

Foreword

Institutional investors often are accused of being obsessed with short-term performance at the expense of long-term goals. Such thinking, the argument goes, does a disservice to companies and the national economy. Speakers at this seminar addressed an array of issues in an attempt to fill in the broad outlines of this complex debate for investment practitioners.

These issues include differences between fundamental investment strategies and quantitative strategies; the effect of manager style on investment objectives; the relationship between takeovers and corporate restructurings as a cause of short-term horizons; the relationship between institutional holding periods and stock market volatility; and the roles of money managers, consultants, and pension sponsors in setting strategies appropriate for long-term goals.

AIMR wishes to thank all seminar speakers for sharing their experiences as well as their perspectives. Their expertise is what made the seminar—and this publication—possible.

Special thanks are owed to Eugene H. Vaughan, Jr., CFA, who conceived the seminar during his tenure as chairman of the AIMR Board of Governors and also doubled as its moderator. His guidance proved sure both in articulating the need for such a conference and in shepherding the meeting through its various developmental stages. The result was a sem-

inar that far exceeded expectations and a proceedings that will receive wide distribution among investment practitioners.

Finally, the contributions of Arnold S. Wood, conference commentator, are especially noteworthy. His introduction to this proceedings helps set the stage for the important discussions that follow. In addition, his counsel during the seminar's development and during the meeting itself was invaluable.

The speakers contributing to the seminar were Peter L. Bernstein, Peter L. Bernstein, Inc.; John C. Bogle, Sr., The Vanguard Group; John C. Bogle, Jr., CFA, Numeric Investors L.P.; Carolyn Kay Brancato, Columbia Institutional Investor Project; John J. Curley, Gannett Company, Inc.; Judith D. Freyer, CFA, Board of Pensions of the Presbyterian Church (U.S.A.); J. Parker Hall III, CFA, Lincoln Capital Management Co.; Elizabeth Holtzman, Comptroller of the City of New York; Jonathan D. Jones, Securities and Exchange Commission; Norman F. Lent, U.S. House of Representatives; Lisa K. Meulbroek, Harvard Business School; Thomas M. Richards, CFA, Richards & Tierney, Inc.; Eugene H. Vaughan, Jr., CFA, Vaughan, Nelson, Scarborough & McConnell, Inc.; C.F. Wolfe, IBM Corporation; and Arnold S. Wood, Martingale Asset Management.

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The Importance of Investing for the Long Term

Eugene H. Vaughan, Jr., CFA

President and CEO

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The outlook for lengthening the investment vision of the United States is bright because of three factors: The disadvantages of a short-term approach are well-known; it is within the power of corporate chief executives to force the change because of their influence with investment managers; and a long-term approach jibes with institutional investors' long-term objectives.

Anation is never finished," wrote John W. Gardner. "You cannot build it and then leave it standing, as the Pharaohs did the pyramids. It has to be built and rebuilt, re-created in each generation by believing, caring men and women. It is now our turn."

This trusteeship is a responsibility of corporate America and Wall Street, and it is highly germane to the importance of long-term vision and investing. The serious issue before us is the charge that U.S. corporate executives, investment managers, and analysts are running aground the flagships of the free enterprise system and, possibly, our ship of state.

Sixty years ago, John Maynard Keynes warned that "when the capital development of a country becomes the byproduct of the activities of a casino, the job is likely to be ill-done." Yet when people experience the massive volatility and the recurring August and October free-falls—or read of the grab-it-now cupidity in *Liar's Poker*, *Barbarians at the Gate*, and *Predators' Ball*, the trilogy of books by which the Wall Street mergers and acquisitions operators of the 1980s will be remembered—a rigged casino is precisely what a preponderance of citizens perceive. Indeed, *Business Week* labeled America the "Casino Society" and then went on to ask plaintively in a cover story, "Will Money Managers Wreck the Economy?" In the article, a corporate executive said "there are no long-term stockholders anymore," a refrain that has become the theme song of the corporate choir.

Many corporate CEOs say the unrelenting pressure from investors to keep earnings consistently climbing quarter after quarter precludes the kinds of vital investment that pay off in the long term but penalize earnings in the near term. The leveraged

buyout takeover binge, with the occasional cooperation of some of the institutional investors who own nearly one-half of equities in the United States, accentuated corporate focus on near-term results.

Whatever the cause, managerial myopia of U.S. corporations is widely believed to be the source of our nation's lack of competitiveness internationally. Decision makers do not have sufficiently long vision to allocate resources to areas vital to the generation of future income streams—essential investments such as in plant and equipment, research and development, core infrastructure, and education.

Another widespread belief is that the primary cause of the short-term bias toward cost reduction at the expense of long-term development of U.S. industry, in contrast to its international competitors, is pressure from the investment management and research profession. Although other factors also have major impacts as sources of managerial myopia, investment short-termism is doubtless a critical ingredient. When surveying extant research in preparation for this conference, I was surprised, considering the enormous importance of the subject, to find how little work is under way to generate creative solutions. A key goal of this conference is to try to identify some possible solutions that go beyond the superficial tax remedies and governmental fiat proposals generally advanced and to "let loose creative forces of change," particularly in the investment profession.

Short-Term Vectors

The best interests of the United States, I believe, lie in ending the debate that has run for years in the eco-

conomic and academic communities and agreeing that managements of U.S. corporations generally could compete better with competitors abroad if they adopted longer time horizons. It cannot be proven beyond any question that an abandoned new product might have succeeded if the company had absorbed low earnings for a few more quarters. Nevertheless, many convincing cases can be cited: Warner Communications, for example, gave up on Atari, leaving a huge market solely to Nintendo.

What to do when the doctors disagree has been a paralyzing puzzle in this matter of vital national interest. To get on with the solution stage of the problem and quit elaborating at identifying the problem, I suggest we accept generally from a large amount of research in recent years that U.S. corporate investment in key areas that contribute to improved competitiveness—new plant and equipment, research and development (R&D), education and training—has declined during the past 20 years relative to the past and, importantly, relative to Germany and Japan. For example, although the magnitude is less important than the condition, some reports indicate that U.S. aggregate investment in nondefense R&D as a percent of gross domestic product in recent decades was as much as one-third less than that of our major worldwide competitors.

Although investor attitudes are our focus, this is only one of several powerful reasons why U.S. executives seem to take a shorter term view than our major economic competitors abroad. Other causes include, for example, critical differences in the way industries are structured and financed and the way U.S. executives are rewarded.

Corporate Structure and Governance

In the United States, the relationships between financial institutions and industry are entirely different from those in Japan and Germany. In Japan, the dominant type of industrial organization is the *keiretsu*, networks of corporations with cross-ownership of stock and interlocking managements centered on powerful banks. Mitsubishi and Mitsui are examples of *keiretsu*. Approximately one-half of Japan's 200 largest companies are in six *keiretsus*.

Although the arrangements are less formal in Germany, banks have significant holdings in German corporations, and relationships are interlaced for synergistic commercial purposes.

The interlocked financial structures in Japan and Germany protect corporate managements from threats of takeover, provide insulation from the swings of the capital markets, create a stable shareholder base, and in general function as a synergistic support system. Consequently, managements feel

free to adopt a longer time horizon, invest in long-term projects, and are less threatened during drastic cyclical swings. The United States, by law and custom, has avoided such interlaced industrial structures because Americans have serious reservations about adopting systems that would materially affect our nation's long-standing belief in entrepreneurial enterprise, open markets, prevention of abusive financial power, and protection of small companies.

Executive Compensation

Variable compensations, such as bonuses that are tied to accounting earnings, make up a very large part of top executives' pay in the United States. Thus, managers during their last years in office have a financial incentive to favor current earnings and penalize long-term investment. Although the practice of tying a significant portion of executive compensation to operating results is good, changing compensation plans to reflect long-term results holds much potential for lengthening vision.

Investor Attitudes

Clearly among the most influential factors in the short-term orientation of U.S. industry is the effect of investor attitudes and practices. In Japan and Germany, the *keiretsu* and *hausbank* systems, respectively, exist for synergistic business purposes. Under the U.S. capitalistic system, the primary purpose of corporate governance is to reflect the wishes of shareholders—generally, creation of shareholder wealth—even though businesses in fact serve a variety of constituents, including employees, managers, and members of the community.

U.S. investors have long sent mixed signals about their desire for short- or long-term emphasis. It is as though their heads know the value of long-term investing but their birthright includes "get rich quick." This has been exacerbated in recent decades as the rise in volatility and turnover rates gave corporate executives the impression that what their owners want is short-term earnings results. Stimulated by the takeover binge, concentrated ownership, and a prevalent "instant gratification" philosophy, particularly during the 1980s, the turnover rate of the average share of stock on the New York Stock Exchange has increased dramatically from 12 percent in 1960 to 48 percent so far in 1991; it peaked at 73 percent in 1987, the year of the October crash. Thus, the holding period of the average shareholder during the past 30 years fell from 10 years to 2 years.

Many executives view the increased trading as evidence of the market's preoccupation with short-term earnings, good reason for their companies not to sacrifice for the long term. Simultaneously, invest-

ment managers interpret the focus on quarterly performance measurement as client pressure for near-term results, reinforcing a “vicious circle” of motivation for myopic behavior.

Stretching the Horizon

Embedded and ignored in this circular process are important seeds of redemption. The process can be reversed in the decade ahead if corporate executives, our national leadership, and investment managers so desire. For several reasons, I believe there is substantial hope for lengthening the vision of Wall Street America:

■ The preponderance of professional investors believe in and are trained in the principles of long-term investing and would welcome client support in that practice.

■ The CEOs and directors of America’s corporations are in a powerful position to insist that the retirement and other funds they influence be invested soundly on a long-term basis commensurate with the needs of such funds.

■ The change required is mainly one of perception and behavior modification. In concert, corporate managements and investment professionals can shift the paradigm successfully.

Corporate Control of Investment Policy

Institutions own nearly 50 percent of corporate stock in America and account for more than two-thirds of trading volume. The investment managers who invest most of those funds actually are employees of the corporate executives. The corporate CEO, CFO, and investment committee of the board of directors hire the external and internal managers that invest their pension funds, which alone account for 25 percent of equity ownership in the United States. These same executives populate the boards and investment committees of the universities and foundations that also hire investment managers. Powerful institutional investors, who manage more than \$5 trillion of assets in the United States alone, in essence work for corporate executives. Thus, corporate executives can prescribe the investment philosophy these investment managers must follow and set the criteria by which the investment managers are evaluated.

The logic is straightforward. Corporate executives cannot directly influence how individual investors—including mutual funds—invest. In a market increasingly dominated by the institutional managers of pension funds, endowments, and foundations, corporate executives who want to change the investment philosophy of the U.S. market can make a powerful start by so instructing their present man-

agers and by hiring managers, internal and external, who believe in the efficacy of long-term investing.

Since the start of ERISA in 1975, many corporate executives and directors, with the encouragement of lawyers and consultants, have sought to dilute fiduciary responsibility by taking a hands-off approach to the investment philosophy with which their funds are managed. Some executives and boards have abdicated altogether. Corporate executives have the opportunity, and arguably the responsibility, to be sure that the funds for which they have stewardship use the investment philosophy they believe is in the best interests of their employees and organization.

The message to CEOs comes straight from Ben Franklin: “Drive your business, or it will drive you.” Perhaps General George S. Patton had the right idea: “Never tell people *how* to do things. Tell them *what* to do, and they will surprise you with their ingenuity.” This applies to investment managers. The CEO and board must take charge. They must know the actual long-term needs of the pension and profit-sharing funds of their employees and place high priority on communicating by written guidelines and power of personal conviction directly with the investment managers. The matter is too important to the corporations and international competitiveness of the United States to be left to lawyers and consultants.

Long-Term Investing for Long-Term Needs

Another factor, which seems to get forgotten, undergirds corporate managements’ need and ability to modify investor behavior. Pensions, endowments, and foundations generally have long-term purposes and should be invested with carefully considered long-term objectives, not subjected to a race to see who can beat the market best in the short term. Short-term investing involves high risk, high fashion, and large emotional swings. In the long term, these factors wash out, and talent, training, and judgment have a better chance of being brought to bear.

Because of the fashions, fads, and styles that continually come and go in the market, the current vogue to evaluate managers almost solely on their performance relative to a universe of managers and indexes during a period of three years or so makes scant sense. It creates huge rewards for taking risks to outperform—the attendant hirings and firings are akin to the varying fame and fortune of rock stars—and are contrary to the long-term interests of serious funds. Although short-term investing is appropriate for many purposes and is a valid segment of the investment profession, those responsible for serious funds with long-term goals should not be confused.

Another important factor that seems to have

been forgotten in the amazing 17 years of abundance since the financial holocaust of 1973 and 1974 ended at 570 on the Dow Jones Industrial Average is the sardonic line that conveyed prevailing client attitudes during those drastic times: "You can't eat relative performance." Investors learn little, and the wrong things, from prolonged bull markets. A generation has learned that only relative performance matters. Boards, managements, and investment managers responsible for serious funds with long-term needs should keep in focus that superior performance does not come from attempting to outrace the market and other money managers in short-term spurts. Rather, it comes from formulating realistic and wise investment policies for the long term with clearly defined objectives, including absolute return goals (or, for example, X points above the inflation rate) along with relative datum points to be achieved throughout all market cycles.

Some provision should be made in investment planning and evaluation for another 1973-74 situation or, at least, the possibility that the decade ahead could be more in the zigzag pattern of the 1970s. What professional realistically expects a continuation of the fabulous markets of the 1980s? A key to successful long-term investing is to avoid the wipeout; that is, to not lose money drastically during drastic times, which inevitably recur.

Overemphasis on relative performance is an invitation for aggressive risk taking by competitive investment managers, with the danger of a wipeout when a drastic market suddenly occurs. In 1973 and 1974, the median investment manager was down 18.6 percent and 25.0 percent, respectively. The profession needs to use some of its intellectual capital to change from the historic pattern of clients wanting relative performance in bull markets and absolute performance in bear markets.

With all the brainpower and computer power available, a goal should be to devise blended absolute and relative performance measures that will permit clients to evaluate "interim" results on a relative basis as "checkpoints" while using absolute goals over several market cycles to encourage managers to keep one eye on the inevitable cliffs ahead; after all, we do not want to go herdlike over the cliff together with "I'm first decile" still on the lips of the foremost. In the interim, the relative universe could serve as a reference point for an investment manager's philosophy or style. This is a worthy challenge for consultants, fund sponsors, and investment managers.

In my 30 years in the profession, the wisest advice I have read or heard for successful long-term investing of serious funds came from the Roth-

schilds. They said, "The House of Rothschild was built on letting someone else have the first 20 percent of profit and someone else the last 20 percent of profit. We contented ourselves with the 60 percent in the middle." In other words, they let someone have the early and late speculative money and carved out the heart of the melon for themselves. Development of an evaluation system that recognizes and encourages such long-sighted investment strategies could benefit clients and the investment profession.

In a rough sports analogy, the real goal of most serious funds is to win the marathon, a race usually won by an excellent athlete correctly pacing himself. The current prevalent practice of emphasizing relative comparisons in the short term encourages sprinting. In sports, just as in the world of competitive investment management, the athlete is frequently faced with the choice of sprinting with the pack, thereby increasing risk of being unable to go the distance, or of getting too far behind if he lags the pack for a significant period. In the real world of relative measurement, the laggard is all too often fired before being able to demonstrate the wisdom of his pacing strategy.

None of this is to demean performance measurement, which is as healthy and necessary as division reports in business and team statistics in athletics. The key is what message is sent when the measurements are reviewed. Relative performance over the intermediate term is useful and valid as a checkpoint to ensure that an investment manager is being true to its philosophy or style, just as an outstanding marathon runner needs to ensure that he is on pace, but placing undue emphasis on relative performance on a near-term basis is detrimental.

The nature of U.S. business people, including investment managers, is to say, "You set the rules of the game, and we will try to find a way to win." Corporations need to ensure that the rules they set for evaluating performance are consistent with the real needs and objectives of their funds over the long term.

Investment Manager Professionalism

Another factor that undergirds an authentic move to lengthen investment time horizons is that, perceptions to the contrary, a large portion of investment managers and research analysts, as serious professionals, would welcome major behavioral modifications toward a longer term orientation. Impressions can be misleading. For example, during the past decade, a person would surmise from the publicity given insider information scandals that most institutional investors indulged. The truth is

that only a few members of AIMR were implicated in insider information dealings during the 1980s. Similarly, despite the impression that no long-term investors remain, the preponderance of institutional investors are solid, long-term-oriented, fundamentally sound investors.

I believe that most professional investment managers and analysts would welcome a longer term mandate from their clients. They could then practice their profession as they have been trained to do: applying the basics by analyzing balance sheets, searching out value, and developing long-term strategies instead of psychoanalyzing the emotions of the market over the short term, outguessing each other on meaningless next-quarter earnings, or looking for a quick kill on a takeover.

The marginal cash flows that move the market are the main force that has been whipping the market around. The preponderance of professionals would rejoice in the knowledge that clients support long-term commitment—professional investing at its best.

Board Commitment

My suggestion to corporate executives is that if you are serious about long-term investing, begin immediately by writing what you believe in your investment policy guidelines, get your board committed, and call your investment managers to a meeting of the board to tell them that you want them to invest your retirement funds the way you invest in the future of your own company. Getting your board committed is of vital importance. The success of the long-term plan resides in the authentic and continually renewed commitment of the board of directors. The career of a CEO is finite, but a board is “in perpetuity.”

The key to a long-term investment plan lies not just in setting up an intelligent program but also in staying with it during near-term shocks and underperformance. Lord Keynes explained why: “It is the long-term investor, he who most promotes the public interest, who will in practice come in for the most criticism, wherever investment funds are managed by committees or boards or banks If in the short run he is unsuccessful, which is very likely, he will not receive much mercy. Worldly wisdom teaches that it is better for reputation to fail conventionally than to succeed unconventionally.”

Commitment to the long term will take great resolve at times of extreme optimism or despair, when the proper investment course is to go against the crowd. A trained, highly disciplined, long-term professional investor fits the definition of the “rational man in an irrational world.”

Corporate executives should be encouraged that

some of the finest performance results have been achieved by money managers known for a long-term philosophy. There are many. Perhaps the best known are Warren Buffett, whose turnover rate is minuscule, and the legendary Sir John Templeton, who is renowned for his patient investing, searching out what is being thrown away by others and willing to underperform while his values prove out. If corporate executives believe this kind of investing for the long term is appropriate for their companies and for our nation, it should follow that it is appropriate for their pension funds, foundations, and endowments. They have the power to make it so.

Investment Managers on Corporate Boards

Much of value would be accomplished by having broad-gauged investment managers serving on corporate boards. They would bring to corporate deliberations a deep knowledge of capital markets; a true understanding of what institutional investors are seeking and not seeking (which has been badly distorted); a keen appreciation of the trade-offs between short- and long-term investing; broad perspective, because of the nature of their work on national and global trends in industry; and a particularly high sense of ethics and business practices. Where seasoned investment managers serve on corporate boards, I am told they are particularly effective directors.

The current practice in many, if not most, investment organizations is to forbid or strongly discourage their people from serving as corporate directors because of the large amount of time required and the potential conflict of interest, which effectively precludes an organization from investing in the stock of the corporation. This is reasonable. Nevertheless, I hope AIMR will encourage the organizations to which its members belong to permit their seasoned investment managers to serve on a very limited number of corporate boards as a form of public service. If each organization permitted a few directorships, the cumulative impact could be enormously positive. Bringing seasoned investor knowledge and judgment into corporate governance would be a major service to corporations, the investment profession, and to the United States itself.

Research on Investment Decision Making

The Research Foundation of the Institute of Chartered Financial Analysts (previously the Financial Analyst Research Foundation) in its history sponsored a sizable amount of outstanding cutting-edge research that has advanced professional capabilities. Much of this research probably would not have been done anywhere else. I suggest that the

foundation undertake to develop analytical techniques by which research analysts and professional investors can readily ascertain how the decisions and investment practices of corporate managements affect long-term, as opposed to short-term, values. When defined adequately, these measures could also be of substantial use in conveying to proxy voters how managements are building future values. This research would be of such practical importance that corporations would probably join with investment organizations in funding it.

Legislative Solutions

Let me inject a caveat: The mounting frustration about the corporate/Wall Street myopia problem presents a danger of damaging quick fixes.

In the tradition of "if you are a hammer, every problem looks like a nail," Washington has proposed such remedies as transfer taxes, taxation of short-term trades by pension and foundation funds, and other variations. Some, such as lowering the capital gains tax for successively longer holding periods, would help, but others would do more harm than good. One of the worst proposals is to repeal the authority of the Securities and Exchange Commission to require quarterly reports. In the name of curtailing the short-term investment mentality, reducing market volatility, and homogenizing world markets, such legislation would cut the heart out of the frequent and full disclosure of investment information that has been fundamental to the development of the world's most liquid and efficient market. Elimination of the quarterly report would remove the most effective monitoring power small shareholders have and would further alienate them from the market. Insider information would become a way of market life, as it is in Japan. Imagine the volatility when year-end reports are released.

One of the chief obstacles to corporate long-term investing is the "information gap" between what corporate managements know about the benefits of long-term investments in R&D, plant and equipment, training, and so forth, and how these investments are understood by external investors. With perfect knowledge—that is, a totally efficient market—by definition, short- and long-run prices would be the same, adjusted for present value. The object of corporate reporting to encourage long-term investing should be to increase reporting and understanding, not to diminish it.

Conclusion

I am optimistic about the chance of lengthening the investment vision of the United States, because of a

confluence of factors:

■ The magnitude of the negative consequences to the United States and its industries of prolonged preoccupation with the short term is widely recognized. Recognition of a problem, and a sense of despair, are essential conditions for solving the problem. I believe the forces of change are being freed.

■ If CEOs wish investors to take the longer view, they have the power to encourage and to force the change because of their virtual control over institutional investors, which dominate the market. If CEOs resoundingly state this message to the investment managers they hire, it will be heard like a clarion call.

■ Investing for the long term coincides with sound investment principles and the sense of professionalism of the preponderance of institutional investors.

Much of what I have said so far is directed not only at our profession but at what corporate CEOs and boards of directors can do to help create conditions for longer term investing. But my final message is for myself and my fellow professional investment managers and analysts.

When managing other people's money, we need to think and act like owners. In the management of our own funds, we devalue lost opportunity and value preservation of capital in building personal net worth. Yet in our businesses, we follow the Italian proverb: "Since our house is on fire, let us warm ourselves."

Our businesses are built on thinking like agents, earning fees for competing primarily on a relative basis, rather than consistently building value, throughout good and bad markets alike, for our clients. Corporate executives and investment managers/analysts now have a great opportunity to help each other think and act like owners. Owners build long-term value.

As Benjamin Graham admonished, we must never forget our responsibility to educate our clients. We understand the nature of the capital market, its greatness and foibles, better than anyone. We must not abdicate our duty to educate our clients on what is in their long-term best interests.

I believe with Sir John Templeton that, properly practiced, our profession is a ministry. We would do well to heed the words of Woodrow Wilson: "You are not here merely to make a living. You are here in order to enable the world to live more amply, with greater vision, with a finer spirit of hope and achievement. You are here to enrich the world, and you impoverish yourself if you forget the errand."

Introduction

In the hustle and bustle of investment management, long-term investment has nearly become an oxymoron. To the process-driven investor, it may be the next tick; to the fundamental investor, it can be a lifetime.

In Washington, D.C., on October 16, 1991, more than a hundred people spent the day thinking about investing for the long term. Instrumental to the success of this effort was the founding chairman of AIMR, Eugene H. Vaughan, Jr., CFA. His cornerstone address starts these proceedings with inspiration. Distinguished speakers representing varied clients, managers, regulators, company management, and journalists all made contributions to the gathering.

For some, long-term investing represents moral good. It carries a fiduciary atmosphere. To buy and sell stocks with impunity is a travesty. Price may be all we really know at any one time, but for long-term investors, patience for fundamental expectations to play themselves out is paramount.

For others, long-term investing is a cruel hoax, perpetrated by those who actually think a client will wait years for the goodness of an investment to be

priced accordingly. If price changes, the investment judgment must become decision. If a manager can capture small increments of return, isn't that a long-term process and synonymous with long-term investing?

Essential issues explored within these polar views are these:

- Does short-term investing cause unwarranted volatility, which causes regulatory backlash?
- What is the potential impact of proxy activism on social issues?
- What is the influence of investors' short-term demands on corporate planning?
- Are clients and consultants forcing managers to be short-term oriented?

What follows is a selection of what people discussed at this gathering. What follows will help us all sit back and think—something very precious and very missed in the hustle and bustle of investment management.

Arnold S. Wood
President and CEO
Martingale Asset Management

Investing for the Long Term: Theory or Just Mumbo-Jumbo?

Peter L. Bernstein

President

Peter L. Bernstein, Inc.

Moving from the short run to the long run transforms the investment process in ways that are more profound than most people realize. New rules involving volatility, liquidity, and investment income come into play.

The meaning of “long term” is in the eye of the beholder. For investors infested with quarterly measurements, a year can be the long run, and five years is the outer limit. For enthusiasts of the dividend discount model, the long run is the indefinite future. Most of us fall somewhere in between. Yet each of us defines the long run with a different time span in mind, which means that yours will be appropriate for me only by coincidence. No matter how we figure it, the long run means more than shutting your eyes and hoping that some great tidal force will bring your ships home safe, sound, and laden with just the right merchandise for the occasion.

I am going to approach the issue of investing for the long run from two different viewpoints. First, is there such a thing as the long run? Second, assuming that we can identify and define the long run, I shall try to show that moving from the short run to the long run transforms the investment process in ways that are far more profound than most people realize.

How Long Is the Long Run?

When people talk about the long run, they are saying they can distinguish between the signal and the noise. And the world is a noisy place. Discriminating between the main force and the perpetual swarm of peripheral events is a baffling task that human beings must face—and can never duck.

Do two unusually warm winters in a row signify the onset of global warming or are they a normal variation, to be succeeded by bitterly cold winters in the years following? When a championship baseball team loses three games in a row, is that the beginning of the end of its league dominance or a brief interrup-

tion in its string of victories? When the stock market drops 10 percent, is that the start of a new bear market or just a correction in the ongoing bull market? Was October 1987 the beginning of the end or the end of the beginning?

Those long-run investors who believe they can distinguish signal from noise scorn the traders who are so busy chasing the wiggles and the ripples that they run the risk of losing the main trend. The watchwords of the true long-run investor are “regression to the mean.” In the long run, everything will even out; main trends are identifiable and dominate. This concept rules much active investment management. The very idea of “undervaluation” or “overvaluation” implies some identifiable norm to which values will revert. Other investors may choose to succumb to fads, whims, and rumors, but investors who hang in there will win in the long run.

Or will they? The lesson of history is that norms are never normal forever. Paradigm shifts belie blind faith in regression to the mean. This is precisely the problem with which Alan Greenspan is now wrestling: Has the long and reliable relationship between M2 and nominal GNP finally crumbled, or is the current disturbance just an anomaly? Here is another. For 170 years, the highest quality long-term bonds in the United States yielded an average of 4.2 percent within a standard deviation of only a percentage point. In 1970, yields broke through the old upper limits and started heading for 7 percent. Investors stared. How could they decide whether this was a blip or a new era? Then there was the moment in the late 1950s when the dividend yield on stocks slipped below bond yields. Again, investors had no handy rules to tell them whether this totally unex-

pected development was a fundamental shift in market structure or just a temporary aberration that would soon correct itself, with the “normal” spread of stock yields over bond yields reestablishing itself.

John Maynard Keynes, who knew a few things about investing, probability, and economics, took a dim view of the idea that you can look through the noise to find the signal. In a famous passage, he declared that “the long-run is a misleading guide to current affairs. In the long-run, we are all dead. Economists set themselves too easy, too useless a task if in the tempestuous seasons they can only tell us that when the storm is long past the ocean will be flat.”

Keynes is suggesting that the tempestuous seasons are the norm. The ocean will never be flat soon enough to matter. In Keynes’ philosophy, equilibrium and central values are myths, not the foundations on which we build our structures. We cannot escape the short run.

These considerations explain why I asserted at the outset that the long run is in the eye of the beholder. The way you feel about the long run and the way you define it are ultimately gut issues. These issues are resolved more by the nature of your basic philosophy of life, or even how you feel when you get up each morning, than by rigorous intellectual analysis.

Those who believe in the permanence of tempestuous seasons will view life as a succession of short runs in which noise dominates signals and the frailty of the basic parameters makes “normal” too elusive a concept to worry about. These people are pessimists who see nothing in the future but clouds of uncertainty. They make decisions based only on the short distance ahead that they can see.

Those who live by regression to the mean spend their time differently. They expect the storm to pass so that one day the ocean will be flat. On that assumption, they can decide to ride out the storm. They are optimists who see the signals by which they will steer their ships toward that happy day when the sun shines through.

My own view of the matter is a mixture of these two approaches. Hard experience has taught me that chasing noise leads me to miss the main trend too often. At the same time, having lived through the bond-yield/stock-yield shift of the late 1950s and the breakthrough of bond yields into the stratosphere beyond 6 percent in the late 1960s—just to mention two such shattering events out of many—I look with suspicion at all main trends and all those means to which variables are supposed to regress. The primary task in investing is to test, retest, and test yet again the parameters and paradigms that appear to

govern daily events. Betting against them is dangerous when they look solid, but accepting them without question is the most dangerous step of all.

The Impact On Investment Management

That investing for the long run is different from short-term trading is a truism. Because time is such a critical variable in the investment process, the differences between short- and long-term investing are far more profound than most people realize. The long-term game is so unlike the short-term game that you need a whole new set of rules when you are playing. Volatility, liquidity, and investment income are three areas in which this requirement applies.

■ *Volatility.* The first difference is in the impact of volatility. Volatility is noise. The short-term trader bets on the noise; the long-term investor listens to the signal. The long-term investor who thinks that the main trend will even out volatility over time is in for a shock, however. Volatility is the central concern of all investors, but it matters more in the long run than the short run.

Volatility matters because it defines the uncertainty of the price at which an asset will be liquidated. Ibbotson Associates’ data tell us that the expected total return on the S&P 500 for a one-year holding period is about 12.5 percent, but you should not be surprised if you come out somewhere between -8.0 percent and +32.0 percent, a spread of 400 basis points. The range for individual stocks is much wider. So volatility appears to matter a lot if you are going to hold for only a year.

Stretch your holding period out from 1 year to 10 years and the range of the expected return narrows to about +5 percent and +15 percent a year, a spread of only 100 basis points, which implies very little chance of loss for the 10-year period. Although volatility now seems less troublesome than it did with the one-year horizon, and although the odds on losing money when you liquidate are now greatly reduced, do not be lulled by that relatively narrow range of annual rates of return. What matters is not the annual rate of return but the final liquidating value at the end of 10 years. A dollar invested for 10 years at 5 percent compounds to \$1.63; at 15 percent, it compounds to \$4.05. As a dollar invested for one year is likely to end up at the end of the year between \$0.92 and \$1.28, the spread in liquidating value over one year is far narrower than the probable outcomes over a 10-year holding period, despite the greater standard deviation of returns. So where is the uncertainty greater—in the short or the long run? Talk about the ocean being flat! It could be very flat.

■ *Liquidity.* When you buy something to make a few points, or even 10 or 20, eighths and quarters matter. Good execution counts for a lot. When you buy to hold for the long run, even a few points on the price will not matter a great deal. Liquidity is a concern of the short-term investor and a minor matter for the long-term investor.

The point is obvious, but it receives too little attention. How much does pricing matter for assets that are not about to be liquidated? If you are a multibillion dollar investment management organization that has no choice but to acquire and hold indefinitely Exxon and IBM and other major high-cap companies, what difference does the daily price fluctuation make? Why bother to watch their daily action?

Throughout our financial system, many more assets are marked to market than is necessary. When the markets are depressed, this obsession with yesterday's price creates serious distortions as to the soundness of the institutions involved, which may have no need to sell, and no intention to sell, the assets they hold. Assets held for the long pull are simply not the same thing as assets that are to be liquidated in a matter of weeks or months.

■ *Income.* Investment income is an important link between the short and the long run. Income is also a dramatic illustration of an important principle of Hegelian dialectics: Changes in quantity ultimately become changes in quality.

For the short-term trader, the dividend on a stock is a gauge to valuation, but the actual money income from the dividend is irrelevant. The trader's return will be dominated by price change, because prices tend to move in ranges that far exceed one year's income receipt. Now expand the time horizon. Income payments pile up over time, altering the character of the return structure. Investors who can reinvest income now begin to have the opposite desire from short-term traders: Traders want prices to rise so they can sell, while investors reinvesting income are buyers who want prices to fall while the buying process is going on.

