managers whose job it was to make certain that the bank did not take on excessive risk. Where, then, were the risk managers? Traders, who held more organizational sway than risk managers, were more interested in getting a transaction approved than in dealing with the risks of that transaction.[14] They saw risk managers as obstructionists who got in the way of their earning money for the bank and larger bonuses for themselves. When traders clashed with risk managers, senior management sided with the traders, who had produced huge recent profits, rather than with the risk managers, who opposed the transactions that had generated those profits. This was another case of individuals choosing to ignore longer-term consequences while pursuing their own short-term

gains.Why didn't major lending institutions get off the mortgage bandwagon when the signs of an impending meltdown were clear? Was it the irrational exuberance of the crowd? On the contrary, it was rational exuberance. Helped by low interest rates and dizzying levels of leverage, banks were able to report record earnings. And they continued to ride the housing bubble even though they knew that it would inevitably burst. But since no one knew how long the bubble would last, banks refused to get off the bandwagon before the bubble burst because if they did so, they would surrender their customers and their earnings to competitors. They also feared that the public disclosure of a pullback from the business would trigger a sharp drop in the company's stock price, thereby devastating the value of the stock and stock option holdings of the bank's executives and other employees.

While no CEO wanted to be responsible for contributing to the financial crisis, no single bank could have averted the crisis by leaving the out-of-control mortgage lending business. Nor was it in the CEOs' personal interest to leave. CEOs and other senior executives of banks that remained in the game continued to receive generous compensation. And even in the cases where the company failed, the executives collected the severance packages that they had negotiated in better times. Staying in the business also gave executives additional time to sell their shares before the anticipated meltdown, and postponed the expected hit to their stock and stock option wealth. For example, Kenneth Lewis, the CEO of Bank of America who was ousted in 2009, unloaded $173 million of company stock when it was trading around its record high in 2006.[15] Factoring in incentives, it is more risky for CEOs to leave the herd than to follow it.

Credit Rating Agencies

Lending institutions pooled their loans into mortgage-backed securities, which promise to pay a fixed rate of interest for a defined period of time. These securities, which resemble bonds, use the interest and principal payments made by homeowners to pay the holders of the securities. Since buyers want to understand how creditworthy these securities are, the issuers, including banks and Wall Street firms, seek the imprimatur of the credit rating agencies.

The major credit rating agencies—Standard & Poor's, Moody's, and Fitch Ratings—presumably earn their fees for representing the investors.[16] But they face a conflict of interest because it is the issuer that pays them. Moreover, the fees that they earn are contingent on their providing the desired rating. Working closely with the commercial banks that originated the loans and Wall Street investment banks that were eager to sell mortgage-backed securities, rating agencies assigned investment-grade ratings to hundreds of billions of dollars of mortgage-backed securities that they would later, and belatedly, downgrade. These ratings created a false sense of safety and contributed to the billions of dollars of losses for investors who relied on them.

Some economists blame the inflated ratings on flawed models that the ratings agencies used, which failed to distinguish between default risk during economic booms and default risk during downturns.[17] A less charitable interpretation would be that the expectation of the sizable incentive pay that the mortgage business generated for all parties swayed management and the ratings analysts. Why would a rating agency, which depends on its reputation for its long-run profits, sacrifice its future for

short-term gain? A plausible explanation is that sizable short-term rewards, when combined with typically short employment tenure, encouraged executives to overweight near-term compensation at the expense of the company's longer-term health.[18]

Corporate Boards of Directors

Corporate boards of directors cannot shirk the role that they played in the devastation brought on by the financial crisis. Nell Minow, editor of The Corporate Library and a long-time champion for better corporate governance, believes that directors are largely to blame for the mess because "their sole responsibility is to act as fiduciaries for the shareholders in managing risk. They not only failed to perform this task but indeed, in their approval of outrageous pay plans with perverse incentives, they all but guaranteed the current disaster."[19]

Why did boards fail? They may have simply been asleep at the switch, either unaware of or unable to properly exercise their responsibilities. It is also likely that some independent directors of the failed banks did not have a sufficient understanding of the complexities of the business to challenge management. Boards failed to respond to the demands of shareholders, especially on issues related to pay. None of these explanations is a satisfactory excuse for either the failure to monitor risk or the approval of executive pay packages that were loaded with short-term incentives.

It's hard to believe that directors, even those with little experience in financial services, were unaware of the troubling signs in the housing market. So why would well-intentioned directors

just go along with management instead of reining in risky lending activity? Were they really disregarding shareholder demands? The problem was not that the boards of failed companies were unresponsive to the demands of shareholders, but rather that they were responsive to what they believed institutional shareholders wanted—steadily rising earnings to boost the stock price. In other words, short-termism crowded out long-term shareholder interests.

Finally, you can't expect directors to monitor risk carefully when the incentive compensation packages approved by the board encourage senior executives and employees to engage in excessively risky activities. It's even more difficult for directors to live up to their risk management responsibility when an influential member of the board and a strategic advisor to management, like Robert Rubin at Citigroup, supports the bank's move to ramp up risk to increase earnings.

Wall Street Investment Banks

The Wall Street investment banks that issued mortgage-backed securities are the next culprit. Attracted by high yields and falsely comforted by inflated credit ratings, pension funds, hedge funds, insurance companies, and foreign governments snapped up these toxic securities. Wall Street firms generated profits not only from underwriting and trading the securities, but also from repackaging them into even riskier derivative securities.

Realizing that Wall Street would purchase almost any loan, lenders further lowered their credit standards to accommodate the insatiable demand. Hooked on this short-term profit

addiction, Wall Street firms failed to conduct proper due diligence, turning risk management into a lamentable oxymoron. Like the other culprits, Wall Street firms focused on personal, short-term gains and not the risk of future losses to the firm, its clients, and the broader economy. In so doing, the investment banks ultimately failed to attend to even their own short-term risks. For example, they launched in-house hedge funds that purchased significant positions in the riskiest subprime mortgage securities, financed with heaps of leverage. The collapse of the internal hedge funds at Bear Stearns in 2007 sparked the demise of the firm less than one year later. Citigroup, Merrill Lynch, and UBS, among others, were also caught up in the meltdown of mortgage-backed securities.[20]

Some commentators have expressed doubt that short-term compensation incentives were responsible for excessive risk taking.[21] They reason that if a Wall Street firm fails, the wealth of its top executives is largely wiped out—a concern that supposedly mitigates the urge to take reckless risks. The argument loses its bite when you consider that executives were able to and did cash out substantial amounts of their compensation as earnings before the eventual meltdown. For instance, between 2000 and 2008, the top five executives of Bear Stearns and Lehman Brothers pocketed approximately $2.4 billion from performance-based cash bonuses and equity sales. The Bear Stearns executives, with the exception of former chief executive James E. Cayne, sold almost five times as many shares before the firm's collapse as they held in 2008. The comparable figure for the top five Lehman executives was about 1.3 times the shares they held in 2008.[22] The opportunity to take huge sums of cash off the table lessened

any concerns these executives might have had over the future consequences of the aggressive risks they were taking.

Institutional Investors

Surprisingly, institutional investors have received far less blame than the other parties involved. However, institutional investors around the globe played a significant role in the downfall. Little else would have mattered had they not demanded enormous amounts of mortgage-backed securities, as the other culprits would have been unable to play their roles. Without investor demand, Wall Street issuers would have had no outlet for their products. Credit rating agencies would have had nothing to rate. Lenders would have been compelled to retain subprime loans on their books instead of packaging and selling them. Appraisers would have been under less pressure to grant overly generous valuations. Home buyers who were unable to establish their creditworthiness would not have been granted mortgage loans. Counterfactuals are speculative, but it seems reasonable to suggest that the scale and scope of the crisis would have been considerably less had institutional investors paid greater attention to their fiduciary responsibilities.

Complexity and a lack of transparency masked the underlying risk of mortgage-backed securities. As a result, investors bought securities with yields that were too low to compensate them for the risks that they were assuming. However, sophisticated investors with fiduciary responsibility also failed to conduct adequate due diligence. Lured by seemingly high yields and uncritical of investment-grade credit ratings, these investors operated without

a full understanding of the risks that they were assuming. As a consequence, they incurred significant losses in mortgage-backed bonds and financial stocks in the wake of the failure of Bear Stearns, Lehman Brothers, and other financial institutions.

Pension funds, endowment funds, and wealthy individuals who invest in hedge funds pay lofty fees and expect market-beating returns. These returns are difficult to achieve without taking on significant risk and lots of leverage. Hedge fund fee structures provide managers with a strong incentive to place risky bets. The typical fee structure, known as "two and twenty," is an annual management fee of 2 percent of the net asset value of the fund and an annual performance fee of 20 percent of the fund's gains—unrealized as well as realized. That sounds like a win-win for both managers and shareholders. The problem is that if this year's losses offset last year's gains, managers still keep last year's performance fee, even if shareholders lost money over the two-year period.

This structure can encourage managers to take aggressive risks to win big in the short term rather than focus on longer-term investment opportunities. In an attempt to improve the link between the interests of managers and those of shareholders, most funds pay no performance fee until the value of the fund exceeds the "high-water mark," or the previous high for the fund's net asset value.[23] The fund becomes a more attractive investment for investors following poor performance because the need to reach the high-water mark increases their after-fee returns. However, if the high-water mark is too difficult to beat and the fund cannot raise sufficient capital, managers may have little incentive to stay on.

Assessing the behavior of public employee and corporate pension funds is more difficult. State and local government pension funds were under constant pressure to achieve high returns because many of them were seriously underfunded well before the financial crisis. To close the funding gap, these pension funds pursued riskier alternative investments in hedge funds, private equity funds, real estate, and commodities. Corporate defined-benefit pension funds sought higher returns not only to satisfy their funding obligations, but also to reduce the need for the company to contribute to the pension fund. Companies that enjoy good returns on their pension funds therefore have more dollars to invest in value-creating projects. While it is understandable that pension funds were under enormous pressure to produce high returns, the sophisticated investment professionals at those funds should have realized that they could not expect market-beating returns without assuming increased risk.

The nation's largest public pension fund, California Public Employees Retirement System (CalPERS), invested $1.3 billion in a form of debt called structured investment vehicles. This debt was made up of a variety of assets, including subprime mortgages. The investment, made in 2006, collapsed over the next two years. In a lawsuit filed in July 2009, CalPERS contended that "wildly inaccurate and unreasonably high" credit ratings from the three leading ratings agencies validated the investment decision, which ultimately led to $1 billion in losses.

You could argue that CalPERS should have done its own analysis to determine what was in those packages of securities. However, the packages were so opaque that only the hedge funds that bundled the securities and the ratings agencies that rated them

knew what they contained. This information was not provided to investors, including CalPERS.

This begs the question of why CalPERS, or any other pension fund, would invest without adequately understanding the risks that it was assuming. The most plausible explanation is that the pressure for higher returns, combined with the evaluation of the managers' results relative to those of comparable pension funds, boosted the incentive to take on heightened risks.[24]

Erosion of Trust

Each of the private-sector culprits had incentives that encouraged it to behave in a fashion that ultimately unleashed a global disaster. This behavior, in turn, led to an erosion of trust. It's hard to overstate the economic value of trust. Trust greatly reduces the cost of transacting business and thereby increases economic efficiency. Without trust, businesses have to spend considerable amounts of time and money to be sure that other parties are living up to their obligations with integrity.[25] Given the complexity of business relationships in modern economies, professionals like auditors, security analysts, and attorneys typically provide this monitoring service. We call these professionals "trust builders." Three of the culprits—appraisers, credit rating agencies, and boards of directors—failed in their responsibilities as trust builders largely because they focused on their own short-term gains rather than on the long-term welfare of those who relied on their professional judgments.

The other four culprits—individual borrowers, lending institutions, Wall Street investment banks, and institutional investors—transact in capital markets. They expected the trust

builders to bless the transactions they needed to consummate in order to earn their short-term incentive compensation. Borrowers and lending institutions looked for appraisals to help get mortgages approved. Investment banks and institutional investors uncritically accepted the ratings on mortgage-backed securities to get their transactions completed. Institutional investors looked to corporate boards not as trust builders for long-term value creation, but rather as partners in their quest for short-term stock-price appreciation. Trust builders found it in their best short-term interest to compromise their professional mandate and support the short-term interests of the financial market participants who paid them for their services. A common cause connected the network of culprits—reciprocal short-term enrichment.

David Brooks, a columnist at the *New York Times*, wondered "how so many people could be so stupid, incompetent and self-destructive all at once." The reality was the opposite. The corporate and investment managers who were responsible for other people's money were neither stupid nor self-destructive. They were simply individuals who were acting in their own interests in a market economy. It was the incentives that drove their wealth-destroying behavior.

The basic problem is that the corporate and investment communities have failed to adapt their business practices to an economy that is now dominated by professional managers who are responsible for other people's money. The danger is that the essential cause of the problem will remain after the present crisis fades from memory. Without addressing the cause, we run the risk of future crises that will again wipe out a painful fraction of household wealth. A more hopeful view is that the crisis will spur

much-needed voluntary governance reform in the private sector. Change in behavior in a market economy occurs not by appealing to altruism, but by changing the incentives that govern how people behave—a job that we tackle in the second section of the book.

Notes

1 We distinguish between the *root cause*, which initiates a failure, and an *essential cause*, which does not necessarily initiate a failure, but is an indispensable factor in producing it.

2 Carmen M. Reinhart and Kenneth Rogoff, *This Time Is Different: Eight Centuries of Financial Folly* (Princeton, N.J.: Princeton University Press, 2009). Also see Edward Chancellor, *Devil Take the Hindmost: A History of Financial Speculation* (New York: Penguin Group, 1999) and Charles P. Kindleberger and Robert Z. Aliber, *Manias, Panics, and Crashes: A History of Financial Crises*, 5th ed. (New York: John Wiley & Sons, 2005). Eduard Gracia shows how in an environment in which manager-agents maximize their interests, the lower the interest rates, the longer the boom can continue, but also the worse the subsequent crash should be expected to become: *Intervention Journal of Economics*, vol. 2, no. 2 (2005), pp. 77–105.

3 Raghuram G. Rajan, *Fault Lines: How Hidden Fractures Still Threaten the World Economy* (Princeton, N.J.: Princeton University Press, 2010), p. 4.

4 Steven A. Holmes, "Fannie Mae Eases Credit to Aid Mortgage Lending," *New York Times*, September 30, 1999.

5 Consider, for example, the following statement by Robert J. Shiller: "In 2005, in the second edition of my book *Irrational Exuberance* I stated clearly that a catastrophic collapse of the housing and stock markets could be on its way. I wrote that 'significant further rises in these markets could lead, eventually, to even more significant declines' and that this might 'result in a substantial increase in the rate of personal bankruptcies, which could lead to a secondary string of bankruptcies of financial institutions as well,' and said that this could result in 'another, possibly worldwide recession'" (*New York Times*, November 2, 2008). In September 2005, professor Raghuram G. Rajan, then chief economist at the International Monetary Fund, circulated a

working paper "Has Financial Development Made the World Riskier?" that presciently identified the risks in the financial sector.

6 Michael Lewis, *The Big Short: Inside the Doomsday Machine* (New York: W. W. Norton & Company, 2010).

7 We do not contend that given the private-sector incentives, the crisis was inevitable. The incentives were in place well before the beginning of the crisis. We do, however, assert that the incentives were an indispensable factor in producing it.

8 "After more than a half-century observing numerous price bubbles evolve and deflate, I have reluctantly concluded that bubbles cannot be safely defused by monetary policy or other policy initiatives before the speculative fever breaks on its own. There was clearly little the world's central banks could do to temper this most recent surge in human euphoria, in some ways reminiscent of the Dutch Tulip craze of the 17th century and South Sea Bubble of the 18th century." Alan Greenspan, "The Roots of the Mortgage Crisis," *Wall Street Journal*, December 12, 2007, p. A19. For a strong counterargument, see Andrew Smithers, *Wall Street: Imperfect Markets and Inept Central Bankers* (Chichester, U.K.: John Wiley & Sons, 2009).

9 http://oversight.house.gov/documents/20081023100438.pdf.

10 Bank of England Governor Mervyn King is among the strong proponents of this view. "Mervyn King's Wisdom," *Wall Street Journal*, October 22, 2009. For a detailed discussion of how moral hazard played a significant role in the financial crisis, see Kevin Dowd, "Moral Hazard and the Financial Crisis," *Cato Journal*, vol. 29, no. 1, Winter 2009.

11 http://www.federalreserve.gov/BOARDDOCS/SPEECHES/2002/20021219/default.htm.

12 Professor Jeremy J. Siegel asks whether "the large investment banks would have taken on such risks when they were all partnerships and the lead partner had all his wealth in the firm, as they were just a few decades ago?" "Efficient Market Theory and the Crisis," *Wall Street Journal*, October 27, 2009.

13 Short-term thinking contributed to failures beyond the financial sector. The seeds of the automobile company bailouts were sown as early as the 1950s, when unions settled for smaller near-term wage increases but were able to gain continually higher pension and health-care benefits for their members. Management chose outsized but only partially funded future obligations, which at that time were not a charge against reported earnings, over increased wages, which would be deducted from earnings.

14 For an informative look at the role of risk managers, see "Confessions of a Risk Manager," *The Economist*, August 9, 2008, pp. 68–69.

15 David Yermack, "Keeping the Pay Police at Bay," *Wall Street Journal*, October 10, 2009.

16 The U.S. government designated the big three as Nationally Recognized Statistical Ratings Organizations (NRSROs), and certain regulated investors could invest only in securities that the NRSROs rated "investment grade."

17 Consider the following insider view from Mark Zandi, chief economist of Moody's Economy.com. "Yet the rating agencies badly misjudged the risks. Poor-quality data and information led to serious miscalculations. The agencies were not required to check what the originators or servicers of the mortgage loans told them, and this information was increasingly misleading. The agencies also had the difficult task of developing models to evaluate the risk of newfangled loan schemes that had never been through a housing slump or economic recession. Without that experience, the models were not up to the task they were asked to perform. The ratings were supposed to account for the range of things that could go wrong from rising unemployment to falling house prices, but what went wrong was much worse than they had anticipated." *Financial Shock: A 360 Look at the Subprime Mortgage Implosion, and How to Avoid the Next Financial Crisis* (Upper Saddle River, N.J.: FT Press, 2009), p. 19.

18 In testimony before a Senate panel, Eric Kolchinsky, a former managing director at Moody's who oversaw the ratings of collateralized debt obligations, put it this way: "The vast majority of the analysts at Moody's are honest individuals who try hard to do their jobs. However, the incentives in the market for rating agency services favored, and still favor, short-term profits over credit quality." Sewell Chan, "Former Employees Criticize Culture of Rating Firms," *New York Times*, April 23, 2010.

19 Nell Minow, "Blame Boards of Directors for the Financial Mess," September 18, 2008; http://www.cnn.com/2008/POLITICS/09/18/minow.pay/.

20 In a remarkably forthright report, UBS revealed three major flaws in its incentive structure. First, traders had strong incentives to invest UBS's capital in high-yielding mortgage-backed securities because they were charged a low rate for the funds and the rate was not increased for risky investments. Second, traders were given incentives to buy riskier securities because they received significantly higher fees when they did so than when they bought less risky securities. Third, bonuses were based on gross revenue after personnel costs, with no account taken of the quality or sustainability of those earnings. UBS AG, "Shareholder Report on UBS's Write-Downs, April 18, 2008, p. 41.

21 Floyd Norris, "It May be Outrageous, but Wall Street Pay Didn't Cause This Crisis," *New York Times*, July 31, 2009.

22 These findings are reported in Lucian A. Bebchuk, Alma Cohen, and Holger Spamann, "The Wages of Failure: Executive Compensation at Bear Stearns and Lehman 2000–2008," working draft, November 22, 2009.

23 Using a sample of 8,526 hedge funds over the period 1994–2007, 68 percent of the funds used a high-water mark. High-water marks are most frequently used by smaller funds or funds with shorter track records. George O. Aragon and Jun Qian, "High-Water Marks and Hedge Fund Compensation," December 2009; available at http://fic.wharton.upenn.edu/fic/papers/10/10-05.pdf.

24 Robert A. G. Monks, the well-known corporate governance activist and founder of ISS, The Corporate Library, and the LENS fund, describes the "golden rule" among company executives at corporate pension funds as follows: "My pension fund will leave you alone so long as your pension fund leaves me alone." "A Review of Corporate Governance in UK Banks and Other Financial Entities," September 30, 2009.

25 Nobel laureate Kenneth J. Arrow explains the role of trust as follows: "Trust is an important lubricant of a social system. It is extremely efficient: it saves a lot of trouble to have a fair degree of reliance on other people's word. Unfortunately, this is not a commodity which can be bought very easily. If you have to buy it, you already have some doubts about what you've bought." *The Limits of Organization* (New York: Norton, 1974), p. 23. For a comprehensive discussion of the role of trust in society, see Francis Fukuyama, *Trust: The Social Virtues and the Creation of Prosperity* (New York: Free Press, 1995).

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CHAPTER 3

CORPORATE SHORT-TERMISM

Jack Welch, the former chairman and chief executive of General Electric, called shareholder value "the dumbest idea in the world."[1] Roger Martin, dean of the business school at the University of Toronto, has suggested that it's time to "scrap shareholder value theory."[2] It has become fashionable to blame the pursuit of shareholder value for the troubles besetting corporate America, including the counterproductive obsession with next quarter's earnings, the failure to invest in long-term growth, and the 2007–2009 financial crisis. The critics are wrong. The managers who adhered to the principles of shareholder value did not cause these problems. On the contrary, the problems reflect the actions of managers who betrayed those principles. Why are these detractors unfairly blaming shareholder value?

The critics are not condemning shareholder value. Rather, they are attacking the misguided obsession with quarterly

earnings and the company's short-term stock-price performance. Regrettably, many have falsely labeled this destructive behavior "increasing shareholder value." The phrase "we manage to maximize shareholder value" has become commonplace in annual reports and other investor communications, but it is at odds with what actually goes on inside companies. They "talk" shareholder value, but they "walk" quarterly earnings. So it's time to set the record straight on what managing for shareholder value really means.

Executives who manage for shareholder value allocate corporate resources in such a way as to maximize the present value of long-term free cash flows.[3] The basic idea is that managers should build value and let the stock price reflect that added value. Executives who follow the shareholder value approach manage for long-term value, not short-term price. As a governing objective, the shareholder value model applies to all of a company's resource allocation decisions, including capital spending, research and development, investments in operating unit strategies, mergers and acquisitions, issuing new shares, and share repurchases.[4] *Managing for shareholder value means focusing on cash flow, not earnings; it means managing for the long term, not the short term; and it means that managers must take risk into account.* Shareholder value management is no panacea. Its ultimate success depends on the quality of management's strategic thinking, the effectiveness of the company's execution, and a bit of good luck.

Managing for shareholder value means managing for the long term, but a company that is managing for the long term is not necessarily creating shareholder value. In the 1980s, academics, the press, and some business leaders in the United States

heralded Japanese management as a model of long-termism. But the principal measure of success for many Japanese companies was market share rather than the long-term growth in the company's share price. These companies mainly reinvested internally, generating cash in an effort to increase market share. Shareholders were almost powerless because the controlling force was the *keiretsu*, a web of relationships that links shareholding banks, customers, suppliers, distributors, and the Japanese government. Companies that governed in the name of long-termism by increasing market share and by offering lifetime employment relied on concepts that are at odds with the principles of creating shareholder value. The Japanese economy was beset by troubles not because its businesses were long-term-oriented, but rather because many of its firms focused on the wrong measures of long-term success.

The Legitimacy of Shareholder Value

It's not enough to condemn the misguided short-term behavior of corporate managers who are falsely masquerading as shareholder value devotees. It's also important to answer the critics who assert that managing for shareholder value is not the right thing to do. They offer three basic arguments against shareholder value management:

- It exploits customers, employees, and suppliers.
- It disregards corporate social responsibility.
- It is impractical because capital markets are short-term-oriented.

A frequent criticism made by detractors is that the shareholder value approach encourages the exploitation of other stakeholders, including customers, employees, and suppliers. This perception is unfounded. Executives who manage according to the principles of shareholder value recognize that their company's long-term strength depends on a solid relationship with each stakeholder. For instance, customers demand high-quality products and services at competitive prices. Companies that charge too much will lose customers to the competition. Companies that charge too little will have happy customers today but will find it difficult to fund the costly investments needed to provide better products and services tomorrow. The challenge is to find the price that adds value for both customers and shareholders.

Likewise, employees seek competitive compensation as well as a satisfying work environment. Paying employees too little ensures that a company will have a substandard workforce. Paying employees too much, as the U.S. auto companies discovered, damages a company's ability to remain competitive. A similar logic extends to suppliers and other stakeholders. A company will risk its long-term viability if any one stakeholder gets too much, or too little, for an extended period. Companies that manage to maximize long-term shareholder value must deal effectively with all of their stakeholders, continually earning their trust and goodwill. While there is no doubt that executives face difficult trade-offs, one point is clear: a company will not maximize shareholder value through the systematic exploitation of its stakeholders.[5]

The shareholder value concept also draws fire from those who believe that corporations have an obligation to society at large. There is a wide range of opinions concerning the scope of

corporate social responsibility. At one end of the spectrum are a growing number of consumer and environmental groups that press for companies to act on issues such as global warming, pollution, AIDS, and poverty. At the other extremity are those who argue that self-interested behavior offers the best means of promoting the public interest. Milton Friedman, the economist and Nobel Prize winner, strongly advocated for this point of view: "There is one and only one social responsibility of business—to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud."[6]

Friedman's basic argument is that companies do good by doing well. Doing well means maximizing long-term shareholder value, not short-term profits. Corporate social responsibility advocates, in contrast, contend that companies do well by doing good. They believe that market forces can align corporate and social interests as long as the corporation does not impose external costs on others outside the corporation. Important social issues—pollution, for example—involve external costs that require a collective solution. Corporate managers, however, have neither the political legitimacy nor the expertise to decide what is in the social interest. In the United States, representative government provides the means for collective action via elected legislators and the judicial system. For example, government can tax companies that externalize costs.

Social costs, whether management voluntarily assumes them or government imposes them, are borne by consumers in the form of higher prices, by employees as lower wages, and/or by shareholders as lower returns. It's important to remember that

individuals, not the corporation, ultimately bear the costs of social responsibility. CEOs must carefully weigh whether their expenditures for social responsibility are legitimate, given their fiduciary responsibility to shareholders.

Companies that ignore public sentiment do so at their own peril. Voluntarily investing in socially responsible activities can sometimes be the best course of action. For example, it may be prudent to invest in pollution controls or clean energy, even in the absence of any legal requirement, if it averts the threat of lawsuits. Boycotts by consumer or environmental groups that threaten a company's reputation and revenue stream can also turn socially responsible investments into sensible business decisions. Starbucks, for instance, responded decisively to three major concerns—the environmental impact of coffee farming, the poor earnings of coffee farmers, and the low pay of the employees at its retail outlets.[7] Enlightened self-interest is consistent with good shareholder value management.

Some companies have gone beyond making defensive outlays and have turned corporate social responsibility into a genuine value-creating activity. Everyone wins when socially responsible activities are aligned with a company's long-term interests. Automobile companies responding to consumer demand for more fuel-efficient cars and fast-food outlets that offer menu options for health-conscious customers are cases in point. Other examples include Nike's sustainability program, which included recycling millions of sneakers into playing surfaces for sports, and Campbell Soup's freight optimization program, which eliminated more than 1,700 trucks in its network and saved more than 225,000 gallons of fuel annually.[8]

The shareholder value approach offers the most effective framework for balancing the interests of various stakeholders because it provides an effective means for assessing trade-offs. It also provides the best hope that start-up and established companies, which rely on capital markets to finance their value-creating growth opportunities, will continue to see a flow of risk capital. Unlike other stakeholders, who have explicit contracts, shareholders of publicly traded companies have to depend on an implicit contract that management will act in their best interests. If investors come to believe that company executives will not honor this implicit contract, they will balk at funding companies. Investors will either demand a steep discount on the share price to reflect poor governance, or they will simply reject the opportunity outright.

Some executives feel that they have no choice but to adopt a short-term orientation, given that the average holding period for stocks in professionally managed funds is only about one year. They do not feel compelled to consider the interests of long-term shareholders because there are none.

This reasoning is deeply flawed. *What matters is not the holding period of investors, but rather the market's investment horizon—the number of years of expected free cash flow required to justify the stock price.* While many investors may hold shares for a relatively short time, stock prices reflect the market's long-term view. Studies find that the stocks of most companies require more than 10 years of future cash flows to justify their prices. Think of it this way: investors are making short-term bets on long-term outcomes.

Management's responsibility is to pursue the maximization of long-term cash flows, regardless of the holding periods of

shareholders. And there is no reasonable argument that gives management the license to maximize the company's short-term performance numbers, hence endangering the company's future, because of the dearth of long-term shareholders. The competitive landscape, not the shareholder list, should shape business strategies.

Because companies have not done shareholder value right, many commentators have mistakenly concluded that it's not the right thing to do. This thinking is backward. The shareholder value principle has not failed management; management has betrayed the principle.

The Misguided Obsession with Short-Term Earnings

A company's value depends on its long-term ability to generate cash in order to fund value-creating growth and to return cash to its shareholders in the form of dividends or share repurchases. Peter Bernstein, the well-known economist, observed: "Financial markets are nothing more than arenas where investors who need cash today can obtain it by selling the present value of future cash flows to other investors willing to wait for the cash payoffs from their capital. If you invest without expecting future cash flows, then you might as well collect art or play the slot machines."[9]

Even so, a majority of financial analysts and investment managers focus on short-term earnings rather than expected cash flows. Corporate executives frequently point to the behavior of the investment community to rationalize their own obsession

with earnings and their belief that the stock market does not reward them for investing for the long term. Annual bonuses that reward short-term financial performance reinforce this bias. Even large awards of stock options have not altered the short-term orientation of executives, who continue to believe that near-term performance, as demonstrated by reported earnings, drives stock prices. This belief, when coupled with short vesting periods for stock options, has further shrunk the time horizons of corporate executives. A few companies with options-laden executives have even committed fraud in order to show favorable results. The following quotation from Enron's in-house risk management manual captures the obsession with earnings:

> Reported earnings follow the rules and principles of accounting. The results do not always create measures consistent with underlying economics. However, corporate management's performance is generally measured by accounting income, not underlying economics. Therefore, risk management strategies are directed at accounting, rather than economic, performance.[10]

Short-termism continues to be the disease, and earnings obsession the carrier.[11] The financial pages continue to promote the importance of earnings with headlines like: "Earnings Reports Give Wall Street a Lift" and "Earnings Disappointments Trigger Sell-off." The *Wall Street Journal* and other leading financial publications regularly report quarterly and annual earnings. Analyses of corporate strategies by *Bloomberg Businessweek*, *Fortune*, and *Forbes* are replete with references to earnings and other

short-term financial measures. The broad dissemination of earnings fuels the business community's belief that reported earnings determine stock prices.