For bonds, this story is obvious. Current coupons being what they are, interest and interest-on-interest soon win over price change and, for long-maturity bonds, account for an overwhelming share of the total return.

The story in the stock market is similar in character, but few people take notice of it. If you had put a dollar in the stock market at the end of 1925 and just let it appreciate, spending all the income you received over those 66 years, you would have \$30 today. If you ignored the price appreciation and simply piled up 65 years' worth of dividends, with-

out any reinvestment income, you would have a pile equal to \$20. In fact, given the starting period in 1925 and the intervening stock market crash of 1929 to 1932, your growing pile of dividends would have exceeded the market value of your portfolio for 35 years from 1930 to about 1965; the dividend pile fell behind the portfolio value by a meaningful amount only after 1982—57 years after the purchase.

Let me go back to the end of 1925 for a moment to give you the full flavor of this. According to Ibbotson Associates' data, a dollar invested in the stock market at the end of 1925, with all dividends reinvested and no taxes and brokerage paid, would have grown to about \$600 today, far above the \$30 from appreciation alone. The difference of \$570 comes from the receipt and reinvestment of that pile of income, swelling the total to the sum of \$600. An investor who came into the market at the top in 1929 would have had to wait until 1953 before stock prices would have returned to what the stocks cost to purchase. Yet, with income reinvested, breakeven would have arrived in 1944, nine years sooner.

Therefore, the role of price in determining total return diminishes steadily in importance as we move from the short run to the long run. The mean annual income return since 1925 has been 4.7 percent a year with a standard deviation of only 1.2 percentage points. The annual appreciation return has averaged 7.1 percent, but with a standard deviation of 20 percentage points. These facts explain why the income turtle puts up such a good race against the appreciation hare. They also help to explain why the standard deviation of returns tends to shrink with the passage of time.

Quite aside from the demonstration that volatility matters a lot more in the long run than conventional wisdom would lead us to believe, there is an important lesson here for investors. Do not simulate equity portfolio returns with the familiar long-term Ibbotson figures of 10 to 12 percent a year unless the portfolio can accumulate and reinvest all the income that it earns.

Investors who must pay taxes on their income or, even worse, are not able to accumulate and reinvest every penny of dividend income they receive cannot rely on the long run to bail them out of the inherent volatility of equity investments. There have been 56 10-year rolling holding periods beginning with 1925–35. In nine of those cases—of which only three were in the 1930s—stock prices ended up below where they started. In another 12 cases, the increase in stock prices for the decade lagged the rise in the cost of living, so the portfolio lost real value. This means that the market's price performance was negative one-third of the time in these 10-year holding peri-

ods, even though over the whole span of 66 years, prices rose 30-fold, or 5.1 percent a year. Those are frightening numbers without the precious support and smoothing of income accumulation. Equity investing is risky business, even in the long run.

Noises, Signals, and Tempestuous Seasons

The long run in the popular view is a process that smooths the bumps, cuts through the clutter, and captures the main trend. If this story has a moral, it is that the long run is a complex, ambiguous, even

elusive concept, often better in theory than it is in practice. We cannot escape those difficulties. They are part of life.

Despite the complexity, ambiguity, and elusiveness of the long run, another moral—and a useful one—is that time matters. Quantitative changes become qualitative changes, and basic transformations take place as the time period lengthens. Although I am not sure where the short-run ends and the long-run begins, I do know that the character of my expected investment results depend on the length of the holding period. That, at least, is a beginning to wisdom.

Question and Answer Session

Peter L. Bernstein

Question: In an article about 15 years ago, you discussed efficient markets and how information is absorbed quickly. You have proposed dealing with these attributes of the market by investing in “slow ideas”—ideas in which information is not absorbed quickly because they are not in the daily news and require deeper analysis than is typical in the investment community. Have you changed your opinion, and how do you identify slow ideas that work?

Bernstein: This is Jack Treynor’s idea, and I have always believed everything he says. Treynor thought if you invest in something that is not now visible to other people, or that the natural bias of other investors creates opportunities for, you may have to wait a while for your ship to come in, but it will come in big. Hence, a slow idea. Another side of that, which gets less attention, is that if you think of a slow idea, then it is slow forever. You are not in an absolute sense likely to lose. The theory is to buy something cheap, already in the discard heap. On a realistic risk–reward basis, this is an attractive way to invest. I know people who have tried to implement this strategy, and it is very hard. If you are capable of doing that, which not all of us are, then it is the right way to invest, because this is a very efficient and fast-moving market.

Question: Is there any evidence that the incredible changes in computers, telecommunications, and other technologies have shortened the time horizon?

Bernstein: Over the years I have found that subjects of conversation change, but the patterns do not. Originally in my speech, I was going to mention the first Institutional Investor conference held in February 1968. The proceedings of this conference included a speech by David Babson, in which he said there are too many Freds in the business. Also, Gerry Tsai said that the Manhattan Fund was now beginning to take a more long-term view and was beginning to look at 1969 earnings. In the 1960s, much less attention was given to the long term than is the case now. The long term probably receives more respect now than it did before because of academic work, positive experience, and the growth of quantitative techniques. Certainly in the 1920s and earlier, the market was a casino. I think that has changed.

Question: Is there one single asset allocation of stocks, bonds, cash for portfolios with similar objective—for example, endowment funds? Once you identify an allocation, how much would you vary it?

Bernstein: The answer to the first question is no, at least for a foundation. Robert Merton published a National Bureau of Economic Research paper attempting to address this, specifically for college endowment funds.¹ He points out that college endowment funds tend to have a lot of bonds because they want income.

¹R.C. Merton, “Optimal Investment Strategies for University Endowment Funds,” National Bureau of Economic Research Working Paper No. 3820 (August 1991).

Some educational institutions have big endowment funds relative to their budgets, and others have a harder time getting money from their alumni, so they have small endowment funds. Clearly, the two types should have entirely different kinds of portfolios. You can stretch the idea to pension funds.

I find the foundations I work with to be as heterogeneous as individuals, the only difference being that I have to spend the money. Longevity is a very important consideration for both foundations and individuals. In working with foundations, I wrestle with this all the time. Do we want to give this money away in our lifetime, or is this a foundation we want to last into perpetuity? Clearly, the investment strategy will differ depending on the answer.

One foundation I work with has a president everyone is very fond of and some projects under way they think are great. The president will retire in the next five years, however, and they do not know what they will do next. Enough money is in the pot, even if the stock market goes way down, to fund the foundation’s expenditures for the next five years. They decided to take this fund and try to shoot the moon with it, because if they do badly, they can still take care of what they know is ahead, but if they do well, maybe they can do more beyond.

To answer the second question, if a normal distribution exists, vary it modestly. I say this because my gut feeling is that the future is very hard to predict and the only protection against uncertainty is diversification. Therefore, I am not inclined to make big bets in asset

allocation or vary my bet very much. Trying makes sense, but 10 percentage points is probably a nice number for the outside limit.

Question: I was intrigued by the statement that if you were a long-term stockholder you might want to be in stocks that go down so you could reinvest the income. If the stocks had not gone to \$30 between 1925 and today but had stayed the same, and you had reinvested the same amount of dividends, would you have more than \$600?

Bernstein: If they stayed at \$1 the whole time, you would have \$1 plus \$20. So the dividend payments would be the same. Had the market gone down and then come back to \$1, you would have something more than that. In my example, it went to \$30, and I am

not denying that had a lot to do with the \$600, but the \$20 also had something to do with it—the two together. Had you spent all the income, you would only be worth \$30. If the prices had not gone up, the number would be a lot smaller.

Question: At some point, does diversification diminish in value as an economic strategy? Why does Elizabeth Holtzman hold 2,000 companies and Warren Buffett very few? Is there some range beyond which diversification does not pay?

Bernstein: I do not know the answer, but if I were Harry Markowitz, maybe I would. He invented the idea of mean-variance. I do believe that there is a point beyond which more diversification does not reduce risk very

much. There are administrative-type costs to owning things, and those costs rise as the number of holdings increase. But there is another advantage to broad diversification beyond its function as a means of reducing risk. Diversification also exposes us to things to which we would not otherwise be exposed. One of my former associates, Peter Carman, once said that you are not properly diversified until you own things you do not want to own. If you feel safe with everything you hold, the chances are that your holdings share attributes and that you have failed to diversify—to spread your risks among assets with the lowest possible covariance consistent with maximizing expected return. That is what mean-variance analysis is all about.

Is a Long-Term Time Frame for Investing Affordable or Even Relevant?

John C. Bogle, Sr.
Chairman
The Vanguard Group

When investment advice is formulated in a climate that demands urgent action, the result often is counterproductive or worthless. One answer is to diversify investments broadly and to maintain a strategic balance among asset classes.

To paraphrase the words of the late Charles Dudley Warner, editor of the *Hartford Courant*, on the subject of weather: Everybody talks about long-term investing, but nobody does anything about it. Too many investment advisers and securities brokers and too many financial mavens of the press and television (perhaps for obvious reasons) thrive on short-term forecasts, expected market trends, and “hot” (and, less frequently, “cold”) stocks. Thus, we invest in a climate that seems to demand urgent action.

How valuable is this cacophony of investment advice? Far too often, the answer is that it is counterproductive, if not worthless. To ask the question in the obverse way, what is the chance that short-term (or even intermediate-term) changes in investment tactics or strategy will add any value to long-term returns? The answer is that the probability of adding value is 50/50 before the payment of advisory fees and portfolio transaction costs and about one in three or one in four net of such costs. The conclusion, then, is that the odds do not favor the investor who sallies forth to conquer the financial markets.

The implication for the long-term investor is that the most sensible way to invest is to diversify broadly and to maintain a relatively consistent strategic balance among asset classes. I shall try to prove this point in the following manner. First, I shall examine how the simple logic of the “efficient market theory” of common stock diversification, and the obvious extension of this logic to tactical asset allocation, together make a powerful case for passive investing—the ultimate long-term strategy. Second, I shall present empirical evidence that shows how difficult it has been for investment advisors as a group to

exceed the long-term results achieved by passive management. Third, I shall provide additional evidence that market-timing, more often than not, has led to inferior returns. Fourth, I shall consider truly long-term historical return data and demonstrate how it can be used and abused. Finally, I shall present an investment strategy that, based on historical data, can provide above-average returns with below-average risk.

My comments are focused on long-term investing from the perspective of the client, including both individual and institutional investors. In essence, both have a lifetime investment horizon—clearly so for individuals, and a “rolling” lifetime horizon for most institutions. The remarkable efficiency of the U.S. securities markets—rapid response to new information, liquidity that is broad and deep, and low transaction costs—results mainly from the high transaction volume generated by short-term professional investors actively engaging in the purchase and sale of financial instruments of every stripe. In a paradoxical sense, then, short-term investment strategy makes long-term investment strategy possible.

The Efficient Market Theory in Principle

The calculus of the original efficient market theory of the academics was quite complex and difficult for industry practitioners to follow, let alone agree with. Even Paul Samuelson—one of the brilliant proponents of this great body of theory—admitted that he “must confess to having oscillated . . . between regarding it as trivially obvious (and almost trivially

vacuous) and regarding it as remarkably sweeping."¹

Suffice it to say that the complex formulation of what has become known as "modern portfolio theory" is reduced to two obvious facts: (1) Because all investors own the entire stock market, if passive investors—holding all stocks, forever—can match the gross return of the stock market, then active investors as a group must match the gross return of the stock market as well. (2) Because the management fees and transaction costs incurred by passive investors are much lower than those incurred by active investors, if both provide equal gross returns, then passive investors must earn the higher net return.

If ever there were two elementary, self-evident certainties in a financial world permeated by uncertainties, surely they must be these. Although we should applaud the extensive equations and elegant proofs developed by such Nobel Prize winners as Samuelson, Tobin, Modigliani, Sharpe, Markowitz, and Miller, we should also recognize that one need not drive to the farthest reaches of the "efficient frontier" to find simple solutions that, like the proverbial "Acres of Diamonds," often lie undiscovered in one's own backyard.

The syllogism set forth above relates essentially to the ability of investors as a group to engage in superior stock picking. Although I have never seen the obvious logic of this reasoning extended to superior market-timing—changing a portfolio's asset allocation of stocks, bonds, and cash reserves—it is easy to draw a parallel syllogism: (1) Because all investors own all securities of all types in the financial universe, total market risk is, at any given moment in time, fixed. Thus, passive investors who maintain all-market portfolios must inevitably earn a gross return that is equal to that of the market in total. Active investors engaged in the transference of risk among one another must then earn this same gross return. (2) Because management fees and transaction costs incurred by passive investors with fixed asset allocations are much smaller than those incurred by active, market-timing investors, if both provide an equal gross return, then passive investors must earn the higher net return.

Full disclosure compels me to point out that Nobel laureate William Sharpe is a fervent advocate of the first syllogism; however, he seems skeptical about the second. He recently formed a firm to provide asset allocation advice to pension funds. His results should be interesting.

¹Robert C. Merton, "Paul Samuelson's Financial Economics," in *Paul Samuelson and Modern Economic Theory*, C. Brown and R. Solow, eds. (New York: McGraw-Hill Book Company, 1983).

The Efficient Market Theory in Practice

About the first syllogism: The hypothesis that passive equity management should, in theory, outpace active management turns out to work, with some considerable accuracy, in practice. An overwhelming body of data confirm that, on a long-term basis, the average investment advisor has been unable to outperform the stock market.

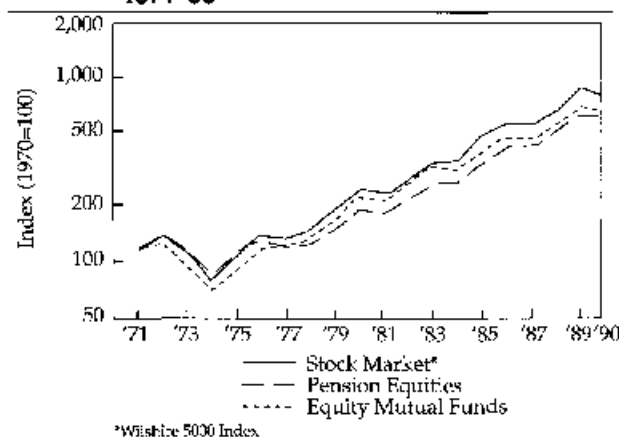
I should note here a distinction between passive management and indexing. The former term implies owning a participation in the entire stock market, while the latter implies owning a participation in a particular segment of the market. Even the broadly based Standard & Poor's Composite Stock Price Index represents only about 75 percent of the market's capitalization. It is a very good—but inevitably imperfect—proxy for the total market.

Figure 1 shows the equity returns achieved by two of the largest institutional investors—mutual funds and pension funds—relative to the whole stock market, as measured by the all-encompassing Wilshire 5000 Index. The stock market return averaged 11.2 percent yearly during the 20-year period ended December 31, 1990. (The Standard & Poor's 500 Index return was 11.1 percent.) The average equity mutual fund achieved an annual return of 9.8 percent during the same period, a shortfall of 1.4 percent.²

This actual margin in relative return is remarkably close to the theoretical margin of roughly 1.8 percent, comprising, broadly stated, a 1.0 percent expense for fund advisory fees and operating ex-

²Lipper Analytical Services, Inc.

Figure 1. Indexes of Returns: Stock Market, Equity Mutual Funds, and Pension Equities, 1971–90



Source: Lipper Analytical Services, Inc. S&P (1971–78) and INDATA (1979–90).

penses, an estimated 0.5 percent for fund transaction costs, and a 0.3 percent reduction resulting from the fact that the Index is 100 percent invested in stocks, while the average mutual fund carried the "drag" of a 10 percent cash position. (In the past two decades, of course, stocks returned more than cash.)

For the average pension equity fund, the average annual rate of return was 9.6 percent after transaction costs but before advisory fees, custodian costs, and other out-of-pocket expenses.³ If we assume that these costs averaged 0.5 percent annually, the net return for pension equity accounts would be 9.1 percent. This return, then, reflects a shortfall of 2.1 percent to the market.

It may be just a curious coincidence that the performance of equity mutual funds and pension equity accounts, with respective shortfalls of 1.4 percent and 2.1 percent to the market, almost exactly bracketed the theoretical margin of 1.8 percent. To see their respective performances diverge very much would be surprising, however, because it is difficult to conceive of any reason why a higher level of competence would prevail in one area than the other. What is more, most major advisory firms manage both pension fund and mutual fund assets.

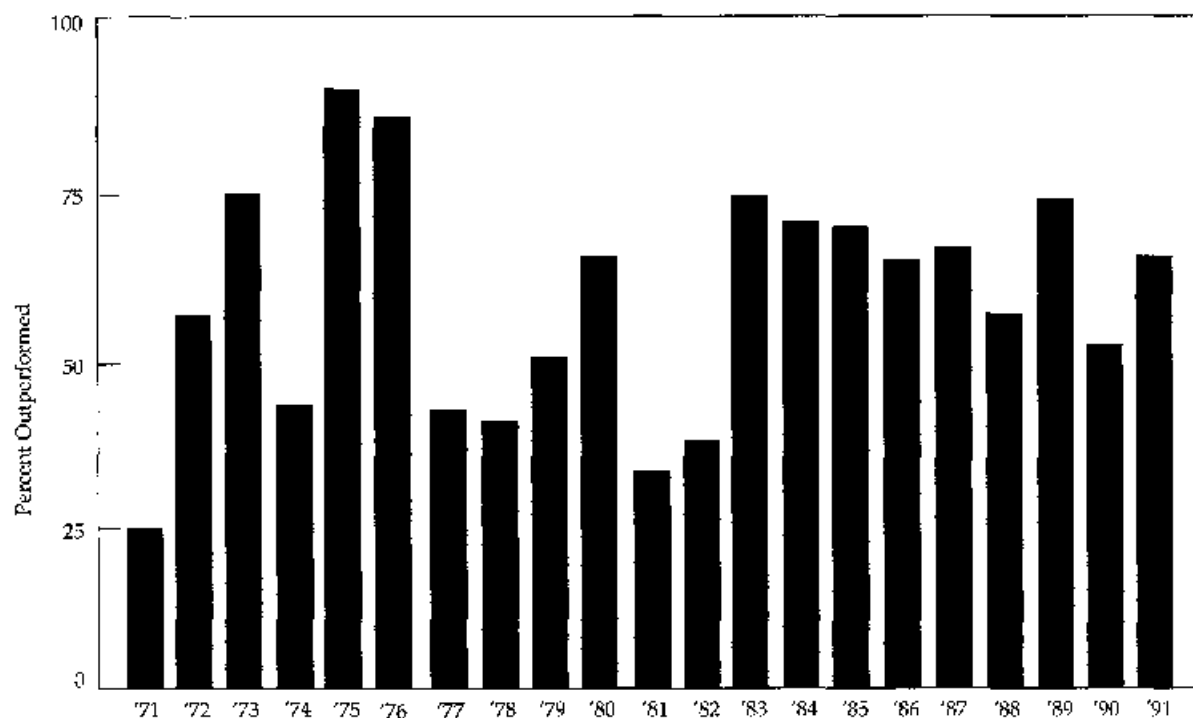
³SEI (1971-78) and INDATA (1979-90).

The average annual returns of pension funds and mutual funds reflect a wide range of individual fund returns; therefore, many managers outperform the market. Some of these fund managers have done such a good job for such a long time that we can fairly assume that they have unusual talents. Warren Buffett and Peter Lynch would surely be in this group, although even Peter Lynch believes that "most investors would be better off in an index fund." John Neff and Sir John Templeton would also be preeminent candidates, although their recent relative returns (during 1990 and in the 1985-90 period, respectively) suggest that we might observe them for a few more years before inducting them into the pantheon.

Such extraordinary managers are few. A major study by Jensen suggests that, on a risk-adjusted basis, only about one of every three equity mutual funds has outperformed the market over time and only about one of every four has done so when sales charges are taken into account.⁴ (Sales charges were ignored in the earlier mutual fund data.) The figures for pension funds show that, during the past 20 years, the S&P 500 has been in the first performance quartile

⁴M. Jensen, "The Performance of Mutual Funds in the Period 1945-64," *Journal of Finance* (December 1965):20-26.

Figure 2. Percent of Pension Funds Outperformed by the S&P 500 Index, 1971-91



Source: SEI (1971-78) and INDATA (1979-90).

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Table 1. Performance of Mutual Fund Timing Newsletters

Period	Number of Newsletters	Advisors Outpacing Market	Advisors Falling Short	Median Timing Return	Market Return
June 30, 1980– June 30, 1990	14	4	10	+271.5%	+336.9%
January 1, 1989– June 30, 1990	85	8	77	+17.1	+31.5

Source: M. Hulbert, *The Hulbert Financial Digest* (New York: New York Institute of Finance, 1991).

in 3 years, the second quartile in 11 years, the third quartile in 6 years, and never in the fourth quartile.⁵ So the consistency of the S&P Index is compelling. As **Figure 2** shows, its ability to outperform pension funds is impressive as well.

The question of consistency is significant, because even the few above-average managers are almost impossible to identify in advance and only erratically do they repeat their past success in the future. Indeed, the 20 top-performing equity mutual funds of the 1970s had an average rank of 137 (among 309 funds) during the 1980s.⁶ That they dropped from the top of the list to the middle strongly suggests that "luck" is a major factor in the selection of the best equity advisors.

One final problem in selecting a winning manager is that, according to Richard Brealey, a respected pioneer of capital market theory, "you probably need at least 25 years of fund performance to distinguish at the 95 percent significance level whether a manager has above average competence."⁷ Another commentator, Gilbert Beebower of the SEI pension data firm, accepted the 25-year timeframe, "but only if the pension executive is using the *perfect* [italics supplied] benchmark for that manager. Using a less than perfect benchmark may increase the observation time to 80 years."⁸ If that is in fact the case, the logic of adopting a strategy focused on indexing equities seems almost overpowering.

the stock market, investors have intuitively suspected that they could effectively outsmart the stock market by moving their financial assets in and out of stocks and bonds, and by so doing, ride the bull markets and sit out the bear markets. This strategy of tactical asset allocation has come to be described as market-timing. As evidence of the increasing pervasiveness of market-timing gurus, consider that only 14 mutual fund market-timing newsletters existed in 1980 compared to 104 in 1990—a sevenfold increase.

How has all of this shuffling of assets worked out? Significant evidence indicates that it did not add value. The performance of mutual fund market-timing newsletters has been recorded, and the evidence logged in **Table 1**. Certainly these numbers would suggest that the theoretical odds against successful market timing dramatically understate the actual dimension of the challenge.

For most asset allocation, the performance results have been depressingly similar, although there have been some solid long-term performers. Since its inception in 1978, one major asset allocator, Mellon Capital Management, has turned in an average annual return of 16.9 percent, exceeding the market return of 14.6 percent, all the while assuming lower risk (an average equity exposure of 60 percent). By way of contrast, the asset allocation fund of a major

Market-Timing as an Investment Strategy

With regard to the second syllogism, the hypothesis that a consistent stock–bond–cash mix should, in theory, outpace tactical asset allocation schemes also seems to work in practice. Since the earliest days of

⁵SEI (1971–78) and INDATA (1979–90).

⁶J. Bogle, "Selecting Equity Mutual Funds," *The Journal of Portfolio Management* (Winter 1992):94–100.

⁷R. Brealey, "Portfolio Theory Versus Portfolio Practice," *The Journal of Portfolio Management* (Summer 1990):6–10.

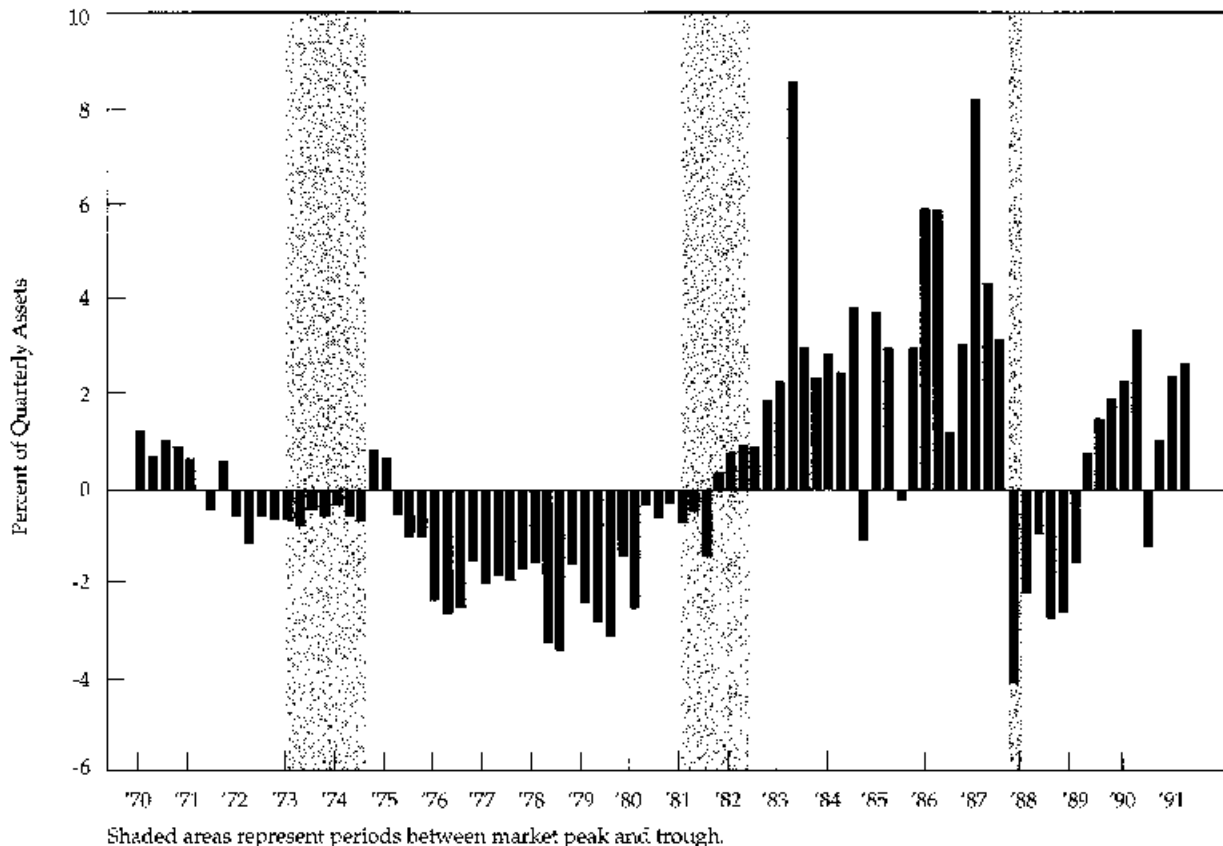
⁸G. Beebower, Editorial, *Pension and Investment Age* (February 8, 1988):10.

Table 2. Comparative Performance: An Asset Allocation Fund and the S&P 500

Period	Total Return	
	Asset Allocation Fund	S & P Index
Second half 1986	+2.4%	-1.8%
First half 1987	+18.9	+27.4
Second half 1987	+8.7	-17.4
Calendar 1988	+17.8	+16.5
Calendar 1989	+10.5	+31.6
Calendar 1990	-4.7	-3.1
First half 1991	+10.5	+14.2
Average	+12.7%	+11.9%

Source: The Common Fund Annual Report, June 30, 1991.

Figure 3. Cash Flows Into and Out of Equity Funds, 1970-91



Source: Investment Company Institute research department.

college endowment pool has performed erratically since its inception on June 30, 1986, as shown in Table 2. Of particular note is that, although this asset allocation fund (and indeed many others) provided considerable downside protection in the October 1987 stock market crash and thus a fine return for the full calendar year, most of that excess return was eliminated by the maintenance of low equity positions during both prior and later periods of market appreciation. Specifically, while the record for the full five years is solid—a market-plus return with significantly lower risk—its average annualized positive margin of 0.8 percent becomes a negative margin of 6.1 percent when returns during the second half of 1987 are ignored. The investor, then, need ask himself whether this fund's surplus relative return during that period was a result of chance or of skill.

The success of these asset allocators in 1987—as is so often the case—spawned a series of imitators in the mutual fund industry. Although it is much too early to evaluate their performance, the returns so far are not encouraging. The average asset allocation mutual fund has garnered a cumulative return of 36.6 percent since December 31, 1987, compared with 70.3

percent for the S&P 500. The range of performance was little short of astonishing, with the top-performing fund up 49.9 percent and the worst up 21.1 percent.

If this fragile test of early data means anything at all, it is that (1) most asset allocation mutual funds are off to a dubious start, and (2) the range of outcomes has been extraordinarily wide. Thus, the challenge of selecting the best allocator parallels (if not multiplies) the challenge of selecting the best equity manager. In any event, statistics developed by Clarke et al. suggest that an allocator must be right 63 percent of the time to add value.⁹ Sharpe suggests a level of 70 percent.¹⁰ Looked at another way, Jeffrey noted that during the 1926-82 period, the real return on stocks was 6.0 percent annually. Perfect timing (owning the better performer of stocks and Treasury bills each year) would have produced a

⁹R. Clarke, M. Fitzgerald, P. Berent, and M. Statman, "Required Accuracy for Successful Asset Allocation," *The Journal of Portfolio Management* (Fall 1990):12-19.

¹⁰W. Sharpe, "Likely Gains from Market Timing," *Financial Analysts Journal* (March/April 1975):60-69.

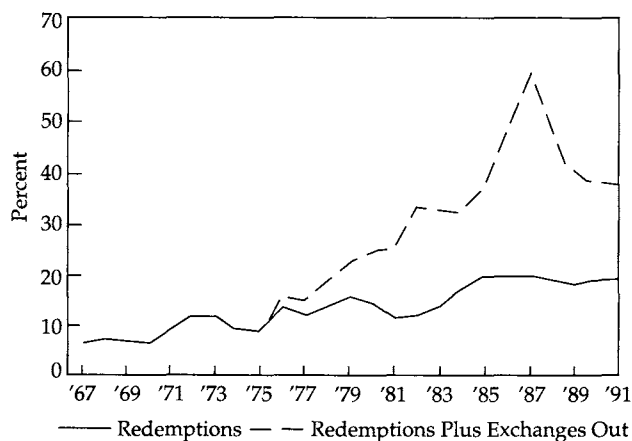
return of 12.1 percent annually; worst timing (the reverse) would have provided a return of -6.4 percent annually. Thus, the upside added 6.1 percent to annual return, while the downside subtracted 12.4 percent.¹¹ So the odds against success appear long, and risk-reward relationships unsatisfactory.

Despite the discouraging record of most asset allocation schemes, a good deal of data on mutual fund shareholder activity suggest that investors are ignoring the "diversify and stay on the course" thesis I am presenting here. Sheeplike, they persist in adding to their equity fund holdings immediately before the stock market reaches a high point and then reducing their holdings immediately following significant market declines. **Figure 3** illustrates this pattern of behavior.

Following the 46 percent market decline in 1973 and 1974, investors made withdrawals from their equity holdings aggregating \$17 billion (64 percent of their initial holdings) during the subsequent 27 quarters through the third quarter of 1981. Then, just before the market began a five-year rise of 227 percent in the fourth quarter of 1982, cash flow again turned positive, totaling \$78 billion (143 percent of initial fund assets) through the third quarter of 1987. The cash inflow was heaviest during the latter part of the period, after most of the "easy money" had been made. The October crash promptly caused a reversal of the trend, with \$30 billion withdrawn during the next six quarters (11 percent of the initial asset base). Since the first quarter of 1989, after stock prices had begun their sharp recovery, cash flow again turned positive, aggregating \$35 billion, with the only negative quarter occurring in the market decline during the third quarter of 1990. In the second quarter of 1991, the \$7.4 billion of cash inflow was the second highest since the third quarter of 1987.¹² We shall have many opportunities to see if this baneful pattern of history—selling after bear markets, buying prior to bull market peaks—will repeat itself in the years ahead.

This counterproductive responsiveness to market changes by mutual fund shareholders seems to be endemic and is perhaps unsurprising. What may be surprising, however, is that the turnover of investments by the shareholders of equity funds has been on what appears to be a long cyclical rise since 1975. Annual redemptions as a percentage of equity fund assets have more than doubled—rising from 7 percent in 1967 to 18 percent currently.¹³ What is more,

Figure 4. Annual Investor Turnover of Equity Fund Shares, 1967-91



Source: Investment Company Institute research department.

exchanges out of equity funds into other funds within the same fund family have risen from 2 percent of equity fund shares in 1976 (when the exchange phenomenon began to take hold) to 19 percent currently. As a result, as **Figure 4** shows, fund shareholder total asset turnover has increased to 37 percent annually—nearly five times the 1967 ratio. In 1987, it rose to an astonishing 59 percent, hardly a tribute to the stability of the mutual fund investor in a bear market. Apparently, with each passing year—and especially in down-market years—the buy-and-hold philosophy has become less persuasive.

I would not want to leave the impression that the peccadillos of market-timing are the exclusive province of the individual mutual fund investor. Financial institutions are guilty of the same sins. For example, as shown in **Figure 5**, corporate pension funds held 71.4 percent of assets in stocks as 1973 began, just before the onset of the worst bear market since the Great Depression. Then, fighting the proverbial "last war," these pension funds substantially reduced their equity commitments, touching a low of 50.5 percent at the end of 1981—just before the great 1982-87 bull market began. This equity ratio has now rebounded to 64.1 percent, and I expect that we will also have many opportunities to test whether history will repeat itself in this case as well.¹⁴

The Use and Abuse of Statistics

What may well be the most sensible and effective long-term investment program in which to engage

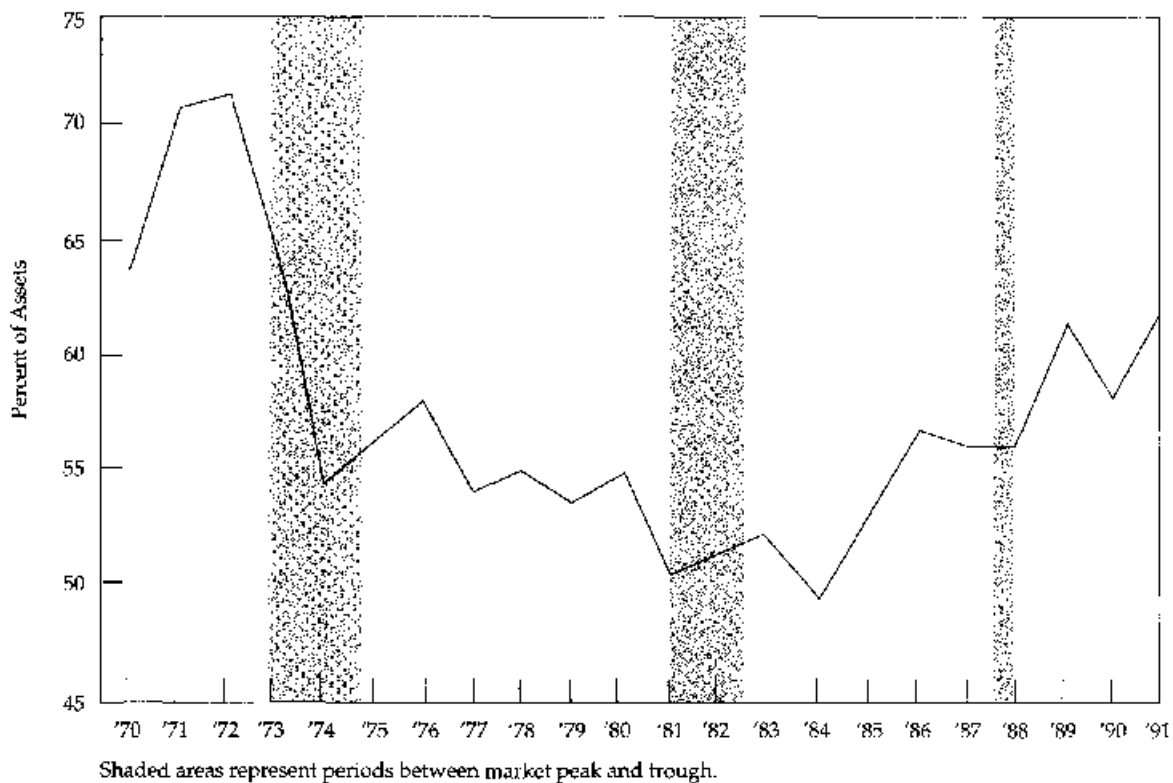
¹¹R. Jeffrey, "The Folly of Stock Market Timing," *Harvard Business Review* (July/August 1984):102-10.

¹²Investment Company Institute research department.

¹³Investment Company Institute research department.

¹⁴Goldman Sachs & Co., "Equities: Supply and Demand," *Portfolio Strategy* (September 1991).

Figure 5. Equity Position of Corporate Pension Funds, 1970–91



Source: Goldman, Sachs & Co., "Equities: Supply and Demand," *Portfolio Strategy* (September 1991).

begins with strategic asset allocation—perhaps the most important decision that an investor can make. Indeed, Brinson, Hood, and Beebower demonstrated that fully 93.6 percent of the average pension fund's long-term return was based on its strategic investment policy, with market-timing accounting for 1.7 percent and stock selection for 4.2 percent; the remaining 0.5 percent could not be accounted for.¹⁵ In short, the predominant determinant of investment

return is the strategic allocation of assets among stocks, bonds, and cash reserves, in a configuration that reflects each particular investor's preference for potential reward and tolerance for potential risk.

The "portfolio" comprising all U.S. financial market assets currently totals about \$12.2 trillion (exclusive of private companies, global securities markets, and real estate). Table 3 shows the breakdown. Clearly, the completely risk-averse (risk here defined as short-term price volatility) investor might place 100 percent of holdings in cash. In contrast, the optimist—with a long-term horizon and with no foreseeable need for liquidity—might place 100 percent of his assets in stocks.

The asset configuration of the financial markets in aggregate, of course, subsumes a variety of investors with particular needs—for example, transaction accounts of individuals requiring ready cash and bonds held by insurance companies with clearly defined long-term liabilities. For simplicity, I will focus on individual investors and institutional investors such as pension and endowment funds. In both categories, the time horizon for investing is assumed to be in the 10- to 30-year range. It has become part of the lore that, for such investors, the best balance should center on something like 60 percent stocks, 30

¹⁵G. Brinson, R. Hood, and C. Beebower, "Determinants of Portfolio Performance," *Financial Analysts Journal* (July/August 1986):39–44.

Table 3. U.S. Financial Markets, 1991

Instrument	\$Trillions	% of Total
Equities	\$4.5	37%
Long-term debt		
U.S. Treasury	2.4	20%
Corporate	1.7	14
Municipal	0.9	7
Mortgage pools	1.1	9
Total	6.1	50
Short-term debt	1.6	13
Total	\$12.2	100%

Source: The Vanguard Group fixed-income department.

Table 4. Returns on U.S. Stocks and Treasury Bonds, 1802–1990

	Stock Returns		Treasury Bond Returns	
	Nominal	Real	Nominal	Real
1802–1870	5.8%	5.7%	5.0%	4.9%
1871–1925	7.4	6.8	4.5	3.9
1926–1990	9.8	6.4	4.6	1.2
1802–1990	7.6	6.2	4.7	3.3

Sources: G. Schwert, "Indexes of U.S. Stock Prices from 1802 to 1987," *Journal of Business* (July 1990):399–426. J. Siegel, "Historical Returns: The Case for Equity," Rodney L. White Center for Financial Research Working Paper (October 1991).

percent bonds, and 10 percent reserves, with variations around these levels based on risk preference. Curiously, I have been unable to find any statistical studies that support such a balance as "optimum." So I can only suppose that it is based largely on common stocks providing greater returns than bonds or cash over extended periods of time—modified by the fact that, in shorter periods, stocks carry a significant risk of underperformance as well as substantially higher volatility.

So exactly how long must long term be to provide reliable data? Jeremy Siegel has done a remarkable study calculating Treasury bond returns and linking historical stock return data calculated by others to provide statistical series going back to 1802.¹⁶ As Table 4 shows, real returns on stocks proved to be comparable in each of three extended periods. The return data provided by G. William Schwert¹⁷ for 1802–70 largely echoed the results of the more rigorous statistical data of the Cowles Commission for 1871–1925 and the still more reliable data provided by the Center for Research in Security Prices (CRSP) for 1926 to the present. (The CRSP data reflect annual returns about 0.3 percent below that of the S&P 500 Stock Index, which I regard as the most reliable indicator of the returns on the stocks of large companies.) The major deviation from the norm during these three eras was the shortfall in the real returns on Treasury bonds during the 1926–90 period relative to the earlier periods.

If the returns shown in Table 4 had been compounded for the full period, based on an initial investment of \$10,000, the nominal terminal values for stocks would have been \$10.3 billion and for Treas-

¹⁶J. Siegel, "Historical Returns: The Case for Equity," Rodney L. White Center for Financial Research Working Paper (October 1991).

¹⁷G. Schwert, "Indexes of U.S. Stock Prices from 1802 to 1987," *Journal of Business* (July 1990):399–426.

Table 5. Stock Matrix for the 1990s, Projected Annual Total Returns

Price–Earnings Ratio	Earnings Growth Rate			
	4.0	6.0	8.0	10.0
10	2.7%	4.5%	6.5%	8.4%
14	6.1	8.0	10.0	12.0
18	8.7	10.7	12.7	14.8
22	10.8	12.9	15.0	17.1

Source: J. Bogle, "Investing in the 1990s: Remembrance of Things Past and Things Yet to Come," *The Journal of Portfolio Management* (Spring 1991):5–14.

Note: Assumed initial yield = 3.1 percent; assumed initial price–earnings ratio = 15.5X.

sure bonds, \$60.7 million. In Figure 6, the "magic of compounding" is in evidence, at least for an investor with a time horizon of 189 years! This is truly long-term investing of Methuselah proportions.

Most of us have time horizons of considerably shorter duration. As human beings, we have hopes and fears that color our strategic choices, and we have to make judgments as to the best investment decisions for our own circumstances or for the institutions we represent. We also know that we live in an imperfect world, in which the past is not always a prologue. Nevertheless, in at least two areas, an investor should carefully consider the relevance of the historical data on long-term returns. The first relates to an abuse of past returns; the second relates to the existence of cyclical periods of extended length in which stocks provide "expected" returns and other extended periods in which they provide "unexpected" returns.

The first issue regards the use of past data that is largely irrelevant to substantiate present decisions that will determine future performance. The most obvious current example is the dichotomy between bond and stock returns in the post-World War II era and the likely returns on both in the future. Figure 7, for example, shows typical (but hypothetical) data discouraging investment in bonds. It rests its negative case essentially on the fact that between 1949 and 1989, long-term bonds provided returns averaging 4.8 percent annually (standard deviation 10.0 percent), while stocks provided an average return of 12.5 percent (standard deviation 16.9 percent).

This evidence is as perilous as it is precise, however. The 1949–89 era covers four decades in which, on average, stocks began with a dividend yield of 4.6 percent and enjoyed annual earnings growth of 5.9 percent. An additional annual increment of about 2.0 percent was contributed largely by an average expansion in the price–earnings multiple from 12 times to 14 times. Stocks began the 1990s, however,

Table 6. Bond Matrix for the 1990s, Projected Annual Total Returns

Terminal Yield	Reinvestment Rate				
	4.0	6.0	8.0	10.0	12.0
14%	5.2%	5.8%	6.5%	7.3%	8.1%
12	6.0	6.6	7.3	8.0	8.8
10	6.9	7.5	8.2	8.7	9.7
8	7.8	8.5	9.3	9.9	10.6
6	8.9	10.0	10.2	10.9	11.7

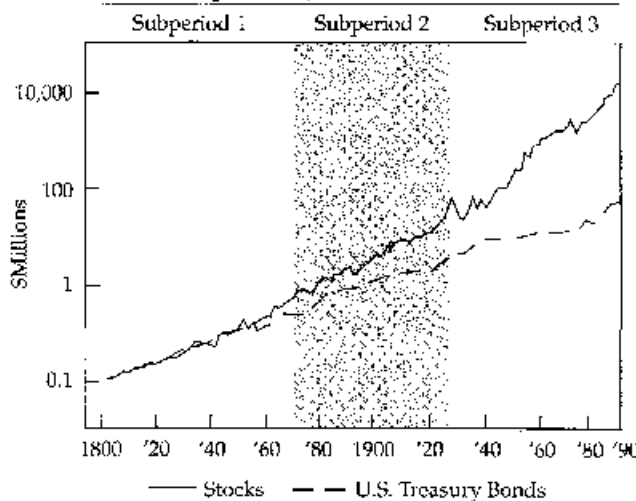
Source: J. Bogle, "Investing in the 1990s: Remembrance of Things Past and Things Yet to Come," *The Journal of Portfolio Management* (Spring 1991).

Note: Assumed initial coupon = 9 percent.

with a dividend yield of just 3.1 percent. Table 5 shows a matrix of the determinants of possible stock returns during the 1990s.¹⁸ This matrix presents possible combinations of price-earnings ratios and earnings growth rates. For example, if the earnings growth of stocks during the next decade is 6 percent—about the long-run average—then a higher multiple will be required to provide the remaining 3.4 percent so as to achieve a total return of 12.5 percent for the decade. Specifically, the market multiple would have to rise to nearly 22 times—more than half-again the long-term norm of 14 times—to provide such a return. Even an 8 percent earnings growth rate would require a price-earnings ratio of

¹⁸J. Bogle, "Investing in the 1990s: Remembrance of Things Past and Things Yet to Come," *The Journal of Portfolio Management* (Spring 1991):5-14.

Figure 6. Total Nominal Returns, U.S. Stocks and Treasury Bonds, 1802-1990



Sources: G. Schwert, "Indexes of U.S. Stock Prices from 1802 to 1987," *Journal of Business* (July 1990):399-426. J. Siegel, "Historical Returns: The Case for Equity," Rodney L. White Center for Financial Research Working Paper (October 1991).

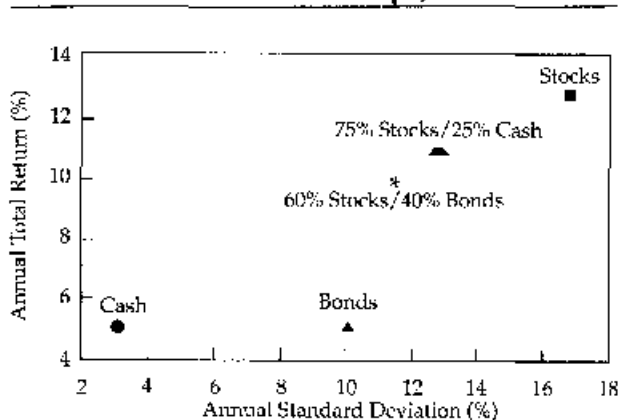
nearly 18 times. The realistic range for equity returns in the 1990s might center in the 8-11 percent range.

A comparable matrix for bonds is shown in Table 6. Bond returns began the 1990s with a 9 percent coupon (lower for U.S. Treasury bonds, higher for investment-grade corporate bonds). Thus, the 4.8 percent annual return achieved during the previous four decades could result, at the extreme, from a gradual decline in interest rates to 1 percent over five years, followed by a rise to 13 percent at the end of the decade. This illustration is so extreme that it does not even appear in Table 6. The "worst case" would seem to be a return of about 5.2 percent, assuming a much lower interest rate (4 percent) during the reinvestment period and a similar rate (14 percent) at the end of the decade. More realistically, the center of the matrix suggests returns in the 7-10 percent range.

Obviously, many permutations and combinations create bond and stock returns over the long term. To forecast future interest rates of 2 percent or 14 percent, however, or earnings growth rates and price-earnings ratios in excess of long-term norms, seems to be "beyond the pale" of rational expectations. In short, historical evidence cannot always be expected to be repeated in the years ahead. Rational expectations, then, cannot be ignored in setting the strategic asset balance of an investment account, and present market valuation measures strongly suggest some tilt toward a larger bond allocation.

The second issue—the possibility of cyclical swings from expected equity returns to unexpected returns over long periods—is presented partly to make a serious point and partly just for fun. Figure 8 illustrates a subtle distinction in the stock market's returns over time. Simply put, the 1949-90 period reflects what I would characterize as "normal" equity markets. In each rolling decade, actual 10-

Figure 7. Historical Evidence Against Bonds, Risk/Return Relationships, 1949-89



Source: The Vanguard Group.

year returns have corresponded quite closely with forecast returns derived simply by beginning with the (known) entry dividend yield and then making the assumption that both the rate of earnings growth and the terminal price-earnings ratios would, in each decade, regress to the mean of their past long-term experience (based on data for the prior 30 years). Using these three components of market return (as in the stock matrix shown in Table 5) resulted in a correlation of 0.80 between forecast returns and the returns experienced.¹⁹ The same model would have added remarkably little value during the preceding period (1928-48), however, when the correlation between forecast and actual returns was but 0.21—better than flipping a coin, but not a lot better.

The interesting point is that, during the past 42 years—a period that encompasses the data for many statistical studies of market returns—stock prices have performed according to rational expectations, largely because earnings growth and price-earnings ratios behaved in a manner consistent with their past performance. Regression to the mean is alive and well. In the earlier 21 years, however, earnings patterns were abnormal, plummeting during the Great Depression and again in 1938, only to enjoy a steady flow of “hyperincreases” immediately following World War II. So the thoughtful investor’s strategic asset allocation today should not depend solely upon historical returns developed in the “normal” markets we have experienced since 1949. Rather, they should consider whether the post-World War II period truly introduced a sea change to an investment environment that will continue to be relatively predictable. If it is not, that would imply some specific event risk that in turn would suggest a below-normal allocation to stocks.

Have I now edged the investor into that “no-no” of market-timing? To a degree, perhaps so, for I am establishing a hypothesis that, under today’s circumstances, the past cannot reasonably be prologue if we are moving from an era of relative predictability for stock returns to an era of surprise. Of course, each investor who tilts toward bonds must inevitably be offset by another investor with a higher allocation to stocks. Investors who use careful judgment in determining their asset allocations may well be able to win at the margin. That said, of course, the investor who accepts my hypothesis is taking a lot on faith—not usually a wise thing to do in the financial markets. Thus, recognizing the human fallibility that we all share, changes in strategic asset allocation should be marginal. A 10 to 20 percentage point reduction in

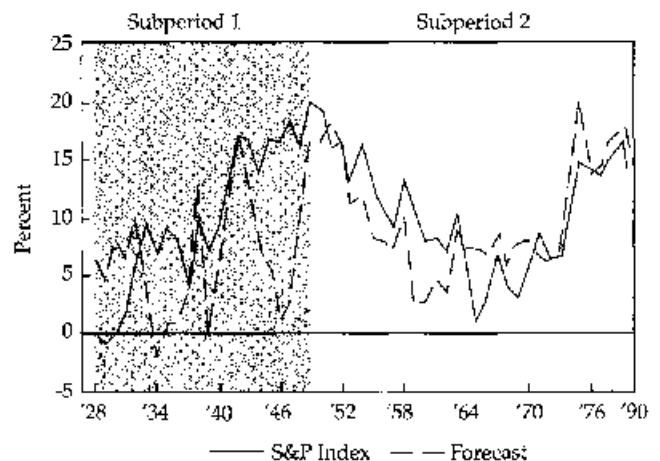
equity exposure (for example, from 65 percent to 55 percent or 45 percent) would currently be expected to carry a significant reduction in risk, along with a commensurate sacrifice in return. Or would it?

More Return with Less Risk?

Returning to the two syllogisms presented in the outset, for investors as a group: (1) Net returns from passive equity investing must exceed net returns from active equity investing, and (2) net returns from a fixed strategic allocation of assets must exceed those achieved from market timing strategies. We will now consider how passive investors as a group can automatically and surely earn a higher net return than active investors, even while assuming lower risk.

Simplistically put, accept the 1802-1990 statistics, despite their weaknesses, that set nominal stock returns at an annual rate of 7.6 percent and nominal bond returns at a rate of 4.7 percent. Because the earlier analysis indicated that future returns on bonds may increase relative to returns on stocks, this could be considered a worst-case scenario. Assume further, conservatively, that an active investor incurs excess annual costs of 1.0 percent from advisory fees and portfolio turnover. Table 7 shows what two contrasting portfolios look like. Annual costs are assumed to be 1.2 percent for active investors and 0.2 percent for passive investors. In this example, the reduction in risk is self-evident, from 60 percent of net assets in stocks to 40 percent and a standard deviation that is 20 percent lower. Still, by reason of the cost advantage of passive investing, the lower

Figure 8. Returns on Common Stocks, S&P 500 Index and Forecast, 1928-90



Source: J. Bogle, “Investing in the 1990s: Occam’s Razor Revisited,” *The Journal of Portfolio Management* (Fall 1991):88-91.

¹⁹ J. Bogle, “Investing in the 1990s: Occam’s Razor Revisited,” *The Journal of Portfolio Management* (Fall 1991):88-91.

risk portfolio provides the higher real net return—4.4 percent as opposed to 3.9 percent. This thesis is worth considering.

Thus, we complete our long march through the underlying principles of long-term investing in an era of efficient capital markets. For two decades or more, investment managers have been challenged by the complex equations and proofs of efficient markets and modern portfolio theory. We now know that they work in practice as well. Nonetheless, despite the congruence of theory and practice in highly efficient financial markets as a whole, inevitably some investors will gain excess risk-adjusted returns by the exercise of intellect, wisdom, and insight. Others—far larger in number—will achieve excess returns by virtue of good luck. Only 1 of every 8 investors, however, will toss a coin and have heads come up 3 times in a row, and only 1 in 1,000 will produce heads 10 consecutive times. So the odds against superiority are compelling, and the odds against “Golconda” overpowering. In each case, of course, every winner is offset by a loser, and all will balance out evenly—until the house demands its take.

The odds against good luck are known. The odds against skill are not—although, as the financial markets become ever more efficient (as they have in the past and almost surely will in the future), the odds become increasingly long that “material” out-

Table 7. Risk–Return Comparison: Hypothetical Active and Passive Portfolios

Item	Active Investor 60% Stocks/ 40% Bonds	Passive Investor 40% Stocks/ 60% Bonds
Gross nominal return	6.4%	5.9%
Less cost	<u>-1.2</u>	<u>-0.2</u>
Net nominal return	5.2	5.7
Less inflation rate	<u>-1.3</u>	<u>-1.3</u>
Net real return	3.9	4.4
Risk (standard deviation)	15.3	12.0

Source: The Vanguard Group.

performance can be achieved. For as efficiency increases, the ability of any one investor to outperform all investors by a wide margin is commensurately decreased—one more regression to the mean. Nevertheless, I simply cannot accept a system in which no bets are taken by intelligent investors willing not only to live by the lessons of past financial history but also to adapt these lessons to present circumstances and potential hazards—and to make marginal, not sweeping, changes in their asset allocation. In any event, as Table 7 indicates, investors with long-term time horizons who are willing to take maximum advantage of efficient capital markets can indeed enjoy that *summum bonum* of investing—greater return accompanied by lower risk.

Question and Answer Session

John C. Bogle, Sr.

John C. Bogle, Jr., CFA

Question: In your own terms, please define long-term investing.

Bogle Jr.: Long-term investing is committing capital to the market and then constantly reallocating that capital to firms with improving abilities to employ it and away from firms that do not have as good an ability to employ it. This definition contradicts the notion of value investing. Value investors seek to earn returns from the market, but they tend to buy stocks that have degenerating prospects for employing capital. General Motors and Ford are considered cheap stocks today. I would be hard-pressed to be convinced that those companies, even though they are probably held in a disproportionate number of value managers' portfolios, will have an improving capacity to employ capital during the next five years. Value investors are less likely to own a stock such as Gap Stores, a company that is likely to employ capital quite effectively in coming years.

Bogle Sr.: The long term is defined as something less than 189 years (as in the 1802–1991 period I covered) and something more like an investor's lifetime. I am speaking from the perspective of the client and not the marketplace or the short-term trading perspective. Long-term investors invest for the truly long term. They should set their strategic asset allocations and invest that way throughout the rest of their lives. The allocation might have more stocks early in the investor's life and more bonds when the investor reaches retirement age. Other than that, true long-term in-

vestors do not need performance reports and may not need managers. They just need to invest in a couple of bond and stock index funds and ride out the painful periods that will surely come along.

Question: Your son suggests that information is captured faster and analyzed better than it was several years ago. Do you think this has changed the definition of long-term investing?

Bogle Sr.: I think his point is that we are not really talking about a definition of long-term investing as such, but a definition of long-term market efficiency. The faster adjustment of prices is good for the market. It creates liquidity and better prices, and it makes the existence of truly long-term investors easier. So I do not see any dichotomy.

Question: Why is short selling good for the capital markets?

Bogle Jr.: We advocate short selling because our primary objective is to deliver an excess return to our clients, not to make the capital markets more efficient. We believe that short selling enhances our ability to do that. A byproduct of this activity is a more efficient market, which is generally believed to be beneficial to liquidity and capital reallocation from investors to capital employers.

Question: How do your quantitative techniques detect the difference between information and noise?

Bogle Jr.: Noise is the random,

or informationless, movement of security prices; information can be thought of as the ability consistently to identify the difference between price movements caused by noise and price movements caused by changing fundamentals. Noise creates opportunities to earn excess return; information does not.

Our models do not attempt to distinguish between noise and information. As active managers, we must always assume that we have information and that the rest of the market does not. We believe that we have well-formulated, comprehensive strategies, and we respond to our models' signals. If our models tell us to buy a stock, and the stock is down \$3 on the day, I worry that I may be interpreting someone else's information as noise. I wonder why the seller is willing to transact at such a depressed price, but I buy the stock anyway. I may be wrong on any individual transaction, but I am right on average. The key to successful active management is maintaining a disciplined, systematic investment strategy and being right more often than being wrong.

Question: You have been a strong advocate of the notion that good performance often leads to bad performance and that styles have cycles. How do you convince your shareholders of this when studies show that most people who buy mutual funds like good performance?

Bogle Sr.: Too many mutual funds pander to the public taste. I see many "We're Number One!" advertisements in the *Wall Street*

Journal and *New York Times*, but most of those funds will never repeat as number one again. The remedy for the mutual fund shareholder is honesty and good communication. Investors should be informed of the risks. They should be informed that the good records of the past may not be repeated in the future, particularly the near future. The disclosure burden on the fund manager is large.

Question: What is risk, and how do we identify it to people who buy investment products?

Bogle Sr.: No one knows precisely what risk is, so we use volatility of return—usually measured by beta, quarterly returns that fall short of Treasury bills, or standard deviation. But those concepts are probably not risk as investors see it. For example, take an investor who buys a 10-year Treasury bond with an 8 percent coupon. He gets his money back at the end of 10 years and gets a 4 percent coupon twice a year for 10 years. He does not think he is taking any risk. The bond may have a standard deviation of 6.0, compared with, say, 21.0 for a stock portfolio, but it does carry some risk.

Because we do not really know what risk is, managers try to find a proxy for it. For example, is the fund more or less volatile than a benchmark? Today, risk measurement appears to have become more of a science because it is more easily quantified. Risk models can measure quite precisely the kind of biases, factor bets, and risk posi-

tions that portfolios are taking.

Question: The non-U.S. markets appear to be more inefficient than the U.S. markets. Assuming that an investor believes that the short-selling market is efficient or does not want to sell short, would it be wise for this investor to put money abroad and to what extent?

Bogle Sr.: Clearly, the foreign markets are less efficient. Equally clearly, the transaction costs in foreign markets are much higher than those in the United States. It follows that the inefficiency would be difficult to capture. Many U.S. investors have gone overboard in moving toward foreign markets. The foreign markets carry a huge risk—currency risk—that need not be taken. Currency return accounted for the entire excess return in foreign markets during the past 10 years. Investors might take this risk for 10 or 15 percent of their equity position, but to have 60 percent of their equity position in corporations outside the United States (as does the World Index) is somewhat insane.

Question: If you were investing in Numeric's long/short portfolio, would you want a straight fee or an incentive fee?

Bogle Jr.: If structured well, performance fees should have little bearing on the holding period, long or short term. They should be structured to measure performance over a market cycle or, ideally, over the manager's style cycle—typically not less than

three-year rolling periods. Careful consideration should also be given to identifying the appropriate bogey; you would not want to measure a small-capitalization stock specialist against the S&P 500. If structured poorly, performance fees can create a short-term orientation by encouraging a manager to styles in search of short-term performance, which is likely to be precisely the wrong time to make such a shift.

Sponsors have yet to broadly embrace performance fees. Typical arguments against them are (1) the difficulty of coming up with a proper benchmark, (2) the tendency to encourage a manager to be inappropriately risk averse or risk taking to game the fee, and (3) sponsors' belief that they can identify managers who will beat the benchmarks. (Why should they compensate the managers more highly if they are right?)

Question: Are incentive fees good for long-term investing?

Bogle Sr.: We may have invented the incentive fee 30 years ago, but I have no particular pride in that. An incentive fee is unlikely to lead to improved future performance. If it did, everybody would have incentive fees. On the other hand, I do not see anything bad about a properly structured incentive fee. It gives the client the opportunity to pay the manager that does well more money. The incentive fee is an economic trade-off that in itself creates nothing.

Is a Long-Term Time Frame For Investing Affordable or Even Relevant?

John C. Bogle, Jr., CFA
Managing Director
Numeric Investors L.P.

In spite of the fact that U.S. capital markets are becoming increasingly efficient, imperfections persist. Investment managers can deliver excess returns—and provide long-term capital to the market—by using strategies designed to exploit these inefficiencies. Three of these are the earnings estimate-revisions, noise-capture, and the short-term mean-reversion strategies.

More than 100 years ago, Henry Wadsworth Longfellow wrote that “All things come round to him who will but wait.” Longfellow’s words seem appropriate in describing the subject of this conference. The notion of long-term, value-oriented investing is typified by waiting for the market to recognize the hidden beauty that the astute investor has already identified. But does such wisdom apply in today’s increasingly complex and competitive financial markets, which are driven by sophisticated quantitative techniques? Also, can long-term investors justify using short-term strategies?

Increasing Market Efficiency

The notion that the U.S. capital markets are becoming increasingly efficient is not particularly controversial. More quants are entering the fray with each tick of the market, emulating the strategies published by academics and practitioners seeking fame or fortune or both. Not only are we operating in efficient capital markets, we are operating in an efficient industry. Information about stock selection strategies travels almost as fast as information about the securities to which these models are being applied.

Ever-expanding data bases of corporate fundamentals allow anyone with soft or hard dollars to try his or her hand at creating new investment methods or improving upon those discovered by others. Technological advances allow backtests to be conducted in minutes; 20 years ago, such simulations would have been extremely arduous, if not impossible, because of insufficient data.

Electronic data feeds, such as First Call (a real-time network that distributes sell-side analysts’ research reports), allow information to be disseminated at speeds beginning to approach the pace assumed by efficient market theoreticians. Faster and more complete information flows and more sophisticated analytical software to interpret these data permit financial analysts to evaluate more securities faster and more completely than anyone ever thought possible.

This flow of information is also being used by investment advisors in many different ways—all of which are designed to beat the market. We have asset allocators; style, sector, or factor rotators; and of course, stock pickers. The market seems to have cornered each of the different forces that has an impact on portfolio return versus the market.

That the markets are becoming more competitive should be no surprise. More than 200 years ago, Adam Smith suggested in *The Wealth of Nations* that markets are driven by individuals acting in their own self-interest, competing with one another to the betterment of the market. Smith suggests that market participants, by pursuing their own interests, frequently promote the interests of society more effectively than when they really intend to do so. “I have never known much good done by those who affect to trade for the public good,” said Smith. These notions of self-interest and competition are evidenced clearly in today’s capital markets. We cannot change them, and it is wrong to try.

As in any other battle, however, casualties are bound to occur. In this case, the casualty is the

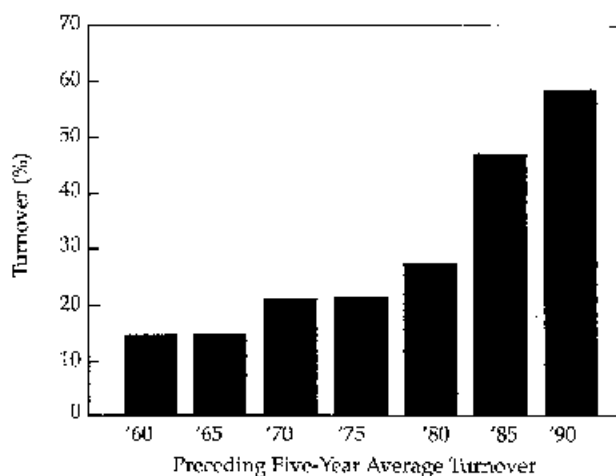
individual investor, who has been put at an increasing disadvantage because of the cost of the systems needed to compete and the time required to monitor the constant flow of information. As a result, individuals have had to subcontract their investing to the institutions.