The earnings expectations game goes on. Key players include Wall Street analysts, companies that track consensus earnings (First Call, I/B/E/S, and Zacks Investment Research), chief financial officers, and institutional investors. Despite all of this attention, reported earnings—or even next year's estimated earnings—tell us precious little about a company's value. Earnings are losing even more relevance as technology, globalization, and fierce competition amplify the volatility of performance. And earnings are useless for young companies with significant growth potential but no current profits.

The accountant's bottom line—earnings—approximates neither a company's value nor its change in value over the reporting period. And it was never intended to. Valuation is the job of the investor, not the purpose of financial reporting.[12] The role of financial reporting is to provide useful information to investors so that they can estimate value. Earnings are relevant only to the extent that they help investors estimate the magnitude, timing, and uncertainty of future cash flows. But five critical factors severely limit the usefulness of earnings.

First, the calculation of earnings excludes a charge for the cost of capital. This is crucial, because a dollar today is worth more than a dollar a year from now. The reason is that you can invest today's dollar and earn a return over the next year. Thus, a company must compare its expected return on an investment to the return that investors can earn on alternative investments of equal risk. This opportunity cost, or cost of capital, is the discount rate that you apply to cash flows in a discounted cash flow

valuation model. A company increases in value when it earns a rate of return on new investments that exceeds the cost of capital. Because earnings ignore the cost of capital, a company can report positive earnings, or earnings growth, even when its investments are yielding a return that is below the cost of capital. This is a problem for anyone who is fixated on earnings, because earnings offer no guarantee that the company has increased its value during the reporting period.

Second, earnings exclude the cash outlays that a business requires if it is to grow, including investments in working capital and fixed assets. Discounted cash flow valuation models, in contrast, reflect all of the cash that goes into and out of a business. The exclusion of investment spending places a further distance between a company's earnings and its change in value. Again, an increase in earnings is not a reliable indicator of an increase in shareholder value.

Third, because there is considerable latitude in estimating the amount and timing of accounting accruals, companies can manage their earnings so that they look good in the short term. There are alternative and equally accepted methods for dealing with employee pension costs, stock option grants, restructuring charges, depreciation charges, and even revenue recognition. In cases where earnings dictate the level of bonuses, executives have a powerful incentive to choose the accounting treatment that maximizes their compensation. Then there are changes in accounting treatment from one period to the next. Whether it is the result of a mandate by accounting standards setters or simply a choice of management, a change in accounting method can have a material impact on earnings, but it does not alter the company's cash flows or value—except for bonuses.

Fourth, traditional income statements depend on a single estimate for various accruals. In other words, companies select one number to represent the future, essentially ignoring the wide variability of possible outcomes. The bottom-line number presents an illusion of certainty in a world of significant uncertainty. That accounting fails to deal with uncertainty meaningfully reduces the usefulness of corporate financial reporting. Earnings are the well-known face of this failure. We examine this shortcoming in detail in Chapter 7.

Here's an example of how earnings can provide an unreliable view of the economic picture.[13] Assume that a company has $10 million in receivables due from a single customer. The probability of collecting the entire $10 million is 90 percent, and the chance of default is 10 percent. The expected value of collection is $9 million (90 percent of $10 million plus 10 percent of zero). A second company also has $10 million in receivables, $1,000 in receivables from each of 10,000 customers. Each customer has an independent 90 percent chance of paying in full and a 10 percent chance of defaulting. The expected value is again $9 million, just as in the first case.

How does accounting handle these cases? In the case of a single receivable, the company would book the receivable at $10 million, leaving earnings unaffected. The reasoning is that with only a 10 percent chance of default, "it is not probable that the single asset has been impaired." This treatment is used, for instance, in commercial real estate, where each receivable is unique, and thus collectibility (credit risk) is highly idiosyncratic.

In the second case, the company would value the receivables at $9 million and reduce earnings by $1 million. In this case, the

accountants would reflect the probability of impairment for the pool of receivables, using appropriate collectibility estimates. The anticipated loss from uncollectible receivables is recognized immediately, even though none of the individual receivables have yet been deemed uncollectible. Loss recognition in the first case is delayed until there is clear and persuasive evidence that the receivable is uncollectible. While these two sets of receivables have identical expected values, they have different levels of risk. The second case, with 10,000 diversified receivables, has less risk and therefore a higher economic value than the single receivable. Following accounting convention, however, companies mistakenly place a higher value on the riskier asset and a lower value on the less risky asset.

This example is just the tip of the iceberg. There are income statement accruals that are loaded with much greater uncertainty. For instance, companies calculate the expense for defined-benefit pensions as the change in the present value of the company's obligations minus the present value of the expected returns on pension fund assets. This calculation embeds a panoply of assumptions, including projected employee turnover, future pay increases, estimated retirement dates, and the expected return on plan assets.

The range of outcomes, from worst to best case, in these estimates is so wide that the numbers that a company reports in the income statement have limited usefulness. So earnings, an amalgam of single-point, high-variability accruals, are even less useful. Nonetheless, the fascination with earnings persists. This evokes the wisdom of the observation often attributed to Albert Einstein that "not everything that counts can be counted, and not everything that can be counted counts."

Fifth, and finally, earnings over a quarter or a year encompass only a small fraction of the cash flows that investors need in order to value stocks. This critical limitation is the most important of all. Earnings combine facts (realized cash flows) and assumptions about future outcomes (accruals). The fact part consists of the cash that a company receives for sales in the current period minus the cash that it disburses to suppliers and employees during the period. Revenue and expense accruals reflect the company's assumptions about the cash receipts and payments in subsequent periods or the anticipated cash flows from the most recent period's sales and purchase transactions. Contracts between the company and its customers (receivables, unrealized gains or losses on long-term contracts, product warranties), employees (defined-benefit pension plans and other postretirement benefits, stock options), suppliers (payables), and government (taxes, environmental obligations) determine the amounts that companies include in their income statements.

No single-period historical measure, including cash flow, provides investors with much help in assessing a company's future prospects. A company that is profitable in the short term may not have what it takes to be successful in the long term. Conversely, a company that reports modest near-term earnings may be well positioned to create lots of value in the future. Analysts must go well beyond financial statements to unearth the preponderance of a company's value. To evaluate the sustainability and growth of cash flow, an analyst must consider factors such as the industry's growth potential, the company's competitive position, the likely behavior of competitors, technological change, and the quality of management.

Obsession with Earnings Compromises Shareholder Value

A survey of more than 400 financial executives revealed that the vast majority of them view earnings as the most important performance measure that they report to outsiders.[14] They perceive meeting or exceeding the quarterly earnings for the same quarter last year and topping the analyst consensus estimate for the current quarter as their most crucial hurdles. Executives also believe that meeting earnings expectations leads to a stable or higher stock price, provides assurance to customers and suppliers, and boosts the reputation of management. On the other hand, managers fear that failure to deliver earnings will lead investors and other constituents to question their skill. They also believe that a repeated inability to hit these targets can lead to their dismissal. Since investment managers and analysts assume that companies have considerable discretion in managing their earnings, they take missed targets as a signal of more serious problems.

That many corporate managers are obsessed with short-term earnings is not at all surprising. The issue is how this focus does a disservice to the interests of the company's long-term shareholders. Companies that manage for short-term earnings compromise shareholder value in three ways.

First, firms that focus on earnings have a great propensity to engage in activities that pad the bottom line in the short term, even if those activities involve putting the long-term health of the company in jeopardy. The practices of some major financial institutions before the crisis of 2007–2009 provide a compelling case in point. These institutions failed to record a significant

fraction of their exposure to securities tied to subprime mortgages on their balance sheets, leaving the disclosure to opaque footnotes. These off-balance sheet exposures boosted earnings for a while, but ultimately generated the losses that devastated the banks.

Second, companies that are fixated on earnings may also delay or forgo value-creating investments in order to meet earnings expectations. Although such actions improve earnings in the short term, they sacrifice the company's long-term earnings potential and, as a result, its value. The survey of financial executives found that an astonishing 80 percent of respondents would be willing to decrease discretionary spending on research and development, advertising, and hiring in order to meet earnings benchmarks. And more than half of them would delay a new project, even if the delay would entail giving up value. With a large dash of understatement, the authors of the survey observe, "Getting managers to admit such value-decreasing actions in a survey perhaps suggests that our evidence represents only the lower bound of such behavior."

For companies that are focused on short-term performance measures, though, the problem is much bigger than just squandering value by delaying discretionary spending. These companies are doomed to fail when they concentrate on their existing businesses rather than on developing the businesses of the future. Good current sales and earnings numbers often induce complacency and reduce management's motivation to respond to meaningful changes in the marketplace.

According to business consultants Don Peppers and Martha Rogers,[15] Dell Inc. is a prime example of this type of complacency. With its pioneering direct-to-consumer business model,

Dell enjoyed extraordinary profitability for years and became a popular subject of business school case studies. Rather than investing to develop new capabilities during good times, however, Dell focused on meeting ever-rising expectations for quarterly earnings. But it was a big mistake to assume that the long term would be fine as long as quarterly results were acceptable. Michael Dell, the company's founder, had to return as chief executive in 2007 in order to reverse the company's declining fortunes. He immediately discovered that the company had fudged four years of earnings results in order to meet quarterly targets and would have to restate them. It's too soon to tell whether Dell will recapture the dominant market position it once enjoyed in the market for personal computers.

When managers spend too much time on the company's core businesses, they end up with no new opportunities in the pipeline. And when they get into trouble—as they inevitably do—they frequently try to pull a rabbit out of a hat. Clay Christensen and Michael Raynor, the authors of *The Innovator's Solution*, outline the dynamic of this failure.[16] With a little adaptation, it plays out like this:

- Management focuses on the company's maturing core businesses, despite a slowdown in growth and profit margin erosion, rather than launching new growth businesses.
- Eventually, investments in the core business no longer produce the growth that investors expect, and the stock price takes a hit.
- To revitalize the stock price, management announces a target growth rate that is higher than what the core business can deliver, thus introducing a large growth gap.

- Confronted with this gap, the company limits funding to projects that promise very large and fast growth. As a result, the company refuses to fund new growth businesses that can't get big fast enough, but that can ultimately fuel the company's expansion.
- Managers then provide overly optimistic projections to secure funding for initiatives in the large existing markets that they deem capable of generating sufficient revenue quickly enough to satisfy investor expectations.
- To meet the planned timetable for rollout, the company puts a sizable cost structure in place before realizing any revenues.
- As the increases in revenue fall short of expectations and losses persist, the market hammers the stock price again, and the board brings in a new CEO to shore up the business.
- Seeing that the new growth business pipeline is virtually empty, the new CEO quickly tries to stem losses by allowing only expenditures that bolster the mature core business.
- The company comes full circle, having lost substantial shareholder value in the process.

Companies that are serious about shareholder value avoid behaving in this self-reinforcing pattern. Because they refuse to be lulled by the market's near-term expectations, these companies invest in new growth opportunities before their core business deteriorates. They understand that the bestselling and most profitable products of today are likely to be the commodities of tomorrow. Therefore, they are more likely to become first movers in new markets, seeking to erect formidable barriers to entry through scale or learning economies, positive network effects, or reputational advantages.

Finally, companies that manage for short-term earnings compromise shareholder value when they exploit the discretion that accounting standards allow. Companies can boost earnings by aggressively pulling revenues into the current period and pushing expenses to future periods. But this is a game that can go on for only so long. Borrowing from the future to satisfy today's earnings expectations inevitably catches up with a company. When a company fails to deliver on expectations, the market hammers the stock price. WorldCom, Enron, and Nortel Networks are examples of companies that pushed earnings management beyond acceptable limits, ultimately destroying part or all of their market values.[17]

Accounting shenanigans also played a role in the financial crisis of 2007–2009. For instance, Citigroup, Bear Stearns, Merrill Lynch, and other major financial institutions kept billions of dollars of risky mortgages off of their balance sheets by creating special-purpose vehicles (SPVs). Here's how it worked. A company would originate mortgage-backed securities, sell some to an SPV that it owned in part, and keep some on its own books. The bank retained a stake in the SPV that was below the level that required it to consolidate the SPV on its books, obscuring the scope of the program. Exchanging the risky mortgages for cash enabled the banks to repackage even more mortgages, boosting their earnings from origination fees. The model failed when the risky mortgage-backed securities went into free fall, dragging the banks down with them. Management's fixation on quarterly earnings did more than compromise shareholder value—it destroyed practically all of it.

In this chapter, we made the case for the legitimacy of long-term shareholder value and how corporate managers' obsession

with short-term earnings compromises it. We now turn to examining the causes and consequences of the short-term performance obsession in the investment community.

Notes

1 Francesco Guerrera, "Welch Condemns Share Price Focus," *Financial Times*, March 12, 2009.

2 Roger Martin, "Managers Must Be Judged on the Real Score," *Financial Times*, May 11, 2009.

3 Free cash flow = sales - operating expenses - taxes on operating profit - working capital investment - capital investment.

4 Alfred Rappaport, *Creating Shareholder Value: The New Standard for Business Performance* (New York: Free Press, 1986).

5 Michael J. Mauboussin, "In Defense of Shareholder Value," *Mauboussin on Strategy*, June 5, 2009;Legg Mason Capital Management. Alfred Rappaport, *Creating Shareholder Value: A Guide for Managers and Investors* (New York: Free Press, 1998), pp. 5–11.

6 Milton Friedman, "The Social Responsibility of Business Is to Increase Its Profits," *New York Times Magazine*, September 13, 1970.

7 Geoffrey Heal, *When Principles Pay: Corporate Social Responsibility and the Bottom Line* (New York: Columbia University Press, 2008), p. 135.

8 "From Soup to . . . Corporate Social Responsibility: Campbell's Effort to Lead the Way," *Knowledge@Wharton*, November 11, 2009.

9 Peter Bernstein, foreword to *Expectations Investing: Reading Stock Prices for Better Returns*, by Alfred Rappaport and Michael J. Mauboussin (Boston: Harvard Business School Publishing, 2001), p. xii.

10 As quoted in Bethany McLean and Peter Elkind, *The Smartest Guys in the Room: The Amazing Rise and Scandalous Fall of Enron* (New York: Penguin Group, 2003), p. 132.

11 As discussed in Chapter 2, excessively risky short-term behavior was one of the major factors contributing to the 2007–2009 financial meltdown. With many companies struggling, the concern over the short term has intensified. Understandably, executives think that if they don't get through the short term, there will be no long term. But short-term initiatives aimed at ensuring the longer-term survival of the company, rather than short-termism, represent the best tradition of shareholder value management.

12 "Financial accounting is not designed to measure directly the value of a business enterprise, but the information it provides may be helpful to those who wish to estimate its value." *Statement of Financial Accounting Concepts No. 1*, Financial Accounting Standards Board, 1978.

13 This example is adapted from L. Todd Johnson, Barry P. Robbins, Robert J. Swieringa, and Roman L. Weil, "Expected Values in Financial Reporting," *Accounting Horizons*, Vol.7, No. 4, December 1993, p. 82 This article has several other instructive examples of dissimilarities between economic valuations under uncertainty and accounting valuations used in corporate financial reporting.

14 John R. Graham, Campbell H. Harvey, and Shiva Rajgopal, "The Economic Implications of Corporate Financial Reporting," *Journal of Accounting and Economics*, Vol. 40, 2005. The *2010 NACD Public Company Governance Survey*, published by the National Association of Corporate Directors, also reported earnings as the dominant financial metric for measuring and rewarding performance.

15 Don Peppers and Martha Rogers, *Rules to Break and Laws to Follow: How Your Business Can Beat the Crisis of Short-Termism* (Hoboken, N.J.: John Wiley & Sons, 2008), p. 19.

16 Clay Christensen and Michael Raynor, *The Innovator's Solution: Creating and Sustaining Successful Growth* (Boston: Harvard Business School Press, 2003).

17 Michael C. Jensen, "Agency Costs of Overvalued Equity," *Financial Management*, Vol. 34, No. 1, Spring 2005.

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CHAPTER 4

INVESTMENT MANAGEMENT SHORT-TERMISM

Professionally managed funds, principally mutual funds and pension funds, control about 70 percent of the U.S. stock market. Starting in the early 1980s, large mutual fund organizations, including Fidelity, Vanguard, and the American Funds, grew significantly as many companies shifted from employer-sponsored defined-benefit pension plans, where employees get a monthly amount upon retirement, to defined-contribution plans, where contributions from employees and employers, combined with investment returns, determine the ultimate benefits. Defined-contribution plans typically allow employees to select from a menu of funds that invest in stocks, bonds, and money markets. Employees make their own investment decisions and must live with the consequences of those decisions.

Mutual funds and other collective investment vehicles claim to have three important advantages over investing on your own: professional management, diversification, and low costs.

However, individuals frequently do not realize these benefits to the extent that they should.

Professional managers have expertise that individual investors ordinarily lack. But this expertise is an advantage only if, in the words of the Investment Company Act of 1940, "mutual funds are organized, managed and operated in the best interests of their shareholders, rather than in the interest of their advisers." It is difficult and costly for individuals with relatively small amounts of capital to hold a sufficient number of securities (at least 30 to 40 stocks distributed across various industries) to be appropriately diversified. Large, actively managed mutual funds typically hold more than 100 stocks.[1] While the funds do provide diversification, having a large number of holdings reduces the chances of outperforming a benchmark index, as the funds start to look like, and act like, the index. Finally, few actively managed funds outperform passive index funds over the long term because the results for the funds are much like those for the index, but the fees that the active managers charge are higher than those of an index fund.[2]

There are two essential reasons that the shareholders of actively managed equity funds don't capture the benefits of professional investment management. To start with, the costs of active management are materially higher than those of index funds. For example, from 2003 to 2008, the lowest-cost quartile of large-capitalization funds had an average expense ratio of 0.70 percent, while the highest-quartile funds charged an average of 2.00 percent. By contrast, the expense ratios for index funds typically range between 0.10 and 0.20 percent. This cost differential means that active management must underperform passive management in the aggregate. In other words, the stock-picking skills

of most active managers are simply not good enough to overcome the higher costs that they incur. The second reason that fund shareholders are often disappointed is the investment community's costly emphasis on short-term performance. Investment managers focus on short-term performance for the same basic reason that corporate managers do—it's about their incentives.

This chapter begins with a brief look at the incentives that drive investment managers to dwell on short-term performance. It then assesses why managers often default to corporate earnings and other short-term financial metrics, including the price/earnings (P/E) multiple, in their attempts to identify mispriced stocks. We next explore whether investors should expect stock prices to reflect value in a market that is dominated by institutional investors with short-term investment horizons. Finally, we consider the chances that investors with long horizons can outperform the market by exploiting disparities between price and value.

Performance Measurement

The results that fund managers achieve are commonly measured relative to a benchmark, such as the S&P 500 Index, as well as relative to funds with similar investment objectives, over the most recent quarter and over the past one, three, and five years. Investment managers add value when they produce risk-adjusted portfolio returns in excess of the benchmark.

Predictably, managers who focus on relative short-term returns are very sensitive to tracking error, or how much the returns of their fund differ from the benchmark index over time. Managers fear that underperforming their benchmark will encourage

investors to withdraw sizable amounts of money from the fund. Such withdrawals lead to reduced fee revenue (business risk) and the possibility that the manager will be terminated (career risk). Many managers therefore become "closet indexers," preferring the safety of delivering results that are acceptably close to the index to the riskier strategy of building portfolios that are meaningfully different from their benchmark. This is despite the fact that portfolios that differ from the benchmark offer the best chance of delivering market-beating returns. By staying close to the index, managers reduce the chances of having to face the nightmare scenario—underperforming both their benchmark and their benchmark-hugging peers. No one wants to be wrong and alone. In brief, short-term performance measurement has become the fuel in the arms race for assets.

Ironically, the fear of underperforming the benchmark contributes to mediocre results, since there is no way to produce superior performance without veering from the benchmark. Consultants or plan sponsors who impose tight tracking-error constraints on managers only exacerbate the challenge. Closet indexing shrinks the performance differences between the best and worst performers. Less-skilled managers mask their lack of stock-picking ability by staying close to the benchmark. Managers with greater skill, on the other hand, limit their potential to demonstrate it when they succumb to benchmark tracking. Managers who turn over their portfolios too frequently also incur significant transaction and market impact costs as well as needless tax liabilities, thus further reducing returns to their shareholders.

Relative performance measurement can encourage fund managers to follow the herd even in cases where they believe that

certain stocks are overpriced. This is because the most frequently used benchmark indexes, including the S&P 500 Index, weight stocks by market capitalization. As a result, hot stocks acquire increasing weights as they become more and more overvalued. When a relatively small number of stocks accounts for a significant percentage of an index, as occurred during the technology bubble in the late 1990s, managers who mimic the benchmark abandon the discipline of buying only undervalued securities. But managers who don't hold full weights in the hottest stocks will find themselves at the bottom of the performance rankings in the short run. They face a choice of either playing it safe in the short term by holding the full market weights of stocks that they believe are overpriced or taking personal risk by reducing these weights in the interest of better longer-term performance. Measuring short-term performance relative to a benchmark compels managers to focus on their own business and career risks at the cost of long-term results for their shareholders. Why be a contrarian when staying close to the crowd seems less risky and more rewarding?

The problem with comparing results to a benchmark is that too frequently the interests of managers, rather than those of the shareholders, become paramount. Short-term performance relative to a benchmark is relevant to the business and career risks of investment managers, but much less so to fund shareholders who are seeking superior long-run returns. The horizon mismatch between the period over which managers are evaluated and the longer period that is appropriate for long-term shareholders is the same problem that publicly traded corporations encounter. Not surprisingly, "money managers seem to hold as their highest priority the return earned on their own capital, rather than

the return earned on the capital they are investing for their fund shareholders."[3] Chapter 8 explores ways to align the interests of investment managers with those of fund shareholders.

The Appeal of Earnings

Many people in the investment community are fixated on corporate quarterly and annual earnings per share, along with other short-term financial measures. This is understandable because investment managers are also subject to short-term performance measures. The problem is that earnings are not well suited for use in valuing and selecting stocks. A company's long-term cash flow prospects cannot be estimated from a single year's earnings number.

For the most part, investment professionals recognize that the discounted cash flow model is the correct way to value financial assets, including equities. For example, cash flow models are a fixture in the curriculum for Chartered Financial Analysts, a coveted professional designation. However, many professional investors believe that a forecast of distant cash flows is too speculative, costly, and time-consuming to be practical. As a consequence, they tend to attach substantial weight to reported short-term results.

Investment managers also focus on earnings because surprises in quarterly earnings announcements often trigger sizable stock-price changes. This leaves the impression that short-term earnings, not long-term cash flow prospects, fuel price changes. However, it's not clear what actually moves stocks. Prices might be responding mechanically to corporate earnings announcements

or to new information about long-term prospects that the components of earnings convey. In any case, investment managers can easily conclude that using earnings analysis, which they deem as practical, is better than using the discounted cash flow model, which they view as valid in principle, but disconnected from the real world of stock prices. Going against the market's apparent earnings-based pricing model has risk that is greater than the perceived reward of using a discounted cash flow model. Most investors figure that they are better off following the crowd. So when they see that earnings surprises lead to big stock-price changes, they try to anticipate those surprises. This behavior reinforces the price changes, making the earnings focus a self-fulfilling prophecy.

The relatively short investor holding period for stocks also favors short-term earnings over long-term cash flows. Mutual fund portfolio turnover has had an astonishing rise over the past few decades. From the 1940s to the mid-1960s, equity funds, on average, were holding the stocks in their portfolios for about seven years. Over the past several years, the average holding period has dropped to about one year, which translates into 100 percent portfolio turnover each year.[4] While lower transaction costs and capital gains taxes might explain part of the rise in turnover, the shortened time horizons of investment managers have also played an important role. As the holding period shrinks, the beliefs of others become more central to investment decisions, and long-term fundamentals fall by the wayside. High turnover contributes to the greater weight placed on short-term earnings results.

Shortcomings of the Price/Earnings Multiple

We now turn our attention to the investment community's most popular valuation metric, the price/earnings (P/E) multiple. You can compute the multiple by dividing the stock price (*P*) by earnings per share (*E*). A measure of what investors are willing to pay for a company's earnings, the P/E usually reflects projected earnings for the forthcoming year. Its simplicity plays a major role in its ubiquity. But traditional P/E analysis is often deceptive and, as a consequence, can lead to disappointing investment results.

P/E analysis is based on a simplistic valuation formula:

$$\text{Shareholder value per share} = \text{earnings per share} \times (\text{P/E})$$

Since estimates of earnings per share are widely available, investors must decide only on the appropriate P/E multiple to use to estimate a stock's value. They can then compare the output of the formula with the stock's current price to determine whether the stock is undervalued, overvalued, or fairly valued.

The formula looks good on the surface. But take a deeper look at it. Since we know last year's or next year's consensus estimate of earnings per share, we need only select an appropriate P/E multiple to estimate shareholder value per share. But given that we know the denominator, *E*, the only unknown is the appropriate share price, *P*. We therefore have a useless tautology: to estimate value per share, we require an estimate of value per share. P/E analysis is not an analytical shortcut, it is an economic cul-de-sac.

One approach that investment analysts use is to search for profitable opportunities by looking at the *relative* P/E multiples

of comparable companies. Adherents of this approach consider low-P/E stocks within the group to be generally more attractive than high-P/E stocks. But without a careful examination of a company's growth prospects, operating margins, and investment requirements, it's difficult to know whether low-P/E stocks are really bargains.

Simple P/E analyses can send misleading valuation signals. For instance, the stock of a company that reported strong earnings over the past year may have a low P/E, but it's no bargain if its core business is about to fall off the cliff. Also, the stock of a company with modest current earnings and a relatively high P/E may be attractive despite its lofty P/E if the company has significantly improving prospects.

P/Es offer no explicit information about a company's prospects for creating value. Assume that two competitors have identical P/E multiples. One company consistently creates value because its growth requires relatively modest investments in facilities and research and development. The second company is smaller and does not enjoy the same economies of scale as the first company. It therefore requires meaningfully greater investments to fuel its growth, and consequently generates very little shareholder value. Despite their identical P/Es, these two stocks are not equally attractive.

There is an additional problem with P/E analysis: companies and analysts employ a wide variety of definitions in calculating earnings per share. Investors can base P/E on earnings as reported under generally accepted accounting principles. Many companies emphasize "pro forma" earnings in analyst conference calls, press releases, and financial reports. Pro forma earnings are higher than reported earnings because they typically

exclude nonrecurring items, including restructuring and merger expenses, and noncash items, including depreciation, amortization, and stock-based compensation. Because companies define pro forma earnings in different ways, even these P/Es are not comparable. An investor can also calculate each of these P/E alternatives as a trailing P/E, which incorporates earnings per share for the most recent 12-month period, or a forward P/E, which uses estimated earnings per share over the next 12 months. So we are left with earnings that provide little or no investment guidance and an array of unpalatable alternatives for calculating the P/E multiple.

Stock Market Efficiency

For the past 40 years, academics and luminaries in the investment industry have heatedly debated the extent to which the stock market is efficient.[5] To assess the merits of the arguments, it is essential to distinguish between two versions of market efficiency—informational efficiency and allocative efficiency.

In an informationally efficient market, stock prices quickly impound all publicly available information that is relevant, thereby preventing investors from earning superior returns by exploiting this information. As evidence for this idea, proponents point to the scarcity of investment managers or investment strategies that outperform major stock market indexes over long time periods. Skeptics invariably point to the extraordinary performance records of Warren Buffett and Peter Lynch as counterexamples. While acknowledging such apparent exceptions, proponents of informational efficiency usually dismiss those who succeed as the beneficiaries of statistical chance.

In an allocatively efficient market, stock prices reflect unbiased estimates of the present value of future cash flows, thereby allocating scarce resources to the companies with the most promising prospects. Proponents argue that intense competition among sophisticated professional investors ensures allocative efficiency. Skeptics, on the other hand, point to recurring market excesses as evidence that stock prices often fail as reliable indicators of value.

Sanford Grossman and Joseph Stiglitz[6] contend that prices cannot perfectly reflect all available information. They argue that if prices already included all information, institutional investors would not spend enormous sums on research, as they would have no expectation of earning excess returns. In other words, the market can approach informational efficiency only if investors believe that it is *not* informationally efficient. Disbelieving investors spend time and money uncovering information, hoping that they can generate a return for their effort. But markets become more efficient as the information that these investors unearth is reflected in stock prices.

But this logic holds only in a world of rational individuals who invest their own money—a world of principals without agents. In the existing market, which agents dominate, it is perfectly rational for fund managers to incur costs, even if they face very long odds of achieving market-beating returns, so long as fund shareholders bear those costs. The result is what we call *subsidized informational efficiency*, and it turns on its head the conventional wisdom that informational efficiency depends on market participants disbelieving it. Paradoxically, many active equity managers contribute to informational efficiency not by pursuing long-term superior returns, but rather by closely tracking their benchmark indexes.

Some commentators mistakenly believe that an informationally efficient market implies that stock prices must be right. Recall the key assumption: stock prices reflect all *relevant* information that is publicly available. The crucial observation is that investment managers have little incentive to track down information that contributes to allocatively efficient prices unless such information is also relevant to *their* stock selection models. The financial information that analysts and managers draw on, such as near-term earnings, is not necessarily relevant to estimating value. As a consequence, active managers participate in an informationally efficient market without necessarily making it an allocatively efficient market in which stock prices reasonably reflect long-term prospects.

It's impossible to prove or disprove that prices are right because in a sea of uncertainty and wide-ranging investor expectations, the right price is indeterminate. Not only is the right price unknowable today, but observers cannot determine it at a later date because future prices will reflect updated information. Investors who maintain that stocks were mispriced in the past typically exhibit hindsight bias by relying on information that became available only subsequent to the alleged inefficiency.