Persisting Inefficiencies

This intensifying competition and enhanced flow of information does not mean that all investors must wave the white flag and index. The market is still sufficiently distant from that perfectly efficient, well-oiled mechanism that academics claim it is. It has its share of inefficiencies and squeaks, and investment managers can still deliver excess return by using careful, disciplined strategies exploiting these imperfections. That many of these strategies involve shorter holding periods is irrelevant; active managers must tailor their craft to what the market will return, as determined by competitive forces.

One indication of intensifying competition can be seen in Figure 1, which shows five-year average turnover on the New York Stock Exchange. As evidenced by this growth in turnover, it is fair to assume that more cowboys are out there pulling triggers. What is not clear is whether they are hitting their targets. This is the important distinction Fischer Black makes between noise and information trading: Noise is created by informationless trading. Many sources of noise still exist, including tax-loss selling, cash-flow-related buying and selling by index funds or index arbitrage, and outright errors made by other active managers. Inefficiencies are often born of such noise.

Figure 1. New York Stock Exchange Share Turnover, 1960-90



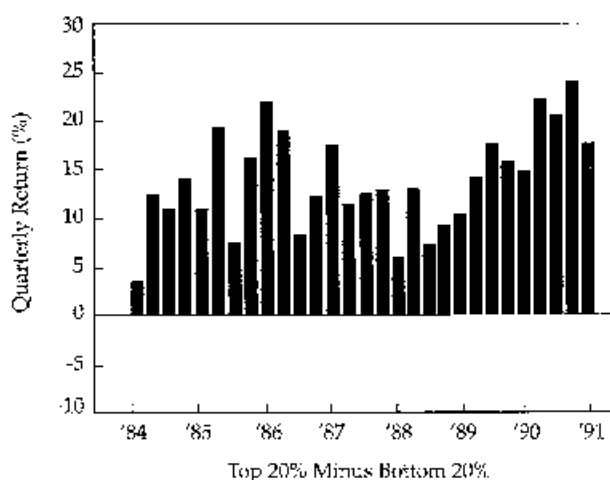
Source: New York Stock Exchange.

The opportunity to earn excess returns from noise relates largely to the idea that such trading causes temporary mispricing of securities. After the noise has abated, these prices tend to revert to the prior equilibrium level, or mean. This mean reversion occurs on both a long- and a short-term basis. The investment strategy that seeks to provide excess return over the longer holding period can be characterized as value investing. This is the strategy most quants have practiced: Create some measure of fair value, compare it with stocks' actual prices, and rank the stocks on the basis of percentage difference between the theoretical price and the actual price. This strategy has many advocates because it is easy to follow, is intuitively appealing, and has worked in the past. These same factors may be contributing to its recent ineffectiveness.

Another factor limiting the efficiency of the equity markets is just the opposite of noise; it could be termed silence. I define this term as any conscious nonaction in response to adverse changes in security fundamentals. Examples would include index funds, which do not trade the underlying securities on the basis of changing fundamentals; taxable investors who might wait to sell a security to defer capital gain into the next tax year; active managers whose particular investment style constrains their trading to a particular group of stocks; and investors who are prohibited from or ignorant of short selling. That Peter Lynch and John Neff cannot sell short a security they see as overpriced creates opportunity for those investors who can.

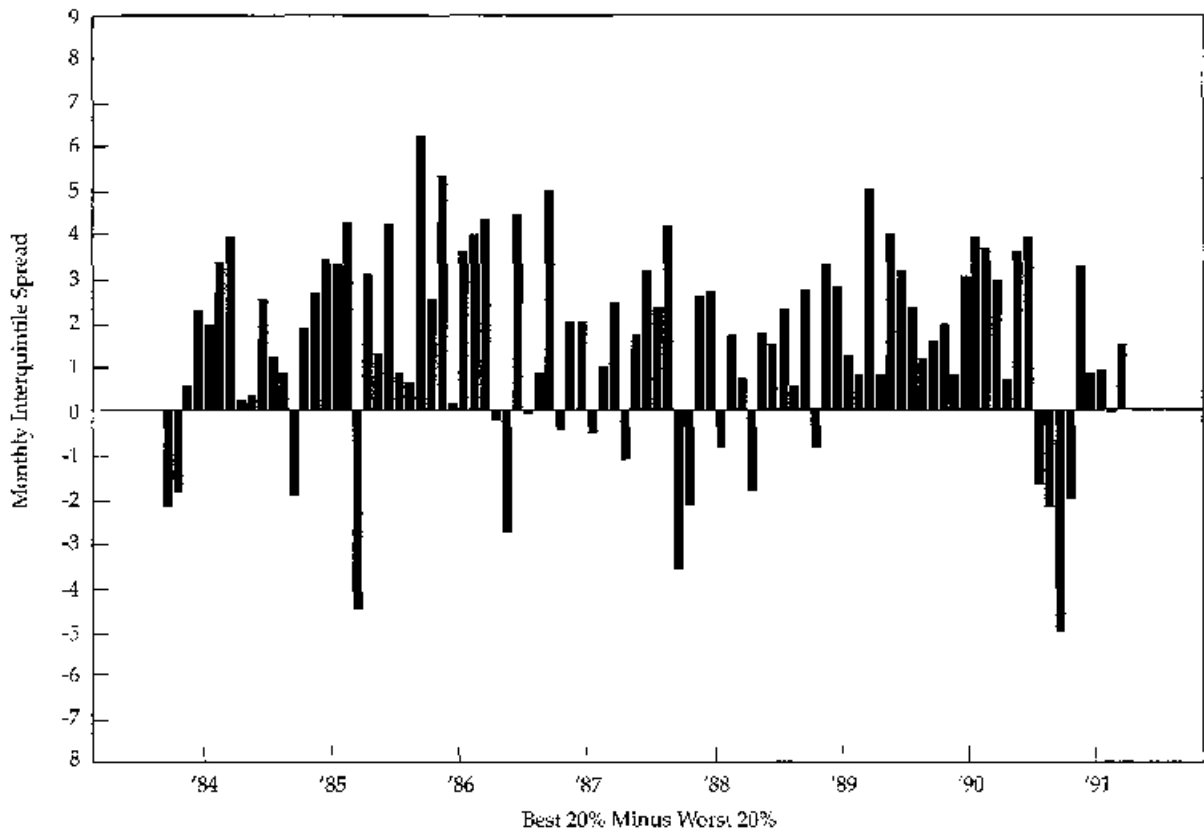
A basic question is why capital markets exist and how short-term strategies interact with these markets. Theory professes that capital markets exist to

Figure 2. Impact of Estimate Revisions on Returns, 1984-91



Source: Numeric Investors L.P.

Figure 3. Estimate-Revisions Model, 1984-91



Source: Numeric Investors L.P.

facilitate the transfer of capital from providers to users. Given that the volume of new equity being issued on any specific trading day is dwarfed by the total volume of shares traded, the primary function of the market seems to be the reallocation of capital. Each day, capital moves away from those firms that the market believes have a deteriorating ability to employ capital successfully to those firms that the market believes have an improving capacity for employing capital effectively.

Long- and short-term strategies both commit capital to the market for long periods of time. The only difference between them is that long-term strategies commit capital to a single firm for a longer period of time and short-term strategies frequently reallocate capital as these strategies reassess the changing ability of firms to employ capital.

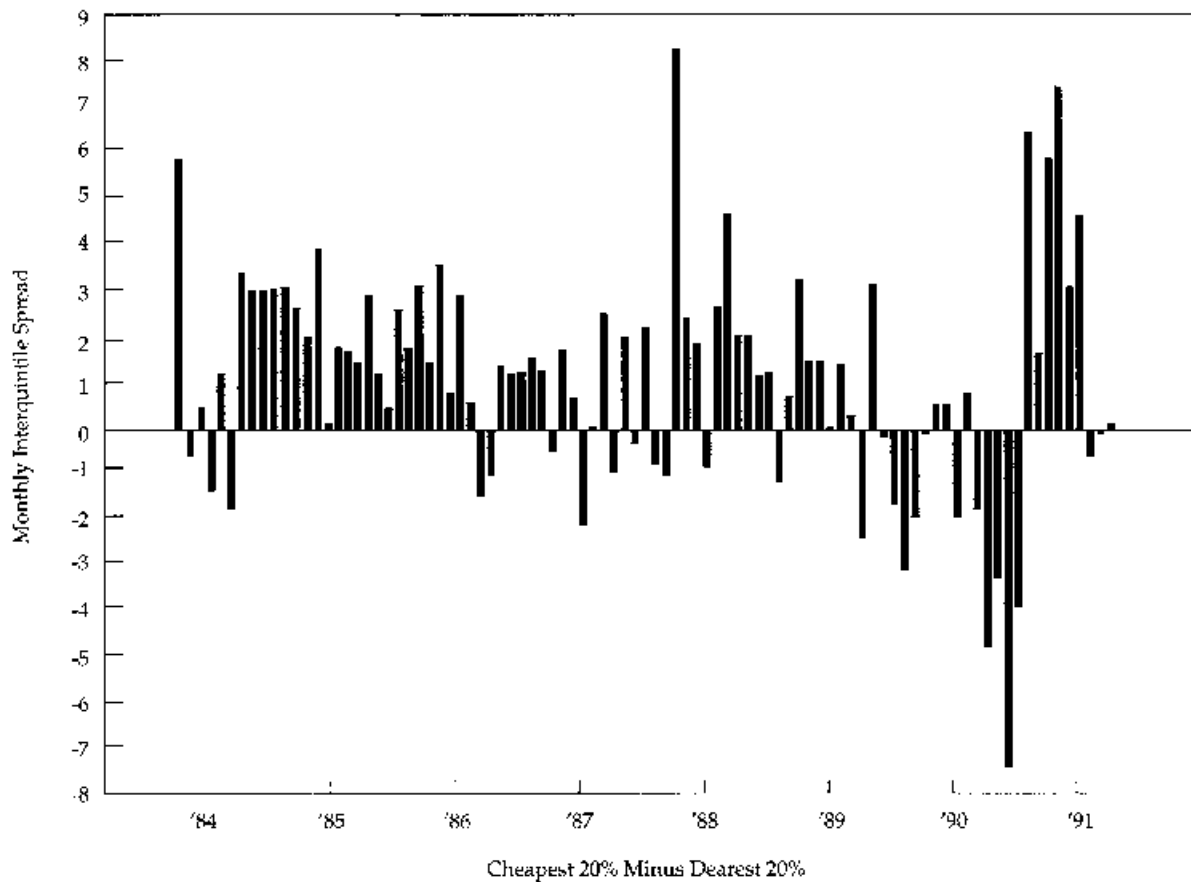
Financial theory also tells us that a company should be priced according to the discounted value of its expected future cash flows. This evaluation is driven primarily by the outlook for the firm's future earnings. The market's assessment of each firm's prospects is based largely on earnings expectations forecasts by security analysts. This phenomenon is demonstrated in Figure 2, which shows the impact

that changing earnings expectations had on security prices in the 1984-91 period. The figure shows that in every quarter, the market rewarded stocks with improving earnings prospects and penalized those with worsening prospects. More than half of all relative price changes are explained by changing earnings expectations. This is the market mechanism at work.

Relevant in this context is the proposal before Congress to lengthen the required frequency of financial reporting by publicly held companies from quarterly to annually. Such a change would have an adverse effect on the efficiency of markets by reducing the availability of information critical to the price discovery process. Stock prices would decline because of an increase in uncertainty about corporate fundamentals, and fraud and abuse would be likely to increase.

Active managers try to identify where the market has made a mistake in pricing, where the consensus has ignored some important facts, and where the market will be changing its assessments in the future. This task is not as easily accomplished today as it was in the past, but the use of some simple strategies can lead to excess return.

Figure 4. Noise-Capture Model, 1984-91



Source: Numeric Investors L.P.

Stock Selection Strategies

Figure 2 implies that the ability to forecast where expectations are going to change in the future will provide superior returns. Certain stock selection strategies are designed to exploit that phenomenon. Three of these are the earnings estimate-revisions, noise-capture, and the short-term mean-reversion strategies.

§ The *earnings estimate-revisions strategy* exploits the tendency of sell-side security analysts to make revisions to their earnings forecasts on the companies they follow in small, frequent increments over time, rather than all at once. Because these revisions are autocorrelated, future revisions can be predicted by measuring past revisions.

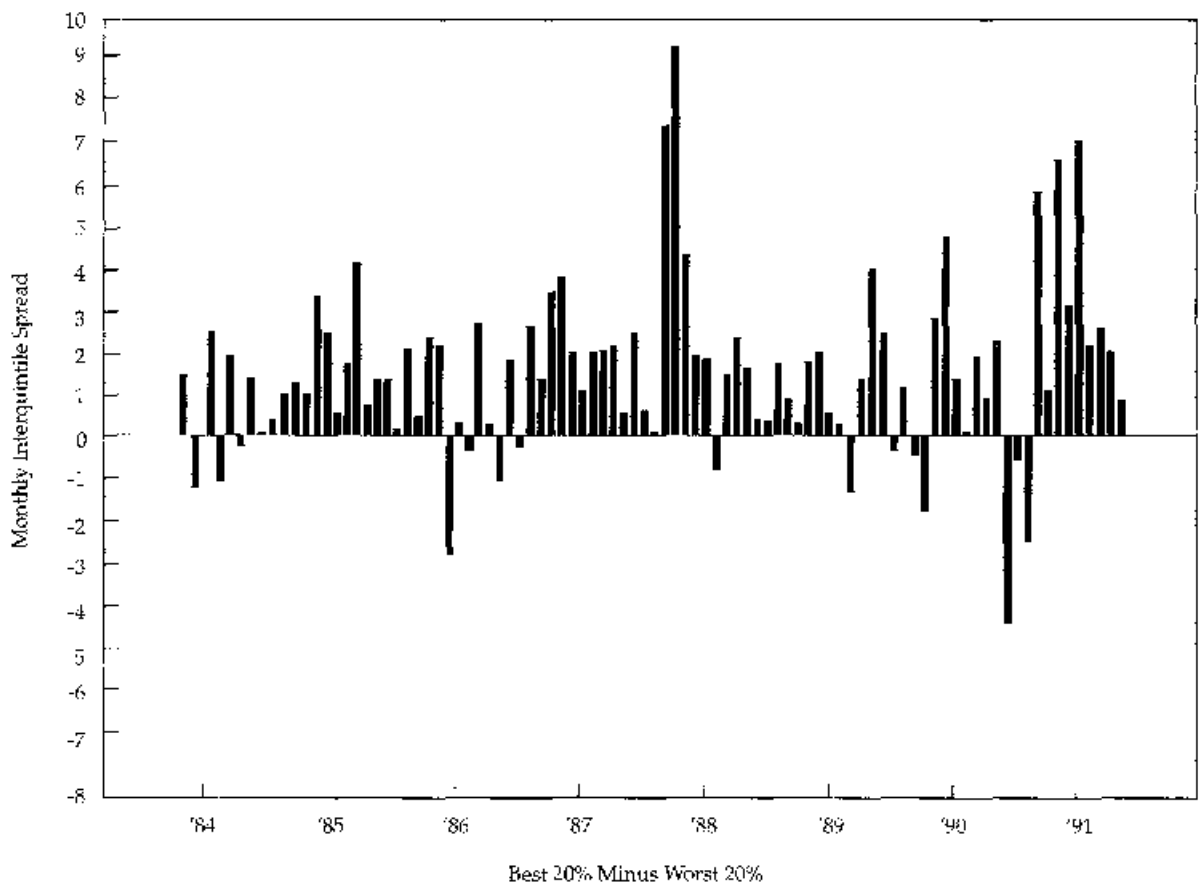
This strategy can be simulated on a monthly basis by identifying for each company the average earnings forecast for each of the previous four months. These are then ranked. The most attractive stocks are those that have had the greatest positive rates of change in their average earnings expecta-

tions; the least attractive are those with the greatest negative changes to earnings expectations. The theory is that the most positively rising estimates will continue to rise, and vice versa.

One of the metrics for identifying the efficacy of this strategy is the difference in returns to the top-ranked 20 percent of the stocks in comparison with the returns to the bottom-ranked 20 percent. Positive returns, or interquintile spreads, suggest that the earnings estimate strategy may be useful in stock selection. Simulation results, such as those illustrated in Figure 3, show the model to be effective in predicting relative price performance, with a mean monthly spread, or return, of 1.47 percent and a standard deviation of 2.22 percent.

§ The *noise-capture strategy*, illustrated by Figure 4, captures the value inefficiency created by noise. In this strategy, stock prices are regressed against several independent variables that influence security prices; these include expected earnings, growth rates, and book value. Each stock's theoretical price, derived from the regression equation, is then com-

Figure 5. Short-Term Mean Reversion Model, 1984–91



Source: Numeric Investors L.P.

pared with its actual price to establish the stock's relative rank. A stock with an actual price significantly lower than its theoretical price is considered cheap and is ranked more highly.

This strategy, with a 1.06 mean monthly return and a 2.47 standard deviation, also seems useful in stock selection. It is not as robust as the estimate revisions strategy, however. Its returns have been more episodic during the past three years, indicating, at least in part, increased efficiency with respect to this type of strategy.

☞ The third strategy is a *short-term mean-reversion strategy*. Figure 5 shows results for this strategy, which stems from supply and demand imbalances caused by motivated buyers and sellers reacting or overreacting to what they believe is important information about a particular security or group of securities. Their motivation to transact causes the price to move away from a short-term equilibrium level. When the trading pressure has abated, the price has a tendency to revert toward its prior level. This tendency can be simulated quite simply, so this is the easiest of the three strategies to replicate. The stocks are ranked on the basis of their price changes relative

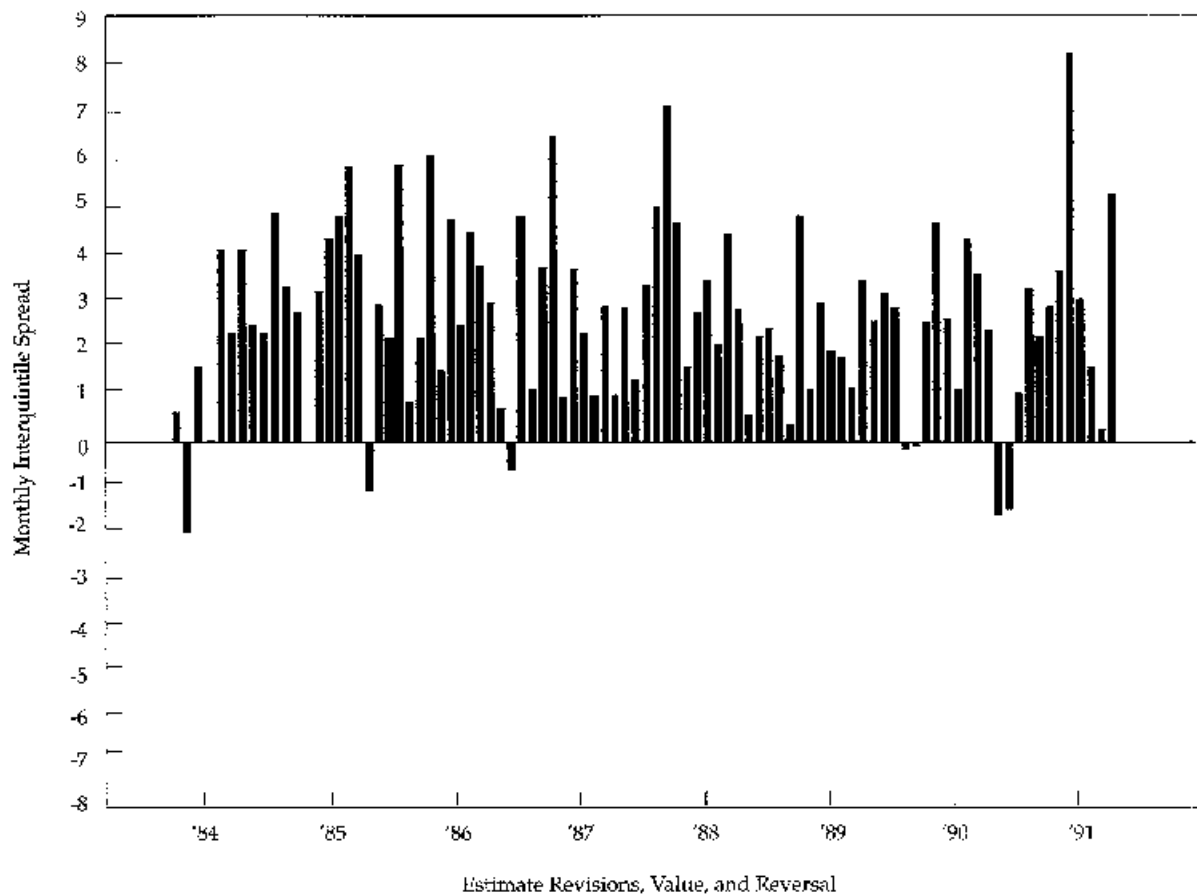
to the market during the past three days. The stocks ranked highest—that is, those that have had the greatest price decrease relative to the market—would be expected to give back some of that negative return during the next period.

This methodology seems to be quite robust, showing a mean monthly return of 1.6 percent and a standard deviation of only 2.1 percent. The strategy would be difficult to exploit, however, because the turnover it implies on a stand-alone basis would produce very high trading costs. This is probably one of the reasons this inefficiency persists.

Combined Strategies

The instability of some of these return strategies and the fact that competitive forces may make them less rewarding in the future may not be appealing to many investors. The poor returns to value strategies of late may be attributed to the fact that value is generally ignorant of changing fundamentals. To account for this and other deficiencies the individual models have, we combined these measures into a composite measure of stock attractiveness (see Fig-

Figure 6. Returns to Combination of Three Models, 1984-91



Source: Numeric Investors L.P.

Figure 6). Stability is enhanced the most by combining the strategies that have negatively correlated or uncorrelated return patterns. An example of this is demonstrated in Figure 7, which shows the returns to the value strategy plotted on the vertical axis and the returns to the estimate revisions strategy on the horizontal axis.

Value and estimate-revisions strategies are considered the yin and the yang of market psychology. Investors have a tendency to oscillate between hopes for the future, when estimate-revisions strategies are rewarding, and fears of overpricing, when value strategies tend to work much better. This trade-off is borne out statistically. The X coefficient, or beta, of the relationship between the payoffs for the two strategies is -0.54 , indicating that when one strategy is not working, it is entirely likely that the other one is. That is also evidenced by the fact that only a couple of observations are in the lower left quadrant, where both strategies returned a negative amount to the investor.

Combining all three of these strategies into a composite measure of attractiveness results in an

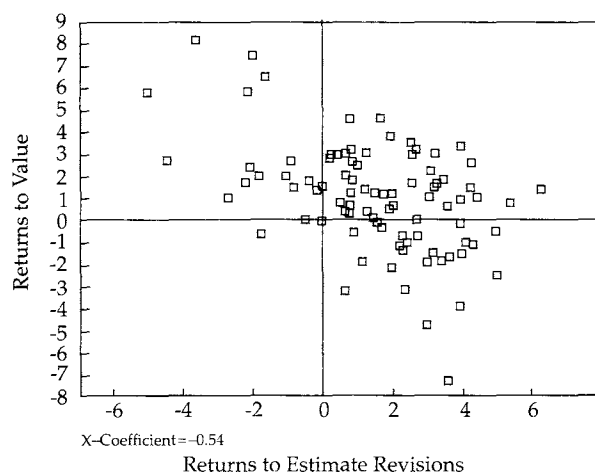
appealing stream of returns. The mean return is higher and the volatility lower than for any of the underlying models individually.

Limitations of Active Strategies

Although the generalities of these strategies are quite easy to replicate, three important caveats apply. First, although they worked in the past, they are not guaranteed to be effective in the future. Second, because active management is a zero-sum game, if one manager is earning excess returns from these strategies, then some other manager is losing. Third, the more investors that follow these strategies, the less effective they will be.

As competitive forces affect these excess returns, the only way for the strategies to be effective will be to use more sophisticated analytics and more rigorous implementation, providing faster response. Model performance can probably be improved with real-time price and research feeds, techniques that have made these strategies the ascendant technology in today's markets.

Figure 7. Correlation of Model Returns



Source: Numeric Investors L. P.

Also recognize that only a limited amount of capital can successfully exploit these opportunities. This limitation is part of the reason the inefficiencies exist. The large institutions cannot commit enough of their capital to such techniques to provide any worthwhile excess return. Consequently, our business and others like ours can only grow to a certain size before the game will not be worth playing any-

more. Institutions and active managers that attempt to grow their businesses to the sky with these kinds of strategies will end up with nothing more than an overpriced, underperforming index fund.

Conclusion

With strategies such as those described, quantitative researchers and practitioners have moved from the lunatic fringe into the mainstream. There is nothing heretical about the fact that these strategies result in shorter holding periods; they still provide long-term capital to the market. They seek only to capture excess return from the markets' small and infrequent errors. The important benefit they provide is to make the markets more efficient.

Investors have a choice. They can index or seek excess return. They index if they believe that the markets offer no opportunity for excess returns net of management fees and costs. They choose active management if they believe they can identify advisors who will be able to exploit the market's inefficiencies. Both strategies will always be needed, because the entire market cannot index and the entire market cannot outperform the index. Investors have the option, but they should not base their decisions on holding period. Both styles provide long-term capital to the economic system.

Question and Answer Session

John C. Bogle, Sr.

John C. Bogle, Jr., CFA

Question: In your own terms, please define long-term investing.

Bogle Jr.: Long-term investing is committing capital to the market and then constantly reallocating that capital to firms with improving abilities to employ it and away from firms that do not have as good an ability to employ it. This definition contradicts the notion of value investing. Value investors seek to earn returns from the market, but they tend to buy stocks that have degenerating prospects for employing capital. General Motors and Ford are considered cheap stocks today. I would be hard-pressed to be convinced that those companies, even though they are probably held in a disproportionate number of value managers' portfolios, will have an improving capacity to employ capital during the next five years. Value investors are less likely to own a stock such as Gap Stores, a company that is likely to employ capital quite effectively in coming years.

Bogle Sr.: The long term is defined as something less than 189 years (as in the 1802–1991 period I covered) and something more like an investor's lifetime. I am speaking from the perspective of the client and not the marketplace or the short-term trading perspective. Long-term investors invest for the truly long term. They should set their strategic asset allocations and invest that way throughout the rest of their lives. The allocation might have more stocks early in the investor's life and more bonds when the investor reaches retirement age. Other than that, true long-term in-

vestors do not need performance reports and may not need managers. They just need to invest in a couple of bond and stock index funds and ride out the painful periods that will surely come along.

Question: Your son suggests that information is captured faster and analyzed better than it was several years ago. Do you think this has changed the definition of long-term investing?

Bogle Sr.: I think his point is that we are not really talking about a definition of long-term investing as such, but a definition of long-term market efficiency. The faster adjustment of prices is good for the market. It creates liquidity and better prices, and it makes the existence of truly long-term investors easier. So I do not see any dichotomy.

Question: Why is short selling good for the capital markets?

Bogle Jr.: We advocate short selling because our primary objective is to deliver an excess return to our clients, not to make the capital markets more efficient. We believe that short selling enhances our ability to do that. A byproduct of this activity is a more efficient market, which is generally believed to be beneficial to liquidity and capital reallocation from investors to capital employers.

Question: How do your quantitative techniques detect the difference between information and noise?

Bogle Jr.: Noise is the random,

or informationless, movement of security prices; information can be thought of as the ability consistently to identify the difference between price movements caused by noise and price movements caused by changing fundamentals. Noise creates opportunities to earn excess return; information does not.

Our models do not attempt to distinguish between noise and information. As active managers, we must always assume that we have information and that the rest of the market does not. We believe that we have well-formulated, comprehensive strategies, and we respond to our models' signals. If our models tell us to buy a stock, and the stock is down \$3 on the day, I worry that I may be interpreting someone else's information as noise. I wonder why the seller is willing to transact at such a depressed price, but I buy the stock anyway. I may be wrong on any individual transaction, but I am right on average. The key to successful active management is maintaining a disciplined, systematic investment strategy and being right more often than being wrong.

Question: You have been a strong advocate of the notion that good performance often leads to bad performance and that styles have cycles. How do you convince your shareholders of this when studies show that most people who buy mutual funds like good performance?

Bogle Sr.: Too many mutual funds pander to the public taste. I see many "We're Number One!" advertisements in the *Wall Street*

Journal and *New York Times*, but most of those funds will never repeat as number one again. The remedy for the mutual fund shareholder is honesty and good communication. Investors should be informed of the risks. They should be informed that the good records of the past may not be repeated in the future, particularly the near future. The disclosure burden on the fund manager is large.

Question: What is risk, and how do we identify it to people who buy investment products?

Bogle Sr.: No one knows precisely what risk is, so we use volatility of return—usually measured by beta, quarterly returns that fall short of Treasury bills, or standard deviation. But those concepts are probably not risk as investors see it. For example, take an investor who buys a 10-year Treasury bond with an 8 percent coupon. He gets his money back at the end of 10 years and gets a 4 percent coupon twice a year for 10 years. He does not think he is taking any risk. The bond may have a standard deviation of 6.0, compared with, say, 21.0 for a stock portfolio, but it does carry some risk.

Because we do not really know what risk is, managers try to find a proxy for it. For example, is the fund more or less volatile than a benchmark? Today, risk measurement appears to have become more of a science because it is more easily quantified. Risk models can measure quite precisely the kind of biases, factor bets, and risk posi-

tions that portfolios are taking.

Question: The non-U.S. markets appear to be more inefficient than the U.S. markets. Assuming that an investor believes that the short-selling market is efficient or does not want to sell short, would it be wise for this investor to put money abroad and to what extent?

Bogle Sr.: Clearly, the foreign markets are less efficient. Equally clearly, the transaction costs in foreign markets are much higher than those in the United States. It follows that the inefficiency would be difficult to capture. Many U.S. investors have gone overboard in moving toward foreign markets. The foreign markets carry a huge risk—currency risk—that need not be taken. Currency return accounted for the entire excess return in foreign markets during the past 10 years. Investors might take this risk for 10 or 15 percent of their equity position, but to have 60 percent of their equity position in corporations outside the United States (as does the World Index) is somewhat insane.

Question: If you were investing in Numeric's long/short portfolio, would you want a straight fee or an incentive fee?

Bogle Jr.: If structured well, performance fees should have little bearing on the holding period, long or short term. They should be structured to measure performance over a market cycle or, ideally, over the manager's style cycle—typically not less than

three-year rolling periods. Careful consideration should also be given to identifying the appropriate bogey; you would not want to measure a small-capitalization stock specialist against the S&P 500. If structured poorly, performance fees can create a short-term orientation by encouraging a manager to styles in search of short-term performance, which is likely to be precisely the wrong time to make such a shift.

Sponsors have yet to broadly embrace performance fees. Typical arguments against them are (1) the difficulty of coming up with a proper benchmark, (2) the tendency to encourage a manager to be inappropriately risk averse or risk taking to game the fee, and (3) sponsors' belief that they can identify managers who will beat the benchmarks. (Why should they compensate the managers more highly if they are right?)

Question: Are incentive fees good for long-term investing?

Bogle Sr.: We may have invented the incentive fee 30 years ago, but I have no particular pride in that. An incentive fee is unlikely to lead to improved future performance. If it did, everybody would have incentive fees. On the other hand, I do not see anything bad about a properly structured incentive fee. It gives the client the opportunity to pay the manager that does well more money. The incentive fee is an economic trade-off that in itself creates nothing.

Protecting the Interests of Long-Term Investors

Elizabeth Holtzman
*Comptroller
City of New York*

The long-term approach New York City uses for its pension funds works best when corporate managers are held accountable to investors. So the city encourages corporations it deals with to place more independent directors on their governing boards.

I will discuss two topics: long-term investing and increased accountability. Long-term investing is the only approach that makes sense for pension funds, but the long-term approach can only work well if corporate managers are accountable to investors.

As New York City Comptroller, I am a trustee of four of the city's five funds—the Teachers' Retirement System, the New York City Employees' Retirement System, the Police Pension Fund, and the Fire Department Pension Fund. In addition, my office is investment advisor for these funds, as well as the assets of the fifth fund, the New York City Board of Education Retirement System. The five funds have total assets of more than \$40 billion.

I have worked to strengthen the funds' investment policies and to increase their diversification in several ways. Until late 1990, two of the funds were invested only in fixed-income assets. I successfully urged that those funds put half of their assets into stocks.

All public pension funds in New York state are limited to a list of investments specified by the state legislature. This year, we convinced the legislature to expand that list to include commingled funds and international investments. We also convinced it to increase the maximum proportion of a fund that can be invested in stock from 50 percent to 60 percent. We were not able to get private placements added to the list, but I hope that we will in the future.