Allocative efficiency depends on the existence of informed buyers and sellers with competitive estimates of the present value of future cash flows in stock prices. Allocative efficiency matters because it affects not only investors, but the real economy as well. Robert Shiller explains:

> If we exaggerate the present and future value of the stock market, then as a society we may invest too much in business startups and expansions, and too little in infrastructure,

> education, and other forms of human capital. If we think the market is worth more than it really is, we may become complacent in funding our pension plans, in maintaining our savings rate, in legislating an improved Social Security system, and in providing other forms of social insurance. We might also lose the opportunity to use our expanding financial technology to devise new solutions to genuine risks—to our homes, cities, and livelihoods—that we face.[7]

Many investment managers select stocks based on near-term investor sentiment, play the earnings-expectations game, or both. Neither approach makes any attempt to value stocks. That so many investors use stock selection approaches that fail to estimate future cash flows makes it difficult to conclude that market prices consistently provide reasonable estimates of value.

In the search for mispriced stocks, the investment community commonly uses fundamental analysis, which is supposed to take a long-term view of the company's prospects. Because investors consider forecasting cash flows speculative and costly, however, much of today's fundamental analysis relies on shortcut metrics—price/earnings, price/sales, and price/book multiples—that sidestep direct forecasts. Analysts typically use these metrics comparatively. For example, they look for investment opportunities by comparing the multiples of companies within an industry and identifying those that warrant higher or lower multiples. Such exercises in relative valuation make no effort to estimate the *absolute* value of stocks, and thereby make no direct contribution to allocatively efficient prices.

It is critical to distinguish between the short-term performance obsession of investment managers and the long-term

cash flow expectations (often 10 or more years of value-creating growth) that stock prices imply. Though it takes years of cash flow growth to justify stock prices, it does not logically follow that these prices are right. Indeed, in the midst of bubbles, stock prices can be justified only by assuming that companies will generate an unrealistically high level of value-creating cash flows for a long period of time. Investors may believe that the stock price overvalues the company's future, but they depend on the short-term expectation that a "greater fool" will purchase their shares at an even higher price.

Technical analysis studies patterns of stock price movements and trading volume in search of profitable buy and sell signals. It makes no pretense of being concerned with company fundamentals or prospective cash flows.

Equity index funds also make no independent contribution to allocatively efficient prices because indexing requires no valuation. Such funds simply mirror the market. Restrictions on short selling pose a barrier to allocatively efficient prices because they limit the ability of pessimistic short sellers to have their opinions reflected in prices. However, the restrictions affect allocative efficiency only if short sellers use discounted cash flow analysis to support their decisions.

Finally, some investors do not base their investment decisions on expected returns at all. They treat equity investments as "consumption goods."[8] Examples include socially responsible funds, employees who hold large, undiversified positions in their employer's stock to demonstrate loyalty, and investors who enjoy holding growth stocks and dislike distressed (value) stocks.

It would be easy to conclude that market participants lack the incentives that promote allocative efficiency. To do so, however, would overlook the possibility that the stock market as an information-aggregating system is not the simple sum of its individual participants, but rather that its collective wisdom-of-crowds judgments generate prices that reasonably reflect value.

The Wisdom of Crowds

Researchers have conducted many experiments over the years to test whether a crowd of diverse individuals can solve problems better than individuals. In a *Nature* article published in 1907, Francis Galton documented the results of a contest to guess the weight of an ox. The median guess among the 787 participants was within 0.8 percent of the weight of 1,198 pounds, and the mean of the guesses was off by only 0.01 percent. The guesses were distributed so that the errors in overestimation and underestimation canceled out and led to the extraordinarily accurate result. Other researchers have replicated Galton's results, including Jack Treynor's oft-cited experiment in which subjects guess the number of beans in a jar. Treynor found that the average guess is invariably close to the actual number of beans and that few participants do better than the consensus.[9]

Galton and Treynor asked participants to estimate a current state. The wisdom of crowds has been impressive in predicting future states as well. Recent years have seen a rise in prediction markets, in which individuals bet on the outcomes of future events, such as elections, sports events, military battles, and interest rates. Iowa Electronic Markets (IEM), the best-known

prediction market, has been uncannily accurate. IEM traders buy or sell futures contracts based on their predictions about upcoming elections. Since 1988, IEM has been more accurate than national polls 75 percent of the time.

Michael Mauboussin, chief investment strategist at Legg Mason Capital Management, offers another example of the wisdom of crowds. About three weeks before the Academy Awards, he asks his Columbia Business School students to predict the winners in six major categories, such as best actress, best actor, and so on. Students are also asked to predict winners in six minor categories, such as best cinematography, best musical score, and other categories that people pay much less attention to. The results in a recent class are typical. The consensus correctly named 11 out of 12 winners. The best student correctly named only 9 out of 12. More interesting, though, the average student guessed only 5 out of 12 winners. So the consensus not only was vastly better than the average student, but was better than even the best student.[10]

The wisdom-of-crowds results for guessing the weight of an ox, guessing the number of beans in a jar, and predicting election outcomes and Academy Award winners depend on the aggregation of information by individuals who have an incentive to be right. Stock market dynamics are different. The wisdom-of-crowds experiments deal with a single estimate or prediction with an unambiguous answer. Stock prices, in contrast, are continuously changing and have no predictable endpoint. Simply stated, there is no right answer for stock prices. Furthermore, the stock price not only informs executives and investors about future financial performance, but can also influence a company's decisions and operating performance and its future stock prices.

While partially informed individuals can make surprisingly wise collective choices, they are also capable of making costly mistakes. When participants act independently, their errors cancel out, and outcomes tend to be accurate. But the wisdom of crowds collapses and markets tend toward excesses when a *safety-of-crowds* mentality prevails in fast-rising markets and in sharply declining markets. In such situations, instead of the wisdom of crowds, where the collective is smarter than the average participant, we have a crowd of agents driven by common incentives and similar stock selection methods. The stock market aggregates information, but it is information that for the most part focuses on short-term performance with a tenuous link to long-term value—a state of affairs that is unlikely to reliably produce allocatively efficient prices.

Chances of Outperforming the Market

Given the limited use of long-term discounted cash flow (DCF) valuation by market participants, can investment managers earn superior returns by buying and selling stocks that they believe to be mispriced based on DCF analysis? The efficient market literature assumes that when stock prices diverge from informed estimates of discounted cash flow values, arbitrageurs will buy or sell to bring prices back into line. Behavioral economists have argued, however, that arbitrage can be risky and costly, which limits the potential to exploit mispricings and to maintain efficiency.

Nicholas Barberis and Richard Thaler specify three factors that limit arbitrage—fundamental risk, noise trader risk, and implementation costs.[11] They illustrate fundamental risk with an example of trading two stocks in the same industry. Suppose

an investor buys Ford shares after excessively pessimistic traders drive the price well below her best estimate of fundamental value. She faces the risk that bad news will drive Ford stock down even further. She can hedge this risk by shorting General Motors when she purchases Ford shares. While this protects the arbitrageur from bad news from the industry, it still exposes her to surprises that are specific to Ford. Finally, there is the possibility that the substitute security, General Motors in this case, is imperfect because it may be similarly mispriced.

Risk from noise traders materializes when traders become even more pessimistic, driving Ford shares down even further. Noise traders buy and sell without reference to news that might affect the fundamental value of a stock. Arbitrageurs may therefore be forced to liquidate their positions prematurely. For this reason, short sellers can actually help fuel bubbles because they have to buy shares back if the price increases sufficiently. This pushes them into the role of the greater fool. Contrary to what efficient market advocates suggest, noise can cause prices to diverge from value, and it is difficult to arbitrage the gap.

Barberis and Thaler also point out a host of costs that make arbitrage less attractive than it appears. These implementation costs include identifying mispricings, trading commissions, bid-ask spreads, market impact costs, and short-sale fees. Not surprisingly, professional arbitrage is concentrated in the bond and foreign exchange markets, where investors can estimate value with greater confidence than they can in the stock market.

If arbitrage is not feasible, then investors who seek to exploit mispricings must rely on their ability to translate available information into an estimate of value that is different from the current price. This process is also challenging and costly.

If information about short-term earnings shapes stock-price changes, you might question why investors should base their decisions on the prospects for a company's long-term cash flows. The answer is straightforward. Stock prices ultimately depend on a company's ability to generate cash flow. As Peter Bernstein pointed out, while art collectors must hope that other collectors will pay more in the future to justify today's price, owners of stocks and bonds depend on the company to produce cash flows rather than on the intentions of other investors.

Here's the crucial observation: you don't have to prove that prices at a given moment reflect expectations for future cash flow because you know that cash flows ultimately determine value. Focus instead on estimating the cash flow expectations that the current price implies and assess whether your expectations are sufficiently different to justify buying or selling shares. We present this "expectations investing" approach in Chapter 9.

Notes

1 The average fund holds 104 stock positions, with closet indexers holding an average of 161 stocks. Antti Petajisto, "Active Share and Mutual Fund Performance," September 30, 2010; http://ssrn.om/abstract=1685942.

2 Over the five years from 2005 to 2009, the S&P 500 outperformed 63.6 percent of actively managed large-cap funds, the S&P MidCap 400 outperformed 77.2 percent of midcap funds, and the S&P SmallCap 600 outperformed 85.5 percent of small-cap funds. For further statistics, see www.SPIVA.standardandpoors.com.

3 John C. Bogle, "A Question So Important That It Should be Hard to Think about Anything Else," *Journal of Portfolio Management*, Vol. 34, No. 2, Winter 2008, p. 97.

4 John C. Bogle, *Common Sense on Mutual Funds: Fully Updated 10th Anniversary Edition* (New York: John Wiley & Sons, 2010), pp. 34–35. A 2010 study conducted by Mercer, a consulting firm, and funded by Investors Responsibility

Research Center Institute found that two-thirds of active long-only equity managers across the globe have turnover greater than what they themselves expected, with some producing turnover that is 150 to 200 percent higher than anticipated. Higher-than-expected turnover not only increases trading costs, but may signal deeper problems in the investment process itself. *Investment Horizons: Do Managers Do What They Say?*; available at http://www.irrcinstitute.org/pdf/IRRCMercerInvestmentHorizonsReport_Feb2010.pdf.

5 For a comprehensive and highly readable history of the debate, see Justin Fox, *The Myth of the Rational Market: A History of Risk, Reward, and Delusion on Wall Street* (New York: HarperCollins Publishers, 2009).

6 Sanford J. Grossman and Joseph E. Stiglitz, "On the Impossibility of Informationally Efficient Markets," *American Economic Review*, Vol. 70, No. 3, June 1980.

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8 Eugene F. Fama and Kenneth R. French, "Disagreement, Tastes and Asset Pricing," Amos Tuck Business School Working Paper No. 2004-03, November 2005.

9 Jack L. Treynor, "Market Efficiency and the Bean Jar Experiment," *Financial Analysts Journal*, May-June 1987.

10 Michael J. Mauboussin, "The Wisdom and Whims of the Collective," CFA Institute, December 2007, p. 4. For a comprehensive examination of collective decision making, see James Surowiecki, *The Wisdom of Crowds* (New York: Doubleday, 1994).

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PART 2

COMBATING SHORT-TERMISM

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CHAPTER 5

CORPORATE LONG-TERM PERFORMANCE INCENTIVES

The debate over executive compensation has raged since the early 1990s, when stock option grants became the largest component of the pay packages for CEOs and other senior executives. Shareholders and rank-and-file employees are outraged over the eye-popping bonus payouts made to CEOs, even when their companies performed poorly and, in some cases, spiraled toward insolvency. Taxpayers are infuriated over having to bail out, at their expense, the companies that took reckless risks. By contrast, supporters of the pay schemes point out that the market for labor is highly competitive and that generous pay packages are the cost of doing business.

While congressional hearings and media coverage following the 2007–2009 crisis focused on the financial services industry, there are troublesome disconnects between pay and performance in virtually all publicly traded companies. To restore trust in corporate governance, boards of directors need to develop new

compensation programs for all employees that motivate them to pursue long-term value creation.[1] This is no trivial task. There is a great deal that we don't know about how incentives shape behavior. Differences among industries, companies, and individual executives defy a one-size-fits-all solution. This chapter examines the challenges that boards face and proposes alternatives to traditional incentive compensation arrangements.

Properly designed performance measures and compensation arrangements are central to the value-creation process. Their unambiguous purpose is to motivate employees to create value by rewarding them for the value that they create. While the principal focus is on incentive compensation for CEOs and other senior executives, the chapter concludes with a discussion of how to motivate operating-unit managers and front-line employees.

Incentives for CEOs and Senior Executives

Executive pay typically comprises base salary, perquisites and benefits, cash bonuses, restricted stock, and stock options. Perquisites and benefits typically include contributions to 401(k) and other retirement plans, company-paid premiums for life insurance, personal use of company aircraft, and home security. Cash bonuses are derived both from annual and multiyear incentive plans with predetermined performance criteria, and from discretionary payments that the board authorizes independent of predetermined performance. Since it does not have a specific link to performance, shareholders can regard the discretionary bonus more as an entitlement than as an incentive. The focus here is on the incentive compensation components that make up the

lion's share of CEO pay packages at most publicly traded companies, including annual and multiyear performance bonuses, stock options, and restricted stock.[2]

Ideally, incentive compensation should motivate executives to maximize long-term shareholder value while avoiding either excessively risky behavior or excessively risk-averse behavior. We use these fundamental objectives to evaluate current practice and to recommend changes in compensation arrangements.

Annual Performance Plans

Most companies offer their executives annual and multiyear incentive plans with predetermined performance targets. The most popular performance measures for annual plans are earnings (for example, earnings per share, net income, operating income, or earnings before interest and taxes), cash flow, revenue, and capital-efficiency metrics (for example, return on equity, return on capital, or return on invested capital).

None of these short-term financial measures provides incentives for maximizing long-term value creation. On the contrary, each encourages short-term behavior. No single-period performance measure is a reliable indicator of a company's future prospects. Value creation is a long journey. Annual performance measures ignore the long-term consequences of today's operating and investment decisions. The lure of enormous bonuses for delivering short-term results can promote reckless risk taking, sometimes culminating in a massive destruction of value. Executives of major financial institutions demonstrated this type of behavior, with its disastrous consequences, during the housing-price bubble.

At other companies, executives may choose to delay or forgo value-creating investments in order to achieve their bonus targets. These vital investments include research, new product development, brand building, and product and market extensions. By refusing to take reasonable risks, executives can boost the company's short-term results at the expense of its long-term value-creation potential. The bottom line is that annual bonuses fail to achieve any of the three objectives of incentive compensation. They do not provide executives with an incentive to maximize long-term shareholder value, they can encourage excessively risky behavior, and they can encourage excessively risk-averse behavior.

Let's take a closer look at these performance measures. As discussed in Chapter 3, an increase in near-term earnings is no guarantee of an increase in shareholder value. Value rises only if a company's investments earn a rate of return that is above the cost of capital. Annual earnings and revenue can grow even when management is investing at a rate that is below the cost of capital, making those measures unreliable proxies for creating shareholder value.

Unfortunately, accounting-based capital-efficiency measures, which include return on equity, return on capital, and return on invested capital, are no better. These measures link an inappropriate numerator, earnings, to an investment denominator generated by the same flawed accounting process. Because these ratios are unreliable in reflecting value creation, they do not solve the problem. They are single-period measures that ignore the economic impact of today's decisions on future periods in the same way that earnings, cash flow, and revenues do.

For instance, a company that is seeking to gain market share might increase its new product development, sales capacities, and marketing expenditures. Even if these investments strengthen the organization's long-term competitive position and add value, the capital-efficiency ratios would decline in the short term. As a result, short-term capital-efficiency performance measures can discourage value creation and jeopardize the health of the company if they reward executives for bypassing value-creating initiatives. Furthermore, executives who fear that they will lose their job if they fail to make their short-term targets will certainly not focus on the long term.

Multiyear Performance Plans

Multiyear plans employ many of the same performance measures as annual bonuses. A survey of the largest 250 companies in the Standard & Poor's 500 Index, released in 2009 by Frederic W. Cook & Co., revealed that 59 percent of the companies use earnings measures, 35 percent use total shareholder return (stock price appreciation plus reinvested dividends), 33 percent use capital-efficiency ratios, 18 percent use revenue, 10 percent use cash flow, and 10 percent use nonfinancial measures such as quality, safety, new business, and individual performance.[3]

Compensation committees commonly call multiyear plans "long-term incentives," a label that is misleading. Extending the period over which unsuitable targets are measured from one year to three years doesn't do the job. A company can report three years of earnings per share growth or improving capital-efficiency ratios without creating any shareholder value.

Following the financial crisis, some financial services companies initiated clawback provisions, which enable a firm to reclaim bonuses in the event of losses or underperformance for three to five years after the end of the performance period. While clawbacks may address some of the egregious failures of compensation, they cannot be the answer if performance measures are unreliably linked to long-term value creation.

Nonfinancial Incentives

Incentives matter, and companies generally get what they pay for. An overemphasis on short-term performance undermines a long-term point of view. On the other hand, a performance measurement period that is too long can cause executives to lose sight of what they need to do in the short term in order to produce superior long-term results. Nonfinancial incentives are supposed to keep executives focused on building long-term value.

Only 10 percent of the largest 250 companies in the Frederic W. Cook & Co. survey offer nonfinancial performance incentives to their senior executives. Among those that do, the most popular measures are safety, quality assurance, new business, and individual performance. The critical question is whether these chosen nonfinancial measures actually drive long-term value. The available evidence is not encouraging.

Based on field research in 60 companies and survey responses from 297 senior executives, Christopher Ittner and David Larcker[4] found that most companies fail to identify appropriate nonfinancial measures. A majority of firms do not investigate the plausible relationships between nonfinancial measures and value creation. Companies that develop causal models rarely examine

whether the chosen nonfinancial measures actually contribute to sustainable financial results and shareholder value.[5] The researchers also found that different business units within the same company often use different, and sometimes contradictory, methods to measure the same thing. Because it is more common for companies to employ nonfinancial measures at the operating-unit level, we will defer the discussion of how to tie nonfinancial measures to long-term value creation.

Shortcomings of Standard Stock Option Plans

In the early 1990s, corporate boards became convinced that the surest way to align the interests of managers and shareholders was to make stock options a meaningful component of executive compensation.[6] The thinking was that properly designed equity incentives were the surest defense against short-termism. But the widespread use of stock options, which boards thought would act as a long-term incentive, only increased management's obsession with short-term performance.

To see what went wrong, you only have to examine the principal features of a standard option plan. For a typical grant, the exercise price equals the market price at the date of grant and remains fixed over the entire ten-year term, with vesting taking place over three or four years. A standard stock option plan has limited ability to motivate long-term value-maximizing behavior because the performance targets are too low and the holding periods are too short.[7]

CEOs widely claim that their overriding goal is to achieve superior shareholder returns. The fixed exercise price of standard stock options, however, rewards performance that is well

below levels representing superior returns. Consider how easy it is to realize gains from options when the stock market is rising. For the 10 years ending December 31, 1999, all of the 100 largest U.S. companies appearing on the *Wall Street Journal*'s Shareholder Scoreboard produced positive returns, and all but 16 generated average annual returns that exceeded 15 percent. Executives who had fixed-price options during the long-running bull market enjoyed a huge windfall that was fueled not just by corporate performance, but also by factors that were totally beyond the executives' control, including declining inflation and lower interest rates.

The problem is that options reward mediocre performance in a rising market because executives profit from *any* increase in share price, even one that is below that of competitors, the Standard & Poor's 500, or even safe investments like Treasury bonds. You can make a compelling argument that executives merit no incentive pay for such underperformance. Instead, the board might well decide to replace the CEO. No board should approve an incentive plan that can provide the CEO with significant remuneration for performance that could also reasonably serve as grounds for dismissal. The unearned gains from options for delivering mediocre performance should give pause to even the most ardent defender of current corporate governance practices.

Stock option plans also failed the pay-for-performance test in the first decade of the 2000s, a very different market setting. The S&P 500 Index fell in 2000, 2001, and 2002, and then rose in each of the next five years. Following the free fall in stock prices in 2008, the index was down 38 percent from its level at the beginning of 2000. To estimate the magnitude of the failure of pay for performance, we examined the stock options exercised

by the CEOs of the 360 companies that remained in the index from 2000 to 2008.[8] Investors expect stocks to generate a return greater than that offered by safe Treasury securities to compensate them for assuming additional risk. Therefore, only option gains reflecting returns above the yield on 10-year U.S. Treasury notes are "earned." For instance, if the return to shareholders from the option grant date to the exercise date is 50 percent and the return on Treasury notes over the same period is 40 percent, the earned gain is 20 percent (10 divided by 50) and the unearned gain is 80 percent (40 divided by 50).

Using a performance threshold of just 1 percent above the Treasury return from 2003 to 2008, we found that 18 percent of CEOs earned less than half of their gains on exercised options and that 11 percent earned less than one-quarter of their gains. When we add a modest 3 percent equity risk premium to the return on the 10-year Treasury note, 37 percent of CEOs earned less than half of their gains and 24 percent earned less than one-quarter of their payouts. For example, Miles White, the CEO of Abbott Laboratories, made almost $14 million in 2008 by exercising 1.3 million options that he had held for about 10 years. An Abbott shareholder who 10 years ago had invested in Treasury notes an amount equal to the market value of 1.3 million Abbott shares would have netted more than $30 million in 2008.

Performance targets that are too low are just one factor limiting the effectiveness of option plans. Standard option plans also fail to motivate behaviors that lead to long-term value creation because the holding periods for the options are too short. Given that managers frequently believe that earnings gains fuels stock prices, vesting periods of just three or four years encourage many executives to manage earnings, exercise their options early, and

cash out shares opportunistically. These actions significantly undermine the long-term incentives that options and stock holdings are supposed to provide. The common practice of accelerating the vesting schedule for CEOs upon retirement or termination promotes this short-term thinking even further.

Before the widespread use of equity-based incentives in the 1990s, compensation critics were concerned that executives who were paid primarily in the form of a salary would be excessively risk-averse. The thought was that these executives would have an incentive to focus on avoiding failure and keeping their jobs. It is not clear, however, that the standard stock option plan encourages greater risk taking. To preserve unrealized option gains in a buoyant stock market, executives may be tempted to forgo all but the very safest value-creating investment opportunities and to underinvest in innovation. On the other hand, when their options are hopelessly underwater as the result of a weak stock market, executives with little to lose may swing for the fences and pursue overly risky investments in a desperate attempt to resuscitate the company's stock price and the value of their options. So standard option plans reward performance that is well below superior-return levels, enable executives to unwind their equity holdings quickly, fail to motivate executives to maximize long-term value, and can encourage either excessively risky behavior or excessively risk-averse behavior.

Option Plans for Superior Long-Term Value

Corporate boards can overcome many of the serious shortcomings of standard stock option programs by adopting a plan that rewards executives only if they create superior long-term value.

One potential solution is an indexed option plan that requires executives to retain a meaningful fraction of the equity they obtain well after the vesting date. Unlike standard options, which have a set exercise price, indexed options have an exercise price that rises or falls based on an index of the company's competitors or a broader market index. For example, if the chosen index increases by 10 percent, then the exercise price of the options increases by the same percentage. As a result, the options are worth exercising only if the company's shares rise by more than 10 percent.[9]

Indexed option plans, unlike fixed-price option plans, ensure that underperforming executives are not rewarded simply because the market is rising. Nor do they penalize superior performers in a falling market. If the peer group or market index declines, then so does the exercise price, which provides executives with a continuing incentive to increase value. With standard option plans, a bear market can overshadow superior performance and cause executives to lose wealth precisely when they are providing the best relative results. Both the free ride in a bull market and the undue penalty in a bear market undermine the effectiveness of the standard stock option plan. Indexed options, by contrast, reward superior performers in all market environments.[10]

One practical challenge in implementing an indexed option plan is determining whether it is better to tie the exercise price to an index of the company's competitors or to a broad market index, like the S&P 500. A market index is transparent and easy to track, but it does not reflect the specific factors that affect the company's industry. As a result, a market index is not an ideal benchmark for measuring management performance. An index of the company's competitors is a better choice. However, many

companies do not have a clear and suitable set of peers. This is particularly true for diversified companies.

For companies that are unable to develop a reasonable peer index, there is an attractive alternative which we call an equity-premium option plan (EPOP). EPOPs require a higher level of threshold performance than standard fixed-price options, but, unlike indexed options, they do not require the construction of an index. Specifically, the exercise price of the option rises by the yield to maturity on the 10-year U.S. Treasury note plus an equity premium minus the dividends that the company pays. For example, suppose a company's shares are trading at $50 at the option grant date, the yield on the 10-year Treasury note is 4 percent, and the equity risk premium is estimated to be 5 percent. The exercise price would rise by 9 percent over the next year, from $50.00 to $54.50, before consideration of dividends. If the company pays dividends of $1.00 per share during the year, the end-of-year exercise price would be adjusted to $53.50.

Choosing an equity-premium rate for an EPOP plan becomes a much less daunting task when corporate directors recognize a few considerations. To begin with, nobody can accurately predict future return spreads between stocks and Treasury notes. That said, most forecasts tend to cluster in a relatively narrow range of 4 to 5 percent. Finally, any forecast error in the equity-premium rate pales in comparison with the failure of standard options, which incorporate *no* shareholder opportunity cost, not even the risk-free rate on Treasury securities.[11]

The reason it makes sense to modify the exercise price is that equity investors expect a minimum return that consists of the risk-free rate plus a premium to reflect the additional risk of owning equity. Following this reasoning, the exercise price of

EPOPs should increase at no less than this rate, the cost of equity capital. While conceptually sound, this approach presents a practical problem: this threshold level of performance increases the odds that executives will hold underwater options. An option is underwater when it has an exercise price that is above the prevailing stock price. Properly designed incentives balance the delicate trade-off between making sure that the performance levels reflect fair compensation for the risk that shareholders bear and the need to continually motivate executives. One way to strike that balance is to discount the equity risk premium component of an EPOP. If the board decides to incorporate only a fraction of the premium, say 3 percent of an estimated 5 percent premium, it is betting that a motivated management will add sufficient value to more than offset the higher cost of the option grants. The board may also choose to grant a smaller number of options in exchange for less demanding performance.

Finally, the plan deducts dividends from the exercise price in order to remove any incentive for companies to hold back distributions when there are no value-creating investment opportunities. By rewarding executives only when the company's stock price increases at a rate greater than the return on the 10-year Treasury note plus an equity risk premium, EPOPs overcome the criticism that performance targets are too low. But we must still address the criticism that executives hold stock for periods that are too short.

The freedom to unload shares at the end of a short option-vesting period can encourage executives to focus on boosting short-term earnings and stock price, often taking excessive risks to get the job done. The Frederick W. Cook survey finds that a vast majority (86 percent) of option grants vest uniformly over a

specified number of years—48 percent over three years and 38 percent over four years.[12] For example, an executive who receives a three-year option grant of 30,000 shares would be able to exercise 10,000 options at the end of each year.

To provide an incentive to focus on value creation, the plan must ensure that executives hold a meaningful and long-term stake in the company's equity. The difficult trade-off is between the benefit of requiring senior executives to have meaningful stakes and the cost of granting additional options to compensate executives for the restrictions that the plan places on their liquidity and diversification. One size does not fit all. Boards need to consider the likely effect of lengthening option-vesting periods and restricting the sale of shares that executives obtain from exercised options for a specified period after vesting.

Maintaining a long-term focus is particularly important in companies with significant value-creating opportunities that executives could bypass in favor of meeting short-term performance targets. Each of the two initiatives seeks to extend executives' time horizons. But each can also impose significant costs on executives that boards need to take into account.

Executives usually forfeit their unvested stock options and restricted stock when they either leave the company voluntarily or are fired for cause. Longer vesting periods increase the probability of forfeiture. Given their increasingly short tenures, CEOs and senior executives will place a lower value on grants that have extended vesting periods. Long vesting periods introduce another big concern for executives who are allowed to cash out at the end of the vesting period with standard option plans. With a lengthened vesting period, the plan presumably extends

the earliest date at which executives can exercise their options and sell the shares.

Harvard Law professors Lucian Bebchuk and Jesse Fried[13] propose that a plan should prevent executives from cashing out their equity for a specified number of years after vesting. For example, a plan that vests in three years can bar executives from selling shares for an additional five years. Extending the cash-out date serves the fundamental goal of having executives hold a meaningful and continuing stake in the upside potential of the company's equity. Importantly, the risk of forfeiture does not change if the plan maintains the length of the vesting period.

Lengthening the vesting period and delaying the cash-out date impose costs on executives. Risk-averse executives who have a significant fraction of their wealth invested in their companies prefer to exercise their options early. Delaying the cash-out date limits their liquidity and their ability to diversify their financial holdings. As a consequence, these executives appropriately discount the value of their stock options. To compete successfully for talent, companies that extend the cash-out date may need to consider granting additional options or increasing other components of the compensation package.

It is impossible to know how much additional value will result from giving executives incentives for long-term, rather than short-term, performance. However, the recent multibillion-dollar stock market losses attributable to short-termism in the financial services industry suggest that the benefits for shareholders and the economy can be substantial.[14] A company will realize the full benefits of extending the cash-out date only if the threshold performance is set by an indexed option plan or an EPOP.

Constant-Dollar, Fixed-Shares, and Megagrants

We now turn to the most common approaches that companies use to grant options:[15]

1. *Constant dollar.* Executives receive options with the same dollar value each year.
2. *Fixed shares.* Executives receive the same number of options each year, irrespective of changes in the stock price.
3. *Megagrants.* Executives receive a large, up-front grant in lieu of annual grants.

The constant-dollar approach is based on a predetermined fixed value for future grants.[16] It turns pay for performance on its head in that it penalizes executives for superior performance by giving them fewer options if the stock rises, and rewards them for poor performance by giving them more options if the stock price falls. If the stock price drops, say, 25 percent over the first year of the plan, the value of the options that the plan grants in the second year increases by 25 percent to preserve the predetermined value of the grant. Similarly, if the stock price increases by 25 percent, the value of the options that the plan grants in the second year decreases by 25 percent.

Advocates for constant-dollar plans argue that fixing the value of stock option grants provides executives with an incentive to remain with the company. The challenge to this argument is that underperforming executives are the ones who are most likely to be given incentives. At the same time, the plan may create a retention risk among value-delivering executives who view the reduction in the number of options granted to them as the result

of a share price increase to be an unwarranted pay cut. Constant-dollar plans allow underperforming managers to accumulate a substantial number of shares over time, while diluted shareholders bear the financial burden of a sagging stock price. Compensation committees should be especially skeptical of granting constant-dollar options when the company has limited growth potential and its executives are especially risk-averse.