I am also proud of our "emerging managers" program, a means for attracting smaller money management firms to work with the funds. A firm qualifies for this program if it manages at least \$20 million. Before this program, firms had to manage at least \$300 million to \$500 million to get business with

the New York City funds. Seven firms were given separate accounts of \$25 million to \$50 million to manage, including five firms owned by women or minorities. In addition, Progress Investment Management Company will run a \$50 million "Manager of Managers" program, which will include a number of woman- and minority-owned firms. This emerging managers program allows the funds to tap a larger and more diversified pool of talent.

Pension Funds and the Long-Term Perspective

Pension funds are a growing force in the market. During the past 40 years, the assets in pension funds have doubled every five years. Total pension assets are now about \$2.2 trillion. Forty years ago, pension funds owned 1 percent of all corporate stock and 13 percent of corporate bonds; in 1990, pension funds owned 23 percent of all stock and nearly half the stock in the companies in the S&P 500. Pension funds now hold more than half of all corporate bonds.

Individual funds have also become quite large. More than 30 funds have assets of \$10 billion or more, and more than 200 have at least \$1.5 billion in assets. When a fund is that big, it ends up owning at least a little of almost everything and quite a bit of some things. The New York City pension funds own stock in more than 2,000 companies. That means that their future is tied to the future of the American economy.

Long-term investing always made sense for pension funds because their obligations are long term. They have to provide retirement funds for employees in 20, 30, or 40 years. Matching long-term investments with long-term obligations is good investment strategy.

The large size of pension funds is another reason they should be long-term investors. When a fund has billions of dollars in assets, taking what is known as the "Wall Street walk" does not make much sense. Pension funds own most shares of the major corporations. If they all tried to move into and out of stocks based on the most recent quarterly earnings or the latest rumor on the financial wires, it is the funds themselves that would get hurt the most. You cannot sell that much stock without disrupting the market and possibly lowering the price of the stock, at least temporarily.

As a fiduciary, my duty is to get the best returns for the beneficiaries. That is not possible to do consistently over the long run with a short-term strategy. The fact is, with a short-term strategy, management cannot build a company that can compete year after year and make money for its investors year after year. If short-term investing is bad for corporations, how can it be good for the pension funds that own them?

Many pension funds index their stock portfolios because of the difficulty of finding active managers who can beat the market consistently. The New York City funds use both index funds and active managers. In either case, the funds take a long-term approach. Typically, the New York City funds hold stock in major U.S. companies for more than a decade. This approach makes pension funds the perfect partners for managers trying to build their companies. Both have the same basic interest, building the long-term value of companies.

Trustee and Board Accountability

Pension funds are not going to make a long-term investment and then forget about it. The pension fund's trustees have a duty to protect that investment. Accountability does not mean interference, however. Running the corporation on a day-to-day basis is management's job. It must be accountable to the owners for how it does that job.

Earlier this year, the *Harvard Business Review* asked me and several others to respond to an article by Professor Peter Drucker that dealt with this issue.¹ Professor Drucker suggested that corporate management needs a new goal to encourage a long-term perspective. This goal should be to maximize a company's ability to create wealth for many years. He called for developing clearly defined, long-term performance measures that can be audited by independent outside experts.

Boards of directors also need to be more active in examining executive compensation. Too many

¹P.F. Drucker, "Reckoning With the Pension Fund Resolution," *Harvard Business Review* (March/April 1991):106-14.

top executives still seem to make more and more every year, regardless of what they produce for investors. Executive compensation should be tied closely to the performance of the company and to returns to investors. For that to happen, the board must be able to evaluate management. Too often, the board is not able to do that.

The board is the critical link between shareholders and managers. After all, it is elected by and accountable to shareholders for a company's performance. In many cases, however, board members turn out to be handpicked by the CEO or people with business ties to the company. Some boards are too ingrown and too close to management to provide an effective balance. By opening the boardroom door to new independent directors, a poorly performing company may get the whiffs of fresh air and winds of change necessary to find new solutions to its problems.

Working with other institutional shareholders and CEOs from the business roundtable, the New York City funds developed a definition of an independent director as someone who has not been employed by the company as an executive in the past five years, is not a member of a firm that serves in a paid advisory or consulting capacity to the company, is not employed by a significant customer or supplier, does not have a significant personal services contract with the company, is not employed by a tax-exempt organization that receives a significant grant from the company, has not had any business relationship that would be required to be disclosed under the proxy rules, and is not a relative of the management of the corporation.

Getting more independent directors is part of the process. In addition, if boards of directors are to be held accountable, it must be easier for stockholders to nominate candidates for the board in elections. That would give stockholders the opportunity to remove boards when companies are not performing well. At some companies, poor performance may be associated with having a weak board.

The New York City funds took a new initiative last year. For the first time, rather than focusing on broad procedural issues like confidential voting, the funds targeted companies that have poor financial performance. We used all the traditional measures of performance such as return on equity and comparisons with other companies in that industry. We noticed that at some of these companies, the composition of the board of directors was an important issue. So we made some specific suggestions for strengthening their boards.

Clearly, this approach flows from our view of ourselves as long-term investors. We believed these

companies have strong potential value if they are managed properly. So we tried to make some constructive suggestions to help them attain that value. In the case of two of these companies, the New York City pension funds filed proxy resolutions asking that they reform the method by which they choose directors, add independent directors, and hire search firms to find good candidates for their boards.

Let me tell you a little about those two companies. In 1987, Harcourt Brace Jovanovich took on a large amount of debt to avoid a takeover. It had trouble dealing with that situation. The board has people with good academic, cultural, and political backgrounds. Most of them, however, also had consulting, publishing, or other business ties with the company. We believe the board should have included some independent directors with solid business and financial expertise. Only one of the directors had such experience.

We did not ask to appoint our own nominees to the board. Instead, we asked that the board include a majority of independent directors and establish a nominating committee made up of independent directors. We filed our proxy resolution early and tried unsuccessfully to negotiate a settlement with the company. The resolution was voted on at a meeting on August 8, 1991, and got 34.5 percent of the shares voted. Harcourt is now negotiating with General Cinema and may be bought out. If no merger takes place, the New York City funds intend to refile the proposal next year because the company has not adopted it, despite that substantial vote.

The second company is Lone Star Industries. Lone Star had added only one director since 1981. The board dropped to nine people. Because of the company's poor performance, we thought it could use some fresh ideas. The company's last proxy statement reported that it had no nominating committee and no committee of the board performing that function. So our resolution called for the creation of a nominating committee and the hiring of a search firm to find at least three candidates. Our attempt to help was too late, however. Lone Star filed for Chapter 11 bankruptcy.

The New York City funds are now discussing their proxy efforts for the coming round of stockholder meetings. The funds will probably decide to continue their efforts to strengthen boards of directors by urging more companies to set up nominating committees and to increase the number of independent members.

The proxy resolution is not our only medium of communication. At some companies, we are talking directly to management, listening to what it has to say, and expressing our views. We also use such

contacts to urge companies to take a long-term perspective. We think this exchange of views is constructive, and we plan to continue talking to companies when that is appropriate.

We have seen many examples of how much environmental irresponsibility can cost a company and its stockholders. The Valdez spill will cost Exxon billions of dollars. Many other companies face having to spend millions cleaning up the sites where they dumped toxic waste. Most of corporate America has learned it pays to focus on quality and safety. It is about time the environment was put in the same category. This case, like others, is one in which not getting it right the first time can result in lost markets and large liabilities.

During the past stockholder meeting season, the New York City funds filed proxy resolutions urging Exxon and two other companies to adopt the Valdez principles, a set of operating standards designed to protect the health of the environment, as well as the health of a company's balance sheet. We also voted for similar resolutions filed at other companies. This year, the funds plan to file the resolution at about six or seven companies, including Exxon.

As another example, information recently indicated that Baxter International might be cooperating with the Arab boycott of Israel. If the charges were true, the company could be subject to criminal prosecution. In addition, the company could lose business with many hospitals in this country. Clearly, such an action would not make Baxter a better investment. The New York City funds filed a proxy resolution asking the company to make a full disclosure about its activities. The company responded by canceling plans to build a plant in Syria.

In sum, managers sometimes do foolish things in pursuit of short-term gain. For long-term investors to question them about such policies and to seek a change is entirely appropriate.

The New York City funds are also exploring other ways to protect our beneficiaries' assets. For example, the funds have joined the equity committee in one recent bankruptcy case and are being considered for another. The goal is to preserve the rights of long-term holders in any restructuring or recapitalization plan.

The Stock Transfer Excise Tax

In closing, I would like to mention the stock transfer excise tax (STET), a half-percent tax on the sales of all securities. This is an issue that brought pension funds, Wall Street, and much of corporate America together in opposition to the proposal, which the Bush administration was thinking about using to

help close the budget gap.

The New York City funds took a leading role in opposing the tax. Our office conducted original research and issued the first extensive report on the impact of STET. The tax would have hurt pension funds, both by increasing transaction costs and lowering the value of stocks. It would also hurt corporations by increasing the cost of raising capital. STET would have been a vicious blow to New York City—

in job losses in the city, tax base erosion, and the costs of issuing bonds.

STET is another example of an idea pursued for a short-term goal—in this case, balancing the federal budget—which would have had a very bad long-term impact on corporate America and its owners. The New York City pension funds will continue to take the long-term view and urge that corporations and governments do likewise.

Question and Answer Session

Elizabeth Holtzman

Question: Does the Employee Retirement Income Security Act's "loyalty to pensioner" provision allow selection of female or minority managers who may not have the best track record or credentials?

Holtzman: Public pension funds are not governed by ERISA, but we feel we have a solid process and procedures. Although we understand the need for a standard that requires firms to have had a certain kind of track record and to have handled a certain amount of capital, we also think that it may be too restrictive. We feel we are opening ourselves up to new ideas, new talents, and fresh approaches by using smaller managers. We hope the experiment will work.

We have a very careful selection process designed to ensure that we attract the best possible talent to manage our funds. We are not discriminatory in doing that. We had 176 applications from firms from all over the country—an enormous number. They were carefully screened, and we picked seven firms, which were given very small amounts to handle (\$25 million to \$50 million). We think that is a responsible way to open opportunity and to bring in new ideas and talent.

Question: Many public pension

funds and some endowments are under pressure to give up return for making social value investments such as real estate purchases or low-end mortgages to build neighborhood projects. What is your view of this particular issue?

Holtzman: New York City pension funds do not own any real estate. We have a "tough love" approach to what you might call social investing. We do not provide subsidies to anybody through the pension funds. We think that the funds must earn a market rate of return. With a little creativity and ingenuity, however, you may be able to get a market rate of return and produce some social good at the same time.

The New York City Police Pension Fund, for example, decided it wanted to stimulate the growth of small business in the city. So it committed \$50 billion for that objective. By working out an arrangement with banks in New York City that were not participating in the federally supported small business loan program, we got a number of them to start participating. The federal government guarantees about 85 percent of those loans. We said to the banks, "You make the loans, and we will immediately buy the federally guaranteed 85 percent." This gives the banks the opportu-

nity to make more loans, get rid of the loans immediately, and collect a fee.

We think this is a win-win program. We invest in a federally guaranteed FDA certificate, at a market rate of return, and we also provide a catalyst to get banks to provide small business loans in New York City that they might not otherwise have made. We have not placed the pension fund at risk because of the 100 percent guarantee, we are earning the market rate of return, and we are creating some social good at the same time. So far under this program, banks have provided nearly \$4 million in loans, and no politics have been involved.

We have taken advantage of federal and state guarantees to do similar kinds of things in housing. We worked out a program with Fannie Mae whereby we make a commitment to buy Fannie Mae certificates, which have a Fannie Mae guarantee and a market rate of return; Fannie Mae has agreed to provide \$100 million for the construction of moderate-income homes in New York City. We bring in banks, construction companies, and others. We structure and package the whole thing and bring in subsidies from elsewhere. We do not use the pension funds to provide the direct subsidy.

The Effects of Antitakeover Protection on Long-Term Planning

Lisa K. Meulbroek

Assistant Professor of Business Administration

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As long as shareholder–manager conflicts exist, takeovers may be needed to discipline bad management. Instead of freeing managers to pursue long-term interests, anti-takeover amendments seem only to exacerbate managerial myopia.

The deterioration of the United States' competitive position is sometimes attributed to the excessive focus by corporate managers on the short term. Managers and commentators argue that managers are frequently forced to adopt a short-term perspective because the market does not reward long-term planning. The threat of a hostile takeover only exacerbates this managerial myopia: Managers cut profitable long-term projects that the markets find difficult to evaluate so they can prevent raiders from acquiring the firm at an undervalued price. If this view is correct, antitakeover amendments protect firms from unwelcome takeover attempts, thereby freeing managers to adopt a long-term horizon and act in the shareholders' best interests. In contrast, Manne and others argue that takeovers discipline entrenched management.¹ In Manne's view, anti-takeover amendments only encourage managers to act in their own best interests rather than adopt a long-term value-maximizing strategy.

Whether antitakeover amendments promote long-term planning by managers or merely exacerbate existing managerial myopia depends on the extent of shareholder–manager conflict. In introductory economics and finance classes, academics often assume that managers are perfect agents for stockholders—that is, managers work for the shareholders to maximize firm value by accepting all positive net present value projects. Shareholders, in turn, are able to evaluate and compensate managers perfectly for their efforts by linking managerial pay to firm performance. In this setting, the market and manag-

ers are symmetrically informed, and the market is able to value the firm's projects—even those with long horizons—correctly. In the world of introductory economics and finance, takeovers are benign. Without manager–shareholder conflicts, takeovers are not needed as a disciplinary device. Similarly, because the market correctly values all projects, including those with a long horizon, raiders have no incentive to pursue firms with managers who engage in long-term projects.

This idealized world imprecisely mirrors the real world managers face. Managers must communicate information to the market at a cost, so firms can be undervalued. Undervaluation may attract a takeover bid; the threat of a takeover may in turn encourage managers to base decisions on an overly short planning horizon. Several companies have responded by adopting antitakeover amendments to their bylaws. Do these antitakeover amendments allow managers the freedom to focus on long-term goals, or do they serve instead to further entrench bad management?

Absent any manager–shareholder conflict, anti-takeover amendments would be unambiguously beneficial: They would allow managers to pursue all worthwhile projects, even those that the market does not immediately recognize as profitable. The potential benefits of antitakeover measures are uncertain when manager–shareholder conflict is possible. In fact, such amendments might insulate managers from takeover pressure that inhibits poor project selection. In this presentation, I will provide several examples of how corporate control battles affect managers' long-term planning horizons and discuss the results of an investigation of the effects of anti-

¹H.G. Manne, "Mergers and the Market for Corporate Control," *Journal of Political Economy* 73 (April 1965):110–20.

takeover protection on long-term planning.

The Time/Warner Merger

The Time/Warner/Paramount battle illustrates how freedom from takeover pressure affects managerial decision making. **Table 1** displays the key events in this battle. On Saturday, March 4, 1989, the publishing concern Time, Inc., announced its decision to pursue a global strategy and said it would expand into film production by merging with Warner Communications, an entertainment firm. The following Monday, Time's stock price dropped from a close of \$109.125 on the preceding Friday to \$106.375 by 10:50 a.m., a 2.5 percent drop. By the end of Tuesday, March 7, however, Time's stock had increased to \$116.75 on speculation of a hostile bid for Time.

In June 1989, the long-anticipated hostile bid occurred when Paramount Communications (formerly Gulf & Western) announced a \$175 per-share bid for Time; Paramount later raised the bid to \$200 per share and hinted it was willing to bid up to \$220 per share. Paramount predicated its bid on Time dropping its plans to merge with Warner.

Time's management claimed that the proposed merger with Warner was in the best long-term interests of Time's shareholders. The hostile bid from Paramount, however, put Time's management in a difficult situation. According to Time management, the market undervalued its long-term strategy, and Paramount's bid represented only a short-term gain for Time's shareholders. The amount of the bid for Time, \$200 per share, was extremely high relative to Time's stock price prior to the offer, and Time man-

agement feared that a Paramount takeover would prevent Time from achieving an even higher price in the long-run. Consequently, Time would not allow its shareholders to vote on the merger with Warner and sought court protection from the Paramount bid.

Time's investment bank, Wasserstein Perella & Co., testified that Time's long-term strategy would result in a share price of \$250 within two or three years. Paramount, along with Time's shareholders, sued the management of Time to permit Time's shareholders, rather than its management, to decide on the Warner merger. The Delaware court ruled in management's favor, stating that "the corporation law does not operate on the theory that directors, in exercising their powers to manage the firm, are obligated to follow the wishes of a majority of shares." Time commented that "the appropriateness—indeed, acute desirability—of encouraging director attention to long-term value, and not requiring director conduct to be dictated by short-term swings in market price, is also borne out in fact. As this court has noted, there is substantial evidence that director resistance to hostile bids, even at a premium over market price, tends in the long run to enhance market price." Eventually Paramount dropped its hostile bid for Time.

In retrospect, was Time's management correct in asserting that its long-term strategy was best for shareholders? **Figure 1** implies that the market disagreed with Time's strategy, both during the time period surrounding the merger announcement and during the two years following the announcement. Upon the announcement of the court's judgment in favor of Time's management, Time's stock price plunged and has remained far below Paramount's offer price. By the end of 1991, Time's stock traded in the \$80 to \$90 a share range.

Why has Time's stock price failed to reach the promised \$250 a share? Could the market still be undervaluing Time's long-term strategy? Time's management revealed information concerning its opinion of Time's true value when, in the summer of 1991, it announced it had decided to issue equity. Time's stock price plummeted 20 percent, and the firm lost \$1.42 billion in market value in less than a week. Time's decision to issue equity signaled that Time management believed its stock was overvalued (managers are most likely to want to sell stock when the price is high).²

This takeover battle illustrates that management's assertion that it protects the long-term interests of shareholders from the short-term

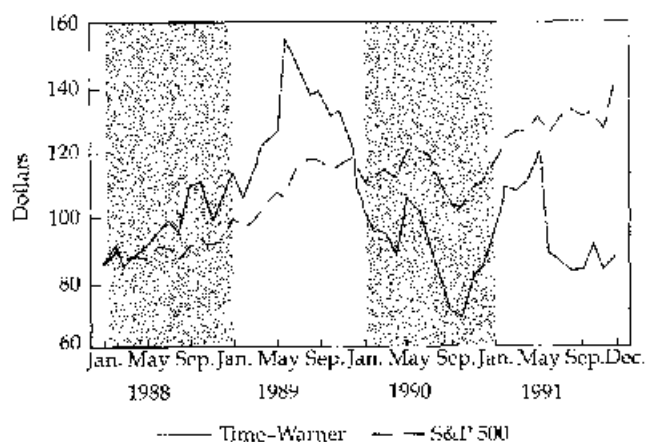
Table 1. Events in the Time/Warner/Paramount Battle

Date	Event	Time's Stock Price
3-3-89	Last preannouncement date	\$109.125
3-6-89	Time announces friendly acquisition of Warner over prior weekend	107.25
6-7-89	Paramount makes \$175 per share hostile tender offer for Time	170.00
6-26-89	Paramount increases bid to \$200 per share	164.00
7-14-89	Delaware court refuses to block Time's bid for Warner	145.25
6-5-91	Time decides to issue equity	111.875

Source: *Wall Street Journal*.

²See N.S. Majluf and S.C. Myers, "Corporate Financing and Investment Decisions when Firms Have Information that Investors Do Not Have," *Journal of Financial Economics* 13 (1984):187-222.

Figure 1. Time/Warner, Adjusted Monthly Stock Price, January 1988–December 1991



Source: Interactive Data Corporation.

interests represented by a hostile takeover may be only a convenient excuse. Time's management has sacrificed roughly \$6.8 billion in shareholder value—the difference in the Paramount offer and Time's current market value. Time's court-enforced protection from Paramount's hostile takeover bid did not encourage its management to adopt a long-term, value-maximizing strategy.

The Zenith/Nycor Proxy Fight

U.S. managers are frequently accused of myopically spending too little on research and development (R&D). Takeover pressure contributes to this managerial myopia. Nycor's proxy fight with Zenith is one example of how corporate control battles may discipline firms that spend too little on R&D. In October 1990, Nycor, Inc., announced that it had acquired an 8.2 percent stake in Zenith Electronics and that it would seek control of Zenith.

Figure 2 displays Zenith's stock price reaction—an initial plunge. The *New York Times* (November 21, 1990) explained, "Defenders of Zenith worry that Nycor will sacrifice the future. At a minimum, they fear that Nycor will put pressure on Zenith to slash its research. Nycor officials acknowledge that air conditioners require far less research and development than HDTV [high-definition television], but they imply that Zenith has simply been frittering money on HDTV." Further, Zenith's strategy of investing in R&D had left it undervalued. The *Times* article continued, "Some analysts contend that the real value of Zenith lies in the intangible assets, its name and its technology. James Magid, an analyst at Needham & Co. in New York, said Zenith [is in] a tremendously undervalued situation."

In fact, Nycor did not want Zenith to stop spending on R&D—it wanted Zenith to spend more. In its proxy materials, Nycor criticized Zenith for not spending enough on R&D for HDTV. It characterized Zenith's spending as "minimal" and asked why management "has not devoted more resources to this important new technology" (*PR Newswire*, March 25, 1991). Nycor did not win the proxy fight, but pressure from Nycor, combined with Nycor's institutional support, led Zenith to increase its R&D spending on HDTV (*Communications Daily*, March 14, 1991). The Zenith/Nycor example shows that corporate control pressure may not always lead managers to focus excessively on the short-term. For Zenith, the situation was quite the contrary.

The Time/Warner/Paramount takeover battle and the Zenith/Nycor proxy fight provide anecdotal evidence that takeover pressure need not lead to managerial myopia. To investigate whether takeover pressure systematically leads to myopia, several colleagues and I examined whether firms subject to takeover pressure spend less on R&D and whether firms protected from takeover pressure through anti-takeover amendments spend more on R&D.³

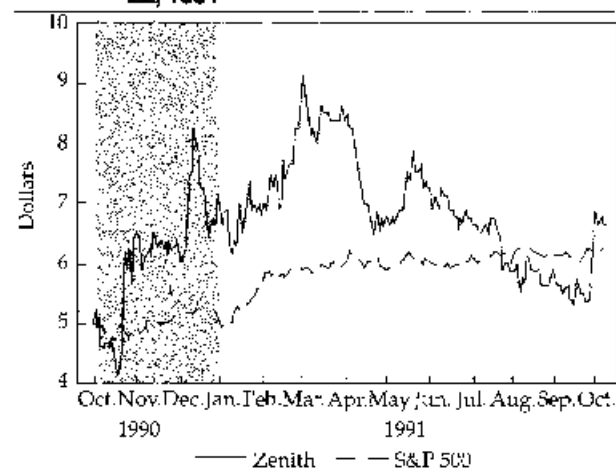
Research and Development Spending

A recent paper by Stein develops a formal model in which the threat of takeovers encourages myopic behavior on the part of managers.⁴ Stein suggests

³L. K. Meulbroek, M. L. Mitchell, J. H. Mulherin, J. M. Netter, and A. B. Poulsen, "Shark Repellents and Managerial Myopia: An Empirical Test," *Journal of Political Economy* 98 (1990):1108–17.

⁴J. C. Stein, "Takeover Threats and Managerial Myopia," *Journal of Political Economy* 96 (February 1988):61–80.

Figure 2. Zenith, Adjusted Daily Stock Price, and S&P 500 Index, October 1, 1990–October 22, 1991



Source: Interactive Data Corporation.

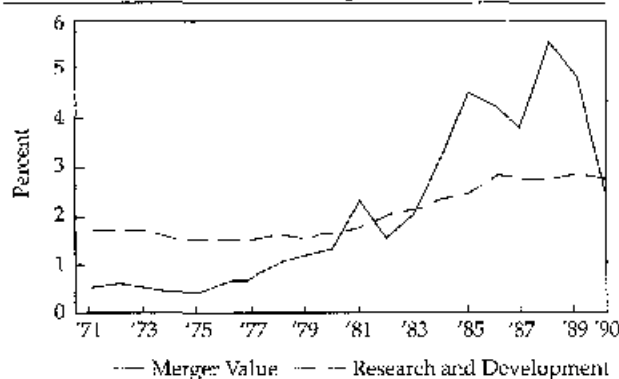
that "Takeover pressure, combined with the fear of being acquired at an undervalued price, leads managers to boost current profits by sacrificing profitable long-term projects." One type of long-term expenditure that managers may sacrifice is R&D spending.

How has increased takeover activity affected R&D spending? Figure 3 shows merger value as a percentage of GNP compared to R&D effort from 1971 to 1990. In aggregate, the dramatic increase in takeover activity in the mid-1980s does not seem to have influenced R&D spending. To investigate more carefully the connection between R&D spending and takeover pressure, we conducted two tests. First, we asked whether firms that become takeover targets spend less than nontargets on R&D, after adjusting for firm size and controlling for industry. A finding that targets spend less on R&D than nontargets would suggest that takeover pressure leads managers myopically to cut long-term projects. Second, we examined whether firms that construct barriers to takeovers by passing antitakeover amendments increase R&D expenditures. Again, a finding that firms increase their R&D spending after takeover pressure eases implies that takeover pressure may indeed create myopia.

We examined takeover attempts occurring during the January 1980–July 1988 period. We used a sample of firms listed on the New York and American stock exchanges, taken from Mitchell and Lehn.⁵ The sample consists of 987 public corporations in 51 industries tracked by *Value Line Investment Surveys* at the beginning of the sample period. Mitchell and Lehn classify firms in the Value Line sample as targets if, during the January 1980–July 1988 period, the firms are objects of successful or unsuccessful takeover attempts, including tender offers, mergers, leveraged buyouts, and proxy contests. Of the 987 firms in the Value Line sample, 385 (39 percent) are targets; the remaining 602 (61 percent) firms are nontargets.

The ratio of R&D to sales varies substantially across Value Line industries. For instance, the computer data processing, pharmaceuticals, electronics, and precision instruments industries have relatively high R&D–sales ratios (4–6 percent), but industries such as drugstores, air transport, and retail stores have very low ratios (0 percent). We examined whether target and nontarget R&D–sales ratios differ after controlling for industry effects. Specifically, we eliminated 17 industries with R&D–sales ratios of less than 0.2 percent. We also removed the entertain-

Figure 3. Merger Value as a Percentage of GNP and R & D as a Percentage of Sales, 1971–90



Sources: Standard & Poor's Compustat; Grinnin's Mergerstat

ment, multiform, and metals/mining industries because of the dissimilarity of the firms in these industries. Within the remaining 31 industries, we also excluded firms if their primary and secondary three-digit SIC codes have no similarity to the primary or secondary codes of the majority of the firms in the industry. The refined sample contains 152 targets and 302 nontargets in 31 industries.

The managerial myopia hypothesis predicts that the R&D–sales ratios of targets are smaller than those of nontargets; if the probability of takeover increases as the takeover date approaches, then the absolute value of this difference should also increase. For each of the 152 targets during the period from one to five years prior to takeover, we calculated the difference between the R&D–sales ratios of the target group and the average ratios of the corresponding nontarget industry control group (the second column in Table 2). We also computed each year's weighted difference in ratios for each target, defined as the target–nontarget difference divided by the average R&D–sales ratio in the target's industry (the third column in Table 2). The weighted difference is the more appropriate measure, because it controls for industry variability and changes in R&D over time.

Table 2 shows that takeover targets undertake less R&D than nontargets in the same industry. In each year preceding the takeover attempt, both the difference and the weighted difference between target and control group R&D–sales ratios are negative and significantly different from 0 at the 1 percent level. If the threat of takeover induces lower R&D spending, then the magnitude of the difference in R&D–sales ratios should increase as the takeover bid approaches. Neither the difference nor the weighted difference between target and control group ratios, however, significantly increases in absolute size dur-

⁵M. L. Mitchell, and K. Lehn, "Do Bad Bidders Become Good Targets?" *Journal of Political Economy* 98 (1990):372–98.

Table 2. Effect of Takeover Pressure on R & D: Comparison of Target and Nontarget Firm R&D-Sales Ratios

Number of Years Before Takeover Attempt	Target - Nontarget R&D-sales (x100)	Adjusted Target - Nontarget R&D-sales(x100) ^a	Number of Firms
-1	-0.86 (4.28)	-0.32 (5.77)	146
-2	-0.85 (5.19)	-0.32 (6.45)	152
-3	-0.70 (3.68)	-0.30 (5.41)	152
-4	-0.74 (5.09)	-0.31 (6.37)	152
-5	-0.65 (4.68)	-0.30 (6.06)	152

Source: Meulbroek et al., "Takeover Threats and Research and Development: Testing Stein's Model of Managerial Myopia."

Note: Numbers in parentheses are *t*-statistics.

^aThe adjusted measure divides target-nontarget R&D-sales ratios by industry R&D-sales.

ing the five years preceding the takeover attempt.

This evidence suggests that takeover threats do not cause the relatively low target R&D-sales ratios; in fact, one might argue that the low R&D by target firms in years well before takeover bids indicates that the causation flows from low R&D to takeovers rather than the reverse direction. Perhaps systematic underinvestment in R&D makes a firm a more likely candidate for a takeover bid, or perhaps R&D underspending may signal firmwide inefficiency, again resulting in a disciplinary takeover. The Zenith case supports this explanation.

The targets in our sample are of smaller size than the control firms (the mean of the ratio of target equity to industry control group equity in our sample is 0.59, the median is 0.27). To investigate whether firm size affects our results, we divided the sample into quartiles based on the ratio of target-to-control-group equity. The results, shown in Table 3, indicate that after this adjustment for size, the difference between target and nontarget R&D-sales ratios persists. Targets have significantly lower ratios, even in the quartile in which targets have greater average equity than the nontargets.

Again, if takeover pressure forces managers to act myopically and cut R&D expenditures, one would not expect to detect any difference in target and nontarget R&D spending in Year -5, because takeover pressure is very unlikely to be greater for targets five years prior to takeover. From these results, we concluded that the lower spending on R&D by takeover targets is not the result of the takeover bid itself. Instead, firms may even become takeover targets by spending too little on R&D.

Antitakeover Amendments

The second phase of the research tried to determine whether firms spend more on R&D once they implement measures that free them from antitakeover pressure. We used a sample of 649 firms that had passed antitakeover amendments between January 1979 and May 1985 and tracked their R&D spending.⁶ The empirical analysis excludes firms that have

⁶For sample description, see G. A. Jarrell and A. B. Poulsen, "Shark Repellents and Stock Prices: the Effects of Antitakeover Amendments Since 1980," *Journal of Financial Economics* 19 (September 1987):121-68.

Table 3. Effect of Takeover Pressure on R & D: Comparison of Target and Nontarget Firm R&D-Sales Ratios, Adjusted for Firm Size

Years Before Takeover Attempt	Smallest	Target Equity Quartiles		
		Second	Third	Largest
-1	-0.23 (1.78)	-0.36 (2.98)	-0.44 (4.61)	-0.24 (2.69)
-2	-0.27 (2.79)	-0.30 (2.98)	-0.41 (4.61)	-0.30 (2.69)
-3	-0.20 (1.47)	-0.30 (3.06)	-0.28 (2.92)	-0.43 (3.79)
-4	-0.35 (4.90)	-0.29 (2.30)	-0.28 (2.91)	-0.32 (3.49)
-5	-0.27 (3.00)	-0.41 (4.50)	-0.20 (1.71)	-0.32 (3.38)
Median target equity/industry nontarget equity	0.05	0.17	0.40	1.42
N	38	38	38	38

Source: Wall Street Journal.

not reported R&D expenditures in the sample period. Many of the excluded firms come from retail and financial services. After the exclusions, the sample contained 203 firms. As in the full Jarrell and Poulsen sample, most firms in the subsample introduced amendments during the 1983–85 period. Six firms passed amendments in 1979, 4 in 1980, 5 in 1981, 9 in 1982, 63 in 1983, 72 in 1984, and 44 in 1985.

For each of the 203 firms introducing shark repellents, we investigated the change in R&D–sales ratios during various windows surrounding Year 0, the year the firm enacts the shark repellent. For example, the –1,1 window measures the percentage change in the firm’s ratio between the year prior to the amendment and the year after the amendment. We also calculated the percentage change for the –1,2 and –1,3 windows; the longer windows are appropriate if firms adjust their R&D slowly. **Table 4** shows the mean percentage change across all firms for the three windows.

If takeovers cause managers to act myopically, R&D–sales ratios will increase after the adoption of a shark repellent. The data fail to support this prediction. For all three windows, the ratios change insignificantly, on average, following the introduction of shark repellents. The ratio increases 0.43 percent ($t = 0.14$) in the –1,1 window, decreases 0.04 percent ($t = -0.01$) in the –1,2 window, and decreases 2.98 percent ($t = -0.46$) in the –1,3 window.