By contrast, under the fixed-shares approach, an increase in the stock price in the current year will increase the value of future option grants, and a decrease in this year's stock price decreases the value of future grants. Suppose the stock price rises from $100 to $125 this year, a 25 percent increase. The number of options the board grants in subsequent years stays the same, lifting their value by 25 percent, since an at-the-money option at $125 per share is worth 25 percent more than an at-the-money option at $100, all things being equal.[17]

The fixed-shares approach provides a stronger link between pay and performance than the constant-dollar approach does, but it presents problems in rising and falling markets. Recall the structure of a standard plan. The company establishes the exercise price at the market price on the day it grants the options, and the exercise price stays fixed over the entire option period, usually 10 years. Executives holding standard options enjoy a huge windfall in bull markets, when macroeconomic factors that are largely beyond management control drive the company's stock price higher. The fixed-shares approach provides executives with a windfall coming not only from already-granted options, but also from option grants that become more valuable as the company's stock price increases.

There is, of course, another side to the coin. A significant drop in the company's stock price causes the value of fixed-shares option grants to decline correspondingly. Boards must then deal with irritated executives who contend that they are performing well and that they are being penalized for factors beyond their control. When executives hold underwater options and face the prospect of smaller future grants, the stock option plan has lost its ability to motivate and retain the best executives.

Institutional shareholders generally oppose repricing options or issuing new lower-priced options because they don't have the luxury of lowering the price that they paid for their shares. Furthermore, shareholders believe that executives who enjoy windfalls in bull markets should forgo rewards in bear markets.

To preempt shareholder opposition, companies can allow executives to exchange existing options for a smaller number of options that have lower exercise prices and are thus value-neutral. In this exchange, executives receive only the value that remains in their underwater options and, if there is enough value there, a motivational jolt. Opposing value-neutral repricing does not serve the best interests of shareholders if the company has a talented executive team in place. However, there is a better way. An indexed option plan or an EPOP with an extended cash-out period can mitigate the difficulties that underwater options pose.

An indexed option plan or an EPOP that extends the time before executives are permitted to cash out can also significantly reduce the windfalls associated with the fixed-shares approach. Indexed options reduce bull-market bonanzas by filtering out the special factors that affect the industry as well as broader stock market price movements. To further strengthen the pay-for-performance incentive of indexed option plans with

a delayed cash-out, the plan can increase or decrease the number of options in annual grants when the company's shares outperform or underperform, respectively. To illustrate, assume that the company's stock and the benchmark index are each at $100 at the beginning of the year. At year-end, the index is unchanged, while the company's stock price is at $110. Since the company's stock outperformed the index by 10 percentage points, next year's grant would be 110,000 options—100,000 predetermined fixed shares plus a 10 percent premium for superior returns.

Because of the difficulty in developing a suitable set of peers, many companies may find an indexed option plan unfeasible. An EPOP with a delayed cash-out provision also meaningfully reduces option-profit windfalls and rewards executives for long-term value creation. This is because option profits kick in only after shareholders attain a return that compensates them for risk and after enough time has passed to establish that management's value-creation efforts are sustainable. Executives do not profit from a rise in the company's stock price that comes as the result of near-term performance that is unsustainable.

Megagrants are the third approach to granting options. These are large, up-front grants that are offered in lieu of annual grants. There is no widely accepted definition of a megagrant. Compensation experts usually define a megagrant as any grant that exceeds a stipulated number of options or exceeds a stipulated multiple of salary. The Corporate Library, for instance, defines a megagrant as any grant that exceeds half a million options.

Megagrants were popular during the bull market of the 1980s and 1990s, when they enabled CEOs, including Michael Eisner of Walt Disney and Lawrence Ellison of Oracle, to amass unprecedented stock option profits. They became less common

after the Financial Accounting Standard Board's 2005 mandate that companies treat stock option grants as an expense on their income statements. Megagrants staged a comeback following the stock market collapse in 2008, as companies looked to reenergize executives who held underwater options.

Megagrants provide a stronger initial incentive than either constant-dollar or fixed-shares options because of the front loading of both the number of shares and the exercise price. Just as in the case of fixed-shares grants, holders of megagrants enjoy a windfall when the company's share price rises as the result of a buoyant market rather than because of superior corporate performance. Conversely, the strong incentive that megagrants provide erodes quickly when the company's stock price drops hopelessly below the exercise price. Boards that confer new megagrant options because of the significant decline in the value of existing options are engaging in a back-door repricing of options.[18] This practice delivers pay, but certainly not for performance.

A sensible solution exists for a board that believes that it risks losing some of its most valued executives if it doesn't reprice existing options or issue new ones: the board can replace the underwater options with indexed options or EPOPs. This is a win-win for executives and shareholders. The executives are reenergized, and the shareholders are delighted that the executives have a powerful new incentive to create superior long-term value. Shareholders are generally pleased to pay generously for superior performance in exchange for withholding rewards for mediocre performance.

Both investors and the general public need assurance that CEOs and other executives are earning their pay. Much of the public resentment over executive compensation is about undeserved pay.

Replacing the standard stock option plan with an indexed option plan or requiring CEOs to outperform the return on relatively riskless Treasury notes over an extended period of time not only will help alleviate the current anger over compensation, but will also produce stronger long-term economic growth. Now is the time for corporate boards to transform the pay-for-performance mantra into a best-practices reality.

Restricted Stock Grants

The use of stock options skyrocketed during the boom of the 1990s and peaked in 2000. The tide turned against options with the disclosure that executives at Enron, Tyco, and WorldCom had cooked the books to prop up the company's share price and the value of their large options holdings. The backlash against options encouraged many companies, most notably Microsoft in 2003, to move from stock options to restricted stock. Accounting changes that leveled the playing field with other forms of executive compensation further fueled the movement from stock options to restricted stock. By 2006, restricted stock grants had displaced options as the largest component of executive pay.[19] Choosing an incentive plan based on how accountants treat it, however, is an extremely unlikely way to find the best form of executive compensation. The rise in restricted stock grants is a case in point.

Restricted stock grants vest after an executive has remained with the company for a specified length of time. At the end of the vesting period, executives own the stock and are free to do whatever they want with it. Restricted stock grants are equivalent to options with an exercise price of zero. They are largely

guaranteed pay, have no commensurate performance requirement, and are aptly referred to as "pay for pulse." Stock grants motivate executives to stay with the company until the end of the vesting period, when they can cash in their shares. They encourage risk-averse executives to play it safe, to protect the current share price, and to avoid getting fired.

In an effort to blunt the criticism that restricted stock plans are a giveaway, some companies offer performance shares that require executives not only to remain on the payroll, but also to meet performance targets for metrics such as earnings per share, revenue, and return on capital employed. Executives may pursue these short-term targets, which are typically set at undemanding levels, at the expense of the company's longer-term value-creation potential. Unlike restricted stock grants, performance share plans do demand some performance. Unfortunately, it's not the right performance.

Stock Ownership Requirements

Conventional option and stock grants fail to align the long-term interests of corporate executives and shareholders because executives routinely cash out their shares after the short vesting periods. To address the problem, companies have adopted stock ownership plans for CEOs and senior executives. Among the largest 250 companies, 87 percent have formal stock ownership plans.[20] About half of these companies require minimum ownership of shares equal in value to a specified multiple of base salary that ranges from 2 to 25 times the salary of the CEO, with a median of 5 times. Following the sharp decline in stock prices in 2008, executives found it difficult to meet minimum ownership

requirements, forcing companies to reconsider the multiple-of-salary approach.

Of the companies surveyed, 10 percent require executives to hold a minimum number of shares. As of July 31, 2009, fixed-share requirements for the CEO, expressed as a multiple of salary, range from less than the CEO's current salary to 14 times salary, with a median multiple of 4. When stock prices fall, the dollar value of stock ownership falls correspondingly. This explains why Frederic W. Cook's *2009 Stock Ownership Guidelines* report found that minimum ownership in some companies had dropped below the CEO's annual salary. So while the multiple-of-salary approach makes it difficult for executives to meet the minimum required values in the wake of a bear market, the fixed-number-of-shares approach can set the ownership bar so low that it largely eliminates the power of equity incentives. Neither approach is effective in a falling market.

Some 32 percent of the companies with formal stock ownership requirements also employ retention ratios. A retention ratio establishes the percentage of salary that executives must hold in earned equity incentives, exercised stock options, and vested restricted stock. Retention ratios range from 25 to 100 percent, with a median of 75 percent. For 80 percent of the companies, the retention ratio applies only until the executives reach their minimum multiple-of-salary or minimum-number-of-shares ownership target. The remaining 20 percent of companies extend the minimum retention requirements until the executive's retirement date or beyond.

Stock ownership and retention ratio requirements facilitate stock accumulation over time, particularly in rising markets. They also increase investor confidence by focusing executives on

delivering long-term returns. The problem is that the requirements apply to plans that are themselves flawed. For example, standard option plans demand an unacceptably low threshold of performance, and restricted stock plans require either no performance or the wrong performance. The best way to ensure that executives hold a meaningful and continuing stake in the upside potential of the company's equity is to implement superior long-term performance plans, either indexed options or EPOPs, with provisions that prevent executives from cashing out.

Dollar ownership minimums are relative easy to meet in a rising market under standard stock option plans. Executives can profitably cash out shares at the end of a short vesting period, even if the company's shares have performed at well below the level required to compensate shareholders for risk. Indexed options or EPOPs with delayed cash-out provisions solve the problem. Moreover, shareholders are assured that executives can cash out only after they have met a reasonable threshold of performance. Under such conditions, boards may choose to impose less restrictive constraints on the personal liquidity and diversification of executives.

Incentives for Operating-Unit Managers

While CEO pay dominates the headlines, critics give far less scrutiny to the incentive compensation of the operating managers, who are equally critical to corporate success. In reality, the primary source of a company's value lies in its operating units. In decentralized organizations that produce a range of products and operate in a range of markets, business-unit managers make important day-to-day decisions that affect value. Incentives at

the operating level, no less than at the CEO level, need to provide business-unit managers with continuing motivation to pursue superior long-term value creation. Otherwise, even CEOs with proper incentives will find it difficult to realize gains.

Many boards and CEOs believe that granting stock options to operating-unit managers and front-line employees effectively aligns their interests with those of the shareholders. This point of view is mistaken for all the reasons we discussed about the shortcomings of standard stock option plans for CEOs and senior executives. If anything, granting options to operating managers and other employees is even less efficient than granting them to the CEO because a company's stock price is not an appropriate measure of performance for an operating unit or for the effort of an employee. Operating-unit managers usually have a limited impact on the company's overall success and, as a consequence, on its stock price. Incentives based on share price do not give them the rewards they deserve.

A stock price that declines because of disappointing performance in another part of the company can unfairly penalize the manager of a superior-performing operating unit. Alternatively, if an operating unit performs poorly, but the company's shares rise because of superior performance by other units, the employees of the underperforming unit will enjoy an undeserved windfall. Only when operating units are substantially interdependent as a result of shared customers, suppliers, or technology can the share price be a fair and useful measure of performance.

Companies typically have annual and long-term (most often three-year) incentive plans that reward operating managers for beating financial targets, including revenue, operating income, cash flow, and return on capital. Many companies include

nonfinancial targets as well. As we discussed earlier, these measures are not reliably linked to the cash flows that produce superior long-term value. Indeed, they often encourage value-destroying short-term behavior.

Setting incentive pay for an operating unit is possible. One way is to reward managers for the shareholder value added (SVA) that the unit produces. To add value over time, operating cash inflows must increase at a rate that more than compensates for the investment cash outflows that the business needs in order to grow.[21] SVA applies standard discounting techniques to the operating cash flows that sales and operating margins drive, and then subtracts the investment expenditures. Because SVA is based entirely on cash flows, it does not introduce accounting distortions. This gives SVA a clear advantage over traditional measures. To ensure that SVA captures long-term performance, companies need to extend the performance evaluation period to at least a rolling three-year cycle. A lengthened evaluation period allows the program to retain a portion of the incentive payouts to cover possible future underperformance. This eliminates the need for two plans by combining the annual and long-term incentive plans into one.

Incentives for Front-Line Employees

A company needs appropriate incentive pay measures at every level to maximize its potential for superior long-term value creation. The final piece of the puzzle is establishing measures that properly guide hands-on decision making by front-line employees. Although sales growth, operating margins, and capital expenditures are useful for tracking SVA, they are far too broad

to provide much day-to-day guidance for middle managers and front-line employees, who need to know what specific actions they need to take to increase SVA.

On the other hand, incentives that are short-term and too narrowly focused can have damaging side effects. For example, in the early 1990s, Sears, Roebuck established challenging sales quotas for its auto repair personnel. The quotas encouraged the staff to overcharge for services and to perform unnecessary repairs. Narrow short-term performance incentives have also prompted employees to falsify financial statements in order to meet or beat their targets. Incentives that foster unethical behavior can compromise the reputation of the company and will inevitably erode long-term shareholder value.

Narrowly focused incentives can blind employees to factors that are important to an organization's success. An often-cited example is Ford Motor's attempt to compete in the small, fuel-efficient car market in the late 1960s. Lee Iacocca, the CEO, announced the specific goal of producing a new car that would come in "under 2,000 pounds and $2,000" by 1970. The result was the Ford Pinto. The challenging fuel efficiency, cost, and time-to-market targets induced several levels of management to skimp on safety checks. Design flaws in the fuel tank caused Pintos to ignite upon impact and triggered a flood of lawsuits that severely damaged Ford's reputation.[22]

Despite all the talk about pay for performance, the disappointing reality is that companies continue to measure and reward operating managers and employees based largely on annual results, which only reinforces a short-term orientation. An increasing number of companies also measure performance over three to five years. But even a three- to five-year horizon will

not capture most of the value-creation potential in high-growth businesses or businesses that invest for returns a decade or more away, such as pharmaceuticals. Measuring performance using leading indicators of value fills this gap.

Leading indicators of value are current accomplishments that have a significant positive impact on the long-term value of the business. These are indicators that the company can measure, that it can easily communicate, and, most important, that employees can meaningfully influence. Examples include customer retention rates, number of new customers, timely opening of new stores or manufacturing facilities, on-time new product launches, employee retention rates, and average cycle time from order date to shipping date. Think of the leading-indicators approach as a system of "management by objectives" tied directly to long-term value creation. The approach is an answer to those who contend that long-term-oriented companies invite employees to hide poor performance behind a veil of unending excuses. Leading indicators look to the long term but demand accountability in the short term.

The study by Ittner and Larcker cited earlier found that most companies fail to investigate whether the nonfinancial performance measures that they use drive value creation.[23] Understanding the sources of value takes more than an impressive knowledge of customers, products, suppliers, and technology. Identifying leading indicators is challenging, revealing, and rewarding. The process involves three essential steps:

- Determine which of the key value drivers—sales growth, operating profit margin, or investments in fixed and working capital—has the greatest impact on long-term value creation.

- Establish how the business creates value, and identify the key capabilities required to deliver that value.
- Identify leading indicators of value.

To illustrate the process, we consider the case of distribution manager drivers for Frito-Lay, a division of PepsiCo that has grown to hold a 55 percent share of the $20 billion U.S. snack food market.[24]

Using Frito-Lay's historical performance and other publicly available information, we begin by developing a forecast for each of the key value drivers and computing the discounted cash flow value for Frito-Lay. We then modify the sales growth, operating profit margin, and investment expenditure forecasts by 1 percentage point (for example, the sales growth rate was increased from 7 to 8 percent) to determine the impact of each change on value. We found that a 1-percentage-point change in the sales growth rate affects Frito-Lay's value by 7.6 percent, a 1-percentage-point change in the operating profit margin affects its value by 5 percent, and a 1-percentage-point change in the investment required for each dollar of incremental sales affects its value by less than 1 percent.

The fact that value is most sensitive to changes in sales growth comes as no surprise, given Frito-Lay's healthy 20 percent plus operating margin. This goes a long way toward explaining the business's intense focus on market share. Frito-Lay and its competitors battle fiercely for sales in the hope of securing economies of scale and establishing brands that support high value-creating margins. Understanding each value driver's impact on value enables management to examine how strategies that are under consideration are likely to affect long-term value. For example,

suppose a new snack product is expected to increase sales growth by 1 percentage point, but one-time development and additional continuing costs would lower operating margin by 1 percentage point. This is clearly a value-creating opportunity despite the operating margin decrease, which many companies would find unacceptable. We now turn to the second step in the process—choosing the way the business will pursue long-term value and the key capabilities required to deliver that value.

With more than 50 percent of the snack foods market, Frito-Lay is able to achieve economies of scale in purchasing, production, distribution, and marketing that are not available to its competitors. It also places a strong emphasis on cost efficiency, with recent efforts focusing on increased production and distribution efficiency.

Frito-Lay leverages its unique capabilities to increase sales volume and to earn a premium price for its products. These capabilities include (1) a well-funded program to monitor changing consumer preferences, which drive its product development and service capabilities, (2) continuing expenditures on advertising and customer-centric service aimed at establishing and maintaining premium brands, (3) a continuing initiative to use superior insights about customer preferences to drive promotion campaigns, and (4) its well-documented Direct Store Delivery (DSD) program, with its own fleets of trucks driven by skilled and motivated drivers who are known for their ability to build relationships with store owners and managers, secure shelf space, and even offer stores credit. In brief, Frito-Lay's approach to creating value, coupled with these mutually reinforcing capabilities, is difficult for its competitors to replicate.

With knowledge of the relative importance of key value drivers and a broad value-creating plan in place, we now proceed to identify leading indicators of value for distribution managers and drivers. Because of their direct access to customers, Frito-Lay's drivers affect several leading indicators that drive long-term value. Three particularly significant indicators that can be used as performance measures and incentives are

- *Shelf space per store.* This is "ground zero" for the snack foods war, and Frito-Lay's drivers are uniquely positioned to use product, pricing, and promotion programs to win. Ensuring that they compete for shelf space effectively in the short term is critical to Frito-Lay's long-term success and value.
- *Customer satisfaction.* Drivers are directly responsible for keeping grocers satisfied by surpassing stocking targets, enhancing store appearance, setting up and maintaining local marketing and promotion displays, and providing superior service. Linking drivers' incentive compensation to grocer satisfaction scores links their daily activities to long-term customer value.
- *Market/customer reports.* Drivers have clear, close, ongoing access to what's happening at the point of sale. They learn from grocers why they gained or lost shelf space, observe actual shoppers, and monitor pricing and product changes in competitors' lineups. Capturing and harnessing this market information is critical to Frito-Lay's ongoing growth. Rewarding drivers for providing detailed, timely customer reports on their handheld computers strengthens Frito-Lay's market insight capability and value going forward.

Using leading indicators to give front-line employees incentives offers significant benefits over traditional financial and nonfinancial performance measures. By providing an explicit link between the day-to-day activities of front-line employees and the business's long-term value, leading indicators focus on what's in the best interests of the business, the company, and its shareholders.

Conclusion

Achieving superior long-term value should be the governing objective of all publicly traded companies. Corporate boards, in turn, should measure and reward CEOs and senior executives based on how well they meet that objective. Companies with superior performance standards at all levels send a powerful message to shareholders about their aspirations.

The focus on superior long-term value is consistent with the duties of the CEO and senior executives. These executives have the responsibility to be in the right businesses and to allocate the proper amount of capital to those businesses. Either indexed options or EPOPs are promising incentives for promoting long-term performance. The company's value-creating ability depends on the shareholder value added (SVA) contributions from its operating units. And the building blocks for SVA are the leading indicators of value that guide operating-unit managers and front-line employees. While companies and boards give plenty of lip service to pay for performance, the link between existing incentive plans and superior performance remains weak. Boards of directors need to make the needed changes in compensation

practices at all levels of the organization in order to advance the interests of shareholders, employees, and the broader economy.

Notes

1 For an overview of the board's role in establishing the metrics by which it can judge the performance of the management team and the company, see *Report of the NACD Blue Ribbon Commission on Performance Metrics: Understanding the Board's Role*, cochaired by John Dillon and William White (Washington, D.C.: National Association of Corporate Directors, 2010).

2 There is no ideal way to measure the percentage of total compensation that incentive compensation represents. Almost all pay surveys present the cost of stock option awards at the date of grant as reported by the company. Most companies use the Black-Scholes option-pricing model, in which six basic factors affect option value: current stock price, exercise price, stock-price volatility, time to expiration of contract, risk-free interest rate, and dividend yield. Not only is the calculation complex, but the resulting value is, at best, an approximation. The Corporate Library employs an alternative approach. It reports the compensation that CEOs have actually realized—the value that they realized on the exercise of options and on the vesting of restricted stock. Both approaches confirm the essential point that equity incentives have dominated CEO pay packages over the past two decades.

3 Frederic W. Cook & Co., Inc., *The 2009 Top 250: Long-Term Incentive Grant Practices for Executives*, October 2009, p. 14.

4 Christopher D. Ittner and David F. Larcker, "Coming Up Short on Nonfinancial Performance Measurement," *Harvard Business Review*, November 2003, pp. 83–95.

5 Irene Rosenfeld, CEO of Kraft Foods, Inc., was paid an annual incentive bonus of 130 percent of target for her "exceptional leadership in executing on the formal bid for Cadbury in November 2009 and closing this complex deal in early 2010." Given that Kraft paid a healthy premium for Cadbury, that a majority of acquisitions fail to work, and that the jury will be out for some time on the outcome of the acquisition, paying an immediate bonus flies in the face of long-term value creation. Interestingly, Warren Buffett, representing Berkshire Hathaway, Kraft's largest shareholder, took a highly publicized stand against the acquisition.

6 Another impetus came from the 1993 Internal Revenue Service regulation that disallowed corporate tax deductions for salaries exceeding $1 million, but made an exception for performance-based incentive compensation such as stock options.

7 Another factor, which affects shareholders but not executives' motivation, is the gap between the cost of option grants to shareholders and their value to executives. The value of options to undiversified, risk-averse executives is substantially lower than the cost to shareholders.

8 Alfred Rappaport and Paul Hodgson, "Make CEOs Earn Their Pay," *Directors & Boards*, Vol. 34, No. 3, second quarter 2010.

9 For a detailed discussion of indexed options, see Alfred Rappaport, "New Thinking on How to Link Executive Pay with Performance," *Harvard Business Review*, March-April 1999, pp. 91–101. The tax treatment of discounted employee options was modified in 2004. After that date, an executive would be taxed on the value of the option at vesting and would also incur a 20 percent penalty tax. Indexed options are granted at the money and would not ordinarily be thought of as discounted options. Treasury regulation 409A, however, stipulates that the exercise price may *never* fall below the market value at grant date. This ruling certainly makes indexed option plans less attractive. For a comprehensive review of the economics, tax, and accounting aspects of discounted options, see David I . Walker, "The Non-Option: Understanding the Death of Discounted Employee Options," *Boston University Law Review*, Vol. 89, 2009, pp. 1505–1561.

10 Some observers object that executives profit when they outperform the index even if the stock price falls below the exercise price at grant date. To counter this objection, boards can require that options be exercised only if the company's stock is trading above its price at grant date or if the shares have appreciated at a specified minimum annual rate.

11 Individual stocks can be more or less risky than the market. Companies with riskier shares, such as young high-technology companies, can choose to either increase the equity risk premium or reduce the number of options that they grant in order to offset the greater value of high-volatility options.

12 The other major vesting pattern is cliff vesting, where grants vest all at once. In a comprehensive study of vesting practices from 1997 to 2007, Cadman et al. found that cliff vesting ranges from immediate vesting at the grant date to vesting on the fifth anniversary of the grant or later. See Brian Cadman, Tjomme Rusticus, and Jayanthi Sunder, "Stock Option Grants Vesting Terms: Economic and Financial Reporting Determinants," January 2010. Available at SSRN: http://ssrn.com/abstract=1545602

13 Lucian Bebchuk and Jesse Fried, *Pay without Performance: The Unfulfilled Promise of Executive Compensation* (Cambridge, Mass.: Harvard University Press, 2004), pp. 174–176. Bebchuk and Fried also caution that permitting executives to cash out all, or most, of their equity upon retirement will detract from their incentive to think long-term in their last few years on the job.

14 In the aftermath of the financial crisis, there is growing interest in reexamining the managerial incentives at financial institutions. When banks and other highly leveraged financial companies run into difficulty, executives whose pay packages consist largely of equity are motivated to take on excessive levels of risk to salvage the value of their equity holdings, which places the company and its debtholders in even greater jeopardy. If their gamble fails, the executives have little to lose, since the value of their equity is already close to zero. If their gamble pays off, the value of their equity shoots up. In brief, this asymmetric payoff structure gives executives the upside potential, while debtholders bear most of the downside risk. To discourage excessive risk taking, two proposals have been suggested. Harvard Law professors Lucian Bebchuk and Holger Spamann recommend that bank executives' incentive pay packages include not only common shares, but also preferred shares and debt securities. "Regulating Banker's Pay," *Georgetown Law Journal*, Vol. 98, No. 2, 2010. Wharton professor Alex Edmans and doctoral student Qi Liu recommend "inside debt" (pension obligations and deferred compensation) as a superior motivating approach for highly leveraged companies with a relatively high risk of bankruptcy. "Inside Debt," *Review of Finance*, Vol 15, No. 1, January 2011, pp. 75–102. For an overview of the latest thinking on including debt in executive compensation packages, see John McCormack and Judy Weiker, "Rethinking Strength of Incentives for Executives of Financial Institutions," *Journal of Applied Corporate Finance*, Vol. 22, No. 23, Summer 2010, pp. 65–72.

15 For an excellent discussion of the incentive effects and trade-offs among the three types of plans, see Brian J. Hall, "The Design of Multi-Year Stock Option Plans," *Journal of Applied Corporate Finance*, Vol. 12, No. 2, Summer 1999, pp. 97–106.

16 Using 1992–2007 option grant data for top-five executives reported in Standard & Poor's Execucomp database, Stephen F. O'Byrne and S. David Young find 54,451 cases of three consecutive stock option grants. Only 5 percent of these cases have the same number of option shares for all three years, thus providing evidence of the dominance of the constant-dollar approach to option granting. Stephen F. O'Byrne and S. David Young, "What Investors Need to Know about Executive Pay," *Journal of Investing*, Vol. 19, No.1, Spring 2010.

17 This assumes that interest rates and the volatility of the stock do not change.

18 Repricing of options is not new. Erwin N. Griswold, the dean of Harvard Law School, offered the following observation more than 50 years ago: "What happens, though, when the value of the stock goes down? As a matter of fact, this may merely increase the incentive. It tends to become a heads-I-win, tails-you-lose type of lottery. For when the market goes down, the old options may be canceled, and new options may be issued at the lower price. Thus, the employee may get the maximum incentive if the price of the stock is first depreciated." "Are Stock Options Getting Out of Hand?" *Harvard Business Review*, November-December 1960.

19 David I. Walker, "Evolving Executive Equity Compensation and the Limits of Optimal Contracting," Boston University School of Law Working Paper No. 09-34 2009**.** Available at SSRN: http://ssrn.com/abstract=1443170

20 Frederic W. Cook & Co., Inc., *Stock Ownership Guidelines: Prevalence and Design of Executive and Director Ownership Guidelines among the Top 250 Companies*, October 23, 2009.

21 For additional detail on how to calculate SVA, see Alfred Rappaport, *Creating Shareholder Value: A Guide for Managers and Investors* (New York: Free Press, 1998), pp. 119–121.

22 Lisa D. Ordonez, Maurice E. Schweitzer, Adam D. Galinsky, and Max H. Bazerman, "Goals Gone Wild: The Systematic Side Effects of Over-Prescribing Goal-Setting," *Academy of Management Perspectives*, Vol. 23, No. 1, February 2009, pp. 6–16.

23 Companies commonly use key performance indicators (KPIs) to monitor their progress toward strategic goals. The problem is that it is difficult to justify the measures chosen because the governing objective is rarely the creation of long-term shareholder value. Leading indicators of long-term value can be established using a management system such as the balanced scorecard *only* if creating long-term value is the governing objective. For recent thinking from the originators of the balanced scorecard, see Robert S. Kaplan and David P. Norton, "Mastering the Management System," *Harvard Business Review*, January 2008, pp. 63–77.

24 This Frito-Lay analysis was conducted by Tom Nodine, senior executive advisor at Booz & Company.

CHAPTER 6

BECOMING A LONG-TERM VALUE-CREATING COMPANY

It's one thing to know what the problem is and another thing to figure out what to do about it. The first four chapters examined the causes of short-termism and showed how it can lead to value-destroying behavior. Chapter 5 looked at the compensation practices of publicly traded companies and recommended concrete changes that would provide employees with incentives to pursue long-term value. Well-conceived incentives are necessary, but not sufficient, for becoming a value-creating company. This chapter introduces the other essential practices that committed organizations need to adopt.

Policies and everyday behavior that are consistent with long-term value creation invariably challenge long-accepted and cherished practices. A company's ability to transform itself into a long-term value-oriented firm will vary based on top management's degree of commitment, on the company's culture, and on the nature of the company's operating units.

With the possible exception of Berkshire Hathaway, no company today is close to being a full-blown long-term value-creating company.[1] Executives offer various, and often conflicting, reasons for failing to implement the idea and sometimes flatly reject it. Here's a sample of common objections along with a brief response to each.

Objection	**Response**
Our stock will plummet if we fail to meet the market's expectations for quarterly earnings.	Long-term, risk-adjusted cash flows drive value, not short-term earnings.
As long as we grow our sales, the stock price will take care of itself.	Not all growth creates value. Sales growth that requires sizable investment and produces insufficient operating margins to cover that investment and the cost of capital destroys value.
External factors, including changes in interest rates, government regulation, and disruptive technologies, significantly influence the stock price and are beyond management's control.	The stock price reflects expected future cash flows, and it is management's responsibility to anticipate and adapt to developments that are ostensibly beyond its control in order to maximize long-term shareholder value.
We already use discounted cash flow analysis to evaluate capital expenditure proposals.	Smaller value-creating projects can be embedded in larger value-destroying strategies. Invest in strategies, not projects.
There's so much going on right now that we can't make implementing the principles of long-term value creation a priority.	There is always too much going on. It is management's responsibility to create value for its shareholders. If not now, when?
No other companies seem to be doing it; why should we?	Management must answer this question to its own satisfaction before it can effect any meaningful change.

People are reluctant to change. As a result, modifying behavior in an organization is difficult under even the most favorable conditions. Change, however, is a lot easier when individuals see the benefits to the organization and are comfortable with the way the change affects them personally. Still, modifying the mindset and behaviors of an organization is a large task. The process of becoming a long-term value-creating company entails

- Gaining the commitment of the board and senior management
- Implementing the essential habits of long-term value-creating companies at all levels of the organization

Gaining Commitment

The commitment to long-term value creation starts at the top, with the board of directors and the CEO. Most leaders readily acknowledge that managing for the long term is the right thing to do. Moreover, they recognize that the risky behavior that short-termism induces can do substantial harm to the company's key stakeholders, including shareholders, creditors, customers, employees, suppliers, and government. The dearth of companies that are committed to long-term value creation speaks volumes about the gulf between well-intentioned declarations on the one hand and the everyday behaviors of business leaders on the other.

Notwithstanding the challenges, there is reason for a healthy optimism. When doing the right thing becomes deeply embedded in the company's culture, executives and other employees will behave accordingly. Many managers feel frustrated with the

current business practices that short-termism has induced, and that frustration may serve as a catalyst for positive change.

Before a publicly traded company can embrace long-term value creation as its governing objective, the board and the CEO must be convinced that this is the right thing to do. This starts with the leadership agreeing on what the term *value* means. Most board members and executives accept the discounted cash flow (DCF) model as the standard for valuing financial assets. They know that DCF sets prices in well-functioning capital markets. For example, bond prices reflect the present value of the contractual cash flows discounted at the rate of return that investors demand.

Given that the magnitude, timing, and riskiness of cash flows determine bond prices, we can expect that these same variables will dictate stock prices, even though stocks are considerably more difficult to value. Indeed, the return that investors earn from the purchase of any financial asset equals the cash flows that they receive while they own the asset plus the proceeds that they receive when they sell it. Peter Bernstein, an investment luminary, said it well: "Financial markets are nothing more than arenas where investors who need cash today can obtain it by selling the present value of future cash flows to other investors willing to wait for the cash payoffs from their capital. If you invest without expecting future cash flows, then you might as well collect art or play the slot machines."[2]

Many executives insist that the stock market is short-term-oriented even while acknowledging that the long-term DCF model is the proper way to value the company's shares. To make their case, they point to the average holding period for equity mutual funds, which has plummeted from seven years in the mid-1960s

to about one year today. But investor holding periods tell us little about what the market is thinking. To assess whether the market takes a long- or a short-term view, you need to estimate the market's investment time horizon. This horizon is the number of years of value-creating cash flows that it takes to justify today's stock price.

Many managers view stock prices with some misgivings because they don't believe that prices accurately reflect value. But the stock price—the dollar level at which buyers and sellers are willing to transact—captures the market's implied expectations concerning the future performance of the company. The board and senior management can satisfy themselves that the stock price does in fact reflect their company's long-term cash flow prospects by estimating the market's expectations for their company.

This analysis starts with a forecast of annual free cash flow, or the cash that is available to pay interest to debtholders and dividends to shareholders. You begin this calculation by estimating the company's sales growth rate and operating profit margin. Sales multiplied by the operating profit margin determines operating profit. Deduct taxes from operating profit to arrive at after-tax operating profit. Then subtract the investments in working and fixed capital that the company needs to make in order to support the projected sales growth to arrive at free cash flow. Discount annual free cash flows at the cost of capital to determine corporate value. Finally, subtract debt and other applicable liabilities from corporate value to arrive at shareholder value.[3]

To calculate the market's investment time horizon, extend the discounted free cash flow forecast for as many years as it takes for the cash flow value to reach the current stock price. For example,

if you need 11 years of cash flows to get to the current price, the market investment horizon is 11 years. You will be able to confirm quickly that the stock price reflects long-term expectations, even if you use a relatively pessimistic cash flow scenario. We have found that corporate executives who instinctively believe that the market is short-term-oriented and undervalues the company's shares are often surprised to find that the market's expectations are more optimistic than their own. Numerous companies require 10 or more years of value-creating cash flows to justify the current stock price.[4]

Boards and CEOs reach an important intellectual milestone when they acknowledge the level of long-term performance that the company must deliver in order to justify its current stock price. But even if the analysis persuades them that expected long-term cash flows govern stock prices, they must also be confident that the benefits of becoming a long-term value-creating company outweigh the risks. This takes us right back to the critical question: why should we enter these uncharted waters if no one else is doing it?

As we will show, virtually all companies enjoy substantial benefits if they focus on long-term value. Yet some companies might experience problems if investors were to misinterpret near-term results and punish the stock, because there are cases in which a weak stock price can affect operating performance. This risk is particularly acute for start-ups, which depend heavily on a healthy stock price to finance growth and to send positive signals to employees, customers, and suppliers. A depressed share price either makes selling new shares prohibitively dilutive to current shareholders or, in some cases, makes the company unattractive to prospective investors. As a consequence, management may

have to defer or scrap its value-creating growth plans. Then, as investors become aware of the situation, the stock price continues to slide, possibly leading to a takeover at a fire-sale price or, in the worst case, to bankruptcy.

A company that is severely capital constrained can also be vulnerable, especially if it operates in tight labor markets, serves just a few customers, or has suppliers that are particularly powerful. For example, a poorly performing stock means that the company cannot offer employees credible prospects for stock option gains, which makes it difficult to attract and retain the talent whose knowledge, ideas, and skills are the dominant source of value.

If a company is vulnerable because of the perceptions of important constituents, responsible executives cannot ignore market pressures for short-term performance and may have to temper some of the best practices of long-term value-creating companies. But these extreme conditions do not apply to most publicly traded companies. Few of them rely on equity issues to finance their growth. Most companies generate enough cash to pay their top employees competitively. They also have a large universe of customers and suppliers and have plenty of lending institutions bidding for their business.

Once the board and senior management agree that the stock price reflects the market's assessment of a company's long-term cash flow prospects, the commitment to managing for long-term value is off and running. Leaders clear another important hurdle when they are convinced that the rewards of a long-term orientation outweigh the risks of the poor short-term share-price performance that myopic investors might trigger. The catalyst for change can also come from a frustration with business as usual.

It's hard to believe that many CEOs and CFOs are comfortable playing the earnings expectations game, especially since it too often pushes them to the limits of ethical and legal behavior. Both corporate headquarters and the operating units cook up gimmicks that stretch accounting standards in order to deliver reported earnings. But it goes beyond accounting shenanigans; finance executives admit to deferring or rejecting value-creating investments that would create a short-term hit to profits in order to satisfy Wall Street's expectations for quarterly earnings. Such a lax attitude toward the interests of shareholders raises serious doubts about whether corporate managers are meeting their fiduciary responsibility. Despite a rash of well-publicized failures, companies remain very determined to deliver quarterly earnings. We can only hope that the frustration with the earnings game in boardrooms and executive suites launches the process of becoming a long-term value-creating company.

Within companies, there is an equally frustrating game going on between headquarters and the operating units—the costly and time-consuming annual budgeting process. This process fosters a culture of deception that can, in extreme cases, perpetuate outright lies. When budgets become a company's central focus, executives are rewarded more for their ability to negotiate successfully than for delivering results. The ostensible aim of the budgeting exercise is to compel managers to develop plans that incorporate the best opportunities for value creation. But when their bonuses and promotions depend on beating the budget, executives quickly throw that goal overboard. Operating-unit executives know the game. They lowball budget targets

and inflate results in order to minimize the risk that they will underperform their targets and to maximize the reward of their bonuses. Perverse incentives once again trump value creation.

The game continues at corporate headquarters, where senior executives, who have their own performance plans tied to earnings and revenue growth, rebuff the underwhelming targets that the operating units submit. The protracted negotiations typically result in the two sides splitting the difference. This compromise may allow both sides to walk away satisfied, but no one has reason to be pleased with the outcome—including the shareholders. The traditional budget process encourages employees to compromise on ethical conduct, promotes value-destroying behavior, and obliges senior executives and operating-unit heads to invest their scarce time in a fruitless exercise.

Timing is critical in gaining the commitment of the board and the CEO. Leaders become more receptive to change when the company's performance has lagged and dissatisfied institutional shareholders are putting pressure on management to increase value. The threat of being acquired—either by a competitor or by a private-equity firm—can be a defining moment for senior management. A far superior alternative is for leaders to anticipate such external pressures and to commit to making the changes necessary to eliminate those pressures.

Suppose that the combination of frustration with existing business practices and fortuitous timing convinces the CEO and the board to focus on long-term value creation. The next step is to examine the major changes that this new focus requires. The following section outlines a dozen essential habits of long-term value-creating companies.

A Dozen Essential Habits of Long-Term Value-Creating Companies

The essential habits of long-term value-creating companies will be familiar to many readers, and earlier chapters discussed several of them in detail. But these habits are in distinct contrast to prevailing norms, and they call for a profound change in the mindset and narratives of most organizations.

Essential Habit 1: Do Not Manage Earnings or Provide Earnings Guidance

If a company fails to embrace this habit, it will find that it is almost impossible to follow the rest. Unfortunately, a majority of large public companies play the earnings expectations game. A National Investor Relations Institute study conducted in April 2009 found that 60 percent of 515 surveyed companies, representing a wide range of industries and market capitalizations, provide earnings guidance to Wall Street analysts. This percentage was a relatively modest reduction from 2008, when 64 percent of respondents provided earnings guidance. The decline is probably attributable to the increased difficulty of making forecasts in the midst of a financial crisis rather than to a fundamental shift in how companies think about earnings.

Many companies view earnings guidance as an essential means of communicating with financial markets. Not only is earnings guidance the wrong guidance, but it can also be very costly when senior management spends considerable time monitoring the quarterly results and the process reinforces the focus on short-term performance throughout the company.

Essential Habit 2: Select Strategies That Maximize Long-Term Value, Even at the Expense of Lowering Near-Term Earnings

Once the company ends the earnings game, it can assess alternative strategies and day-to-day operating decisions by estimating the value of the future cash flows that they would provide rather than by gauging their effect on near-term earnings.[5] If managers of operating units are conducting sound strategy analysis, they should have informed responses to the following questions:

- Which strategies are expected to create the greatest value?
- For each strategy under consideration, how sensitive is the value to different assumptions concerning competitors' behavior, disruptive technologies, the regulatory environment, the performance of the global economy, and other pertinent variables?
- Which strategies have an unacceptably high chance of producing an unacceptably large downside?

At the corporate level, executives must satisfactorily address the following questions:

- Which operating units have sufficient value-creation potential to warrant continuing investment?
- Which units have limited upside potential and should become candidates for restructuring or divestiture?
- What mix of investments among the company's operating units is likely to produce the most overall long-term value?

The idea that companies focus too much on generating top-line growth even when they lack the capabilities to outperform their competitors is evidenced by how often revenue growth turns out to be value-destroying or value-neutral rather than value-creating. The disappointing results may arise because many companies evaluate proposed strategies using short-term financial or nonfinancial performance measures that have an uncertain link to sustainable value creation. In other situations, unrealistically optimistic long-term forecasts, so-called hockey sticks, win the day. Well-managed companies employ both a superior approach to strategy formulation and an economically sound methodology to estimate the likelihood that a strategy will add meaningful long-term value.

Essential Habit 3: Instill a Customer-Equity Mindset throughout the Processes of Planning, Decision Making, and Performance Evaluation

Customer equity is the present value of anticipated lifetime revenues that current and prospective customers generate, minus the costs to retain and acquire those customers.[6] Because customers are the source of a company's revenues and the driver of expenses and investments, increases in customer equity translate directly into increases in shareholder value. You can boost customer equity by keeping your good customers longer, by acquiring value-contributing new customers, by growing revenue from present customers, by prioritizing high-value customers, by improving the return on customer acquisition and retention expenditures, and by turning the knowledge that you gain from customer relationships into improved products, services, and goodwill.

Peering into the future in order to value customer equity is admittedly difficult. But that should not dissuade a company from doing it. What's important is that a customer-equity mindset permeates the organization; everyone understands that the company's value rests not on this year's revenues and costs, but rather on those revenues and costs that are expected well into the future. A customer-equity mindset serves as a powerful antidote to the false complacency that current-period target-beating revenue and profit results induce. For instance, a focus on customer equity discourages sales representatives from spending a disproportionate amount of effort on acquiring new customers to prop up current-period results while neglecting the needs of existing customers, who represent the overwhelming share of customer equity.

The trade-off between acquiring new customers and investing in the loyalty of existing customers is particularly crucial for businesses that have the opportunity to create customer lock-in.[7] Lock-in occurs when a customer faces large costs to switch to another supplier. Examples of sectors in which lock-in is important include cable television, credit cards, life and casualty insurance, home security, and Internet retailers. A focus on customer equity not only promotes integrity and trust in customer relationships, but also increases the loyalty, trust, and dedication of employees—further contributing to a company's long-term value.[8]

Fred Reichheld, a Bain & Company consultant, sums up this win-win-win for customers, employees, and shareholders: "Loyalty-based management is a Sunday school teacher's dream come true—an ethical approach to business that pays so well it puts the unscrupulous approaches to shame. It calls for companies

to create tremendous value for their customers, to share value expansively by giving managers and employees a partnership interest in their work, and to deliver exceptional value in the form of profits to the investors who made the business possible."[9]

Essential Habit 4: Manage All Businesses—Existing, Emerging, and Embryonic—without Regard to Their Stage of Maturity with a Single-Minded Focus on Creating Long-Term Value

Many commentators have discussed the alleged tension between short-term and long-term goals.[10] One assertion is that an excessive focus on a highly uncertain long term distracts the organization from what it needs to accomplish in the short term. Others emphasize that an obsession with the short term compromises the competitiveness and health of the company over the long haul. The discussion generally ends with the recommendation that the company strike a sensible balance between the short term and the long term, which is not particularly helpful.

Long-term value-creating companies do not engage in unproductive debates about the short term versus the long term. They don't view the short term and the long term as opponents in a zero-sum game. Instead, they govern by the single objective of maximizing long-term value. This objective applies to all activities, whether management expects them to pay off soon or in the distant future. Managers, like good farmers, "must simultaneously harvest the current crop, till the ground for the next season, and investigate new crops for the future."[11] Mehrdad Baghai, Stephen Coley, and David White,[12] consultants at McKinsey &

Company, suggest examining what they call the three horizons of growth, the different paths to success in a company's mature, emergent, and embryonic businesses.

Horizon 1 encompasses the company's existing core businesses. Operating management should focus on defending the company's competitive positions and on increasing value by means of product and market extensions, increasing productivity, reducing costs, and innovating. Companies that enjoy a competitive advantage in their core businesses today should not expect it to last indefinitely. Rapidly changing technology, unexpected entrants, and increasing global competition are shortening the duration of competitive advantage. So while core businesses may account for the lion's share of today's earnings, cash flow, and market capitalization, companies need new, value-creating businesses to complement or replace their core businesses in order to increase long-term value. That's the job of the Horizon 2 business builders and the Horizon 3 visionaries.

Emergent Horizon 2 businesses are typically under intense pressure to grow revenues quickly, to establish a dominant market position before competitors do, and to become self-funding as soon as possible. To capture long-term value, executives must manage emergent businesses, which operate in highly uncertain and rapidly changing environments, differently from the relatively mature Horizon 1 businesses. Building a Horizon 2 business requires taking on significant risk, while managers of Horizon 1 businesses are often seeking to reduce risk. Business processes, including planning, budgeting, performance evaluation, and incentive systems, need to be consistent with the different level of risk that Horizon 2 businesses face. For instance,

imposing profit-oriented performance metrics on Horizon 2 businesses is most likely to be counterproductive. The metrics may discourage investments to boost critical market share precisely at the time when the company needs those investments most. The chaotic environment in Horizon 2 demands performance evaluation and incentive systems that have a long-term orientation as well as the flexibility to modify strategies as circumstances warrant.

Horizon 3 initiatives include research projects, strategic alliances, minority investments, and other investments that have the potential to become tomorrow's businesses. Each initiative is an option that management can exercise if the initial investment works out well or abandon if the prospects diminish. Management's challenge with Horizon 3 is to separate projects with long-term potential that need to be nurtured from projects with limited upside that need to be jettisoned. While the three horizons of growth call for different skills and management systems, the governing objective is the same for all: a continuous focus on what management needs to do in the short term in order to increase value in the long term.

Essential Habit 5: Retain Only Assets That Maximize Value

A company that is dedicated to long-term value creation regularly looks for buyers who are willing to pay more for its business units, brands, real estate, and other detachable assets than what those assets are worth to the company. Such an analysis can be a political minefield when businesses are performing well against

internal performance targets but are clearly more valuable to another entity. Nonetheless, failure to exploit such opportunities compromises shareholder value.

Kmart provides a stunning example of this failure. In 2002, ESL Investments, a hedge fund operated by Edward Lampert, gained control of Kmart for less than $1 billion. At the time, Kmart was under bankruptcy protection, and its shares were trading at less than $1. Lampert looked beyond the company's dismal operating results and focused on the value of its real estate holdings. In 2004, ESL was able to recoup almost its entire investment by selling a total of 68 Kmart stores to Home Depot and Sears. After that, Lampert closed underperforming stores, increased cash flow by reducing nonproductive capital spending and inventory levels, and eliminated Kmart's ineffective clearance sales.

By the end of 2003, Kmart shares were trading at about $30. In the following year, they surged to $100, and, in a deal announced in November 2004, Lampert used them to acquire Sears. Former shareholders of Kmart who had sold their shares at distress prices were justifiably stunned and angered that the previous management hadn't unlocked the value for them, but had allowed ESL to do so on behalf of *its* shareholders.

Companies can also trim assets and increase value by investing in high-value-added activities (including research, design, and marketing) where they enjoy a comparative advantage and by outsourcing low-value-added activities (manufacturing) when other companies can perform these activities reliably at a lower cost.

Essential Habit 6: Reward CEOs and Other Senior Executives for Delivering Superior Long-Term Value

Corporate boards can overcome the serious shortcomings of standard fixed-price options by adopting an option plan that rewards executives only if they create superior long-term value. We proposed two ways to do this in Chapter 5. The first is an indexed option plan that ties the exercise price to an index made up of the company's peers. Unlike standard options plans, which reward executives for any increase in the company's stock price after the grant date, indexed option plans reward executives only if the stock outperforms its peer index.

Because many companies are unable to develop a reasonable peer index, we offered a second possibility—an equity-premium option plan (EPOP). Like indexed options, EPOPs demand a higher level of threshold performance than standard fixed-price options. Specifically, the exercise price rises by the yield to maturity on the 10-year U.S. Treasury note plus an equity premium to compensate shareholders for assuming equity risk. Both plans extend the cash-out period in order to motivate a long-term focus.

Essential Habit 7: Require CEOs and Other Senior Executives to Hold a Meaningful and Continuing Stake in the Company's Equity

Standard fixed-price options and restricted stock grants allow executives to cash out their shares after a relatively short vesting period. This gives them an incentive to focus on near-term

earnings in an effort to boost the current stock price, rather than focusing on long-term value. Many companies have adopted stock ownership standards for senior management in order to address this problem. However, the most popular approach, which requires minimum ownership of shares equal in value to a specified multiple of salary, poses difficulties. A sharp decline in stock prices makes it hard for executives to meet the minimum ownership requirements. On the other hand, meeting the minimum ownership requirements in a rising stock market is relatively easy, thus enabling executives to cash out a significant fraction of their holdings after a short vesting period. This is a problem if the company's shares have performed well below the level that shareholders require to compensate them for risk.

Either indexed options or EPOPs with delayed cash-out provisions (Essential Habit 6) overcome much of the problem because executives can cash out shares only after they have met a more demanding level of performance. This frees the board to impose ownership requirements that are less onerous and consider the liquidity and diversification concerns of executives.

Essential Habit 8: Reward Operating-Unit Executives for Delivering Superior Multiyear Value

Granting stock options and restricted stock to operating-unit executives fails the test of pay for performance because a single operating unit's performance generally has little impact on the company's stock price. Equity-based incentives therefore fail to provide the operating units with suitable rewards. Ill-suited incentives unfairly penalize operating units that deliver superior

performance during a period when the company's stock price declines as a result of disappointing results in other units. Units that have performed poorly receive unearned windfalls when the company's stock price rises because of better-than-expected results in other units.

To add value, operating cash flows must increase at a rate that more than compensates for the investments that the business needs if it is to grow. To ensure that shareholder value added (SVA) captures long-term performance, value-creating companies extend the performance evaluation period to rolling cycles of at least three years, and withhold a portion of the incentive payments to protect against possible future underperformance.

Essential Habit 9: Reward Operating-Unit Employees for Delivering Superior Performance on the Key Drivers of Long-Term Value that They Influence Directly

Thoughtful companies reward employees for superior performance based on how well they do in delivering leading indicators of value. Leading indicators of value are measurable and easily communicated current-period accomplishments that management expects will generate long-term value for the business. Importantly, leading indicators of value are based on specific actions that employees can take. Examples include customer retention rates, number of new customers, timely opening of new stores or manufacturing facilities, on-time new product launches, employee retention rates, and average cycle time from order date to shipping date. Leading indicators look to the long term, but demand accountability in the short term.

Essential Habit 10: Make Acquisitions That Maximize Expected Long-Term Value

Companies create most of their value through their day-to-day operations. However, a major acquisition can create or destroy significant amounts of value faster than almost any other corporate activity. Companies, guided by their investment bankers, usually assess the attractiveness of a deal by considering multiples (of earnings and cash flow) for comparable acquisitions and the acquisition's immediate impact on earnings per share (EPS). They view EPS accretion favorably and dilution unfavorably. Nonetheless, just as with other investments, the immediate EPS impact gives little indication of a deal's prospects for creating long-term value.

There is a much better way to evaluate mergers and acquisitions. To determine how much value the acquiring company will generate, you estimate the present value of the acquisition benefits, or synergies, and subtract the acquisition premium. The premium is the amount in excess of the seller's stand-alone value that the acquirer offers. Research over the past three decades reveals that about two-thirds of merger and acquisition transactions result in a decline in the shares of the acquiring company. Assessments of product markets and postacquisition synergies that are overly optimistic, combined with inadequate due diligence, often lead acquirers to pay too much for their targets.

Long-term value-creating companies do not stop at estimating the present value of acquisition synergies. They recognize the challenge of the postacquisition integration and the strong likelihood that competitors will try to take advantage of them while the acquiring company is attempting to generate synergies.

Before committing to a major deal, they carefully assess the risk to their market value if the anticipated synergies fail to materialize. Shareholder value at risk (SVAR) is a straightforward and useful tool for evaluating an acquirer's synergy risk relative to the value of the firm.[13] It calculates the percentage of a company's market capitalization that is at risk if the combination produces no synergies.

To calculate SVAR for a cash offer, you simply divide the premium that the acquiring company offers by the acquiring company's preannouncement market capitalization. For example, suppose an acquirer with a market capitalization of $5.0 billion proposes to pay $4.0 billion for a target with a current market value of $2.8 billion. The premium in this case is $1.2 billion ($4.0 billion - $2.8 billion). Dividing the $1.2 billion premium by the acquirer's $5.0 billion market value yields a SVAR of 24 percent.[14] This means that if no synergies materialize, the stock of the acquiring company is at risk of going down 24 percent. Acquirers can, of course, lose even more than the premium they offer. In such cases, SVAR underestimates risk.

Essential Habit 11: Return Cash to Shareholders When There Are No Value-Creating Opportunities to Invest in the Business

Companies that choose to return cash to shareholders can either pay a cash dividend or buy back shares. We begin with the golden rule of share buybacks, which companies can use as a yardstick for evaluating the economic attractiveness of buyback programs. We then assess the relative merits of repurchasing shares versus paying dividends.

Value-driven companies follow the golden rule of share buybacks: *Repurchase shares only when they are trading below their expected value and when no better investment opportunities are available.*[15]

The first part of the rule—"repurchase shares only when they are trading below their expected value"—suggests that management should act like any good investor by buying the company's stock only when its price is lower than its value. With its superior understanding of the business and its prospects, management is well positioned to make this judgment about value versus price. If price is truly less than value, a buyback transfers wealth from the selling shareholders to the continuing shareholders. The resulting increase in expected value per share fulfills management's objective to maximize value for its continuing shareholders.

The second part of the rule—"when no better investment opportunities are available"—addresses a company's priorities. Buybacks may appear attractive, but reinvesting in the business may be a better opportunity. Value-maximizing companies fund the investments with the highest returns first.

The golden rule has a couple of noteworthy corollaries. First, the rate of return on a buyback depends on how deeply the market is undervaluing the stock. The more undervalued it is, the higher the expected rate of return to continuing shareholders. The shareholder rate of return equals the cost of equity capital divided by the ratio of stock price to value. For instance, say a company has an 8 percent cost of equity and its stock is trading at 80 percent of value. Dividing 8 percent by 80 percent yields a 10 percent rate of return. If the stock were trading at only 70 percent of its value, the rate of return on the buyback would rise to 11.4 percent.

Second, a buyback can be more attractive than an investment in the business. Executives know that they should fund all investments that promise to create value. But what if a company has no excess cash or borrowing capacity and therefore must forgo value-creating investments in the business if it chooses to repurchase shares? The company should consider the buyback when it offers a more attractive return than investing in the business. As Warren Buffett observed in Berkshire Hathaway's annual report in 1984, "When companies with outstanding businesses and comfortable financial positions find their shares selling far below intrinsic value in the marketplace, no alternative action can benefit shareholders as surely as repurchases."

We need to add a word of caution. CEOs almost always believe that their company's shares are undervalued, and they rarely have a full understanding of the performance expectations that are embedded in the stock price. History is littered with executives who bought back shares that they thought were undervalued, only to see business prospects deteriorate and their stocks plummet. Interestingly, buybacks reached a record level in 2007, just before the market collapse in the following year.

Just because a company engages in buybacks doesn't mean that it abides by the golden rule. Many companies buy back shares purely to boost EPS. But, just as in the case of mergers and acquisitions, EPS accretion or dilution has nothing to do with whether or not a buyback makes economic sense. When an immediate boost to EPS, rather than value creation, dictates management's decision to buy back shares, the selling shareholders gain at the expense of the continuing shareholders if the market is overvaluing the repurchased shares. Buyback programs aimed at offsetting the EPS dilution from shares that the company issued

through employee stock option or restricted stock plans are especially widespread. In these situations, the decisions of employees, rather than a price-versus-value analysis by management, determine how much and at what price the company purchases shares. This is hardly a reliable approach for creating value.

While buybacks and dividends both return cash to shareholders, there are important differences that a company should consider before choosing between them. Only investors who elect to sell shares pay taxes, and then only on their capital gains. However, all investors must pay taxes on the entire amount of the dividend.

Another important advantage favoring share buybacks is that it's entirely up to shareholders to decide whether to sell their shares. With a dividend payout, the discretion lies with the company rather than with shareholders. Buybacks not only offer shareholders greater flexibility, but are more flexible for companies as well. Corporate executives generally view dividends as sacrosanct and go to great lengths to avoid cutting or omitting them. By contrast, they deem buybacks to be discretionary. There is, however, a situation in which dividends are the clear choice. When management believes that the company's shares are fairly valued or overvalued by the market and there are no good long-term investments in the business, paying dividends is usually the better option.

Essential Habit 12: Provide Investors with Value-Relevant Information

Relevant, transparent, and timely information is vital to the allocative efficiency of capital markets. In the current unforgiving climate for accounting shenanigans, companies have an

unprecedented opportunity to meaningfully improve the form and content of their financial statements. Corporate reporting that highlights a company's commitment to long-term value creation not only serves as an antidote to short-term earnings obsession, but also is an act of enlightened self-interest: by reducing investor uncertainty, a company can potentially lower its cost of capital and increase its share price. Because this habit is so critical, we devote the next chapter to detailing how accounting standard setters and public companies can begin the desperately needed overhaul of accounting and corporate reporting.

Notes

1 Michael J. Mauboussin, "Approaching Level 10: The Story of Berkshire Hathaway," sidebar in Alfred Rappaport, "Ten Ways to Create Shareholder Value," *Harvard Business Review*, September 2006.

2 Peter Bernstein, foreword to *Expectations Investing: Reading Stock Prices for Better Returns*, by Alfred Rappaport and Michael J. Mauboussin (Boston: Harvard Business School Publishing, 2001), p. xii.

3 Rappaport and Mauboussin, *Expectations Investing*, pp. 69–84.

4 The calculation assumes that after the end of the forecast period, competition drives the company's returns down to the cost of capital rate. Another way of expressing this idea is to say that after the forecast period, the business will invest, on average, in strategies whose net present value is zero.

5 Each year, Jeffrey P. Bezos, CEO of Amazon.com, attaches his 1997 letter to shareholders to the current year's letter. In his 1997 letter, Bezos offers the following clear-cut statement: "When forced to choose between optimizing the appearance of our generally accepted accounting principles (GAAP) accounting and maximizing the present value of future cash flows, we'll take the cash flows."

6 For calculation details, see Robert C. Blattberg and John Deighton, "Manage Marketing by the Customer Equity Test," *Harvard Business Review*, July-August 1996. Three other articles that offer particularly helpful ideas on how to link customer equity to shareholder value are Rajendra K. Srivastava, Tasadduq A. Shervani, and Liam Fahey, "Market-Based Assets and Shareholder

Value: A Framework for Analysis," *Journal of Marketing*, Vol. 62 January 1998; Heinz K. Stahl, Kurt Matzler, and Hans H. Hinterhuber, "Linking Customer Lifetime Value with Shareholder Value," *Industrial Marketing Management*, Vol. 32, 2003; and Don Peppers and Martha Rogers, "Return on Customer: A New Metric of Value Creation—Return on Investment by Itself Is Not Enough," *Journal of Direct, Data and Digital Marketing Practice*, Vol. 7, No. 4, 2006, pp. 318–331. Don Peppers and Martha Rogers, *Rules to Break and Laws to Follow: How Your Business Can Beat the Crisis of Short-Termism* (Hoboken, N.J.: John Wiley & Sons, 2008) makes a compelling case for managing customer equity and offers practical ideas on how companies can combat short-termism. This is the book for readers who are looking for a very readable discussion of short-termism by two experienced consultants.