During the 1980–87 period, the market R&D–sales ratio increased substantially, at a compound annual rate of 9.7 percent. To evaluate how a firm’s R&D intensity changes with market effects held constant, we computed a market-adjusted change in the R&D–sales ratios by subtracting the market change from the individual firm changes. The second row of Table 4 reports those results. On average, firms significantly decrease their R&D intensity relative to the market after proposing a shark repellent. The market-adjusted R&D–sales ratio fell 15.42 percent ($t = -5.14$) in the –1,1 window, 25.29 percent ($t = -6.58$) in the –1,2 window, and 36.25 percent ($t = -5.53$) in the –1,3 window. These results are inconsistent with an increase in the ratio following the introduction of antitakeover amendments.

Because R&D–sales ratios vary across industries, using an industry-adjusted rather than a market-adjusted measure may control more precisely for changes in R&D during the sample period. To measure how the firm’s R&D intensity changes relative

Table 4. Effect of Antitakeover Amendments on R & D: Percent Change in R&D–Sales After Introduction of Antitakeover Amendments

Percent Change	Window Length		
	(–1, 1)	(–1, 2)	(–1, 3)
Sample	0.43%	–0.04%	–2.98%
<i>t</i> -statistic	(0.14)	(–0.01)	(–0.46)
Number of firms	199	184	128
Market-adjusted	–15.42	–25.29	–36.25
<i>t</i> -statistic	(–5.14)	(–6.58)	(–5.53)
Number of firms	199	184	128
Industry-adjusted	–5.99	–11.46	–12.04
<i>t</i> -statistic	(–1.98)	(–2.70)	(–2.00)
Number of firms	174	158	111

Source: Meulbroek et al., “Shark Repellents and Managerial Myopia: An Empirical Test,” *Journal of Political Economy* 98 (1990):1108–17.

to its industry, we subtract industry rather than market percentage changes from the simple percentage changes. The third row of Table 4 displays the industry-adjusted changes in the ratio. The industry-adjusted results are similar to the market-adjusted results, though of smaller magnitude. The industry-adjusted ratio declined 5.99 percent ($t = -1.98$) in the –1,1 window, 11.46 percent ($t = -2.70$) in the –1,2 window, and 12.04 percent ($t = -2.00$) in the –1,3 window. Instead of promoting firms’ long-term interests by encouraging R&D, antitakeover amendments seem to inhibit R&D spending.

Conclusion

Our results suggest that the conflict between shareholders and managers is important enough that takeovers are needed to discipline bad management. We found, for instance, that target firms spend less on R&D than nontarget firms, but this underspending by targets does not appear to be the result of takeover pressure. Instead, firms that spend too little on R&D may attract a takeover bid. Our second test found that after takeover pressures ease (because of the adoption of antitakeover measures), a relative decrease in R&D spending occurs. Instead of freeing managers to pursue the firm’s long-term interests, antitakeover amendments seem only to exacerbate managerial myopia. This interpretation is consistent with the stock price evidence that defensive measures harm target shareholders.

Question and Answer Session

Lisa K. Meulbroek

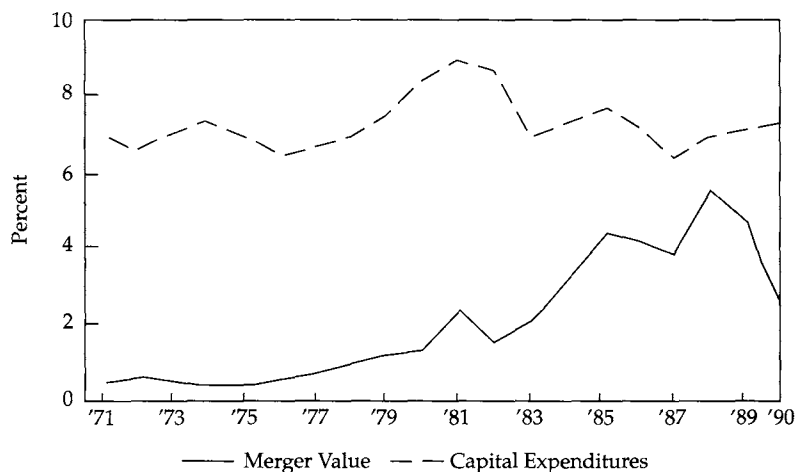
Question: Do you believe anti-takeover activities would be reduced if managers of companies were owners of their own companies? Do you see any academic support for the proposition that people who own a lot of a takeover target's stock are more likely to accept the takeover and become rich?

Meulbroek: Increased manager ownership would certainly reduce the problems associated with conflicts between managers and shareholders. If the managers themselves are owners, they are more likely to follow value-maximization strategies. Mitchell and Lehn found, for example, that a firm is less likely to receive a hostile takeover bid the larger the management's ownership in the firm.⁷ This evidence suggests that high management ownership leads to value-maximizing decisions, which reduces the need for a disciplinary takeover later. Maloney, McCormick, and Mitchell support this point; they find that managers are less likely to make value-reducing acquisitions when they own a greater proportion of the firm.⁸ Long and Walkling provide evidence that the larger management's equity stake in the firm, the more likely a takeover bid will be friendly, as opposed to hostile.⁹ In other words, the larger the share of management ownership in the

⁷M. L. Mitchell and K. Lehn, "Do Bad Bidders Become Good Targets?" *Journal of Political Economy* 98, No. 2 (1990):372-98.

⁸M. T. Maloney, R. E. McCormick, and M. L. Mitchell, "Managerial Decision Making and Capital Structure," *CRSP Working Paper* 333 (1991).

Figure 4: Merger Value as a Percentage of GNP and Capital Expenditures as a Percentage of Sales, 1971-90



Sources: Standard & Poor's Compustat, Grimm's Mergerstat.

target, the less likely the managers are to oppose a takeover bid.

Question: Did you do any testing on capital spending as well as R&D?

Meulbroek: Although we did not perform extensive tests on capital expenditures similar to those we did on R&D, I do have a graph for capital expenditures that is comparable to Figure 3. Figure 4 shows that capitalization has a few more swings than R&D but does not follow the same trend as mergers nor does it move in the opposite direction from mergers. Therefore, as mergers have increased, capital expenditures in aggregate have not decreased.

Question: Managers and investors sometimes calculate value in

⁹M.S. Long and R.A. Walkling, "Agency Theory, Managerial Welfare, and Takeover Bid Resistance," *Rand Journal of Economics* 15 (Spring 1984):54-68.

different ways. A dramatic shift took place in the early 1970s from looking at earnings to looking at assets in U.S. companies. Do you think that a company that may be undervalued in the mind of a manager of a company may be overvalued in the mind of an investor?

Meulbroek: That is certainly possible. In the Time/Warner example, Time had a potentially large bust-up value, as evidenced by the amount of Paramount's offer. Time's market price, however, was low relative to Paramount's offer, indicating that the market did not value Time management's strategy very highly. Management's claim that the market was undervaluing its strategy in retrospect seems overly optimistic. Time's stock price during the next few years never approached the levels Time's management predicted.

Question: Companies have several ways to make themselves unattractive to those attempting a takeover. Did your study consider any other methods?

Meulbroek: We did not specifically look at the different methods of takeover protection. We concentrated solely on antitakeover amendments.

Stock Market Volatility and Institutional Ownership

Carolyn Kay Brancato

Executive Director

Columbia Institutional Investor Project

A New York-based project aims to explore the role of institutional investors in publicly owned companies and analyze their role in capital markets.

Institutional investors are a major force in today's capital markets. In 1990, institutional investors controlled 20.5 percent of the assets in the economy and approximately 53 percent of the outstanding equities—both public and private. In comparison, these institutions in 1955 held only 9.5 percent of total assets in the economy, and they controlled only about 23 percent of the equity markets. Total assets under management for all institutional investors grew from \$2.1 trillion in 1981 to about \$6.5 trillion in 1990.

The Columbia Institutional Investor Project was initiated in 1988, in collaboration with the New York Stock Exchange, to explore the role of institutional investors in publicly owned corporations and to analyze institutional investors and their role in capital markets. Four years ago, when the project began, we perceived that institutional investors had become a very important and powerful force in the markets, but not much was known about them. In fact, even defining the institutional investor universe was difficult.

Profile of the Institutional Investor

The institutional investor community is made up of public and private pension funds, mutual funds, insurance companies, and banks. The largest single bloc of institutional investors is pension funds, with 28.2 percent of the total equity market—19.9 percent for private pension funds and 8.3 percent for public pension funds.

Institutional investors are quite diverse, with different investment time horizons, risk-reward tolerances, and perspectives as to preferred types of investments. For example, public pension funds have

characteristically devoted more of their assets to debt than have private corporate pension funds. Also, insurance companies tend to have low equity holdings compared to pension funds; they have higher asset allocations to debt securities and to various layers of mezzanine financing. Thus, they participate in all asset layers of a company.

When people think of linkages between companies, most of them think of the Japanese *keiretsu*, but we have such linkages in the United States as well; they are just not as visible. For example, many pension funds are investing in guaranteed investment contracts, payments in kind, and annuities, which causes pension fund money to be recycled into the insurance industry pool.

The management of institutional investment funds has become increasingly concentrated, and the use of domestic indexation has grown. The total amount of funds invested by domestic index equity managers was \$225 billion as of September 1991. The largest five managers accounted for approximately 75 percent of the indexed money. The largest 15 index managers accounted for 90 percent. Also, the degree of concentration of ownership by these large pension funds is staggering. In 1990, the largest 20 private and public funds held 24 percent of the assets of all pension funds.

We believe that the public pension funds will become an increasingly important force in the equity market for at least three reasons. First, the public funds are growing faster than the private funds. They grew 12.7 percent a year between 1986 and 1990 compared with only 7 percent for the private funds.

Second, the public funds are increasing their equity allocations. Historically, public pension funds tended to invest almost solely in bonds. Only

in the past 10 or 15 years have they moved to equities, and they still have a long way to go to reach the 50/50 stock/bond allocation that the private pension funds tend to average. For example, in 1980, public pension funds had 22 percent of their assets invested in equities and 70 percent invested in bonds. By 1990, the public funds had increased their equity investment to 37 percent of their funds and decreased their bond allocation to 59 percent of assets.

Third, the private funds will continue a trend toward increasing the amount of pension fund money in defined-contribution plans as opposed to defined-benefit plans. This will lower the equity allocation for private funds, because employees with investment discretion tend to put pension money into more conservative investments rather than equities.

Turnover Analysis

In recent years, economists and those in public policy positions have been concerned with pension fund turnover and with the issue of whether pension fund money was fueling the large number of mergers and acquisitions in the 1980s. Prior to the 1980s, most economists believed turnover was good for the market because it created liquidity and reduced spreads. During the mergers and acquisitions era, however, some started to attribute a moral value to turnover per se, apart from any real underlying economic value. Thus, some argued that high turnover proved institutions had no "loyalty" to the corporations in which they invested—that they would sell out to the highest bidder, undermining the corporation's ability to survive a raider or to invest for the long term.

Turnover is not, however, a "moral" issue. A fund may trade stock to balance a portfolio to maintain certain equity-debt ratios. Also, a fund may sell stock to meet current beneficiary payout requirements. The buying and selling of stock is, therefore, not "good" or "bad" as some opposed to takeovers would imply.

We have just completed a pilot study intended to develop a methodology for analyzing various types of turnover among pension funds. The methodology will be used for a larger study in the future. The present study focused on two large pension funds—one public, one private. For Fund 1, we analyzed 42,000 transactions in three portfolio segments: an internally managed indexed segment, an externally managed segment, and an active internally managed segment of a portfolio used to balance immediate payout obligations. For Fund 2, we analyzed 12,000 transactions in an active internally man-

aged portfolio. The study covered the five years from 1985 to 1989.

One way to measure turnover is by "aging" securities to determine how long they have been held in a portfolio. **Figure 1** shows a comparison of trading activity by the two funds—the combined segments of the first fund and the one segment of the other. Of the shares that were either in the inventory of Fund 1 at the beginning of the five-year period or were purchased during that period, 44.3 percent were still being held at the end of the period. For Fund 2, 61.3 percent of the comparable shares were still being held at the end of the period. For Fund 1, 2.2 percent of all portfolio transactions were stocks traded in less than 30 days; the comparable figure for Fund 2 was 3.0 percent. A significant amount of the stock in both portfolios was held for long periods. In Fund 1, 12.2 percent of the shares in the segments of the portfolio analyzed were held longer than five years. In Fund 2, an even higher percent of shares—19.2 percent—were held longer than five years.

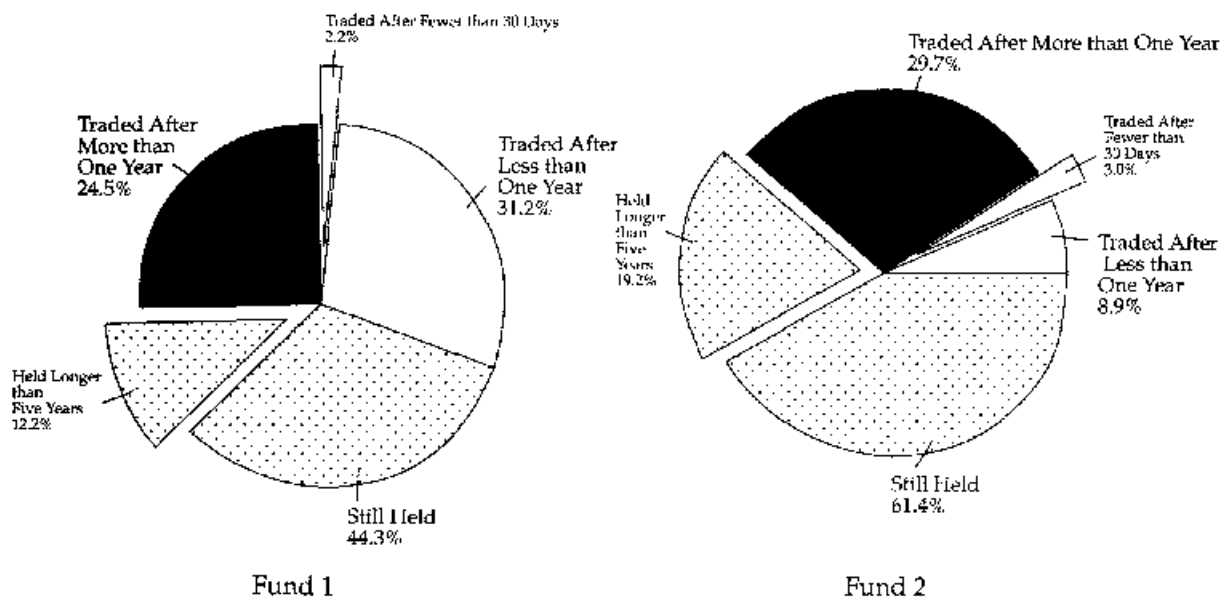
These funds are operating at both ends of the spectrum: A large proportion of the portfolios is held for long periods, but also a sizable proportion is traded in less than a year. At first, we were surprised by the amount of short-term trading, particularly for Fund 1, which has a big index fund. We found several explanations. First, the externally managed portfolio turned over more rapidly than the index portfolio. This seems logical, but we were surprised by the magnitude of the difference. Second, a sizable number of transactions are required to maintain asset allocation ratios. For example, the managers may want a 50/50 stock-bond allocation. In a strong equity market, the portfolio will have to be rebalanced by selling some equities and buying some bonds to maintain the balance. Third, transactions are incurred to raise cash for current payout requirements. Thus, the short-term spike is not simply a function of short-term time horizons.

The obvious question that arises from this type of analysis is whether the transaction costs of active management are justified. Some funds are shifting to index funds because they believe that they cannot justify the additional transaction costs associated with active management based on their returns.

Concentration of Power

The takeover battles of the 1980s led to some tension between institutional investors and the corporations whose stock they hold. The pension funds—particularly the public pension funds—began to feel that some corporations had interests other than their

Figure 1. Comparison of Trading Activity, Fund 1 and Fund 2



Source: Carolyn K. Brancato, "Pension Fund Turnover and Trading Patterns: A Pilot Study," Columbia Law School, Institutional Investor Project (January 18, 1991).

shareholders' at heart. As a result, a number of institutional investors—primarily public pension funds—began to organize. Their common effort has taken on some significance now that the high-yield bond markets are drying up, and the lack of takeover financing has meant that the vehicle for takeovers has shifted to the proxy arena. Here, the sizable stock ownership by institutional investors can be a swing vote in proxy contests waged for corporate control.

If large pension funds were to act together, they could influence the outcome of some of these proxy battles. As Elizabeth Holtzman stated, the pension funds do not want positions on the board, but they do want to influence the corporation's performance.¹ Their role will be similar to Saudi Arabia's in OPEC: Saudi Arabia does not control the oil market, but it can control the price at the margin by increasing or decreasing oil production by a couple of million barrels a day. These pension funds have the capability of controlling the outcome of the proxy battles at the margin, so their votes are particularly important.

The corporations view the institutional investors with great suspicion because of their potential for exerting control in the market. We recently completed a study on the concentration of ownership in the largest 25 corporations, ranked by value of shares outstanding, by institutions that file Form 13F with

the SEC—in other words, institutions that have investment discretion to manage amounts in excess of \$100 million.² The Form 13F institutional filers are not the entire universe of institutions, of course, but they represent a big chunk of it.

Institutions hold approximately 46 percent of the shares in these largest 25 corporations. The top 5 institutional investors hold 11 percent of all the outstanding shares, 10 institutions hold 15 percent, and 20 institutions hold 21 percent.

When we look at the voting power behind these ownership positions, we find similar high concentration by a small number of institutions. Institutions control on average 30 percent of the sole voting authority in the largest 25 corporations. Furthermore, the largest 5 institutional investors control 7.6 percent of the vote, the largest 10 institutions control 11 percent of the vote, and the largest 20 institutions control 15 percent of the vote in these corporations.

The SEC is looking at whether large shareholders should be allowed to talk to one another, have greater access to proxy statements, and participate more in the proxy process. The Senate Banking Committee will be holding hearings to address a

¹Please see Ms. Holtzman's presentation, pp. 33-36.

²C.K. Brancato, "Institutional Investor Concentration of Economic Power: A Study of Institutional Holdings and Voting Authority in U.S. Publicly Held Corporations," Part 1: Top 25 Corporations as of December 31, 1990, Columbia Institutional Investor Project (October 1991).

whole slate of proxy reform issues. At issue is whether institutional investors are disadvantaged by managements that largely control the proxy process and how opening up the proxy process to greater participation by groups of institutions will affect corporate governance and performance.

Conclusion

These are a few of the issues we are looking at regarding institutional investors. Others include whether indexing is cost-justified and the relationship between the stock market and the capital formation process.

Question and Answer Session

Carolyn Kay Brancato
Jonathan D. Jones

Question: Public pension funds are aggressive in proxies, perhaps more so than in the private sector. They are beginning to realize they are owners and they control things. Also, young people fund these pension plans for older people. The old people want the returns, and the young people want to pursue sociopolitical issues, housing, and different types of goals than the older people. People know about control, and shareholders' rights groups are helping to concentrate their ownership to gain control. Given this scenario, what can we conclude about volatility? Is volatility something that must just be endured? Are we going to hold these assets forever and take over on the control and ownership issue, or are we going to say that volatility does not really count as long as our performance is good? Where do these independent scenarios fit into the volatility equation?

Brancato: Clearly, institutions are not monolithic, and one type of institution may behave very differently from another with respect to these issues. Also, the institutions feel tremendous pressure. The Department of Labor sets fiduciary guidelines governing investments made by private pension funds, and the public pension funds operate under a similar set of state and local regulations. When the Department of Labor sets a guideline—for example, the Avon letter, in which they required pension funds to read the proxies and to vote their stock—the public funds are generally expected to adhere to it. The Department of Labor has asked

pension funds to vote their shares owned in index funds. The public funds feel this is a burden because they are managed by civil servants with limited staff. This creates tremendous tension between what a fund manager is required to do and what he or she is capable of doing to fulfill his or her responsibilities in corporate governance and monitoring the proxy process. Many funds do not know what to do.

Many of the funds are taking steps to improve the long-term prospects of companies in which they invest. For example, CALPERS—the large California fund system—is moving toward negotiated settlements with corporate boards of directors to prod them to assume more oversight over corporate performance. This would enable the funds to justify holding the stock longer and perhaps justify a vote with management in a proxy contest.

Jones: Based on the results in our study using annual data, institutional investors do not appear to have the negative effects that they are alleged to have when it comes to stock volatility. The increase in volume associated with the trading practices of institutional investors was found to augment stock market liquidity and lower stock volatility.

Question: Please expand on institutional investors' impact on bid-ask spreads. Are they really responsible for this volatility, or is the brokerage community responsible?

Jones: The financial microstructure literature suggests two possi-

ble effects of greater trading volume. These apply to the volume associated with trading by institutions. If institutions generate trading volume that reduces the inventory risk of market makers, then their trading practices augment stock market liquidity and narrow bid-ask spreads. In contrast, if the trading volume associated with institutions consists of unanticipated one-sided orders (that is, mostly buys or mostly sells), this additional trading volume may increase the inventory risk confronted by market makers and widen bid-ask spreads as a result. The evidence in our study suggests that institutions increase stock market liquidity and narrow bid-ask spreads.

Question: How do you define volatility?

Jones: Stock volatility is a measure of the dispersion of stock returns. It can be measured either by the variance or the standard deviation. Simply stated, the variance is a weighted average of deviations of stock returns from their average value. The standard deviation is the square root of the variance. In our study, stock volatility was computed as the standard deviation of daily stock returns within a year.

Question: The Columbia study took place between 1982 and 1988. To what extent were your conclusions influenced by the rising equity markets of that particular time period?

Jones: In the regressions, we used variables to control for rising equity markets between 1982

and 1988. By doing so, our conclusions about the effects of insti-

tutional investors on turnover, bid-ask spreads, and volatility

were not influenced by the upward trend in the market.

Stock Market Volatility and Institutional Ownership

Jonathan D. Jones¹
Senior Research Economist
Office of Economic Analysis
U.S. Securities and Exchange Commission

As institutions increase trading volume or lower stock volatility, their trading practices increase stock market liquidity and narrow bid-ask spreads. The reverse also is true: As volume goes down, liquidity diminishes and bid-ask spreads widen.

Institutional investors and their trading practices have stimulated controversy for more than three decades. Central to the debate have been questions concerning the effect that institutions such as pension plans, insurance companies, mutual funds, and bank trusts have on stock market liquidity. Do institutions increase liquidity and reduce stock volatility, or do their trading practices instead place severe strains on market mechanisms resulting in greater stock volatility? The widespread use of stock index futures by institutions during the 1980s has intensified the debate on this issue. Some observers attribute much of the stock market volatility in October 1987 to program trading strategies, such as index arbitrage and portfolio insurance, that are used by institutions.

This presentation reviews the results of a study on the effect of institutional investors on stock market liquidity from 1982 to 1988.² The 1982-88 period is used to capture the interaction between institutional investors and stock index futures. The study focuses specifically on the relations among the percentage of corporate equity owned by institutions and trading volume, stock return volatility, and bid-

ask spreads. To the extent that institutions increase trading volume and/or lower stock volatility, their trading practices increase liquidity and narrow bid-ask spreads. On the other hand, if institutions decrease trading volume and/or increase stock volatility, their trading practices diminish liquidity and widen bid-ask spreads.

The analysis consists of several related empirical tests. First, levels as well as relative changes in trading volume, stock return volatility, and bid-ask spreads for portfolios of stocks with high, medium, and low institutional ownership were compared over the sample period. Second, the same comparison was done for stocks listed and not listed with the S&P 500 Index. Finally, regressions were estimated to examine the relations among institutional ownership, trading volume, stock volatility, and bid-ask spreads. The authors found evidence that the trading practices of institutions are associated with larger trading volume, lower stock volatility, and narrower bid-ask spreads. The results also suggest that the trading practices of institutions lower the cost of equity capital for U.S. corporations by narrowing bid-ask spreads.

¹The views expressed are those of the author and do not necessarily reflect the views of the Securities and Exchange Commission or the author's colleagues on the staff of the Commission.

²J.D. Jones, K. Lehn, and H. Mulherin, "Institutional Investors, Index Futures, and Stock Market Liquidity: An Empirical Analysis of the 1980s," SEC Working Paper (1991).

The Issues

The controversy over institutions and stock index futures concerns their effects on trading volume in the stock market. **Table 1** shows that the growth in institutional ownership of stock and the advent of stock index futures in 1982 have been accompanied

Table 1. Patterns in Institutional Ownership, S&P 500 Futures Contracts, and New York Stock Exchange Share Volume, 1982–88

Year	Average % Equity Held by Institutions	S&P 500 Futures Contracts Traded (millions)	Shares Traded on the NYSE (billions)
1982	34.3	2.9	16.5
1983	37.5	8.1	21.6
1984	39.0	12.4	23.1
1985	42.5	15.1	27.5
1986	44.7	19.5	35.7
1987	46.2	19.0	47.8
1988	46.3	11.4	40.8

Sources: *Spectrum 3*; Futures Industry Association; *NYSE Factbook* (1990).

by a substantial increase in trading volume on the New York Stock Exchange. For a sample of 499 New York Stock Exchange and American Stock Exchange listed firms used in this study, the percentage of equity held by institutions increased from 34 percent in 1982 to 46 percent in 1988. During the same period, trading volume in the S&P 500 futures contract increased from 2.9 million to 11.4 million contracts, and trading volume on the New York Stock Exchange increased from 16.5 billion to 40.8 billion shares.

Table 1 raises two empirical questions. First, has some of the growth in trading volume been caused by the growth in institutional stock ownership and the advent of stock index futures? If so, has this additional trading volume increased or decreased stock market liquidity? The financial microstructure literature suggests two possible effects of greater trading volume. If institutions generate trading volume that reduces the inventory risk of market makers, then the trading practices of institutions augment liquidity and narrow bid–ask spreads. In contrast, if the trading volume associated with institutions consists of unanticipated one-sided orders (that is, mostly sell or mostly buy orders), this additional volume may increase the inventory risk confronted by market makers and widen bid–ask spreads. The October 1987 stock market crash was purportedly characterized by a large volume of unanticipated one-sided orders by institutions.

Besides microstructure implications, the effect of the trading practices of institutions on stock market liquidity has important implications for corporate finance. Amihud and Mendelsohn (1986) show that expected stock returns are related to stock market

liquidity, as measured by bid–ask spreads.³ They find that more liquid stocks have lower expected returns. Therefore, the effect of institutions on stock market liquidity translates into an effect on the cost of equity capital for corporations.

The sample of 499 firms represents a subset of firms studied by Mitchell and Lehn (1990) for which relevant data are available for each year in the 1982–88 period.⁴ All firms in the sample are listed on either the New York Stock Exchange or the American Stock Exchange over the sample period. Firms excluded from the initial sample of 1,158 firms used by Mitchell and Lehn include targets of successful takeovers, firms experiencing bankruptcy, and firms with missing data. Four sources of data are used. *Spectrum 3* provides the institutional ownership data.⁵ The Compustat tapes provide data on trading volume and various accounting variables used in the analysis.⁶ Data on stock return volatility are taken from the Center for Research in Security Prices (CRSP) tapes and bid–ask spreads are taken from the MOSS transaction and quote tapes.⁷

Empirical Analysis and Results

The analysis begins by comparing institutional holdings, share turnover, stock return volatility, and bid–ask spreads for portfolios of stocks with low, medium, and high institutional ownership for each year from 1982 to 1988. Share turnover, defined as the ratio of trading volume to total shares outstanding, is used instead of trading volume because it provides a more informative measure of trading activity.⁸ The

³ Y. Amihud and H. Mendelsohn, "Asset Pricing and the Bid–Ask Spread," *Journal of Financial Economics* 17 (1986): 223–49.

⁴ M. Mitchell and K. Lehn, "Do Bad Bidders Become Good Targets?," *Journal of Political Economy* 98 (1990): 372–98. The sample period starts in 1982, because this was the year that stock index futures were introduced, and ends in 1988, because of data availability when the study was done.

⁵ *Spectrum 3*: 13(f) "Institutional Stock Holdings Survey," CDA Investment Technologies, Inc.

⁶ Compustat tapes, Standard and Poor's Compustat Services, Inc.

⁷ The MOSS (Market Oversight and Surveillance System) tapes are put together by the Securities and Exchange Commission. Stock return volatility is computed as the standard deviation of daily stock returns within a year. The standard deviation is the square root of the stock return variance. The bid–ask spread is calculated from time-weighted averages of bid and ask prices in the first and second week of December in each year.

⁸ The share turnover rate provides an indication of trading activity relative to total potential trading activity as measured by shares outstanding.

three portfolios are constructed for each year in the sample period by ranking the 499 firms by the percentage of stock owned by institutions reported as of year-end in *Spectrum* 3.⁹

Table 2 reports the sample mean values of institutional holdings, share turnover, stock return volatility, and bid-ask spreads for the portfolios of high, medium, and low institutional ownership stocks. *F*-statistics that test for equality of the means across

⁹In each year, the one-third of the 499 firms with the highest institutional ownership was classified as the high institutional portfolio, the one-third with the lowest institutional ownership was classified as the low institutional portfolio, and the remaining one-third was classified as the medium institutional portfolio. The method of constructing the three portfolios allows firms to move between high, medium, and low institutional portfolios over the sample period. The results, however, are not sensitive to the method of portfolio construction as indicated by an analysis of firms that remain in the same portfolio for the entire 1982-88 period. Complete results are available on request.

the three portfolios are also reported. Mean share turnover is greatest for the high institutional portfolio in each year and is lowest for the low institutional portfolio in each year except 1983 and 1986. Similarly, mean stock return volatility is lowest for the high institutional portfolio and is greatest for the low institutional portfolio each year. Given these results, it is not surprising that bid-ask spreads are smallest for the high institutional portfolio and largest for the low institutional portfolio. These results probably indicate more about the preference of institutional investors for stocks with high turnover, low volatility, and narrow bid-ask spreads than they do about the direct effects of institutional ownership. In addition, the results may also reflect that firms in the high institutional portfolio are large in size and their stock trades at higher prices than the firms in the low institutional portfolio.

More revealing results about the effect of institu-

Table 2. Low, Medium, and High Institutional Investor Portfolios, 1982-88

Year	Variable	Low Portfolio	Medium Portfolio	High Portfolio	<i>F</i> -statistic ^a
1982	Institutional holdings	13.00%	34.24%	55.77%	1,409.7%
	Share turnover	48.54%	48.88%	63.26%	7.6%
	Return volatility	2.76	2.33	2.16	83.2
	Bid-ask spread	1.89	1.22	0.85	32.8
	Number of firms	168	163	168	—
1983	Institutional holdings	16.29%	37.50%	57.87%	1,408.2
	Share turnover	63.12%	53.37%	66.46%	3.7
	Return volatility	2.44	2.05	1.92	92.5
	Bid-ask spread	1.60	1.02	0.79	34.6
	Number of firms	161	171	167	—
1984	Institutional holdings	18.70%	39.73%	58.84%	1,354.9
	Share turnover	48.39%	53.46%	67.24%	11.4
	Return volatility	2.37	1.88	1.83	29.2
	Bid-ask spread	2.08	1.15	0.93	31.7
	Number of firms	168	166	165	—
1985	Institutional holdings	22.06%	43.20%	62.17%	1,311.8
	Share turnover	52.94%	57.49%	77.92%	18.3
	Return volatility	2.32	1.69	1.62	54.4
	Bid-ask spread	1.93	1.01	0.77	41.6
	Number of firms	165	169	165	—
1986	Institutional holdings	23.99%	46.22%	64.63%	1,095.6
	Share turnover	70.71%	68.93%	83.75%	4.2
	Return volatility	2.71	2.00	1.84	38.7
	Bid-ask spread	2.08	1.07	0.74	46.7
	Number of firms	166	173	160	—
1987	Institutional holdings	25.12%	47.68%	65.20%	1,270.2
	Share turnover	74.04%	82.77%	98.35%	9.0
	Return volatility	3.46	2.88	2.88	60.8
	Bid-ask spread	2.85	1.49	1.17	21.9
	Number of firms	163	169	167	—
1988	Institutional holdings	24.64%	48.25%	64.95%	1,186.0
	Share turnover	60.68%	68.59%	84.89%	11.1
	Return volatility	2.57	1.93	1.82	48.2
	Bid-ask spread	2.11	1.00	0.80	37.0
	Number of firms	161	170	168	—

^aThe *F*-statistic tests equality of sample means across portfolios and are all significant at the 5 percent level or lower.