7 Michael J. Mauboussin, "The Economics of Customer Businesses," *Mauboussin on Strategy*, Legg Mason Capital Management, December 9, 2004, presents a particularly useful framework for analyzing businesses through the lens of customer value.

8 Jeffrey P. Bezos, CEO of Amazon.com, links customer equity and shareholder value as follows: "We believe that a fundamental measure of our success will be the shareholder value we create over the long-term**.** This value will be a direct result of our ability to extend and solidify our current market leadership position. Market leadership can translate directly to higher revenue, higher profitability, greater capital velocity, and correspondingly stronger returns on invested capital."

9 Frederick F. Reichheld, *The Loyalty Effect: The Hidden Force behind Growth, Profits, and Lasting Value* (Boston: Harvard Business School Press, 1996).

10 Dominic Dodd and Ken Favaro, *The Three Tensions: Winning the Struggle to Perform without Compromise* (Hoboken, N.J.: John Wiley & Sons, 2007) examines three pairs of competing objectives—profitability versus growth, short-term versus long-term, and the whole organization versus the parts.

11 Geoffrey A. Moore, "To Succeed in the Long Term, Focus on the Middle Term," *Harvard Business Review*, July-August 2007.

12 Mehrdad Baghai, Stephen Coley, and David White, *The Alchemy of Growth: Practical Insights for Building the Enduring Enterprise* (New York: Basic Books, 1999).

13 Alfred Rappaport, *Creating Shareholder Value: A Guide for Managers and Investors* (New York; Free Press, 1998), p. 146.

14 The acquirer's SVAR is lower if it offers stock instead of cash, because the stock deal transfers some of the postacquisition risk to the selling shareholders. To calculate the SVAR for a stock deal, multiply the all-cash SVAR of 24

percent by the percentage of the combined company that the acquiring shareholders will own, in this case 55.5 percent ($5.0 billion preacquisition market value divided by the sum of the $5.0 billion market value plus the $4.0 billion value of shares paid to selling shareholders). The acquirer's SVAR for a stock deal is therefore just 13.3 percent compared to 24 percent for an all-cash deal. For a comprehensive analysis of cash and stock deals, see Alfred Rappaport and Mark L. Sirower, "Stock or Cash? The Trade-Offs for Buyers and Sellers in Mergers and Acquisitions," *Harvard Business Review*, November-December 1999, pp. 147–158.

15 Rappaport and Mauboussin, *Expectations Investing*, pp. 173–175.

CHAPTER 7

AN OVERHAUL OF CORPORATE FINANCIAL REPORTING

Capital markets require relevant, transparent, and timely information if they are to function efficiently. Seeking to provide such information, the U.S. Congress created the Securities and Exchange Commission (SEC) in 1934 and gave it the power to establish and enforce financial disclosures and accounting principles for publicly traded companies. In turn, the SEC entrusted the standard-setting job to the private sector but maintained a strong presence in the development and enforcement of standards.[1] Nevertheless, over the past eight decades, public accounting firms, their audit clients, and the standard-setting bodies have been beset with troubles.[2]

For example, highly visible audit failures—from the scandal in 1939 when McKesson & Robbins, a wholesale drug company, inflated its receivables and merchandise inventory by creating a fictitious subsidiary to the alleged accounting deceptions that overstated the liquidity of Lehman Brothers before its collapse

in late 2008—have damaged the credibility of the accounting profession and corporate management. Trouble also came in the form of inadequate accounting standards and questionable application of standards that contributed to a spate of corporate failures. Finally, there was a proliferation of corporate earnings restatements after the passage of the Sarbanes-Oxley Act of 2002, which requires executives to attest to the accuracy of the company's financial statements. These restatements corrected previous accounting errors or irregularities and justifiably led investors to view reported earnings with greater skepticism.[3] The Financial Accounting Standards Board (FASB), the U.S. standard-setting body, has also come under fire from various directions (reporting companies, investors, regulators, and politicians) for its handling of controversial issues, including the accounting for employee stock options and distressed assets. In this chapter, we examine the underlying causes of these troubles and offer recommendations that address them.

Global Accounting Standards

As the world's economies become increasingly linked, the quest for a single set of global accounting standards has gained momentum. More than 100 countries already require or allow companies to use International Financial Reporting Standards (IFRS), promulgated by the International Accounting Standards Board (IASB). The IASB and the FASB are collaborating to harmonize major accounting standards, and hope to complete the effort by the end of 2011. The key difference between the bodies is that the IFRS standards are principles-based, calling for accountants

to use more judgment in applying them, and the FASB standards are more rules-based. The SEC will decide whether it will require or allow companies listed on U.S. stock exchanges to adopt IFRS.

Advocates for a unified set of accounting standards believe that the convergence of approaches will benefit companies and investors by enhancing the comparability of financial statements across borders. Skeptics, on the other hand, worry that a single set of standards will inhibit valuable innovation that could come from having multiple standard setters. There is good reason to question whether companies and investors will realize the benefits that advocates claim, as well as whether there is justifiable concern over stymied innovation in the setting of accounting standards.

Shyam Sunder, a professor at Yale University, points out that convergence toward the principles-based IFRS standards will allow for more judgment and discretion than the FASB's rules-based approach. This will give rise to greater variability in outcomes for the same facts, stymieing the goal of greater comparability.[4] Yet the concern that a standard-setting monopoly will inhibit innovation also seems overblown, given the negligible innovation we have seen under multiple standard-setting bodies.

The IASB and FASB state that "the objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful to present and potential equity investors, lenders, and other creditors in making decisions in their capacity as capital providers."[5] This governing objective is widely accepted. That the form and substance of financial reports should focus on this objective also stirs little controversy. The

problem is that financial reporting, as it exists today, falls short of meeting the stated objective, and there is little evidence to suggest that the situation will change. There are a couple of basic reasons for this. The first is that accounting income remains the centerpiece of corporate financial reporting, despite its serious shortcomings. The second is that financial statements ignore the significant uncertainties lurking behind single-point estimates for revenues, expenses, assets, and liabilities.

The Twilight of Income Measurement

Fifty years ago, David Solomons, a professor of accounting at the Wharton School, declared, "The next twenty-five years may subsequently be seen to have been the twilight of income measurement."[6] Twenty-five years later, observing that nothing fundamental had changed, he refrained from making further predictions. In his words, "One bad call every twenty-five years is quite enough."[7] Another quarter-century has gone by without fundamental change. Taking a cue from Professor Solomons's experience, it would be foolish to predict the demise of income measurement. But there is little risk in suggesting that accountants are unlikely to discover alternatives that are useful for decision making if they cling to the traditional concept of income.

There are two distinct concepts of income: economic income and accounting income. Economic income aims to quantify how much better off a company has become over the course of the reporting period. Specifically, economic income is the difference between the net present value of expected future cash flows at the end of the period and that at the beginning of the period.[8]

Economic income and the value of a company's shares are precisely what investors want to know. However, forecasting distant cash flows accurately is a challenge under even the best of circumstances. Economic income, while highly relevant, lacks the objectivity that auditors require. Valuing shares is the investor's job, not the job of the accountants who produce and audit financial reports.

The principal objective of financial reporting is to supply capital providers and other financial statement users with information that is useful for estimating the magnitude, timing, and riskiness of future cash flows. Savvy investors recognize that no historical performance measure, including accounting income and cash flow, can substitute for insightful competitive strategy analysis that allows them to anticipate shifts in a company's fortunes over the long term.

Accounting income is the revenue that a company produces in a given period minus the expenses associated with generating that revenue. In contrast to economic income, accounting income excludes some changes in a company's value that arise from varying expectations for uncertain future cash flows. These changes are notoriously difficult to quantify. For instance, if a warehouse fire destroys a portion of an automobile company's parts inventory, the company deducts the uninsured loss from its accounting income. On the other hand, if the company experiences product recalls that devastate its future sales prospects, it recognizes the estimated loss of value in economic income, but not in currently reported accounting income. The company recognizes the loss in subsequent periods as its sales and accounting income plummet. The delay in recognition of such changes in value decreases

the relevance of accounting income but is justifiable because the changes are too speculative to include in financial statements. This example underscores the fact that accounting income may not do a very good job of helping capital suppliers estimate the magnitude, timing, and riskiness of future cash flows. However, as we will demonstrate, there is a better option.

As the centerpiece of corporate financial reporting, the income statement falls far short of the accounting profession's objective of supplying information that is useful for decision making. The reasons go well beyond the exclusion of speculative value changes. First, the dollar amounts of revenue and expenses that a company presents in the income statement are an amalgam of *observable facts* (cash flows) and *uncertain estimates* (accruals) that suppress information. This commingling produces an incomprehensible bottom line.

The cash flow portion of earnings consists of the cash that the company receives from current-period sales minus the cash that it disburses to suppliers and employees for the products and services that it used during the period. Accountants estimate accruals based on contracts between the company and its customers (receivables, unrealized gains or losses on long-term sales contracts, and product warranties), employees (pension plans, other post-retirement benefits, and stock options), and the government (taxes and environmental and other regulatory obligations). Accruals reflect only incomplete contracts, while most of a company's value derives from expected cash flows from future sales and purchases.

The considerable latitude that accountants have in determining the amounts and timing of the accruals that they record limits

the usefulness of the income statement.[9] For example, most companies in the retail and manufacturing industries record revenue at the time of sale. However, a company does not record revenue until after the sale when it has to provide future services to the customer, when contingencies in the sales agreement allow the buyer to terminate the sale, or when a customer's financial condition leads to doubt that the company will collect the full amount owed. These uncertainties afford management leeway that often tilts toward recording revenue too soon or recording revenue that is of dubious quality.

Companies with a predisposition to manage earnings also have room to maneuver in establishing the amount and timing of expense accruals, including those for restructuring, pension costs, stock option grants, and asset impairment charges. In most cases, companies accelerate revenues and defer expenses in order to increase current earnings. The subjectivity in applying accounting standards makes it easy for auditors to endorse the financial reporting choices of their clients.[10]

Another factor that detracts from the usefulness of the income statement is that it combines accruals of activities with substantially different levels of uncertainty. For example, the account for selling, general, and administrative expense often combines a relatively accurate charge for uncollectible receivables with a highly uncertain charge for the future costs of employee pension plans and retiree health benefits.

The final impediment to the usefulness of the income statement is the way in which financial statements bundle uncertainty into a single-point accrual estimate. Presenting a single answer for a broad range of possible outcomes creates an illusion of

certainty that does not serve investors, companies, or the overall economy well. In the presence of uncertainty, revenue recognition and expense matching are highly subjective exercises that can tempt companies to push the limits of accounting standards.[11] Ironically, despite the substantial subjectivity embedded in earnings, analysts agonize over quarterly earnings per share announcements. In the name of better governance, the Sarbanes-Oxley Act requires CEOs and CFOs to certify the accuracy of the financial statements that they issue, despite the many choices that they can make in coming up with the bottom line.

Politicians, regulators, and market observers frequently claim that corporate reporting will have a credibility problem until new accounting rules narrow the range of acceptable practice. Attempts to legislate detailed rules to deal with every circumstance in the earnings estimation process will result only in greater complexity and thicker rulebooks. Perversely, accountants will be motivated to focus narrowly on compliance rather than to exercise their professional judgment. As accounting standard setters and taxing authorities have long known, individuals with sufficient motivation will find ways to circumvent rules, no matter how specifically those rules are crafted. What the rules do not prohibit, practitioners deem acceptable.

In the wake of the global financial meltdown, standard setters and public companies have an unprecedented opportunity to meaningfully improve the usefulness of financial reports. Tinkering at the edges of income determination will not do the job. The accounting income model is broken. The stakes are high, and we need fundamental change. We now present an approach to dealing with the uncertainties inherent in corporate financial reporting.

The Corporate Performance Statement

The corporate performance statement addresses three major shortcomings of the traditional income statement:

- Commingled cash flows and accruals
- Accrual accounts that combine activities with different economic behavior and uncertainty
- Single-point accrual estimates that depict a broad range of uncertain outcomes.

Separating Cash Flows from Accruals

Income statements challenge even the most skilled and persistent analysts to disentangle realized cash flows from forward-looking accruals. In order to assess a company's future cash flow prospects, and to evaluate the reasonableness of reported accruals, an analyst needs the ability to separate cash flows and accruals. The first part of the corporate performance statement traces the path from a company's revenues to its free cash flow. This section of the corporate performance statement is not a replacement for the traditional cash flow statement because it does not include cash flows from financing activities—issuance of common and preferred stock, stock buybacks, new borrowing, repayment of previous borrowing, dividend and interest payments—or the proceeds from the sale of discontinued operations and other assets.

Investors and analysts who use discounted cash flow models find it useful to think about the market value of equity as the value of assets in place plus the value of growth opportunities, minus debt and preferred stock:

Market value of equity = value of assets in place + value of growth opportunities – debt and preferred stock

You calculate the value of assets in place by taking the company's sustainable current cash flow from operations before investments and dividing it by the weighted-average cost of capital. Think of it as the value of the sustainable current operating cash flow level, assuming no further growth in value. You calculate the value of growth opportunities by discounting estimated future free cash flows by the cost of capital.

Investors understandably acknowledge that forecasting distant, highly uncertain free cash flows is tricky. But there is a way to approach the problem. Instead of forecasting cash flows, investors can calculate the market-implied value of growth opportunities by rearranging the terms in the value formula. Specifically, the market-implied price of growth opportunities equals the current stock price minus the value of assets in place plus debt and preferred stock. For example, suppose the current stock price is $75, the estimated value of assets in place is $60 per share, and debt and preferred stock total $25 per share. The market-implied value of growth is then $40 per share ($75 – 60 + 25). Armed with this information, investors can estimate the rate and duration of future growth in cash flows that justify the $40 value, and decide whether the expectations embedded in the stock price offer a sufficient rationale for buying or selling the shares.[12]

Cash flow from operations and free cash flow available for debtholders and shareholders are therefore metrics that are essential to assessing corporate performance. Both appear in the cash flow portion of the corporate performance statement.

CORPORATE PERFORMANCE STATEMENT

Revenues

Operating expenses

- Production
- Sales and marketing
- Administrative and general
- Current taxes

Realized and pending operating cash flow

Change in net working capital

Cash flow from operations

Investments

- Facilities and equipment
- Real estate
- Research and development
- Patents and trademarks

Free cash flow

	Accrual estimates		
	Most likely	**Optimistic**	**Pessimistic**
Uncollectible receivables			
Restructuring			
Product and service warranties			
Pensions			
Other postretirement benefits			
Employee stock options			
Environmental obligations			
Litigation contingencies			
Tax contingencies			

Source: Adapted from Alfred Rappaport, "The Economics of Short-Term Performance Obsession," *Financial Analysts Journal*, May-June 2005.

Let's go back to the top. The statement begins with revenues from continuing operations using the standard criteria for revenue recognition—the company can reliably determine the amount that is due for the product or service it has provided, and it either has collected the cash or expects to collect it in the next accounting period.[13] The company then deducts production, sales and marketing, and administrative expenses, and also currently payable taxes, to arrive at *realized and pending operating cash flow*. These expenses, including taxes, represent a combination of actual cash outlays and increases or decreases in payables, which are cash outlays that the company expects to make in the next accounting period.

Next, we reflect the change in net working capital (accounts receivable plus inventory minus accounts payable) to obtain *cash flow from operations*. An increase in net working capital decreases cash flow from operations, and a decrease in net working capital increases cash flow from operations. Cash flow from operations is the "realized" portion of the realized and pending operating cash flow total.

The final step is subtracting investments to arrive at the free cash flow available to debtholders and shareholders. Investments include outlays for production facilities, equipment, real estate, patents, and trademarks, as well as expenditures for such activities as research and development, software development, and branding activities, which companies ordinarily expense.[14] This calculation provides investors with a historical baseline from which they can begin their assessment of the company's future cash-generating prospects. It is important to emphasize that the corporate performance statement has no single bottom line. No one number can reasonably encapsulate a company's

performance. Investors are best served by focusing on the individual line items that determine cash flow from operations and free cash flow, along with the narrative in the management's discussion and analysis section. (The SEC requires public companies to present a management's discussion and analysis section in conjunction with their financial statements. This section goes beyond the numbers by describing the company's business risks, changes in its financial condition, and changes in its results of operations. It also includes detailed discussions of the critical estimates and assumptions made in the course of preparing the company's financial statements.)

Disaggregating Accruals

The statement then moves from the certain (cash flows) to the uncertain (accruals), or from facts to forecasts. The expense accruals that the second section of the statement presents are estimates of future cash flows that the company needs in order to satisfy its commitments to customers, employees, suppliers, and government. Now that accruals have been disentangled from cash flows, the next task is to classify accruals in an informative manner.

When the income statement includes activities with substantially different economic behavior and uncertainty in a single line item, it masks information and limits the usefulness of accruals for assessing a company's cash flow prospects. A statement that classifies accrual line items by activities with similar economics and levels of uncertainty not only is more useful, but also discourages companies from making indefensible estimates (or, even worse, engaging in outright fraud). The most useful

disaggregation of accruals will differ by industry and even for companies within an industry.

The corporate performance statement presents expense accruals in descending order of certainty. For many companies, the provision for estimated uncollectible receivables is the most certain because receivables are normally converted into cash over the next accounting period. Other accruals are not typically of the check-is-in-the-mail variety. They are subject to wider ranges of plausible cash flow scenarios that may continue for years into the future. Restructuring charges, for instance, reflect subjective estimates of outlays for items including severance pay, canceled leases on abandoned facilities, consulting fees, and litigation costs. Warranty costs can be wildly unpredictable. Historical experience, even when modified to reflect current conditions, may not be helpful as companies face increasingly expensive product recalls.

Pensions, other postretirement benefits, and employee stock options pose even greater challenges for forecasters. Pension expense, for example, is supposed to reflect the change in the present value of the company's obligations minus the change in the present value of pension fund assets. The calculation requires assumptions about employee turnover, future pay increases, employee retirement dates, future market discount rates, and future returns on plan assets. Similarly, estimating the cost of employee stock option grants requires speculative long-term forecasts for variables including stock price volatility, risk-free interest rates, and the dividend yield.

Under current accounting standards, a company records a contingent liability and the associated expense only when the company deems it probable that it has incurred a liability and

that it can reasonably estimate the amount of the obligation. When a contingent liability does not meet these conditions, the company discloses it in a footnote. Contingencies for litigation losses and the costs of cleaning up environmental damage may be too uncertain to require recognition on the income statement, but they are critically important for investors who are assessing a company's cash flow prospects, and therefore they are part of the corporate performance statement.

In 1903, United States Steel published one of the first sets of complete financial statements accompanied by an independent auditor's opinion. Because there were no long-term accruals, the company's reported income for the year ending December 31, 1902, was close to the "realized and pending operating cash flow" line of the corporate performance statement. The company also reported investment outlays that enabled investors to compute free cash flow. This income statement from the early twentieth century therefore gets relatively high marks for its usefulness in assessing a company's cash-generating potential. The essentials of income determination, revenue recognition and expense matching, have not fundamentally changed. However, the significant changes in how companies conduct business now require the inclusion of highly uncertain accrual estimates and therefore have reduced the usefulness of the income statement.

The corporate performance statement excludes some accruals that appear in the traditional income statement. Expense accruals reflect estimates of cash outlays in future periods. Depreciation and amortization charges, on the other hand, follow cash outlays for investment. Faced with the unknowable magnitude and timing of future cash flows from these investments, accountants default to arbitrary straight-line or accelerated write-off

methods to allocate the purchase price over the estimated useful lives of the investments. The resulting expense does little to help the investor evaluate a company's cash flow prospects. We therefore exclude depreciation and amortization charges from the statement.

Accounting rules require a company to record an impairment charge for any year in which the value of goodwill, other intangible assets, or long-lived fixed assets has dropped below the amount on the balance sheet. In the absence of market values, a company must base its estimates on a myriad of subjective assumptions about future revenues and costs. Impairment write-downs therefore present managers with abundant opportunities to manage earnings. Companies may be tempted to take write-downs in a year with better-than-expected earnings and to write up assets in a subsequent year when earnings are short of expectations. Further, even if a company can reasonably establish values, it cannot ordinarily sell the individual assets separately. Equity investors want to estimate the going-concern value of the company, not the value of individual assets. The statement therefore excludes impairment charges.

Finally, we also exclude nonrecurring gains and losses, charges arising from discontinued operations, and the effect of accounting changes from the corporate performance statement because they provide no meaningful help in evaluating the sustainability and growth potential of a company's cash flows.

Reporting Three Estimates of Accruals

Accruals are fraught with uncertainty because they are based on the outcome of future events.[15] The single-point accrual estimates

that companies report in traditional financial statements belie the underlying uncertainties. In an ideal world, companies would present accrual estimates as probability distributions, revealing the likelihood of all possible outcomes. However, we don't know what the underlying distribution for uncertain long-term business outcomes looks like. Corporate managers must deal with unknown probabilities. As a result, decision making with a single vision of the future is tantamount to guessing. There are no right answers in a world of uncertainty. Just as sensible investing requires a probabilistic mindset, sensible financial reporting calls for multiple accrual estimates. Management must supplement these estimates with explanatory narratives to make them as useful as possible so that investors can form their own views.[16]

The corporate performance statement presents three estimates for each accrual account—most likely, optimistic, and pessimistic. When coupled with management's discussion of the accrual, the likelihood of the occurrence of each estimate, and the key factors that drive outcomes, these estimates help investors form their expectations.[17]

The most likely estimate—the outcome with the highest probability—ignores the range of possible outcomes. That's what the optimistic and pessimistic estimates convey. Management can employ either the scenario approach or the threshold probability approach to develop the estimates. Under the scenario approach, the optimistic estimate represents the outcome in which (almost) everything goes right, and the pessimistic estimate is the outcome in which (almost) everything goes wrong. The advantage of this approach is that management reports a full range of possible outcomes. The disadvantage is that the optimistic and pessimistic scenarios may have materially different probabilities, a

drawback that the company can easily address with appropriate disclosure in management's discussion and analysis.

Under the threshold probability approach, management estimates that there is a 5 percent probability that the eventual outcome will be better than the optimistic estimate, and a 5 percent probability that the outcome will be worse than the pessimistic estimate. For instance, an optimistic estimate of $50 million for product warranty costs means that management believes that there is a 5 percent probability that the costs will turn out to be less than $50 million. Similarly, a pessimistic estimate of $80 million means that management believes that there is a 5 percent probability that the costs will exceed $80 million. The advantage of this approach is that all accruals have the same threshold probability.[18] The disadvantage is that investors may be uninformed concerning extreme outcomes at both ends of the spectrum. But, just as for the scenario approach, management can easily address this with informative disclosure in management's discussion and analysis. Management can also use this section to discuss the principal variables and forecast assumptions that it used to compute the most likely, optimistic, and pessimistic estimates in the corporate performance statement.

Benefits of the Corporate Performance Statement

Admittedly, the corporate performance statement will be a difficult sell to executives who are accustomed to delivering earnings per share to the last penny. Standard setters who are wedded to single-point income statement accruals will also find it a challenge. But the potential rewards for capital providers, and for the overall economy as well, are too great to ignore.

The corporate performance statement separates fact-based cash flows from forecast-based accounting accruals. It also sheds light on the dark corners of uncertainty by reporting multiple outcomes rather than just one. More complete information enables capital markets to produce better price signals for allocating scarce resources to their most productive uses. Also, the better the information they have, the better investors can manage the risks that they face.[19] When well-informed equity investors and creditors are confident that they can manage their risks, they lower the minimum acceptable rate of return on their investments. This lowers the cost of capital and expands the portfolio of projects in which companies can profitably invest. More value-creating investment, in turn, leads to higher growth in the overall economy.

Thus far, our case for the corporate performance statement has emphasized the benefits for investors. But there are substantial advantages for other participants as well. Companies commonly use short-term financial measures, including earnings and return on invested capital, to measure and reward operating-unit managers and senior executives. By clearly exposing the shortcomings of earnings, the corporate performance statement makes it easier for boards to create compensation plans that reward employees at all levels of the organization for creating long-term value. These plans, as we outlined in Chapter 5, would be in lieu of those rewarding short-term financial results, which are often risky, unsustainable, and only loosely linked to value.

Some may argue that the corporate performance statement is too costly to implement. But only companies that do not already use this information for internal purposes will incur additional costs. If a company doesn't use this information, investors are

justified in raising serious concerns about the management's grasp of the business and the board's exercise of its oversight responsibility. Board members, and particularly members of the audit and compensation committees, should know how much of a company's performance comes from realized cash flows and how much comes from uncertain accrual estimates. Board members should also be keenly aware of the danger that single-point accrual estimates may well be materially off the mark.

The FASB and the IASB have ongoing research projects that seek to improve the quality and presentation of the information in financial statements.[20] The deliberative process virtually guarantees that whatever changes they propose will take years to materialize. Moreover, it is highly likely that income measurement will continue to dominate the attention of standard setters. While innovation always carries the risk of unintended consequences, the corporate performance statement offers significant benefits for public companies and their capital providers. Moreover, because companies would presumably continue to disseminate the traditional financial statements, including the income statement, they would mitigate any perceived risk.

The corporate performance statement also offers substantial benefits for accounting standard setters. Shifting the focus away from bottom-line earnings eliminates many of the fruitless debates about the right accounting treatment. It would shield standard setters from the intense pressure coming from statement preparers, statement users, and the government. For example, there was a long, high-decibel debate over accounting for the cost of employee stock options. Those who were opposed to expensing options argued that the methods used to value options were based on unreliable assumptions and that, as a result, including

such estimates would reduce the accuracy of the income statement. Furthermore, they contended that the subjective estimates would create new opportunities for earnings management. Those who were in favor of expensing options wanted companies to explicitly acknowledge the value that they were delivering to employees. These types of debates would disappear if the corporate performance statement were adopted because management would explicitly recognize the variability of possible outcomes.

Consider the example of accounting for the value of toxic mortgage assets in an illiquid market. Many bankers, economists, and investors blamed fair-value accounting for exacerbating the financial meltdown in the fall of 2008. The critics contended that requiring banks to write down their long-duration investment securities to the fire-sale transaction prices of an illiquid market would understate the value of these securities. Marking available-for-sale investments to market pushed some financial institutions toward insolvency and forced them to sell assets at distress prices. This caused prices to fall further and triggered a downward spiral of prices. Those in favor of fair-value accounting rejected the idea that it was the cause of the financial crisis, maintaining that it simply reflected poor corporate decisions that the users of the financial statement were entitled to know about. Proponents further insisted that without fair-value accounting, irresponsible subprime lending might have gone on even longer than it did, causing still greater damage. Studies to date generally conclude that fair-value accounting played a limited role in the financial crisis.[21]

Fair-value accounting is controversial because today's financial statements report uncertain values with a single estimate. Much of this controversy would vanish with the adoption of the corporate

performance statement. In the throes of the recent crisis, banks would have reported most likely, optimistic, and pessimistic values. Mark-to-market fire-sale prices would have been appropriate for the pessimistic scenario if there was a likelihood that the bank would be forced to sell assets in the near term to stay afloat. The optimistic scenario would have reflected the present value of holding assets opportunistically until market prices recovered. The most likely estimate would have been somewhere between the optimistic and pessimistic scenario estimates. With this disclosure, it would have been irrelevant to argue that the prices of distressed transactions did not reflect fair values. Management would simply have acknowledged that there was no right answer, only a range of values with associated probabilities.

Standard setting works best when various financial reporting models compete for user acceptance. A shift in focus from what is the best way to determine income to what is the best way to develop information that is useful for making decisions would greatly facilitate progress.

The auditing profession also stands to benefit from the proposed approach to reporting corporate performance. Auditors would no longer have the hopeless task of judging the reasonableness of single-point accrual estimates for uncertain future outcomes. Instead, they would evaluate the reasonableness of management's three-level estimates. This would require auditors to be well versed in economics, finance, statistical analysis, and the competitive dynamics of businesses and industries. These skills, rather than a narrower familiarity with detailed accounting rules, would attract better talent to a profession that has lost considerable ground in the competition for talent over the past two decades.

The principal barrier to change in financial reporting is the difficulty of shedding old habits and ways of thinking. Investors, corporate management, financial analysts, professional money managers, auditors, and accounting standard setters are all heavily invested in the current accounting model. People tend to cling to the established order, especially when it serves as an important source of professional reputation and personal income. It will take a combination of properly structured financial incentives and substantially more informative financial reporting for the corporate and investment communities to move from value-destroying short-term behavior to a focus on long-term value creation. The proposed corporate performance approach serves that purpose while promising to bolster much-needed trust in public companies and capital markets.

Notes

1 The American Institute of Certified Public Accountants (AICPA) Committee on Accounting Procedure, the first private-sector standard setter, issued its initial pronouncements in 1939. It responded to specific issues as they arose but did not develop an overall framework for its pronouncements and consequently was replaced in 1959 by the Accounting Principles Board (APB), also an arm of the AICPA. The Financial Accounting Standards Board (FASB) was formed under an independent foundation in 1973 with the goal of redirecting standard setting from a focus on technical accounting to a focus on the information needs of investors, creditors, and other users of financial statements.

2 For an overview of the evolution of accounting and financial reporting, see Gary John Previts and Barbara Dubis Merino, *A History of Accountancy in the United States* (Columbus: Ohio State University Press, 1998).

3 The act also required companies to strengthen their internal controls, called for audit firms to cut back significantly the kinds of consulting ser-

vices that they perform for audit clients, and fortified the position of audit committees, among other things.

4 Shyam Sunder, "IFRS and the Accounting Consensus," *Accounting Horizons*, vol. 23, no. 1, 2009, p. 104.

5 Financial Accounting Standards Board, *Conceptual Framework for Financial Reporting: The Objective of Financial Reporting and Qualitative Characteristics and Constraints of Decision-Useful Financial Reporting Information*, May 29, 2008, p. 1.

6 David Solomons, "Economic and Accounting Concepts of Income," *Accounting Review*, **V**ol. 36, No. 3 July 1961, p. 383.

7 David Solomons, "The Twilight of Income Measurement: Twenty-Five Years On," *Accounting Historians Journal*, Spring 1987, p. 6. Vol. 14, No. 1

8 You must make adjustments for transactions with shareholders. You add dividends and subtract capital contributions from the change in net present value.