Source: "Institutional Investors, Index Futures, and Stock Market Liquidity: An Empirical Analysis of the 1980s," SEC Working Paper (1991).

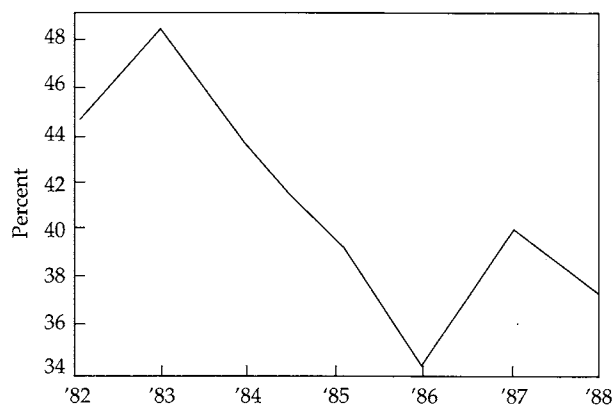
tions on stock market liquidity can be obtained by looking at relative changes in turnover, volatility, and bid-ask spreads. From 1982 to 1988, turnover increased more for the high institutional portfolio (by 34.2 percent, from 63.26 to 84.89) than for the low institutional portfolio (by 25 percent, from 48.54 to 60.68). For the same period, stock return volatility decreased more for the high institutional portfolio (by 15.7 percent, from 2.16 to 1.82) than for the low institutional portfolio (by 6.9 percent, from 2.76 to 2.57). Given these results on turnover and volatility, it is not surprising that the mean bid-ask spread of the high institutional portfolio declined 6 percent from 0.85 to 0.80 between 1982 and 1988. In contrast, the mean bid-ask spread for the low institutional portfolio actually increased 12 percent from 1.89 to 2.11 over the sample period.

Figure 1 plots the ratio of the mean bid-ask spread of the high and low institutional portfolios from Table 2 for each year in the sample period. In 1982, the mean spread for the high institutional portfolio was 44 percent of the mean spread for the low institutional portfolio. Since 1982, the ratio has declined steadily, except for a slight upward swing in 1987. By 1988, the mean bid-ask spread for the high institutional portfolio was 38 percent of the mean bid-ask spread for the low institutional portfolio.¹⁰ These results suggest that the trading practices of institutional investors have increased stock market liquidity during the 1982-88 period.

Table 3 reports the mean institutional holdings, volatility, and bid-ask spreads for two portfolios of

¹⁰The 16 percent decrease in the ratio of the mean bid-ask spreads between 1982 and 1988 is significant at the 10 percent level.

Figure 1. Comparison of Bid-Ask Spreads: High versus Low Portfolio, 1982-88



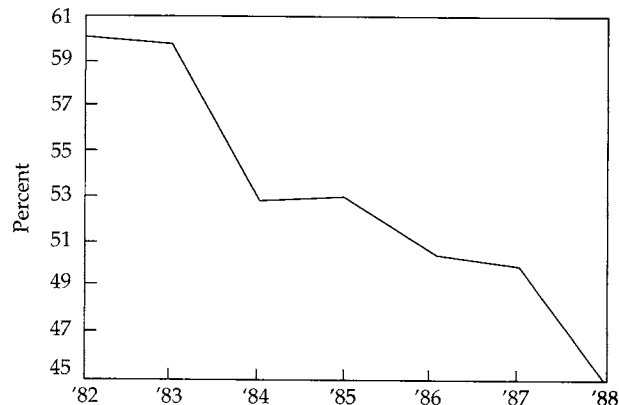
Source: "Institutional Investors, Index Futures, and Stock Market Liquidity: An Empirical Analysis of the 1980s," SEC Working Paper (1991).

the 499 firms in the sample that are listed and not listed in the S&P 500 Index. In addition, *t*-statistics that test for equity of the means across the two portfolios are also reported. If the advent of stock index futures has induced trading practices by institutions that have reduced stock market liquidity, then the stocks of firms listed in the S&P 500 Index should experience an increase in volatility and a widening of bid-ask spreads relative to firms not listed in the index. If, on the other hand, stock index futures have augmented stock market liquidity, then there should be a relative increase in turnover and a narrowing of bid-ask spreads for the S&P 500 stocks compared with the non-S&P 500 stocks.

Between 1982 and 1988, turnover increased more for the S&P 500 stocks (35.2 percent) than for the non-S&P 500 stocks (23.8 percent). Stock return volatility declined by a similar amount for the two portfolios: 12.6 percent for the S&P stocks and 11.3 percent for the non-S&P stocks. The relative increase in turnover for the S&P stocks in conjunction with a similar decline in volatility for both S&P and non-S&P stocks suggests a relative decrease in the bid-ask spreads for the S&P stocks. Table 3 shows this to be the case. The average bid-ask spread for the S&P 500 stocks decreased by 14.7 percent from 0.95 in 1982 to 0.81 in 1988. In contrast, the average bid-ask spread for the non-S&P 500 stocks increased by 13.9 percent from 1.58 in 1982 to 1.80 in 1988.

Figure 2 plots the ratio of the mean bid-ask spread of the S&P and non-S&P stocks from Table 3 for each year in the sample period. In 1982, the mean bid-ask spread for the S&P 500 stocks in the sample of 499 firms was 60 percent of the mean bid-ask spread for the non-S&P 500 stocks. By 1988, the

Figure 2. Comparison of Bid-Ask Spreads: S&P versus Non-S&P Portfolio, 1982-88



Source: "Institutional Investors, Index Futures, and Stock Market Liquidity: An Empirical Analysis of the 1980s," SEC Working Paper (1991).

Table 3. S&P 500 and Non-S&P 500 Portfolios, 1982–88

Year	Variable	Non-S&P 500 Portfolio	S&P 500 Portfolio	t-statistic (absolute value)
1982	Institutional holdings	27.57%	43.66%	10.24
	Share turnover	48.34%	60.86%	3.36
	Return volatility	2.56	2.22	5.29
	Bid-ask spread	1.58	0.95	9.38
	Number of firms	289	210	—
1983	Institutional holdings	31.34%	45.47%	9.42
	Share turnover	54.98%	68.64%	3.16
	Return volatility	2.27	1.96	5.82
	Bid-ask spread	1.37	0.82	10.83
	Number of firms	283	216	—
1984	Institutional holdings	32.70%	46.74%	9.63
	Share turnover	48.81%	65.97%	5.10
	Return volatility	2.16	1.86	5.04
	Bid-ask spread	1.76	0.93	6.77
	Number of firms	276	223	—
1985	Institutional holdings	36.10%	49.60%	9.21
	Share turnover	52.35%	74.32%	6.06
	Return volatility	2.04	1.69	4.95
	Bid-ask spread	1.60	0.85	8.03
	Number of firms	263	236	—
1986	Institutional holdings	38.33%	51.54%	8.61
	Share turnover	66.88%	82.00%	3.39
	Return volatility	2.34	2.02	3.92
	Bid-ask spread	1.72	0.87	6.42
	Number of firms	255	244	—
1987	Institutional holdings	39.44%	52.77%	8.94
	Share turnover	69.75%	100.21%	6.61
	Return volatility	3.11	3.03	0.87
	Bid-ask spread	2.44	1.22	8.91
	Number of firms	247	252	—
1988	Institutional holdings	38.85%	53.30%	9.64
	Share turnover	59.84%	82.30%	5.18
	Return volatility	2.27	1.94	4.01
	Bid-ask spread	1.80	0.81	8.15
	Number of firms	243	256	—

Source: "Institutional Investors, Index Futures, and Stock Market Liquidity: An Empirical Analysis of the 1980s," SEC Working Paper (1991).

mean bid-ask spread of the S&P portfolio was 45 percent of the mean bid-ask spread for the non-S&P portfolio.¹¹ These results are consistent with those reported in Table 2 on the effects of high and low institutional ownership and suggest that the widespread use of stock index futures by institutional investors has increased stock market liquidity.

Finally, the full sample of 499 firms for the 1982–88 period was used to specify and estimate regressions for turnover, stock return volatility, bid-ask spreads, and institutional ownership. The sample constitutes a panel data set with 499 firms over 7 years. The regressions complement and extend the analysis in Tables 2 and 3 by allowing other variables to be held constant while examining the relations among institutional ownership and turnover, stock return volatility, and bid-ask spreads. The estimation technique of error components—or random ef-

fects—is used to generate the panel regression results.¹²

Table 4 presents the regression results for the turnover, bid-ask spread, stock return volatility, and institutional ownership equations. Coefficient estimates are reported along with their *t*-statistics in parentheses. The major regression results are summarized. Institutional ownership has a significant positive effect on turnover, and a significant negative effect on both bid-ask spreads and stock return volatility. In addition, both turnover and the S&P 500 Index dummy variable have significant negative effects on the bid-ask spread.¹³ The regression results for the institutional ownership equation show that institutional investors are attracted to those stocks that are listed in the S&P 500 Index, have high turn-

¹²See C. Hsiao, *Analysis of Panel Data*, 1986, for discussion of panel data and estimation techniques.

¹³The S&P 500 Index dummy variable takes a value of 1 if the stock is listed in the S&P 500 Index and a value of 0 if it is not listed.

¹¹The 25 percent decrease in the ratio of the mean bid-ask spreads between 1982 and 1988 is significant at the 5 percent level.

Table 4. Error Components Single Equation Estimates

Independent Variables	Dependent Variables			
	Share Turnover	Return Volatility	Bid-Ask Spread	Institutional Ownership
Institutional ownership	0.525*** (10.2)	-0.011*** (-12.2)	-0.0006*** (-4.8)	NA —
Share turnover	NA —	0.0006*** (20.0)	-0.0006*** (-15.0)	0.05*** (9.4)
Return volatility	23.93*** (25.7)	NA —	0.80*** (38.4)	-1.94*** (-6.3)
Bid-ask spread	-9.35*** (-13.8)	NA —	NA —	-0.50** (-2.8)
S&P dummy	11.48*** (4.9)	-0.14*** (-3.5)	-0.20*** (-4.3)	7.99*** (9.7)
Asset value	0.00003 (0.14)	-0.00001*** (-3.3)	NA —	NA —
Debt/asset value	NA —	0.01*** (11.1)	NA —	NA —
Stock price	NA —	NA —	-0.0077*** (-8.6)	NA —
Equity value	NA —	NA —	-0.000010* (-1.9)	0.0002** (2.2)
Profit rate	NA —	NA —	NA —	0.13*** (4.8)
<i>N</i>	3493	3493	3493	3493
Adjusted <i>R</i> ²	0.47	0.75	0.64	0.58
Σ^2_e	868.2	0.21	0.17	176.7
Σ^2_v	931.3	0.35	0.58	79.5
<i>N</i>				

Source: "Institutional Investors, Index Futures, and Stock Market Liquidity: An Empirical Analysis of the 1980s," SEC Working Paper (1991).

Note: All regressions include a constant and a set of industry dummy variables. *t*-statistics are in parentheses.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

* Significant at the 10 percent level.

over, and have small bid-ask spreads. The regressions support the view that the trading practices of institutional investors increase trading volume, decrease bid-ask spreads, and decrease stock volatility. These results suggest that institutions augment stock market liquidity.

Conclusion

This study addressed empirically the controversy over the effects that institutional investors and stock index futures have on stock market liquidity. The evidence indicates that the trading practices of institutions increase stock market liquidity and reduce

stock volatility. In addition, the results suggest that institutions lower the cost of equity capital for U.S. corporations by narrowing the bid-ask spread. As concluded 20 years ago by the *Institutional Investor Study*, the evidence presented supports the view that "market makers may face less, not more, uncertainty when institutions account for a high proportion of trading in a stock."¹⁴

¹⁴ L. Jones, "Some Contributions of the Institutional Investor Study," *Journal of Finance* 27 (1972): 313. *Institutional Investor Study*, Report of the Securities and Exchange Commission, 92nd Congress, House Document #92-64, Washington, D.C., Government Printing Office, 1971.

Question and Answer Session

Carolyn Kay Brancato
Jonathan D. Jones

Question: Public pension funds are aggressive in proxies, perhaps more so than in the private sector. They are beginning to realize they are owners and they control things. Also, young people fund these pension plans for older people. The old people want the returns, and the young people want to pursue sociopolitical issues, housing, and different types of goals than the older people. People know about control, and shareholders' rights groups are helping to concentrate their ownership to gain control. Given this scenario, what can we conclude about volatility? Is volatility something that must just be endured? Are we going to hold these assets forever and take over on the control and ownership issue, or are we going to say that volatility does not really count as long as our performance is good? Where do these independent scenarios fit into the volatility equation?

Brancato: Clearly, institutions are not monolithic, and one type of institution may behave very differently from another with respect to these issues. Also, the institutions feel tremendous pressure. The Department of Labor sets fiduciary guidelines governing investments made by private pension funds, and the public pension funds operate under a similar set of state and local regulations. When the Department of Labor sets a guideline—for example, the Avon letter, in which they required pension funds to read the proxies and to vote their stock—the public funds are generally expected to adhere to it. The Department of Labor has asked

pension funds to vote their shares owned in index funds. The public funds feel this is a burden because they are managed by civil servants with limited staff. This creates tremendous tension between what a fund manager is required to do and what he or she is capable of doing to fulfill his or her responsibilities in corporate governance and monitoring the proxy process. Many funds do not know what to do.

Many of the funds are taking steps to improve the long-term prospects of companies in which they invest. For example, CALPERS—the large California fund system—is moving toward negotiated settlements with corporate boards of directors to prod them to assume more oversight over corporate performance. This would enable the funds to justify holding the stock longer and perhaps justify a vote with management in a proxy contest.

Jones: Based on the results in our study using annual data, institutional investors do not appear to have the negative effects that they are alleged to have when it comes to stock volatility. The increase in volume associated with the trading practices of institutional investors was found to augment stock market liquidity and lower stock volatility.

Question: Please expand on institutional investors' impact on bid-ask spreads. Are they really responsible for this volatility, or is the brokerage community responsible?

Jones: The financial microstructure literature suggests two possi-

ble effects of greater trading volume. These apply to the volume associated with trading by institutions. If institutions generate trading volume that reduces the inventory risk of market makers, then their trading practices augment stock market liquidity and narrow bid-ask spreads. In contrast, if the trading volume associated with institutions consists of unanticipated one-sided orders (that is, mostly buys or mostly sells), this additional trading volume may increase the inventory risk confronted by market makers and widen bid-ask spreads as a result. The evidence in our study suggests that institutions increase stock market liquidity and narrow bid-ask spreads.

Question: How do you define volatility?

Jones: Stock volatility is a measure of the dispersion of stock returns. It can be measured either by the variance or the standard deviation. Simply stated, the variance is a weighted average of deviations of stock returns from their average value. The standard deviation is the square root of the variance. In our study, stock volatility was computed as the standard deviation of daily stock returns within a year.

Question: The Columbia study took place between 1982 and 1988. To what extent were your conclusions influenced by the rising equity markets of that particular time period?

Jones: In the regressions, we used variables to control for rising equity markets between 1982

and 1988. By doing so, our conclusions about the effects of insti-

tutional investors on turnover, bid-ask spreads, and volatility

were not influenced by the upward trend in the market.

How to Break the Vicious Circle

Judith D. Freyer, CFA

Vice President for Investments and Treasurer

The Board of Pensions of the Presbyterian Church (U.S.A.)

Although many features of a church pension plan lead sponsors toward long-term investing, other features might well promote a shorter term focus. Sponsors attempt to minimize the pressures by keeping appropriate time horizons, benchmarks, proactivity, and continuity of purpose in mind.

The Board of Pensions of the Presbyterian Church has been a long-term investor for more than 200 years. Our predecessor organization, the Fund for Pious Uses, was established in Philadelphia in 1717. The Board of Pensions was incorporated as a non-profit organization in the state of Pennsylvania in 1876. We currently provide major medical and retirement benefits to the employed work force of the Presbyterian Church (U.S.A.) and their families. The retirement plan is a defined-benefit plan, which is invested in a broadly diversified portfolio of assets. The plan liability stream determines the asset allocation: 45 percent in domestic equities, 10 percent in international equities, 10 percent in real estate, and 35 percent in fixed-income securities. We have segmented the portfolio by asset class and by manager style, and we currently have 20 active managers. We use index funds and participate in commingled real estate funds.

the Financial Accounting Standards Board's FAS No. 87 accounting requirements, again a significant plus. We do follow the urgings and guidelines of the General Assembly of the Presbyterian Church with regard to social issues. We follow, to the extent possible as a prudent fiduciary, its divestment guidelines for investments in the tobacco, alcohol, and gambling industries; South Africa; and military-dependent industries.

We vote all of our own proxies in-house—almost 500 a year. My staff and I thoroughly research each issue and document each vote. We assist with the Presbyterian Church Mission Responsibility Through Investment Committee in its work filing shareholder resolutions. Church groups have been very active filing resolutions on equal employment, South Africa, the Valdez environmental principles, and corporate governance. We work with other churches to visit companies that we own and discuss employment and environmental policies with them. We have observed employment conditions in the “maquiladoras,” manufacturing plants in Mexico that are operated by U.S. corporations. We have visited chemical companies in Appalachia to see the impact of chemical pollution. We have toured pharmaceutical companies in Puerto Rico to discuss compliance with Environmental Protection Agency standards and how they impact local communities. We are very different from a corporate plan in our commitment to work with the Church in its social programs.

Church vs. Corporate Plans

Church plans and corporate plans differ in several important respects. In many ways, the problems for church plans are a hybrid between Elizabeth Holtzman's problems with the City of New York fund and Terry Wolfe's problems with a corporate plan.¹

As a church plan, we are not subject to ERISA. Nevertheless, we follow ERISA guidelines for portfolio diversification and prudent investments. We are not required to file Department of Labor Form 5500s—a major plus. Nor do we have to comply with

Structural Characteristics and the Time Horizon

Although many features of our plan lead us toward long-term investing, some other very significant fea-

¹Please see Ms. Holtzman's presentation, pp. 33–36, and Mr. Wolfe's presentation, pp. 70–72.

tures might promote a shorter term focus. We strive to minimize those pressures favoring a short-term outlook and emphasize those structural characteristics that permit a long-term investment horizon.

Long-Term Characteristics

Several characteristics of the plan make it possible for us to maintain a long-term investment horizon. First, the Board of Pensions retirement plan is fully funded, so we do not have the pressures that many corporate plans have to increase contributions after poor investment performance or periods of uncertain corporate earnings. Our annual contributions are a constant percentage of each minister and lay employee's salary, which is paid to us as dues by their employing organization. This percentage is actuarially determined, based on our long-term study of plan assets and liabilities. We anticipate no change in dues for the next 15 years in our planning process.

Second, the staff has a long-term commitment to the fund. I am the only career investment officer within the board, so I will not be rotated through other positions and can be assured of some tenure without being voted out or reassigned. We also have an investment committee composed of investment professionals, Presbyterian elders, and active members of the Presbyterian Church who donate their time and expertise to participate in the work of the committee.

Third, our managers are encouraged to use long-term securities analysis and portfolio construction. Each of our managers is provided a copy of the General Assembly list, which currently consists of 41 companies that are either in South Africa or active in the tobacco industry or production of military goods. If managers believe that not purchasing or retaining a security on the divestment list will impair portfolio return, and no substitute security can be found, we ask them to provide a written rationale for the purchase. This could create a very difficult situation, because it might appear that we are preventing managers from making timely decisions on a security. We are actually forcing them to think long term, however, and to decide whether they really need to own companies on our divestment list as long-term assets.

Short-Term Characteristics

Just as many characteristics of our plan support our focus on long-term investing, a few characteristics might provoke us to shorten our investment horizon.

One feature of our plan design that tends to elevate the importance of short-run results is its cost-of-living provision. Our plan design is very different from a corporate plan. Corporate plans often operate with a philosophy of surplus maximization. A large surplus, or being overfunded, is advantageous because it reduces pressure to increase funding in years of poor earnings or disappointing investment performance. The Church plan is different in that we have a policy of surplus or reserve minimization. Once we exceed our target, which is usually in the range of a 5 to 15 percent reserve, we are obligated by plan design to give cost-of-living increases to plan members. Assets and liabilities are matched at year-end. If we have adequate reserves at the end of every year, each pensioner will get an increase, subject to General Assembly approval. At the same time, the floor is raised for all active plan members, and they are provided increases in their pension credits. This creates enormous pressure to earn investment returns adequate to provide these "experience" apportionments.

A second pressure toward short-term results is that we are required to submit written and oral reports to the General Assembly annually. We have a fishbowl existence as a church pension fund, and we receive more than the usual amount of correspondence from our plan members. The annual report presents an opportunity for them to review and critique investment decisions made during the previous year. In 1990, the investment returns were inadequate, and we decided we could not provide an experience apportionment. We received hundreds of calls and letters from disgruntled members who felt we should have put the money in certificates of deposit at their local banks. We have a large incentive to provide returns that will enable us to continue the experience apportionment program.

Third, the structure of our investment committee might lead to more short-term perspectives. Although the members of our committee are some of the best and brightest in the investment community, they often differ among themselves on investment philosophy and asset classes. The term of membership on the committee is three years, and it meets only three times a year. Members can be renominated, if their schedules permit, for a second three-year term, but generally a third of the members leave each June. Three years is not a very long time to build a cohesive group of nine people. That creates pressure for the new people as well as existing members to promote an environment that accepts new ideas without redesigning the present structure.

Sources of Short-Term Thinking

One reason plan sponsors think short term is that they and their investment committees like to be action oriented. Plan sponsors like to go through an agenda and feel they have accomplished something. They like to interview prospective managers and be associated with creative, bright, innovative ideas and "first quartile" people. They do not like to be associated with "fourth quartile" managers, nor do they want them in their portfolio of managers. The tendency is for sponsors to clean house just before publishing a report—to remove that manager who has been lagging the benchmark. Portfolio managers call it window dressing; plan sponsors call it cleaning house.

Plan sponsors, particularly church plan sponsors, also like to research new ideas thoroughly. They like to make sure they are not the first pension plan to do something new or innovative. This means they sometimes buy at the top of the market and sometimes get into investments far too late in the investment cycle. Plan sponsors and board members like to believe their personal successes and their professional reputations lie in their ability to have good managers and good pension fund performance.

Several years ago, *Institutional Investor* carried an article called "America's Best Pension Officers."² Virtually all plan sponsors dream of being the best pension officers—having an article written about them. What does it mean to be the best? Who named them as best? Was it their retirees? Was it the money management community or the consultants they hire? We all want to be the best plan sponsor, but the best is very subjective.

Breaking the Vicious Circle

Given the characteristics of most plan sponsors, the vicious circle of short-term investing will be hard to break. Nevertheless, I believe it is possible to maintain a long-term horizon. For many plan sponsors, breaking the circle is a process that depends upon time horizons, benchmarks, proactivity, and continuity of purpose.

■ *Time horizon* is critical for defining what we are trying to achieve. We must differentiate between absolute performance and relative performance and develop appropriate time horizons for each. Absolute performance is the longest time horizon, generally based on actuarially determined liabilities and the strategic asset allocation that will provide the target absolute return.

²D.H. Goper, "America's Best Pension Officers," *Institutional Investor* (July 1987).

Our absolute measure of success is a 5 percent real return after inflation, which will provide adequate reserves to increase benefits when we have favorable investment opportunities. In our plan, absolute performance is critical. We have an obligation to our ministers to provide them with a pension income that increases. We call it the "loaves and fishes" pension. When someone retires in 1991 with a buying power of two loaves and four fish, we want to be able to say that—20 years later—he can still buy two loaves and four fish, maybe even five or six fish because of our wise investments. We try to keep our retirees whole with inflation. Our time horizon for our absolute goal is 15 years.

Relative performance and relative goals will have a different set of time horizons than absolute performance. The time frames might be significantly shorter and might differ among asset classes. For example, for real estate, five years is too short, but that may be an adequate horizon for a fixed-income portfolio. As plan sponsors, our obligation is to provide reports to our committees that do not focus solely on the current quarter or year-to-date numbers. Our reports go beyond the standard three- or five-year measures and look at the absolute return we need to achieve to provide adequately for our plan participants.

■ *Benchmarks* are critical to maintaining a long-term horizon. Benchmarks can be constructed in many ways, but some, such as the median manager's return, are inherently inappropriate. Our plan design is unique, so to compare ourselves to the median manager, a universe of typical corporate plans, or even typical church plans may be a disservice to ourselves and our beneficiaries.

For our plan to have extremely volatile returns may be worse than to over- or underperform a benchmark. If we achieve a 20 percent return in one year, our reserve guidelines and plan design will require us to give increases to plan members. If we receive a -10 percent return, however, we are castigated for providing poor performance, despite the fact that we exceeded benchmark returns. Constant returns over time with very little volatility may provide the best results for our plan participants. Nevertheless, appropriate benchmarks are critical in reviewing the success or failure of individual managers or asset classes.

In our review process, we try to focus on what a manager has achieved relative to what we think is the appropriate benchmark. We have developed a manager report card, which goes out to our investment committee. It is a one-page sheet that graphs each manager's performance against an appropriate benchmark from inception, and it also has staff com-

ments about what is happening in that portfolio. We do not provide quarterly or yearly numbers on that particular report.

☛ *Proactivity* is looking ahead rather than back—not picking our investment managers or asset classes through the rear view mirror. As plan sponsors, we are all guilty of looking at past performance to make future selections. I recommend developing a working partnership among ourselves as plan sponsors and our money managers, committees, and consultants. This is the only way to achieve true success.

☛ *Continuity of purpose* means developing, maintaining, and communicating a plan history for all staff, board members, managers, and consultants. We must be certain that when new committee members come on board, they clearly understand why each manager was selected, how each fits into the overall plan design and structure, and what goals we have for any given manager and asset class. Losing sight of the collective history of the plan and how each manager fits into the larger asset/liability structure dooms the sponsor to failure, because every new committee member or staff member will pillory the manager who underperformed in the most recent quarter or year to date.

Pension Management in the 1990s

Will pension fund management in the 1990s be a new era of cooperation or business as usual? One of my colleagues said there is no pension fund industry because there is no SIC code for it. I beg to differ. There is a pension fund industry. We are it.

Business as usual for the plan sponsor and consultant is the once-a-year investment committee meeting with the money manager. The manager gets 45 minutes on the committee agenda and maybe a few minutes for questions and answers. At the end of the meeting, the consultants, staff, and committee members review the manager. The scene is reminiscent of gladiatorial times: Thumbs up, the manager gets to stay another year; thumbs down, you are off on a new manager search. Monday morning, the

sponsor's phone is ringing off the hook with consultants and first-quartile money managers offering their services.

Business as usual for the analyst and portfolio manager might be evaluating companies too closely with only the numbers the corporation provides and then quickly recommending a sale based on an unexpected earnings decline for one quarter.

Business as usual for the corporate community in America is setting up factories in enterprise, or tax-free, zones. It is polluting the local air, water, and environment without accruing a reserve for environmental damages and then moving on when the tax benefits expire.

What is the similarity in each of these instances of business as usual? In each case, we did not take seriously our responsibilities as fiduciaries. As plan sponsors, analysts, portfolio managers, and corporations, we failed to ask, "Whose money is it?" In our zeal to build up our pension industry, we lost sight of the real purpose for the money and our obligation as fiduciaries.

The end of business as usual could be a new era for all of us and an end to the vicious circle. Intelligent people can solve problems, but wise people are far-sighted enough to avoid them. Intelligent people can excuse fourth-quartile managers, they can sell companies that have poor earnings, and they can clean up superfund sites and chemical waste dumps. Wise people would avoid focusing on quarterly performance data and this year's top-quartile managers. They can look beyond one quarter's or one year's earnings before they buy or sell a company. Wise corporations would develop long-term research and development strategies and ways to work with our environment instead of against it. The end of business as usual could mean the end of the vicious circle as we know it today. It could provide improved investment performance for our plan participants, increased corporate responsiveness to shareholders, and a renewed commitment by our profession to long-term investing in our role as prudent fiduciaries.

Question and Answer Session

Judith D. Freyer, CFA
J. Parker Hall III, CFA
Thomas M. Richards, CFA
C.F. Wolfe

Question: Friction between principals and their agents is inevitable. In investment management, one problem is that when a manager's (the agent's) numbers are not very good, his client (the principal) is inclined to shake his finger and say, "You are a bad dog." Then the manager, consultant, or whoever, cringes. How do you keep managers, consultants, and other agents on track, doing what you want them to do, without putting them through the "bad dog" routine? How do you train them to be "good dogs?"

Freyer: We try to avoid the "bad dog" routine. Recently our investment committee made the decision that managers will not meet with the committee on a regular basis to review performance; staff will be responsible for performance reviews. We will only bring managers before the committee for nonperformance issues. This might be when the manager wants to introduce a new investment concept, or if, because of changes in the marketplace, the

committee has questions about a manager's particular asset class or specialty. The manager's appearance is not performance related but rather serves as an educational update for the committee.

Hall: If a manager seems to be performing poorly, but the qualitative characteristics of the manager are unchanged, rather than wag my finger or terminate a manager, I would consider giving the manager more money. If the manager's five-year returns were good, but the most recent two-year returns were not so good, even against an appropriate benchmark, relax. Two years is too short a time period to base judgments on. Even three years is probably too short if the manager is still doing everything in the same way as when the returns were good.

Richards: In tough times, managers should sit down with clients and do some attribution that reveals that they have underperformed the agreed-upon

target or benchmark and that they understand what caused it. This will provide some assurance to the other party that the investment manager has things under control, that the process remains in place, and that they are benefiting from events and experiences that have taken place. In fact, the results may not be out of line with what had been agreed to and discussed at the initiation of the relationship.

Wolfe: Continuous communication between principal and agent might be one way to avoid a confrontation. Surprises are problematic and do not enhance relationships. Returning to my theme of expectation management, if continuous communication is lacking, expectations will surface only when performance is poor. If managers do not understand the expectations of the sponsors, they may inadvertently wind up being "bad dogs."

How to Break the Vicious Circle

J. Parker Hall III, CFA

President

Lincoln Capital Management Company

More thoughtful long-term policies pursued by countries, corporations, clients, and investment management firms would help lessen the short-term pressures under which they all operate.

My discussion centers on three topics: extending the time frame; the tyranny of the median; and taming, if not breaking, the vicious circle.

Extending the Time Frame

As suggested by the title of this seminar, one has to extend the time frame to break the vicious cycle. This has to be done at both the macro and micro levels—by countries, corporations, clients, and investment managers.

Countries

To effectively lengthen the time frame for national policies, our confidence in our institutions and in our future must be increased. Unfortunately, there is a lack of both vision and policies to promote time-lengthening goals. Here are six suggestions for ways to promote a longer perspective:

■ *Broaden the attitudes of elected public officials.*

Increase the pay scales of elected officials to attract better candidates, but limit their terms of office to break the elect-and-spend circle.

■ *Spur competition.* Reinstate antitrust enforcement.

■ *Rein in periodic speculative excesses and financial buccaneering.* Continue tight regulation of financial institutions, bank capital adequacy standards, and enforcement of securities laws to encourage ethical behavior.

■ *Shift investor attitudes from a trading mentality.* Introduce a tax surcharge of 5 percent on realized capital gains for all investors (regardless of normal tax treatment) for holding periods shorter than one year and a related tax reduction of 5 percent for holding periods longer than two years.

■ *Improve the quality of our human capital.* Pur-

sue policies, starting before birth and continuing onward, that will help rebuild the family and enfranchise our troubled youth.

■ *Reduce the decades-long chance of war by enhancing the rule of law internationally.* Grasp this opportunity to strengthen the United Nations as an institutional mechanism to help settle international disputes.

Corporations

Generally, the credibility of corporate management, like that of politicians, is low. Both have a similar preoccupation with the short term. A corporate example is the frequency of large “nonrecurring” writeoffs. Among other things, this is an

admission that past policies resulted in an overstatement of earnings.

Following are three suggestions. Each requires a more active role by outside directors and advocacy by AIMR and large institutional investors.

■ *Formulate more realistic corporate goals.* For example, recognize that not everybody can increase market share.

■ *Encourage a longer term ownership mentality.* Have a larger proportion of management compensation deferred and based on attaining reasonable long-term goals for earnings, dividends, and earned surplus. Writeoffs within three years would reduce deferred compensation.

■ *Reduce both short-term stock volatility and availability of material inside information.* Companies should communicate publicly more openly and frequently, especially if their expectations change.

Clients

Client time frameworks are also too short. Modifying standards for appraising investment manag-

ers would be productive. Changing investment managers is costly in frustration, time, travel, and security transactions. It is especially expensive to portfolios, because managers are usually terminated at points of ebbing relative returns and hired at points of cresting relative returns. What can a sponsor do?