9 Warren Buffett summed it up well in his 1990 Berkshire Hathaway letter to shareholders: "The term 'earnings' has a precise ring to it. And when an earnings figure is accompanied by an unqualified auditor's certificate, a naïve reader might think it comparable to pi, calculated to dozens of decimal places. In reality, however, earnings can be as pliable as putty when a charlatan heads the company reporting them."

10 Max H. Bazerman, George Lowenstein, and Don A. Moore, "Why Good Accountants Do Bad Audits," *Harvard Business Review*, November 2002, pp. 97–102 discusses the auditor's vulnerability to bias and proposes several remedies.

11 Accounting copes with uncertainty by invoking the principle of conservatism. When it's difficult to forecast future benefits attributable to intangible investments like research and development, accountants arbitrarily expense the entire cost in the period in which it is incurred. Just as arbitrarily, accountants allocate the cost of tangible investments with uncertain benefits, such as outlays for plant and equipment, over their estimated useful life, using one of a variety of acceptable depreciation methods.

12 This "expectations investing" approach is presented in more detail in Chapter 9.

13 There are a number of industries in which companies require an extended period to complete a transaction for a product or service. Construction companies, shipbuilders, aircraft manufacturers, and software developers are but a few examples. Most use the percentage-of-completion method to account for revenues and associated expenses as progress is made toward completion.

14 Whether a company records an investment outlay as an operating expense or as an asset does not affect free cash flow.

15 For a detailed discussion of various accruals, see Lawrence Revsine, Daniel Collins, Bruce Johnson, and Fred Mittelstaedt, *Financial Reporting and Analysis* (New York: McGraw-Hill/Irwin, 2008). Jonathan C. Glover, Yuji Ijiri, Carolyn B. Levine, and Pierre Jinghong Liang, "Separating Facts from Forecast in Financial Statements," *Accounting Horizons*, Vol. ? , No.4, December 2005, pp. 267–282, divides conventional income statement and balance sheet amounts into fact and forecast. The corporate performance statement departs from the income statement, as it separates cash and accruals, it disaggregates accruals by economic behavior and uncertainty, and it establishes three estimates for each accrual account.

16 Support for probabilistic financial reporting in the accounting literature goes back to at least 1966, when an American Accounting Association report, *A Statement of Basic Accounting Theory*, observed: "In view of uncertainties surrounding business activities and the measurement of their impact, the use of nondeterministic measures is likely to become a part of an expanded discipline of the future." There has been relatively little interest in this concept on the part of either academics or practicing accountants over the ensuing years.

17 A problem that is common to single-point and three-level accrual estimates for contingencies occurs when outsiders can use the disclosure against the interests of the reporting company. Domestic and foreign taxing authorities are unlikely to turn a blind eye to the dollar amounts that a company establishes for contingent tax liabilities. Nor are plaintiffs' lawyers going to ignore expense accruals and footnote disclosures dealing with unresolved lawsuits.

18 One concern is that executives tend to miscalibrate, that is, they establish their subjective probability distributions too narrowly. A Duke University quarterly survey from March 2001 to February 2010 asked U.S. chief financial officers to predict the 10th and 90th percentiles of the distribution of one- and ten-year S&P 500 returns. Of the more than 11,600 probability distributions provided by the executives, only 33 percent were within the executives' 80 percent confidence interval. Itzhak Ben-David, John R. Graham, and Campbell R. Harvey, "Managerial Miscalibration," July 2010, http://ssrn/abstract=1640552. NBER Working Paper No. 16215

19 Risk refers to the possibility of loss from the point of view of the decision maker. While better information helps investors manage risks, the choices that they make are often different. For instance, suppose the proposed three-level accrual format exposes a meaningful possibility that a firm's

pension costs may prove to be well above any previously estimated levels. Risk increases for shareholders, but there is less risk for those who hold a short position in the company's stock. Similarly, traders with short-term horizons view risk differently from long-horizon investors.

20 See *Presentation of Financial Statements*, July 1, 2010 at fasb.org.

21 Christian Laux and Christian Leuz, "Did Fair-Value Accounting Contribute to the Financial Crisis?" *Journal of Economic Perspectives*, Vol. 24, No. 1, 2010, pp. 93–118; Robert C. Pozen, "Is It Fair to Blame Fair Value Accounting for the Financial Crisis?" *Harvard Business Review*, November 2009, pp. 85–92; Sanders Shaffer, "Fair Value Accounting: Villain or Innocent Victim," Federal Reserve Bank of Boston Working Paper No. QAU10-01; Mary E. Barth and Wayne R. Landsman, "How Did Financial Reporting Contribute to the Financial Crisis?" *European Accounting Review*, forthcoming.

CHAPTER 8

LONG-TERM PERFORMANCE INCENTIVES FOR INVESTMENT MANAGERS

Achieving long-term financial goals, including the accumulation of adequate funds for retirement, is challenging and worrisome for most people. Lengthening life expectancies increase the level of savings that individuals need. In the past, many companies provided defined-benefit pensions and post-retirement health-care benefits, but most now place the financial burden on employees. Citizens of the United States have a growing concern that in the decades ahead, social security and Medicare will fail to deliver the benefits that they have promised. Most people count on professionally managed funds, principally mutual funds, to satisfy their future needs by growing the balances of their individual retirement accounts (IRAs) and employer-sponsored defined-contribution pension plans.[1]

Here's the challenge in a nutshell: short-termism is eating into portfolio results at the same time that investors are increasingly relying on professionally managed funds to meet their future needs. At its core, the challenge reflects an ongoing tension between the investment *profession* and the investment *business*.[2] The investment profession is about managing portfolios so as to maximize long-term returns for shareholders and beneficiaries, while the investment business is about generating (often short-term) earnings for the investment firm. Developing a successful business is essential to attracting and retaining top talent, but a focus on the business *at the expense* of the profession creates a serious problem. This chapter examines this tension and recommends strategies to achieve a healthy balance between the profession and the business.

We start by looking at how well actively managed equity funds help investors achieve their long-term financial goals. The answer depends on a number of factors, including the size of the expenses and fees that shareholders and beneficiaries shoulder, how fee structures and performance measurement affect the behavior of fund managers, the ability of investors to identify skilled fund managers, and the performance-chasing behavior that causes investors to earn lower returns than they would with a simple buy-and-hold strategy. We address each of these issues and offer recommendations aimed at aligning the interests of investment managers and those of fund shareholders. We defer to Chapter 9 the discussion of what actively managed funds can do to increase their chances of delivering market-beating returns.

Does It Pay to Invest in Actively Managed Equity Funds?

Actively managed mutual funds are run by bright and superbly educated professionals. Nevertheless, the results are undeniably disappointing. In a typical year, about 60 percent of managers fail to beat the returns of their benchmarks. The percentage of managers who outperform their benchmarks falls as you extend the performance evaluation period. Very few managers produce results in excess of their benchmarks over the investment horizon of a long-term investor. Even more distressingly, there's little evidence of persistence in mutual fund outperformance. Managers who have outperformed in the past are no more likely—and in many cases, are less likely—to outperform in the future than their below-average peers.

Costs, including fees, expenses, and transaction costs, are the primary factor driving this disappointing performance. Before costs, beating the market is a zero-sum game—for every investor who outperforms the market, there must be another investor who underperforms it. In the aggregate, investors can't beat the market because they *are* the market. Because the cost of active management is substantially higher than that of passively managed index funds, actively managed funds must underperform index funds in the aggregate.[3] To add value for shareholders, investment managers must generate returns that more than compensate for the higher cost of active management. The higher the cost, the more formidable the task. The odds of any single active manager outpacing the benchmark index fund over time are slim.

The foregoing reasoning holds whether or not stocks are efficiently priced. If they are not, skilled managers have greater opportunities to exploit mispricings and to earn superior returns. But the superior returns that skilled managers earn are offset by the subpar returns of the other managers. Jack Bogle, the legendary founder of the Vanguard Group, summed it up this way: "Whether markets are efficient or inefficient, investors as a group must fall short of the market return by the amount of the costs they incur."[4] The underperformance of the average manager would be less of a concern if we were able to identify the outperformers and avoid investing in the underperforming funds. Practically all studies, however, conclude that it is virtually impossible to identify superior-performing managers ahead of time.

Mutual Fund Fee Structure

The behavior of fund managers is dictated largely by how they earn their fees and how investors measure their performance. When fees and short-term performance are the primary influences on portfolio decisions, the pendulum has swung too far in the direction of the investment business model and away from the investment profession model. Given a choice, most managers would be happy to focus on the investment profession model, which emphasizes long-term returns. But the fact is that many managers believe that they have no practical choice. Focusing on superior long-term returns, at the risk of failing to produce acceptable short-term results, might cause shareholders to flee. This fear is exacerbated by the industry's prevailing fee and performance measurement practices.

Equity mutual fund expenses, which include fees for portfolio management, accounting, administration, shareholder services, and marketing and distribution costs, come out of fund assets. This means that shareholders pay them indirectly. A fund's expense ratio is the annual total of these ongoing expenses, expressed as a percentage of fund assets. In addition to these expenses, some funds have sales load charges. These are one-time fees that shareholders pay directly when they purchase shares (front-end loads) or sell shares (back-end loads). The average total cost to shareholders—the expense ratio plus the annualized cost of one-time sales loads—has dropped from 1.98 percent in 1990 to 0.99 percent in 2009. Moreover, shareholders now invest mostly in funds that offer low expense ratios.[5]

By far the most common fee structure pays managers a fixed percentage of the market value of assets under management (AUM). These fees are used to compensate fund managers for the range of services that they provide. But asset-based fees also contain an inherent conflict of interest, in that they reward managers for focusing on asset gathering at the expense of long-term performance. Because flows into and out of mutual funds are strongly correlated with recent performance, managers try to avoid underperforming their peers and benchmarks over the short term. This, in turn, can lead to behavior that compromises long-term performance, including herding and closet indexing. Investment managers further compromise returns if they let a fund go beyond its asset-capacity limit, because as the size of a fund swells, the universe of investible stocks shrinks, transaction costs increase, and active strategies become increasingly difficult to implement. Closing the fund to new investors ahead of capac-

ity limits is the right thing to do, but few managers do it, as it conflicts with their short-term interests.

Here's why size is a performance killer: Jack Bogle estimates that a $5 billion fund, assuming a 2 percent maximum holding for any given stock and a maximum ownership of 5 percent of the shares outstanding, had an investable universe of 770 stocks in 2009. By contrast, a $20 billion fund had only 251 available stocks, less than one-third as many as the smaller fund, given the same constraints.[6] If the fund is part of a complex that manages other funds as well, the manager's universe of investible stocks is reduced even further.

Two-thirds of U.S. mutual funds charge a fixed percentage of assets under management, irrespective of the size of the fund. The remaining funds scale back the fee percentage as the assets under management increase.[7] For example, a fund may charge a management fee of 0.40 percent on the first $1 billion of assets, 0.35 percent on assets between $1 billion and $2 billion, and 0.30 percent on assets in excess of $2 billion. While this sliding scale may reduce the financial incentive to increase assets under management beyond asset-capacity limits, it is unlikely to significantly alter the choices of benchmark-tracking managers who are concerned about business and career risk.

The difficulty with all asset-based fee structures is that shareholders pay the fees whether the manager performs well or poorly. Paying investment managers a fee based on the amount of assets that they manage is comparable to paying corporate executives based on the size of the company they run. Neither structure properly considers value creation, and therefore both structures fall short of the pay-for-performance standard.

Long-Term Performance Fees

There is an alternative. Performance fees, or incentive fees, are the norm in the hedge fund world, where the standard fee structure is known as "two and twenty": 2 percent of the fund's net asset value plus a performance fee of 20 percent of the fund's gains. Laws prohibit U.S. mutual funds from entering into this type of incentive arrangement, which enables managers to share the upside without a corresponding penalty on the downside.[8] Performance fees for mutual funds must be symmetrical, so that fees increase or decrease by the same amount for a given level of performance above or below a fund's benchmark. For example, suppose a fund that beats its benchmark by 2 percentage points collects an additional 0.50 percent in fees. If the fund underperforms its benchmark by 2 percentage points, the management fees must decline by the same 0.50 percent.

By most accounts, symmetrical performance fees are in place for fewer than 10 percent of mutual funds, and the typical fee swings are no more than 0.40 percent in either direction.[9] Among the well-established fund companies, privately held Fidelity Investments and Vanguard and publicly traded Janus Capital employ performance fees. As long as shareholders are willing to accept asset-based fees, fund management boards are unlikely to adopt performance fees. Most managers presumably prefer to trade away the possible upside of performance-based fees in order to ensure steady fees in the event that they underperform their benchmark.

Performance fees are designed to align managers' interests with those of the shareholders and to attract talented managers

who believe that they can deliver superior returns for their investors and, as a result, superior pay for themselves. We don't know whether investment managers would produce higher risk-adjusted returns if they used performance fees than if they didn't. But we do know that fees would be more evenhanded. We also know that if performance fees lead to competition that lowers asset-based fees, actively managed funds will improve their aggregate results relative to their passive benchmark indexes. Price competition aside, we know that if every fund used performance-based fees, total expenses would decline purely as a function of the fact that the majority of funds must underperform, even as the amount of their underperformance in the aggregate would fall as a result of lower expenses.

If incentive fees attract managers with benchmarking-beating skills, their shareholders will do better than either the shareholders of funds whose managers operate under an asset-based fee structure or the shareholders of funds with performance-based structures that have managers who lack these skills. If this is valid, we would expect to see more funds adopt performance fees and underperforming funds close shop earlier and more frequently. We believe that fund shareholders would benefit if a greater number of actively managed funds adopted performance-based fees, given their clear advantage over asset-based fees from the investor's perspective.

The proper design of performance fees entails a number of important decisions, including choosing an appropriate benchmark index, determining the rewards for outperforming and penalties for underperforming the benchmark, and consideration of the length of the performance period. Selecting the benchmark that best represents the investor's opportunity set of

investments in an asset class is crucial.[10] Using the proper benchmark enables shareholders to compare the ongoing performance of their actively managed fund with that of an index fund, a low-cost alternative that is always available. The most widely used benchmarks, including the S&P 500 and the Russell 2000, are transparent, investable, and low turnover, and have a historical track record.

All funds with an asset-based expense ratio effectively include a charge for outperformance, whether or not that outperformance materializes. A fund with a 1.00 percent expense ratio, for example, charges a premium of more than 0.80 relative to index funds, which typically have expense ratios of less than 0.20 percent.

You can divide actively managed portfolios into passive and active components. The fraction that a portfolio has invested in the benchmark index represents the passive component, and all variations from the index constitute the active part. Professors Martijn Cremers and Antti Petajisto developed a simple measure of the fraction of the fund's portfolio that differs from the fund's benchmark index, which they call the active share.[11] A fund with no leverage or short positions will have an active share of between zero and 100 percent. For instance, a very low active share of 33 percent means that only about a third of the fund's holdings differ from the index or, equivalently, that 67 percent of the holdings match the index. The 33 percent active component stems from owning stocks that are outside the index or owning stocks that are in the index, but weighting them differently.

However, actively managed funds charge management fees on all of their assets, even those that are invested in the benchmark index. So a fund with an active share of 33 percent and an

expense ratio of 1 percent is effectively charging just under 3 percent for its active positions. In other words, the 33 percent active component of the portfolio must outperform the index by 3 percentage points in order to beat the index—a daunting challenge. The lower the active share, the higher the outperformance that is required of the active positions and the more difficult the challenge.[12] Over the period 1990–2009, funds in the highest active share quintile beat their benchmarks by 1.26 percentage points after fees and expenses, while those in the lowest quintile (closet indexers) underperformed by an average of just under 1 percentage point annually.[13]

The results surrounding active share should encourage skilled managers to consider the financial upside of performance fees. Remember that the performance fee structure must be symmetrical, which means that it must reward and penalize equally for the same level of outperformance and underperformance, respectively. One possibility is to keep the base fee at 1.00 percent if the fund beats its benchmark index by, say, 2.00 percentage points. Then for every 0.02-percentage-point difference between the fund and the benchmark return, the fee would change by 0.01. If the fund were to underperform the benchmark, it would receive no fee, and if it outperformed by 4.00 percentage points or more it would earn a maximum fee of 2.00 percent.

It may be in the common interests of fund management and shareholders to maintain a minimum fee that is sufficient to cover costs as part of a performance fee arrangement. The last thing that fund shareholders would want is a downsizing of staff and resources, which would increase the chances of mediocre performance going forward and invalidate the whole point of performance fees. One way to accommodate a minimum fee is

to shrink the symmetrical reward and penalty range. Returning to the earlier example, if it takes a 0.30 percent fee to service the account, the minimum fee would be established at 0.30 percent and, to retain symmetry, the maximum fee would be 1.70 percent. Actively managed funds can also choose to set the minimum fee equal to the fee that the competing index funds charge, thereby assuring shareholders that they will pay additional fees only when the fund outperforms its index. Only the most confident investment managers are likely to adopt such a plan. On the other hand, those that do implement this plan would send a powerful signal to prospective investors.

Selecting an appropriate time period over which managers calculate the performance fees is critical to the plan's success. If the measurement period is too short, short-term volatility could overwhelm the fees. Longer measurement periods of rolling 36 to 60 months moderate volatility, lengthen the manager's investment horizon, and reduce the chance that managers will assume excessive risk in the hope of increasing their short-term compensation.[14] Importantly, managers who have their own money invested alongside their shareholders' are less likely to drift from their investment mandate.[15]

Incentive compensation is a devilishly complex matter, and getting it right is difficult. It's always helpful to recognize that investment outcomes and compensation, whether asset-based or performance-based, are a largely unknown blend of skill and luck.[16] It's hard to get a handle on the relative contribution of skill and luck in a competitive activity like investing, where we must rely largely on outcomes. That different investment styles tend to rotate in outperforming the broader market only compounds this difficulty. Therefore, the success of small-cap managers

during a period in which small-cap stocks outperform large-cap stocks is more about style than about skill. Some may question the wisdom of performance fees when there is no objective way to untangle skill from luck. What's important is that fund managers and shareholders share a more equitable stake in the outcome, no matter what the mix of skill and luck.

This section described how long-term performance fees can help align the interests of fund managers and shareholders. The adoption of performance fees also offers potentially significant social benefits. If performance fees successfully shift the focus of the institutional investor away from gathering assets and toward generating long-term returns, then investors will reduce the portfolio's turnover and reduce their obsession with short-term earnings and tracking benchmarks. Most important, longer time horizons may lead to fewer bubble and bust cycles and stock prices that do a better job of allocating scarce resources. A recent study of the market bubble of the late 1990s lends credence to this view.[17]

The authors of the study readily acknowledge that traditional asset-based fees encourage short-termism, and that managers find it rational to invest in stocks during a bubble, even if they believe the stocks to be overvalued. But this need not apply to the entire fund-management industry. The authors found that for American mutual funds, the higher the incentives in the fund managers' advisory contracts, measured as fees as a percentage of assets managed, the less the funds invested in bubble stocks. This finding is consistent with the idea that managers that earn high fees assign a greater weight to future payoffs when they believe that the bubble will burst. Well-designed long-term performance-based fees, even more than generous asset-based

fees, offer a strong inducement to abandon the herd and focus on long-term shareholder returns.

Fund versus Investor Returns

The returns that investors earn depend not only on the performance of fund managers, but also on their own behavior. The time-weighted rates of return that mutual funds report measure the percentage change in the share price of the fund, assuming that the investor purchased shares at the beginning of the measurement period and held them until the end of the period. The fund return calculation also assumes that investors reinvest all dividend and capital gains distributions and make no additional purchases or sales during the period.

The rates of return that the funds report are rarely what the average mutual fund investor actually earns. Investors' rates of return are dollar-weighted, which means that they take into account cash flows into (purchases) and out of (redemptions) funds. Following a period of exceptionally good performance, and often just before poor performance sets in, funds frequently attract substantial investment inflows. Because the investor return calculation considers dollar inflows and outflows during the period, stock price declines have more impact when the fund has more assets. Therefore, the investor return is lower than the fund return because the fund has more dollars invested, and hence more dollars lost, during the period of poor performance.

The gap between fund and investor rates of return is a measure of how well investors time their purchases and sales. Said differently, the gap reflects the difference in returns between a buy-and-hold strategy and moving into and out of funds. Not

surprisingly, performance-chasing investors are poor market timers, often buying high and selling low. Morningstar calculates that over the 10-year period ended August 2010, investor returns lagged equity mutual fund (domestic and international) returns by 1.52 percentage points annually. Recency bias, which says that individuals tend to extrapolate from the recent past and overlook the longer sweep of history and prevailing circumstances at the time they invest, provides a likely explanation for this behavior.[18] Investors who pour money into funds that are doing well and abandon funds that are doing poorly ignore the market's tendency to revert to its average performance or valuation level.

Investors who redeem their shares in the aftermath of subpar performance also adversely affect the fund and its remaining shareholders. Open-end mutual fund investors can redeem their shares at the net asset value (NAV) at the close of each trading day. When lots of shareholders cash out at the same time, fund managers have to execute costly (because of brokerage commissions, bid-ask spreads, and price impact) and unprofitable (managers are forced to deviate from their investment strategies) trades in order to honor the redemptions.[19] These costs are borne mostly by shareholders who keep their money in the fund. Because of the open-end structure of many mutual funds, even managers with outstanding long-term track records are exposed to the risk of large withdrawals if they perform poorly or if stock prices swoon.

The likelihood and size of redemptions also depends on factors beyond the fund's recent performance. An empirical analysis covering 4,393 equity mutual funds for the years 1995 to 2005 found three additional reasons for large outflows.[20] The first is the expectation that other shareholders will redeem their shares.

This prospect reduces the expected return for the investors who remain in the fund and thereby increases the incentive to exit. If you expect other shareholders to get out of a fund, your best strategy is to get out first. This causes a race to the exit when all shareholders share the same view. Bank runs, currency attacks, bubbles, and crashes are other well-documented examples of this phenomenon in financial markets.

Relatively illiquid funds—small-cap, mid-cap, and single-country funds—are more susceptible to this behavior than poorly performing, but liquid, large-cap funds because redemptions impose a greater cost on illiquid funds. The researchers suggest that a fund that invests in highly illiquid assets might be better off operating as a closed-end fund.

Finally, the composition of the fund holders also determines the propensity for outflows. For instance, large investors with substantial positions are less concerned about the behavior of other shareholders. As a result, illiquidity has less of an impact on funds that are held primarily by large institutional investors, including banks, insurance companies, corporations, and state and local governments. Redemptions following poor performance are larger for funds that are held primarily by small investors.

To lessen the cost of large-scale redemptions, some funds hold cash reserves or charge redemption fees. Holding cash dilutes potential returns, and funds with less liquid assets have to hold significant amounts of cash in order to meet redemption requests. Funds typically assess redemption fees, ranging from 0.5 to 2.0 percent, only if investors sell shares prior to the expiration of a specified holding period. Relatively few funds implement redemption fees for fear of losing assets to funds that do

not charge these fees. Furthermore, redemption fees may not be enough to discourage a mass exodus of investors following a period of disappointing performance.[21]

Performance fees may dampen the risk of wholesale redemptions, as the losses that shareholders suffer during periods of underperformance will be cushioned by lower management fees. The ability of performance-based fees to discourage outflows depends on how poorly the fund performs, how the fund structures its performance fees, and, ultimately, investor psychology. Limiting redemptions is not the primary purpose of performance fees, but it can turn out to be a fringe benefit.

Another way to contain redemptions is to offer shareholders an expense ratio discount if they agree to hold their shares for a specified period of time. From the manager's perspective, the success of this strategy depends on whether the reduced fund expenses resulting from decreased redemptions sufficiently offset the discount on the expense ratio.

Returns for mutual fund investors lag the published fund returns because of poor market timing. But investors have another important reason to be wary of published fund returns. Studies of historical stock market performance generally report total shareholder return (TSR). Despite its name, the TSR calculation does not represent the return that equity investors earned. Rather, it is the capital accumulation rate that investors would achieve if they purchased shares at the start date, reinvested all dividends, and held all shares to the terminal date.

Investors who use historical TSR rates as a point of departure for establishing their assumed capital accumulation rates can be easily misled. TSR is the relevant capital accumulation rate only for those rare individuals who can count on employment earnings

and other sources of income that permit them to reinvest all dividends and sell no shares. For the overwhelming majority of investors who use proceeds from dividends or sell stock to fund consumption, the capital accumulation rate will be lower than the TSR rate.

Assume, for example, that an investor purchases 100 shares of an individual stock or of a mutual fund at $100 per share, for an initial investment of $10,000. The share price appreciates 6 percent annually, and the dividend yield is a constant 2 percent. If dividends are not reinvested, the $10,000 capital grows at the 6 percent annual price appreciation rate. If 100 percent of dividends are reinvested, capital grows at the TSR rate of 8.12 percent, that is, (6%) + (1.06%)(2%). At the end of 20 years, the investor who does not reinvest dividends will have accumulated only 67 percent of the savings accumulated by the investor who reinvested all dividends.[22] If the investor also sold some shares, the capital accumulation rate would be further reduced from 6 percent, and the gap between the published TSR rates and the capital accumulation rate would correspondingly increase.[23]

The Performance Measurement Conundrum

Performance measurement entails assessing the returns that a fund earns, given the risk that the fund takes to earn those returns. The specifics of how you measure performance matter. Performance measurement influences the portfolio manager's choices and the returns that investors earn. Poor performance encourages investors to withdraw money from a fund and poses a business risk to managers because of the lower fees. Persistent underperformance creates career risk, as the manager risks

getting fired. Because how a manager's performance is measured affects how the manager behaves, selecting measures that align the interests of the manager and the investors is vital.

Mutual fund performance measurement faces a conundrum. On the one hand, performance measurements affect the investment decisions that a fund manager makes. On the other, the most widely used measurements are of limited value in informing the decisions of investors. Specifically, funds assemble historical risk and return data in order to create backward-looking performance measures. Naturally, these measures are only a starting point for estimating future risks. The risks that concern investors are forward-looking. Managers and investors have a hard time quantifying prospective risks and returns. Skilled analysts and investors consider a broad range of performance scenarios, with associated probabilities, for the economy, the market, and the funds under consideration. There are good reasons to be wary of historical performance measures that experts mechanically translate into forecasts of risk and return.

There is the ubiquitous warning in investment offerings that past performance is no guarantee of future results. The bumpy and often totally unexpected path of the economy and equity prices over the decades suggests that investors should heed this warning. The future is likely to be different from the past; we just don't know in what ways or by how much.

Another reason to treat backward-looking performance measures with caution is that in a world of randomness, it's imprudent to judge performance solely on outcomes. Nassim Taleb suggests that you also consider "alternative histories," or the outcomes that could have occurred had history played out in a different way.[24] That a specific outcome materialized doesn't mean

that, before the fact, it was more likely to happen than the outcomes that didn't occur. So, for example, if the investment results were favorable, you have to ask whether the manager made poor decisions but was lucky or whether her choices were indicative of skill. Likewise, were poor outcomes attributable to bad luck or lack of skill? Even though past returns are a fact, how the manager achieved those returns is largely hidden.

Separating skill from luck is difficult under the best of circumstances. To test for skill over time, researchers typically assess whether the risk-adjusted returns in excess of the benchmark that a manager delivered are statistically significant. This leads to another limitation of most performance measures: they rely on an insufficient number of historical observations. When you observe performance over a short period of time, it is extremely difficult to rule out chance as the reason for a fund's superior performance. Analysis of performance over short time frames is also subject to time-period dependency, as high-impact events such as the market crash in October 1987 or the 2008 market meltdown can dominate the results.

Mutual fund longevity and manager turnover make it particularly difficult to perform statistically significant tests of luck versus skill. Using a 1962–2008 Center for Research in Security Prices (CRSP) dataset, Andrew Mauboussin and Samuel Arbesman found that the 5,593 actively managed, large-capitalization equity mutual funds that they analyzed had a mean life of about nine years and a median life of seven years.[25] Among domestic equity funds with at least 10-year records, the average manager tenure is 6.6 years, and the average tenure of the longest-lasting manager (some funds have multiple managers) is 8.6 years.[26] For instance, if you assume that in any given year, half of all funds

beat their benchmark and half underperform, the odds of a fund's beating its benchmark for six consecutive years are 1 in 64. The odds of 15 consecutive years of outperformance are 1 in 32,768.[27] With so much at stake, it's disappointing but realistic to conclude that the period of time you need if you are to be assured that a manager's performance is due to skill rather than luck is longer than anyone's holding period.

Performance measures tell us little about future risks and returns, but they do affect the investment behavior of fund managers. Therefore, it's essential that these measures address the concerns of investors. The next section examines the relevance of conventional performance measures to investors.

Investor-Oriented Performance Measures

Measuring returns is straightforward; measuring risk is not. Over the past few decades, the volatility of returns has become the risk measure of choice for the industry. The reasoning is that the more returns fluctuate, the greater the uncertainty of future returns. And greater uncertainty means greater risk. Consider, for instance, two of the most widely used risk-adjusted performance measures, the Sharpe ratio and the information ratio.

The Sharpe ratio, named after its originator, Nobel Prize winner Bill Sharpe, takes the portfolio's return above the rate of return on risk-free Treasury bills (excess return) and divides it by the standard deviation, or volatility, of the excess return.[28] The more the excess returns diverge from their mean return, the larger the standard deviation and the lower the Sharpe ratio, or return per unit of risk. Conversely, the lower the standard deviation of returns for an observed level of excess returns, the

higher the Sharpe ratio. The Sharpe ratio produces a number that an investor can assess reasonably only by comparing it to the ratios of competing funds. Funds with the highest Sharpe ratios generated the best risk-adjusted performance over the measured period. The Sharpe ratio tells you how well a fund performed relative to the risk-free rate benchmark, but it doesn't tell you how well it did relative to its benchmark index. For this, we must turn to the information ratio.

The information ratio, which is probably the metric that is most widely used to gauge the skill of investment managers, takes the difference between fund and benchmark returns (active return) and divides it by the standard deviation of the active return (tracking error). For example, a fund with an active return of 100 basis points and 200 basis points of tracking error has an information ratio of 0.50. A fund that generates high information ratios through a combination of high active returns and low tracking error is the mark of a manager who beat his benchmark and does so with consistency. High active returns, however, frequently require a high tracking error, thereby making it difficult to achieve a lofty information ratio.

The problem with using either the Sharpe ratio or the information ratio to measure investment risk is the standard deviation in the denominator. Using the standard deviation as a measure of risk makes sense only if returns are symmetrically distributed, with large positive and large negative deviations from the mean having the same probability of occurring—something that frequently does not hold empirically. Assuming a symmetrical distribution is mathematically convenient, but it ignores the realities of large, uneven price fluctuations for individual stocks and bubbles and crashes in the broader market. As Benoit Mandelbrot

and Nassim Taleb point out, over a 10-year period, the 10 biggest one-day moves can represent up to one-half of the market's returns.[29] But this technical objection to volatility as a measure of risk is the least of the problems with these performance measures.

The more fundamental criticism is that variability around the mean return is not the risk that does, or should, concern long-horizon investors. For investors who are saving for their family's education and a comfortable retirement, the relevant risk is the failure to achieve their financial goals.

To illustrate what's wrong with standard deviation as a measure of risk, assume that you need to earn a target annual return of 7 percent from equal investments in two large-capitalization equity mutual funds in order to achieve your long-term financial goals. The first fund generated returns of 5, 4, 6, 5, and 5 percent over the most recent five years. The second fund returned 8, 20, 25, 10, and 12 percent over the same period. Is the first fund, with an appreciably lower standard deviation, really less risky? The fund generated a mean annual return of 5 percent, and its returns were below your 7 percent target return in each of the five years. The second fund exhibited greater volatility, and therefore a higher standard deviation, but its mean return of 15 percent was comfortably above the 7 percent target return. Using standard deviation as a measure of risk, the second fund is riskier than the first. But long-term investors would find the first fund, with its significant shortfall relative to the target return, to be the riskier of the two.

The contradictory conclusions are the result of two features of the standard deviation calculation. First, standard deviation treats returns above and below the mean return identically. For example, consider the first fund, with its mean return of 5 percent.

If, in the following year, the fund produced either a 10 percent return or a 0 percent return, the impact on the standard deviation would be the same. Investors, on the other hand, naturally would view the volatility from returns above the mean return as lowering the risk of a long-term shortfall, and the volatility from returns below the mean return as increasing that risk.

Second, the return fluctuations that are used in calculating the standard deviation take the mean return as the reference return or benchmark. But the risk that investors experience is relative to their personal benchmark—their minimum acceptable or target return. For example, according to standard deviation, you should regard the first fund, with its low-volatility 5 percent mean return, as low risk. But in order to reach your financial goals, you need to earn a minimum return of 7 percent. Therefore, you should regard annual returns below 7 percent, not 5 percent, as risky.

To address the criticisms of standard deviation, some analysts recommend downside risk measures, which incorporate only returns below the investor's chosen target return. As far back as 1959, Harry Markowitz, a Nobel laureate and the father of modern portfolio theory, presented semivariance, which is a measure of the dispersion of results below the target level, as a measure of downside risk. But because of semivariance's computational complexity, he chose to proceed with standard deviation.[30]

Excess Return to Shortfall (ERS) Ratio

At the end of the day, risk is all about the investor's anxiety over bad outcomes—losing money, failing to achieve a target return, or underperforming a benchmark portfolio. Investors sometimes

worry about the *frequency* of bad outcomes, or the percentage of periods in which an investment produces a negative return, fails to achieve the target return, or underperforms the benchmark return. But what's most important—and what investors really need to focus on—is the *magnitude* of the shortfall. A helpful way to do so is to calculate the average shortfall return, which is done by adding up the shortfall returns and dividing the total by the number of periods in which a shortfall occurred.

To illustrate, assume that an investor with a 6 percent target return purchases mutual fund shares that have produced below-target returns in four of the last ten years. The shortfalls for those years were 4, 10, 6, and 8 percentage points, for an average annual shortfall of 7 percentage points. The expected value of the average annual shortfall over the entire ten-year period is 2.8 percentage points (the 7-percentage-point shortfall multiplied by the 40 percent frequency of shortfall). The average above-target return for the other six years was 8 percentage points, which produces an expected value of 4.8 percentage points (the 8 percentage points above target multiplied by the 60 percent frequency of target-beating gains). The difference between the average above-target return of 4.8 percentage points and the below-target return of 2.8 percentage points yields the annual excess return of 2 percentage points.

If the future mirrors the past, investors can expect a 2-percentage-point excess return while experiencing a 7-percentage-point average annual shortfall 40 percent of the time. The expected value of the shortfall is 2.8 percentage points. Using these data, we introduce an intuitive, easy-to-calculate risk-adjusted return

index that we call the *excess return to shortfall (ERS) ratio*. The ERS equals the average annual excess return divided by the average expected shortfall return. For our example, it is 0.71 (the 2-percentage-point average annual excess return divided by the 2.8-percentage-point expected shortfall). Like other risk-adjusted measures, including the Sharpe and information ratios, the ERS ratio reflects the excess return per unit of risk.

You can also use the ERS ratio to measure the performance of fund managers. The excess return in the numerator becomes the difference between the average annual return of the fund and that of its benchmark, and you measure the expected shortfall in the denominator relative to the fund's benchmark. Additionally, you can employ the ERS ratio to assess the benchmark-relative performance of funds with similar investment objectives.

While the ERS ratio does address the risks that concern investors, it does not surmount the shortcomings of backward-looking performance measures—a future that is different from the past, a failure to consider alternative histories, and an insufficient number of historical observations to establish statistical significance.

Performance measurement, however imperfect, is necessary in an industry that is responsible for other people's money. That said, perhaps the industry can lessen its reliance on imperfect performance measures by aligning fund managers' incentives with those of their long-horizon investors. As discussed earlier, performance fees are an important step in this direction. With proper incentives in place, investors can gain better insight into prospective risks and returns by focusing on a fund's investment process. The next chapter specifically addresses this.

Notes

1 At the end of 2009, worldwide mutual fund assets totaled $23 trillion, of which $11.1 trillion were in the United States. About 43 percent of U.S. households owned mutual funds in 2009, compared to 5.7 percent in 1980. Equity funds made up 44 percent of U.S. mutual fund assets. Money market funds accounted for 30 percent, bond funds 20 percent, and hybrid funds held the remaining 6 percent. Investment Company Institute, *2010 Investment Company Fact Book*, available at www.icifactbook.org.

2 Charles D. Ellis, "Will Business Success Spoil the Investment Management Profession?" *Journal of Portfolio Management*, Spring 2001.

3 Kenneth French estimates that investors spend 0.67 percent of the aggregate value of the market each year searching for superior returns. He includes the fees and expenses that investors pay for mutual funds, including open-end funds, closed-end funds, and exchange-traded funds; the investment management costs of other institutional investors, including hedge funds and funds of hedge funds; and the costs that all investors pay to trade. As French points out, the cost of active investing is not a complete loss to society because it does improve the efficiency of stock prices and thereby the allocation of resources. Kenneth R. French, "Presidential Address: The Cost of Active Investing," *Journal of Finance*, Vol. 63, No. 4, August 2008, pp. 1537–1573.

4 John C. Bogle, "As the Index Fund Moves from Heresy to Dogma . . . What More Do We Need to Know?" April 13, 2004; www.vanguard.com/bogle.

5 Investment Company Institute, *2010 Investment Company Fact Book*, pp. 64–66. Some of the decrease in the asset-weighted expense ratio can be attributed to the significant growth of equity index funds over the past decade.

6 John C. Bogle, *Common Sense on Mutual Funds: Fully Updated 10th Anniversary Edition* (Hoboken, N.J.: John Wiley & Sons, 2010), p. 360.

7 Massimo Massa and Rajdeep Patgiri, "Incentives and Mutual Fund Performance: Higher Performance or Just Higher Risk Taking," *Review of Financial Studies*, Vol. 22, No. 5, 2009, pp. 1777–1815.

8 A performance fee without a penalty for underperforming is essentially a call option on a fraction of the fund's gains. With relatively little to lose but lots to gain, the manager may swing for the fences and increase portfolio risk beyond the level that the shareholders expected.

9 Chuck Jaffe, "Performance-Based Fund Fees Near Dead," February 24, 2010; MarketWatch http://www.fa-mag.com.

10 For an overview and critique of how benchmarks are constructed and used, see Laurence B. Siegel, *Benchmarks and Investment Management* (Charlottesville, Va.: Research Foundation of AIMR, 2003).

11 Martijn Cremers and Antti Petajisto, "How Active Is Your Fund Manager? A New Measure That Predicts Performance," *Review of Financial Studies*, Vol. 22, 2009, pp. 3329–3365.

12 Another way to estimate the passive component of a portfolio is by regressing the excess returns of the fund against those of the benchmark index. The resulting R^2 statistic indicates how much of the variance in a fund's returns is driven by movements in the index. For example, Morningstar calculated that the R^2 of the American Funds Growth Fund of America relative to the Russell 1000 Growth Index over 2007–2009 was 98 percent. The Growth Fund charges a 0.75 percent annual fee compared to the 0.20 percent fee charged by the iShares exchange-traded fund (ETF) that invests directly in the Russell 1000 Growth Index. Ross M. Miller, "Paying the High Price of Active Management," *World Economics*, Vol. 11, No. 3, July-September 2010, p. 17 calculates that with its 0.75 percent fee and its close tracking of the Russell Index, the Growth Fund is implicitly charging 4.60 percent for the active component of its portfolio.

13 Antti Petajisto, "Active Share and Mutual Fund Performance," September 30, 2010; available at http://ssrn.com/abstract=1685942.

14 Janus Capital, for instance, began a rolling 36-month performance fee plan for its funds in the first quarter of 2007. Performance fee adjustments are calculated monthly, using a fund's daily net average assets over the performance period. The measurement period begins as a trailing 12-month period, and each subsequent month is added to each successive measurement period until the 36-month period is reached. At that point, the measurement period becomes a rolling 36-month period.

15 An example of a move away from an investment mandate is the manager of a large-cap fund who builds a significant position in small-cap stocks during a period in which they are outpacing the rest of the market.

16 For a comprehensive analysis of skill and luck in investing, see Michael J. Mauboussin, "Untangling Skill and Luck," *Mauboussin on Strategy*, Legg Mason Capital Management, July 15, 2010.

17 Nishant Dass, Massimo Massa, and Rajdeep Patgiri, "Mutual Funds and Bubbles: The Surprising Role of Contractual Incentives," *Review of Financial Studies*, Vol. 21, No. 1, 2008.

18 Much like individual investors who unsuccessfully market-time their mutual fund investments, institutional plan sponsors, including pension plans, endowments, and foundations, exhibit similar behavior. A study covering the period 1984–2007 found that portfolios of products to which sponsors allocate money underperform products from which assets are withdrawn over one- and three-year periods and show no signs of reversal even after an additional two years. Scott D. Stewart, John J. Neumann, Christopher R. Knittel, and Jeffrey Heisler, "Absence of Value: An Analysis of Investment Allocation Decisions by Institutional Plan Sponsors," *Financial Analysts Journal*, November-December 2009, pp. 34–51.

19 In addition, if the fund is forced to sell some of its holdings and generates capital gains, the remaining shareholders face a tax liability.

20 Qi Chen, Itay Goldstein, and Wei Jiang, "Payoff Complementarities and Financial Fragility: Evidence from Mutual Fund Outflows," *Journal of Financial Economics*, Vol. 97, 2010, pp. 238–262.

21 Closed-end funds, which have a fixed number of shares and trade on a stock exchange, eliminate the redemption risk. Unlike open-end funds, whose end-of-the-day value is equal to the net asset value (NAV), the market price of closed-end funds can vary considerably from the NAV. Managers of closed-end funds face the same daunting odds of outperforming the market as managers of open-end funds. They are typically granted a long-term contract guaranteeing them an annual fee equal to a fixed fraction of assets under management. If the manager underperforms, shareholders have no recourse but to sell at a painful market discount to asset value, which materializes when investors lose confidence in fund managers. On the other hand, superior-performing managers are free to leave for more lucrative opportunities. Exchange-traded funds (ETF) are also traded on exchanges, but to date are mostly index funds that track stock market indexes.

22 For calculation details and additional illustrations of the gap between TSR and capital accumulation rates, see Alfred Rappaport, "Dividend Reinvestment, Price Appreciation and Capital Accumulation," *Journal of Portfolio Management*, Spring 2006, pp. 119–123.

23 Most shareholders take advantage of the automatic dividend reinvestment feature that mutual funds offer. The Investment Company Institute reports that investors reinvested about 90 percent of their dividends and capital gains over the past few years. Investors who automatically reinvest often also sell shares, however, so the overall reinvestment rate is likely to be well below 90 percent. While we know of no comprehensive publicly available statistics,

discussions with companies, their transfer agents, and retail stockbrokers indicate that investors who invest directly in individual stocks reinvest on average less than 10 percent of their dividends. This appears to be the case even though most dividend-paying public companies offer a dividend reinvestment plan at no fee.

24 Nassim Taleb, *Fooled by Randomness: The Hidden Role of Chance in the Markets and in Life* (New York: Texere, 2001), p. 26.

25 "Differentiating Skill and Luck in Financial Markets with Streaks," SSRN Working Paper, August 23, 2010, p. 4; available at SSRN: http://ssrn.com/abstract=1664031.

26 My thanks go to Kevin P. Laughlin, research assistant for Jack Bogle, for providing this Morningstar information.

27 Michael J. Mauboussin, *More than You Know: Finding Financial Wisdom in Unconventional Places*, updated and expanded (New York: Columbia Business School Publishing, 2008), p. 49.

28 The standard deviation is not at all intuitive. Precisely, it is the square root of the average of the squared differences between each observed return and the mean return. A standard deviation of 15 percent means that if returns are normally distributed, we expect to observe returns within plus or minus 15 percent of the mean return 68 percent of the time.

29 Benoit Mandelbrot and Nassim Taleb, "How the Finance Gurus Get Risk All Wrong," *Fortune*, July 11, 2005, p. 99.

30 Harry M. Markowitz, *Portfolio Selection*: *Efficient Diversification of Investments*, 2nd ed. (Cambridge, Mass.: Blackwell Publishers, 1992), pp. 188–201.

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CHAPTER 9

TILTING THE ODDS IN FAVOR OF BETTER LONG-TERM RETURNS

In an average year, less than one-half of actively managed funds outperform comparable index funds. This is because active funds charge higher fees and incur greater expenses than index funds do. And the wider the cost spread, the lower the odds that the active fund will beat the index over time. As a consequence, individuals who want to steer clear of underperforming the market are well advised to buy low-cost index funds. Doing so eliminates one of long-term investing's substantial risks—underperformance—at the modest cost of forgoing possible outperformance, which has very low odds of occurring.

Because higher costs are a burden, the average actively managed fund will produce a return that is less than its passively managed benchmark index. But some actively managed funds do better than others. For example, funds that are meaningfully different from their benchmark index—those with a high active share—beat their benchmarks by 1.26 percentage points

per annum after fees and expenses, while closet indexers underperformed by an average of about 1 percentage point.[1] The message is clear: on average, managers who are willing to take the road less traveled by picking stocks, rather than mimicking the benchmark, tilt the odds in their favor. However, traditional performance incentives create business and career risks that make it difficult for most managers to focus on stock selection with a long-term view. Furthermore, many managers simply lack the skill to outperform by meaningfully differentiating their portfolios from benchmark indexes. This chapter examines what skilled fund managers with a long investment horizon can do to improve their chances of outperforming their benchmark indexes over time. We start with encouraging news for skilled managers: focused, highly concentrated funds tend to outperform broadly diversified funds. Furthermore, the stocks in which active managers exhibit the most conviction systematically outperform the other stocks in their portfolios. We then show how managers can read the long-term cash flow expectations that stock prices imply so as to identify potential high-conviction stocks.

Focused High-Conviction Portfolios

Most mutual fund managers, particularly those who have established a sizable asset base, prefer to diversify their bets rather than wager on a relatively small number of stocks. Of course, overconfident managers with no skill would be ill advised to gamble on a concentrated portfolio because the results are bound to be disappointing. On the other hand, three professors of finance at Emory University, using a variety of performance

measures covering the 1979–2003 period, found that domestic mutual funds with a relatively small number of holdings outperformed more highly diversified funds by approximately 4 percentage points, on average, annually.[2]

Another study that spanned the period from 1984 to 2007 revealed that the best, or highest-conviction, ideas of mutual fund managers consistently outperformed the rest of the portfolio as well as the benchmark.[3] The holdings that the researchers designated as "best ideas" were those in which the manager placed the largest overweighting relative to the benchmark weighting. Using various performance measures, the best ideas outperformed by anywhere from 4 to 10 percentage points annually.

The evidence from these studies suggests that individual investors may be able to improve their performance by diversifying across focused funds rather than investing in funds that are highly diversified. Since managers' best ideas rarely overlap, several focused funds can suitably replace one diversified fund. For individual investors who seek diversification and professional management, a combination of low-cost index funds and higher-cost focused funds may be a better asset allocation choice than a mix that includes high-cost funds with low levels of active management. The combination of index and focused funds enables an investor to allocate equity dollars based on his tolerance for market-deviating returns, while simultaneously avoiding the high fees that active funds charge.

Managers who run focused funds have more time to research and evaluate current and prospective holdings. This additional time is an advantage in identifying mispriced stocks. However, in order to exploit the focused-fund opportunity fully, a manager

must be able to maintain an investment time horizon that is sufficiently long to capture the potential of portfolio holdings, to exercise superior judgment, and to employ sound economic tools.

Most investors look no more than 12 to 18 months ahead, a relatively short time horizon. As a result, they spend little time doing the necessary strategic analysis to anticipate long-term shifts in an industry's competitive structure and a company's specific position. These investors frequently generate high portfolio turnover as they purchase stocks that they expect to do well in the near term and sell stocks with unfavorable near-term prospects.

Standing apart from the crowd by having a longer time horizon does not, by itself, increase the chances of outperforming the market. A fund manager must also be able to exercise superior judgment. Jack Treynor, a renowned finance scholar and the former editor of the Financial Analysts Journal, distinguished "between ideas whose implications are obvious" and those "that require reflection, judgment, and special expertise for their evaluation." The latter ideas, he argued, are "the only meaningful basis for long-term investing."[4] When companies announce a major acquisition, a technological breakthrough, a government antitrust action, or a new chief executive officer with a different strategic vision, the implications for long-term valuation are rarely obvious. Investors quickly assess the effects, favorable or unfavorable, and trade accordingly. Not surprisingly, trading volume typically increases after these types of announcements. Volatile stock prices and increased trading volumes affirm that investors respond quickly to such information. But what separates the winners from the losers is not how quickly they respond, but rather how well they interpret the new information. Various

investors interpret the same information differently, and some interpretations are better than others. What is certain, though, is that only those investors who can escape the clutches of the crowd can expect to outperform the crowd. Conventional strategies produce conventional results.

This brings us to the final requirement for increasing the chances of achieving superior long-term returns—the use of sound economic tools to assess opportunities. Stock prices express the collective expectations of investors, and changes in those expectations determine investment success. An investor's ability to understand the expectations that are embedded in stock prices and to anticipate revisions of these expectations is the springboard for superior long-term returns.

Reading Market Expectations Implied by Stock Prices

To begin, you need to track the right expectations. An asset's value is the sum of its expected cash flows discounted back to the present at the rate of return that investors expect to earn on assets with similar risk. This discounted cash flow model sets prices in all well-functioning capital markets, including those for bonds and real estate. For example, bond issuers establish an interest rate, a principal repayment schedule, and the maturity date. Bond prices are, in fact, the present value of the contractual cash flows discounted at the current expected rate of return. When the inflationary outlook or a change in credit quality prompts a higher or lower expected rate, a company's bond price changes accordingly. However, while a company contractually specifies the cash flows and the date on which it will repay principal for its

bonds, its stock has uncertain cash flows, an indefinite life, and no provision for repayment.

Because of this greater uncertainty, stocks are substantially more difficult to value than bonds. Does that mean that you shouldn't value stocks using the discounted cash flow model? Certainly not. After all, whether a company sells soft drinks or software, it is essentially worthless if it can't generate sufficient cash to fund its future growth and pay dividends.

Yet most investment managers, security analysts, and individual investors avoid the difficulty of forecasting long-term cash flows. The reason is that they believe that forecasting is too speculative and too time-consuming to be of practical use. Instead, they focus on near-term earnings, price/earnings multiples, and other short-term financial measures. However, such measures can help identify undervalued stocks only if they are reliable proxies for a company's long-term cash flow prospects, and you cannot estimate long-term cash flows using static measures of near-term performance in a volatile global economy that is marked by spirited competition. Yet, without assessing a company's future cash flow prospects, you cannot reasonably conclude that a stock is undervalued or overvalued.

If you grant that forecasting distant cash flows is extraordinarily difficult, where then do you turn? The ideal solution enables you to use the discounted cash flow model, but frees you from the burden of having to make cash flow forecasts. This is precisely what expectations investing does.[5]

The first step in the expectations investing process is to "read" the cash flow expectations implied by a company's stock price. By reversing the conventional process, not only do you bypass the difficult job of independently forecasting cash flows, but you can also

compare your own expectations against those of the market. You need to know what the market's expectations are today before you begin to assess where they are likely to move in the future.

To zero in on these cash flow expectations, you'll need forecasts of the sales growth rate, operating profit margins, and fixed- and working-capital investment requirements. You can obtain estimates of these value drivers from public sources, including Value Line, Standard & Poor's, and Wall Street analyst reports. Investment analysts at money management firms also frequently produce their own three- to five-year forecasts.

Let's make this more concrete. Say that a company that currently trades at $18 per share generated sales of $100 million during the most recent year. Assume that the company has neither debt nor excess cash. The three- to five-year consensus estimate is 5 percent for sales growth and 15 percent for operating profit margin. As the first column of Table 9.1 shows, the operating profit for the first year of the forecast period is $15.75 million (sales of $105 million multiplied by the 15 percent operating profit margin). Subtracting the $4.73 million of taxes payable on operating profit (at an estimated 30 percent rate) yields an operating profit after taxes of $11.03 million. Incremental investments in working and fixed capital are estimated to require 27 cents per dollar of the $5 million projected increase in sales, or $1.35 million.[6] Finally, you compute free cash flow of $9.68 million by subtracting the $1.35 million of incremental investments from the $11.03 million operating profit after taxes. Think of free cash flow as the pool of cash that is available to pay interest to debtholders and dividends to shareholders.

There are two components of the present value of the company (if you assume that the company will add no further value

after the first forecast year): the present value of the first year's free cash flow and the present value of the residual value. Discounting the first year's free cash flow of $9.68 million at the 7 percent estimated cost of capital yields a present value of $9.04 million [$9.68/(1 + 0.07)].

The perpetuity method of estimating the residual value assumes that a company that is generating returns greater than its cost of capital will attract competition that will, by the end of the forecast period, drive down returns on new investments to the cost of capital. Thus, even if a company continues to grow beyond the forecast period, it will create no further value because it will earn only the cost of capital rate on its investments. To capture this condition, you can treat all cash flows after the forecast period as a perpetuity, or an infinite stream of identical cash flows. You can compute the $147.20 million present value of the perpetuity in this example by dividing the $11.03 million expected cash flow before new investment by the 7 percent cost of capital and discounting that amount by the 7 percent cost of capital [($11.03/0.07)/(1 + 0.07)]. The $156.24 million present value of the company is the sum of the $9.04 present value of the first year's free cash flow and the $147.20 million present value of the perpetuity. With 10 million shares outstanding, the value per share is $15.62.

By repeating this calculation for each succeeding year, you can determine how many years it will take before the discounted cash flows account for the current $18 stock price. This period, which we call the competitive advantage period, turns out to be five years, as Table 9.1 shows. (You can find detailed tutorials and downloadable spreadsheets to do these calculations at www.expectationsinvesting.com.)

Table 9.1 Expectations Implied by the Current Stock Price

	1	2	3	4	5
Sales	$105.00	$110.25	$115.76	$121.55	$127.83
Operating profit	15.75	16.54	17.36	18.23	19.14
Taxes on operating profit	4.73	4.96	5.21	5.47	5.74
Operating profit after taxes	11.03	11.58	12.16	12.76	13.40
Incremental investment	1.35	1.42	1.49	1.56	1.64
Free cash flow (FCF)	9.68	10.16	10.67	11.20	11.76
Present value of FCF	9.04	8.87	8.71	8.54	8.38
Cumulative present value of FCF	9.04	17.91	26.62	35.16	43.55
Present value of terminal value	147.20	144.44	141.75	139.10	136.50
Shareholder value	156.24	162.35	168.37	174.26	180.05
Shareholder value per share	$15.62	$16.24	$16.84	$17.43	***$18.00***

Identifying High-Conviction Stocks

We now turn to the second step of the expectations investing process—identifying potential investment opportunities. The goal is to find stocks where there is a meaningful difference between the expectations implied by the current price and your expectations. A stock will deliver rewarding returns only if the market revises its expectations in the direction of your expectations. You can substantially reduce your analytical effort if you focus only on what really matters. For most companies, revisions in sales growth expectations produce by far the most significant changes in value. Starting the analysis by estimating a range of sales growth scenarios allows you to determine quickly whether a stock warrants further consideration. Revisions in sales expectations can also trigger changes in operating profit margins via changes in product prices and mix, operating leverage, and

economies of scale.[7] Identifying expectations gaps often requires a detailed strategic and financial assessment.

The final step in the expectations investing process is a buy, sell, or hold decision. Suppose you believe that sales can grow at a higher rate than what the $18 current stock price implies. With this more optimistic growth rate, the company's shares are worth $42 today, or 2½ times the current price. But that differential expectation is insufficient to make a confident buy decision. No analysis is complete without recognizing that the company's future performance and the market's expectations are highly uncertain.

Expected value, the weighted-average value for a distribution of possible scenarios, is useful for evaluating uncertain outcomes. You calculate expected value by multiplying the dollar payoff for a given outcome, in this case the stock price, by the probability that the outcome materializes. You then sum the results to determine the expected value.

Returning to the example, assume that you attach a 40 percent probability to the expectations that the current $18 stock price implies, a 50 percent probability to the optimistic sales growth scenario valued at $42 per share, and a 10 percent probability to a pessimistic scenario in which the stock is valued at $15. You compute the expected value of $29.70, which translates to a 65 percent gain on the $18 current stock price, as follows: [(0.40 × 18) + (0.50 × 42) + (0.10 × 15)].

Even if a stock's expected value is above its current price, the investor must consider whether the expected gain is worth the risk. The risk in this case is the 10 percent probability that the stock will lose almost 20 percent of its value. Assuming that you deem the risk acceptable, you must still decide whether the stock

offers a sufficiently attractive return to qualify as a genuine buying opportunity.

The decision depends on two factors. The first is the stock price's percentage discount to its expected value, or its margin of safety. In this example, the discount is 39 percent—the $11.70 discount on the $18 stock divided by the $29.70 expected value. The larger the discount to expected value, the higher is the prospective return. Inversely, the higher the stock price relative to its expected value, the more compelling the case for selling the stock.

The second factor is how long it will take for the market to revise its expectations. The sooner the stock price converges toward the investor's expected value, the greater the return. For a price to move to the investor's target value, either other investors must come to agree with the investor's assessment of the company's prospects, or the information that investors use to make their decisions must support the move toward the target value. Finally, investors face the risk that unanticipated new information will trigger adverse price changes. This risk is offset by the possibility of unanticipated information that produces favorable price changes.

Returning to the example, assuming a 7 percent cost of capital, the expected value one year from now, $31.78, is today's $29.70 expected value compounded at the 7 percent cost of capital rate. If the $18 stock price rises to $31.78 by the end of the first year, the annual return is 77 percent [(31.78 - 18.00)/18.00]. What if it takes the market two years to revise its expectations? The expected value two years hence is $34.00, and the annual return from the $16.00 gain on the $18 stock price is 38 percent, about one-half of the 77 percent return for the one-year revision. If

it takes three years for the price to reach the target price, the annual return drops to 27 percent. Basically, the sooner the stock price converges toward the higher expected value, the greater the return. The longer it takes, the lower the return.

There are also reasons to sell. If a stock has reached its expected value, it's time to consider selling. As a stock's premium over its expected value rises, the case for a sale becomes increasingly compelling. Another reason for selling is that better opportunities exist. Ideally, you are on a never-ending search for the stocks that trade at the largest discount relative to their expected value. Should your research reveal a stock that is more attractive than one of your current holdings, you should consider a change in your portfolio. Finally, unanticipated events can prompt you to revise your expectations downward—sometimes materially. If a downward revision results in an unattractive price to expected value relationship, the stock becomes a sell candidate. But these reasons may not always be decisive once taxes and transaction costs have been incorporated into the analysis.

Overall, individuals who are in a position to exploit mispricings are those with skill, resources, a long investment horizon, and no agency conflicts that compel them to focus on short-term performance.

Notes

1 Antti Petajisto, "Active Share and Mutual Fund Performance," September 30, 2010; available at http://ssrn.com/abstract=1685942

2 Jeffrey A. Busse, T. Clifton Green, and Klass P. Baks, "Fund Managers Who Take Big Bets: Skilled or Overconfident," AFA 2007 Chicago Meetings Paper, March 2006; available at SSRN: http://ssrn.com/abstract=891727.

3 Randy Cohen, Christopher Polk, and Bernhard Silli, "Best Ideas," March 18, 2009; http://ssrn.com/abstract=1364827.

4 Jack L. Treynor, "Long-Term Investing," *Financial Analysts Journal*, May-June 1976, p. 56. For a full collection of Treynor's publications, see *Treynor on Institutional Investing* (Hoboken, N.J.: John Wiley & Sons, 2008).

5 The following discussion is adapted from Alfred Rappaport and Michael J. Mauboussin, *Expectations Investing: Reading Stock Prices for Better Returns* (Boston: Harvard Business School Press, 2001).

6 More specifically, you calculate the required fixed-capital rate by dividing capital expenditures, minus depreciation expense, by the change in sales forecasted for the period. You deduct depreciation because it reasonably approximates the spending required to maintain the current productive capacity. As a result, you consider only capital investment above and beyond depreciation as an "incremental" investment. Note that you do not adjust operating profit to reflect depreciation expense—a noncash item. However, since you deducted depreciation from capital expenditures, free cash flow is truly a "cash" number. You can obtain the identical free cash flow number by adding depreciation back to operating profit and deducting total capital expenditures.

7 Most businesses must commit large amounts of capital in advance of sales to have sufficient capacity to meet expected demand. The near-term result is unused capacity. As a company increases its sales and uses its capacity, it realizes operating leverage as it spreads its cost over more units. The result is a reduced average unit cost and higher operating profit margins.

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