Quantitatively, client expectations of future relative returns generated by their managers are usually unrealistically high. Clients using active management strategies often expect a return net of fee several hundred basis points ahead of the applicable benchmark. But this spread was earned by only about 20 percent of equity managers over the past 23 5-year periods and only 13 percent of equity managers over 23 10-year periods. Therefore, between 80 and 90 percent of these clients will always be unhappy, an unnecessarily large proportion. By lowering their sights somewhat, many more clients can be happy and still earn satisfactory relative returns.

Client time frameworks are too short. Returns for active managers are randomly variable year-to-year and even over several years. Therefore, in the intermediate term, qualitative considerations are very important. Here are some of the kinds of questions the client should ask at least annually: Are key people still there, or have they been replaced with able people? Is the investment philosophy the same? Do the holdings still embody the same philosophy? Is the investment process unchanged or enhanced? Can the firm effectively handle the funds under its management? Are controls in place? Is the range of returns among portfolios narrow? If these questions are answered positively, the client should be patient.

I would assign qualitative factors twice the importance of quantitative factors in hiring a manager, and I would weigh qualitative factors at three to one for a manager already on board. New client personnel and consultants should be especially sensitive to the temptation to urge remedial action based on quantitative, not qualitative, evaluations.

Investment Management Firms

What can an investment manager do to extend its own time frame, securing its life cycle through improved returns and client satisfaction? Here are six ideas:

■ *Have a well-defined investment philosophy and process.* Clarity of thought helps.

■ *Control trading costs.* Brokerage commissions can be 0.1 to 0.2 percent annually, not counting market impact costs. Further, chasing stocks up and down is usually expensive in foregone returns.

■ *Keep timing forays to a minimum unless they are an integral part of your strategy.*

■ *Maintain fees on the low side.* Returns net of fees are increasingly *de rigueur*.

■ *Do not permit your portfolio managers to have different portfolios when their clients have the same goal.* Use all this talent to generate the firm's single best portfolio.

■ *Consider adopting, along with your clients, more appropriate portfolio benchmarks.* Resist promising or accepting unrealistic goals, including absolute objectives.

The Tyranny of the Median

It seems to me that the challenge of the median makes a complete break in the vicious circle impossible. Do you know any client who, at the outset, would embrace a below-average expectation? By definition, however, one-half of any numerical series is higher than the other half. Within any investment sector, the aggregate for all participant relative returns, before any expenses, is zero. This phenomenon is as true for sophisticated sponsors with reasonable expectations as well as for investment managers with finely tuned processes and benchmarks. With improved standards of reporting returns urged by AIMR and the Securities and Exchange Commission, it is becoming true even for accounts of individuals at brokers, investment counselors, and bank trust departments.

With so much money under the wing of financial intermediaries and so much data available on managers, a lot is riding on their relative returns—in both egos and pocketbooks. Except for the founders of successful companies, however—and that list enjoys a survivorship bias—I am not aware of any documentation proving that active investment with a truly long-term framework systematically improves long-term relative returns. Maybe AIMR could undertake such a study; demonstrating such a phenomenon could have important implications.

Even investment managers with high relative returns have no peace. For example, all Lincoln's equity and balanced fund clients have enjoyed cumulative returns that have exceeded appropriate benchmarks by a nice margin. Nevertheless, we remain sensitive to pressures to excel. We worry about everything, including the concern that we have just been lucky and our lucky streak is about to end. The median is truly tyrannical.

The Vicious Circle

My hope is a modest one: to tame, if not to break, the vicious circle. I believe that more thoughtful long-term policies pursued by our country, corporations,

clients, and managers would lessen the short-term pressures under which we all operate. Growth and personal satisfaction would certainly be improved. But I cannot figure out a way to insulate those groups from the ultimate insight that only half of us can be

numerically above average and can benefit from this fact. Maybe we should just accept this outcome as one of the blessings of our democratic, free enterprise system and its invisible hand operating in our aggregate interest.

Question and Answer Session

Judith D. Freyer, CFA
J. Parker Hall III, CFA
Thomas M. Richards, CFA
C.F. Wolfe

Question: Friction between principals and their agents is inevitable. In investment management, one problem is that when a manager's (the agent's) numbers are not very good, his client (the principal) is inclined to shake his finger and say, "You are a bad dog." Then the manager, consultant, or whoever, cringes. How do you keep managers, consultants, and other agents on track, doing what you want them to do, without putting them through the "bad dog" routine? How do you train them to be "good dogs?"

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How to Break the Vicious Circle

Thomas M. Richards, CFA

Principal

Richards & Tierney, Inc.

In hiring and firing investment managers, performance results must be treated properly. Only after an appropriate benchmark portfolio that captures the manager's investment style has been established—and the uncertainty of performance relative to this standard is understood—should performance be a contributing factor.

The relationship between investment managers and their clients historically has been weak. This is reflected in high turnover among investment managers. Unfortunately, the hiring and firing of investment managers seems to have become standard operating procedure in the industry.

This turnover is counterproductive both for investment managers and for their clients. The relationship between these two parties can and should be stronger. To develop a stronger relationship, however, both parties need to understand the manager's past performance and formulate more realistic expectations with respect to future performance. Also, the importance of investment performance results needs to be put in proper perspective.

In general, investment performance results are misunderstood. Additionally, investment performance results, particularly those most commonly used by managers and consultants, are assigned far too much importance in hiring and firing decisions.

The reason investment performance results are generally misunderstood is that the return effect of a manager's investment style is not recognized. Investment managers' styles or areas of expertise have a material effect on performance results, particularly over three- to five-year time periods, which is the time frame often used in clients' hiring and firing decisions.

equation, the relationship will hold. This occurs by adding and subtracting B (benchmark).

$$P = B + (P - B).$$

Thus, any portfolio is equal to a benchmark plus the difference between the portfolio and the benchmark, which we call active management (A).

$$P = B + A.$$

Repeating this process, we can add and subtract M (market) from the right-hand side of the equation with the following result:

$$P = M + (B - M) + A.$$

The term $(B - M)$ can be labeled S and will represent a manager's investment style. Consequently, any portfolio and its return is one part market, one part investment style, and one part active management.

$$P = M + S + A.$$

Traditionally, the investment manager hiring and firing decision has assumed that $S = 0$. A manager's performance is usually compared to a market index. Those managers with superior comparison results are hired, and those with inferior results are fired.

I agree that over the long term, $(B - M)$, or S , will be approximately equal to zero. As the saying goes, however, "in the long run, we are all dead." During time periods as long as 20 years, investment style can be a significant factor in a portfolio's performance; that is, it is materially different from zero.

Sources of Performance Results

The following simple algebraic relationship provides the framework of this concept:

$$P = P.$$

This is an identity. Any portfolio is equal to itself. If a zero is added to the right-hand side of the

Effect of Investment Style

To help investment managers and their clients understand the investment style effect, my company developed four generic investment style portfolios.

Table 1. Richards & Tierney Investment Style Portfolios Returns

Year	Annual Return					Comparison with S&P 500			
	S&P 500	Growth		Value		Growth		Value	
		Large Cap	Small Cap	Large Cap	Small Cap	Large Cap	Small Cap	Large Cap	Small Cap
1976	23.99%	16.86%	37.46%	37.97%	49.20%	-5.75%	10.86%	11.27%	20.33%
1977	-7.18	-10.20	20.87	2.43	16.78	-3.25	30.23	10.36	25.82
1978	6.50	5.24	18.61	5.74	12.70	-1.18	11.37	-0.71	5.83
1979	18.69	26.09	51.63	21.32	24.01	6.24	27.76	2.22	4.49
1980	32.40	33.79	46.06	18.55	22.40	1.05	10.31	-10.46	-7.56
1981	-4.88	-7.14	-2.40	7.84	23.88	-2.37	2.61	13.38	30.24
1982	21.65	9.41	23.44	19.26	34.52	-10.06	1.47	-1.96	10.58
1983	22.33	15.45	26.91	27.44	44.69	-5.63	3.74	4.17	18.27
1984	6.19	3.26	-7.99	17.62	22.33	-2.76	-13.35	10.76	15.20
1985	31.72	33.78	26.45	30.68	45.36	1.56	-4.00	-0.79	10.36
1986	18.38	16.01	7.86	28.99	21.65	-2.00	-8.89	8.96	2.76
1987	5.21	5.82	-9.64	2.00	-3.51	0.57	-14.11	-3.05	-8.29
1988	16.66	12.73	21.01	24.02	27.81	-3.37	3.73	6.31	9.56
1989	31.28	34.35	18.80	23.95	15.78	2.34	-9.50	-5.59	-11.81
1990	-3.17	1.99	-15.50	-5.64	-17.52	5.32	-12.74	-2.56	-14.83
1991	30.52	44.17	60.07	30.88	50.46	10.46	22.64	0.28	15.28
Latest year	30.52	44.17	60.07	30.88	50.46	10.46	22.64	0.28	15.28
Latest 3 years	18.38	25.47	17.13	15.25	12.84	5.99	-1.06	-2.65	-4.68
Latest 5 years	15.29	18.70	11.93	14.13	12.12	2.96	-2.91	-1.00	-2.75
Latest 10 years	17.50	16.91	13.20	19.29	22.26	-0.51	-3.67	1.52	4.05
Latest 15 Years	14.29	13.92	17.12	16.44	21.46	-0.32	2.48	1.88	6.27
1976-91	14.87	14.10	18.30	17.68	23.03	-0.67	2.98	2.44	7.10
First year	23.99	16.86	37.46	37.97	49.20	-5.75	10.86	11.27	20.33
First 3 years	7.02	3.37	25.38	14.33	25.22	-3.41	17.16	6.83	17.01
First 5 years	14.01	13.25	34.27	16.54	24.41	-0.66	17.78	2.22	9.13
First 10 years	14.32	11.68	22.75	18.40	29.02	-2.31	7.37	3.57	12.85
First 15 years	13.90	12.33	15.94	16.85	21.39	-1.37	1.79	2.59	6.58

Source: Richards & Tierney, Inc.

The four portfolios focus on (1) large-capitalization growth, (2) large-capitalization value, (3) small-capitalization growth, and (4) small-capitalization value. These portfolios are composed of investable securities with appropriate weights, and they do an excellent job of capturing the performance pattern of the four domestic equity investment styles that are most commonly discussed among managers and clients. Although the securities and weights are subject to change over time, the portfolio-building process remains the same.

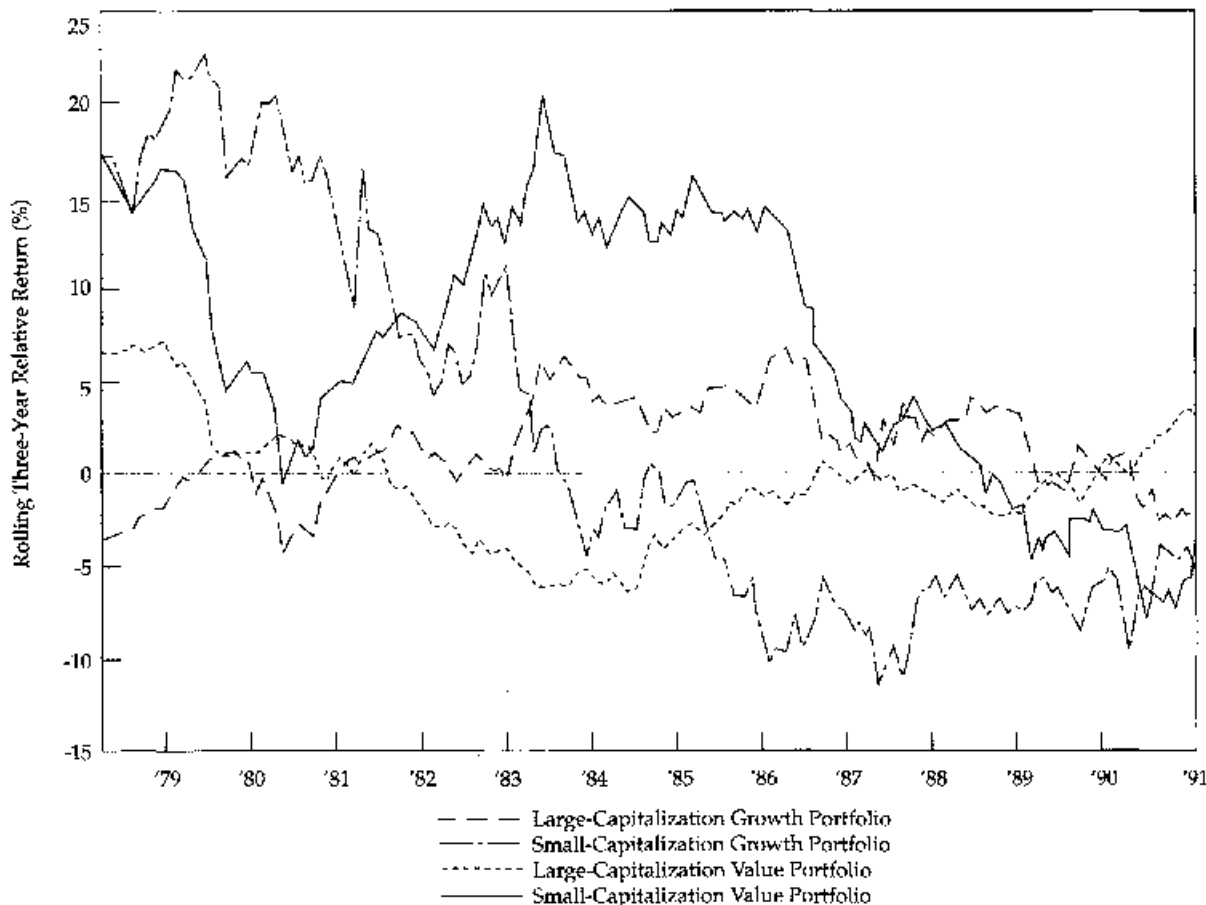
Table 1 lists the annual returns of these portfolios and the S&P 500 since 1976. The performance differentials relative to the S&P 500 also are shown. These performance differentials are quite large. In any one year, they can be as much as 30 percent. In fact, over longer time periods of 3, 5, 10, and 15 years, some of the performance differentials are materially different from zero. Figure 1 shows these performance differentials on a rolling three-year basis. These differentials can be more than 20 percent a year for a three-year time period.

The point of this table and graph is to show that

investment style can have a material effect on a portfolio's performance. For example, in 1983, the S&P 500 had compounded at a rate of 13.36 percent a year during the prior eight-year time period. Now, assume a skillful small-capitalization growth stock manager generated performance results of 29.32 percent a year during the same time period. Many clients and consultants seeing these results would attribute the difference between the market return (S&P 500) and the manager's performance to the manager's investment skill, or active management. Under this scenario, the assumption is that the investment style return component is zero. Many large plan sponsors made hiring decisions based on this rationale at this time.

A more thoughtful client (plan sponsor) might have recognized that part of the manager's performance results could be attributable to investment style, because small-capitalization growth stocks as a group were performing better than the market. In fact, the small-capitalization growth investment style portfolio shown in Table 1 and Figure 1 had a 26.78 percent a year return during this time period.

Figure 1. Generic Style Portfolios; Rolling Three-Year Returns Relative to the S&P 500, 1978-91



Source: Richards & Tierney, Inc.

Accordingly, this plan sponsor would attribute the performance differential between the market (13.36) and the small-capitalization growth investment style portfolio as being the result of the manager's style. The difference between the manager's actual performance of 29.32 percent and the small-capitalization growth investment style portfolio of 26.78 percent would be attributed to the manager's skill or active management. In this case, the amount contributed by the investment manager is substantially less.

Assume that both of these plan sponsors had hired the small-capitalization growth manager in 1983. (In fact, many did.) Now consider the ensuing seven-year time period, 1983 to 1990. The market (S&P 500) compounded at a rate of 14.52 percent a year. The small-capitalization growth investment style portfolio had a return of 2.14 percent a year, and assume the manager's portfolio had a return of 3.16 percent. In the case of the first plan sponsor, the performance differential between the market and the manager's portfolio would be attributed to the manager's skill. Most likely, the manager would be fired, and as was the case in many situations, the assets would be put into an S&P 500 index fund.

The other plan sponsor would recognize that the manager's investment style had fallen out of favor—that is, the market return was considerably more than the small-capitalization growth investment style portfolio return. Because the manager's portfolio return continued to exceed that of the small-capitalization growth investment style portfolio return, the plan sponsor would observe that the manager continued to make a positive contribution as a result of active management or investment skill. Consequently, the manager likely would be retained.

As a result of these decisions, the first plan sponsor would have missed out on the 1991 market, when small-capitalization growth stocks returned to favor and substantially outperformed the market—60.07 percent as opposed to 30.52 percent. In effect, the first plan sponsor, who failed to recognize the importance of investment style, ended up buying high and selling low and creating a substantial and unnecessary cost to the fund.

Use of Multiple Managers

The other plan sponsor recognized that investment style can have a material effect on a portfolio's performance. Accordingly, this plan sponsor could choose to diversify away this manager's investment style risk by hiring other managers who are skillful in other areas of the market. If the managers each can add value within their areas of expertise, and the benchmarks (investment styles) of the managers ag-

gregate to a portfolio that performs in line with the market, then the plan sponsor will achieve the fund's objective of doing better than the market on a relatively consistent basis over time.

Recognition of a manager's investment style and the establishment of a proper benchmark portfolio is the first step in improving the manager-client relationship. Please note in the example discussed earlier that we assumed the small-capitalization growth investment style portfolio was the proper benchmark for the manager. Most likely, a better benchmark would be one that is customized more directly to the manager's investment process. Such a benchmark would be a better indicator of the manager's active management skill and a more powerful tool for the plan sponsor to use in building and managing a team of multiple managers. The "goodness" of a benchmark portfolio can be evaluated (see "Evaluating Benchmark Quality," J.V. Bailey, forthcoming 1992 in the *Financial Analysts Journal*).

Performance Expectations

Once an appropriate benchmark portfolio has been established, the investment manager and the client need to agree on a realistic set of performance expectations. In particular, how much value added can the investment manager be expected to provide, and how consistently will it occur? Realistically, we believe skillful domestic equity managers might generate from 1 to 3 percent a year of added value. Whatever level of added value the manager and client think is reasonable, both parties should acknowledge that the value-added return will not occur month in and month out. Even the most skillful manager with a well-defined, appropriate benchmark could experience negative value-added returns for extended periods of time—from three to five years, for example. In fact, there is a reasonable probability that such an event will occur.

Accordingly, I believe plan sponsors involved with the investment manager hiring and firing decision should not rely solely on performance results as the basis of their decisions. A variety of subjective and qualitative factors have great importance in this decision. Even in situations in which a well-defined, appropriate benchmark that captures the manager's investment style has been established and the manager's performance is evaluated against this standard, only a 50 percent importance-weighting would be assigned to the performance results. The other 50 percent would involve subjective and qualitative factors relating to the manager's people and process. Of course, without a well-defined benchmark portfolio, a 0 percent importance-weighting

would be assigned to a manager's performance results.

Conclusion

A discussion of the subjective and qualitative factors that comprise at least 50 percent of the investment manager hiring and firing decision is beyond the scope of this presentation. My purpose has been to point out that one way to "break the vicious circle"

is to treat performance results properly. A well-defined, appropriate benchmark portfolio that captures the manager's investment style must be established, and the uncertainty of the manager's performance relative to this standard must be understood by both parties. Only when this has been accomplished should performance be a contributing factor in the investment manager–client relationship. Even then, it should have no more than a 50 percent importance weighting in the decision relating to the relationship.

Question and Answer Session

Judith D. Freyer, CFA
J. Parker Hall III, CFA
Thomas M. Richards, CFA
C.F. Wolfe

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How to Break the Vicious Circle

C.F. Wolfe

*Managing Director of Investment Management and Strategy
IBM Corporation*

From the perspective of a large corporate pension fund, three factors promote a focus on short-term performance: the need for current information to use in evaluating and motivating employees; the drive for a strong recent showing to use as a marketing tool; and the demands of consultants who are supporting sponsors' wishes.

What is behind companies' apparent focus on short-term investment results? Is it the chain of performance pressures from the consultant to the pension fund to the money manager and on to the operating management? Or is some other phenomenon driving people in the United States to be short-term thinkers? This breaks down into three questions. First, do institutional money managers or analysts drive corporate managers for short-term performance? Second, do pension plan sponsors drive money managers for short-term performance? Third, do consultants drive pension plan sponsors for short-term performance? I will address the question of pension fund relationships with money managers from the perspective of a large corporate pension fund.

From the corporate management perspective, operating managers press for short-term results for many reasons, including the practicality of having to pay and motivate their employees. Everybody wants predictable sales and earnings. In the real world, however, most managements must make long-term commitments, and their ability to manage short-term results is limited. Only at the margin can management really change things in the short term, as is evident in the current environment. Quality companies do not compromise their future for immediate gratification.

Value of Long-Term Results

To break the vicious circle of short-term thinking, corporate managements should stick to the expectations they have declared to money managers and analysts. A company that meets its established expectations should be rewarded. Meeting expecta-

tions consistently is what impels current stock prices and is certainly different in my view from short-term performance. Personally, I think forcing management to meet commitments is good.

To consider plan sponsors anything but long-term investors is foolish. For IBM's pension plan, the difference between returning 9 percent and 10 percent annually for 25 years equals 100 percent of the starting base for the plan, without contributions, and net of payments.

Of course, this type of analysis varies among plans depending on their funding levels, timing of payments, and contributions. Regardless of the ending value, the sensitivity to the annual return level is startling. Demonstrated, consistent long-term performance is very valuable, because seemingly minor annual differences in performance make a monumental long-term difference. These results are a good reason to keep a steady hand on the tiller and a long-term focus.

Management Process

Because we believe plan sponsors should be long-term investors, our performance evaluation is designed to monitor long-term performance. We focus on our managers' three- to five-year performance records. We look at short-term performance statistics primarily to understand whether or not a manager is likely to achieve his long-term objectives. Although there is much conversation about precipitous terminations of managers, the average manager engagement is 5 to 10 years, so apparently plan sponsors are not reacting to short-term performance aberrations. Consultants provide the tools and the analysis to improve the evaluation of the capability

and performance of our money managers, both our internal ones and external ones. They provide us with several kinds of performance measures: year-to-date, 1-year, 2-year, 3-year, and 10-year results; attribution analysis; peer comparisons; and portfolio trends for varying time frames.

So much data can be overwhelming to some funds, but we love it. The key is to measure all data relative to the sponsor's expectations. From our perspective, consultants' ratings of managers have a low correlation with the managers' short-term performance. Our consultant places heavy weight on a clear strategy, a reasonable methodology for securing success in a particular style, continuity of personnel, and other qualitative factors. Only then is performance judged on a long-term basis and compared with that of competing managers. Admittedly, in awarding new business, a poor short-term record will be a tiebreaker in the case of otherwise equivalent managers. The converse, however—an impressive recent showing but a weaker long-term record—is a big negative. So you cannot blame the consultants for short-term investing horizons. They provide what the sponsors ask for.

The key to a good long-term plan sponsor/money manager relationship is a clear level of expectation by all parties, including the sponsor's fiduciary committee. Before any engagement, the two parties should agree on the basics—the benchmark, the time horizon, levels of tracking error, and realistic expectations for return.

■ *Benchmarks.* A clear benchmark should be in place, whether it be the S&P 500, the Russell 2000, growth, value, or various combinations of international benchmarks. We do not use normal portfolios. Rather, we tend to use a market-oriented measurement that we want to exceed.

■ *Time period.* The time period over which performance will be judged must be agreed upon at the beginning. All parties, including the fiduciary committee, should know the time period being considered. This is usually a very difficult hurdle to get across, because most operationally oriented people who sit on these committees have much shorter time horizons than is wise for investment management. It takes continuous education and reinforcement to lengthen their perspectives.

■ *Tracking error.* Often, even sophisticated plan sponsors fail to establish the amount of variability, or tracking error, that is acceptable. The parties should agree on whether the portfolio is to be diversified or concentrated and what the expected tracking error to the benchmark is. This is also a relatively technical area that requires continuous education.

■ *Expectations.* The parties must establish re-

alistic expectations for excess returns. Establishing goals that are not consistent with the manager's record serves to haunt him in marketing and does not well serve the sponsor, except perhaps for a fleeting satisfaction when the manager is hired.

Talking about benchmarks, time frames, and volatility seems basic, but so does long-term investing. Having expectations in place and agreed upon minimizes the tendency to overreact to short-term disappointment and helps explain performance to the fiduciary board. The key in my mind is positioning expectations.

The Role of Short-Term Results

If we are so long-term oriented, why do we measure short-term results? Can the short term tell us anything about the long term? Our purpose in measuring short-term results is to get data that can be used to compare the long-term performance with our expectations. We try to determine whether the deviations from agreed-upon benchmarks are statistically significant. We use a quality-control approach to assess whether a given short-term deviation is something to be expected once a year, once in 3 years, once in 5 years, or once in 10 years. If we find a pattern of deviations happening quarterly that statistically only should occur once in five years, we get concerned. We have tried to set up a rigorous way of interpreting volatility in the light of expectation.

Although we are interested in long-term performance, we measure the short-term performance relative to our expectations. We use statistical analysis of the short-term results to determine whether a manager stands a reasonable chance of achieving his long-term goals. This provides us the confidence to stay focused on the long term.

The more plan sponsors know about a portfolio and the more sophisticated the tools used to analyze the portfolio, the more thoughtful the sponsors will be in establishing realistic expectations and the more likely they will be to understand periods of poor performance and to focus on the long term. The less they know, the more likely they will be to react precipitously to short-term results, often unwisely.

Conclusion

Three factors tend to promote a focus on short-term performance: (1) people who want current information upon which to judge and motivate other people; (2) the drive for a strong recent showing as a marketing advantage by money managers seeking new business; and (3) the demands of consultants who are supporting sponsors' wishes.

The natural forces leading people to focus on short-term results must be balanced by establishing clear expectational levels, including expected varia-

tion. Following these guidelines will enable clients and money managers to develop a longer term investment relationship.

Question and Answer Session

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Thomas M. Richards, CFA
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Short-Term Time Frame, Short-Term Results

John J. Curley
Chairman, CEO, and President
Gannett Company

Because the Gannett Company considers short-term thinking bad policy, the media operation follows a long-term strategy that attempts to minimize the inevitable quarter-by-quarter "bumps."

The major league baseball teams can change their strategies every year because their season extends only from April to October, which is long term by Wall Street standards. In baseball, every year is a finite contest, and short-term planning and performance are just fine. Not so with business.

Short-term thinking by management is bad policy, one that investors who demand short-term earnings performance encourage. It adds to stock market volatility, which tests money managers and discourages retail investors. Because we all agree that a short-term focus is bad, who will be the first to surrender?

Congressman Don Ritter (R-Pennsylvania) introduced legislation that would eliminate quarterly earnings reporting to the SEC. Passage of the bill, which is unlikely, would reverse a 20-year trend of increasing financial disclosure. The Congressman's sentiment is not difficult to understand, however.

Newspaper advertising linage has been in a downdraft for two years. Newspaper publishers as a group have underperformed the market during most of that interval. The notable exception was October through December 1990, when Elaine Garzarelli, Shearson's quantitative analyst, reminded her clients that newspapers are early-cycle performers. Newspaper industry equities jumped 30 percent in response.

Now, 12 months later, it is fair to say we had a false start. The economy did not recover with any conviction, and newspaper advertising comparisons are still negative, but at a decreasing rate. When the August numbers showed weakening retail sales, the analysts began calling media companies to see if the same trend was apparent. It was, and so the magic of Wall Street began to unfold.

Some analysts moved to take advantage of the

situation by lowering earnings estimates and shorting stocks. Some told their clients to lay off media stocks. One person, however, said, "No one said it was going to turn in the fourth quarter and continue to accumulate. There are several buying opportunities in the group, and now is a good time to buy." In the meantime, media stocks took hits in the 15 to 20 percent range.

The bottom line is that most of Wall Street was telling us that long-term means now or, at the latest, tomorrow. You should be able to deal with reality as long as you know what reality is.

The Long-Term View

To be successful, companies have to follow a long-term strategy, despite Wall Street. The Gannett Company is a good example. Over the years, we have played the quarterly earnings game better than most. From 1967, when Gannett went public, until the second quarter of 1990, we reported 90 consecutive quarters of higher earnings. At least one other company, Automated Data Processing, had longer runs. Our record was a source of pride and motivation to our employees and earned us a berth among America's premier growth companies. Over the years, investors recognized our consistency and rewarded us with a premium valuation.

Occasionally, the quarterly gain was a challenge, and we undertook reasonable efforts to smooth the trend. A capital gain in one year was a tough comparison in the next, so we tried to match nonrecurring gains to nonrecurring charges. Skeptical of our consistency, some analysts tried to adjust every quarter's earnings report for "unusual items." In some quarters, analysts spent more time analyzing nonoperating items than they did reviewing our fun-

damentals.

Newspaper publishing—our largest source of earnings—is a more cyclical business than it used to be. We depend on advertising for about 80 percent of our revenues. When the economy turns down, many advertisers decamp. Classified lineage—largely help wanted, real estate, and auto advertisements—is particularly volatile.

From 1975 to 1987, advertising grew faster than the economy and increased from 1.8 percent of GNP to 2.4 percent. Two economic recoveries, record household formations, and the persistent inflationary psychology fueled the spending that enriched newspapers, broadcasters, and magazine publishers. The success of the media attracted competition from new properties like *USA Today*, independent television stations, specialized cable services, and the Fox television broadcast network.

When advertising growth stalled in 1988, old and new competitors became entrants in a continuing game of musical chairs. Advertising may not grow at all in 1991, and it is likely to be a long time before we see double-digit growth rates.

In the past, newspaper publishers could count on increases in circulation revenues to make budget when advertising growth stalled. The money readers pay for their newspapers is an insignificant part of their household budgets. Even at 50 cents, *USA Today* is a bargain compared to the price of the cup of coffee you might drink while reading it. Even if circulation volume did not grow as in the 1970s, an occasional five-cent increase could add up to real money. Five cents amounted to a 50 percent increase, going from 10 to 15 cents; 33 percent going to 20 cents; and 25 percent going to 25 cents.

Newspaper publishers are likely to continue to rely on circulation revenues to make up some of their shortfall from advertising. Before long, local daily newspapers will increase to 40 or 50 cents a copy, and Sunday will ultimately cost \$2.

Companies must keep pushing forward, focusing on long-term strategic decisions. Managements must be aware that on a quarter-by-quarter basis, some bumps will occur; but they cannot let short-term decisions disrupt the overall long-term strategy. Many investors are interested in the long term and want to see results over time. In fact, Wall Street's best known names may not be a microcosm of reality. Several money managers at mutual funds and pension funds have a longer term focus. Companies can talk more candidly with these investors than they can at a mass feeding of analysts.

Our experience this year with the media illustrates this point. The issue was whether Gannett would buy a cable television company in the future.

We repeated our position that we have looked at cable for a long time and would buy if a good-sized unit were for sale at a price that made sense. Then the hypothetical questions started. We responded that a minimum of 400,000 subscribers would be required before we would take a look at cable, because fewer than that would not make economic sense. Within 90 minutes of our meeting, at least four of the participants had rushed to curry favor with the *Wall Street Journal* by giving it an interpretation of what they perceived as a change in Gannett policy. The stories then followed that Gannett was about to buy a cable company of 400,000 subscribers. The reporters did not believe us when we told them it was not true. Some did not even bother to ask, which is not uncommon. In the future, our presentations will be geared to the presence of reporters.

Long-Term Thinking in Practice

No product illustrates long-term thinking better than *USA Today*. When *USA Today* was launched in 1982, it was received in the newspaper industry like a skunk at a picnic. *Newsweek* coined the phrase "The McDonald's of Journalism." In 1982, most financial analysts thought Gannett was crazy. Our stock price fell 30 percent to \$15. (Now it is around \$40.) Gannett kept six ideals in mind as it took the risk that eventually will make *USA Today* a winner: business judgment, vision, persuasion, commitment, creativity, and patience.

We needed two constituencies to make our idea of a colorful, national newspaper work—readers and advertisers. First we needed readers with good demographics, which would attract advertisers. The readers we wanted had many things in common besides disposable income. They grew up on color television and would quickly realize that newspapers did not have to be gray and boring to cover the news. We have done well getting the advertisers, though the current economic climate has caused a slowdown.

As a result of our experience with *USA Today*, we have 36 possible projects in the development stage. Some will not pan out, some will be minor in revenue, and others may have reasonably good payoffs. The launch of *Baseball Weekly* this year was built on our existing sports data collection and distribution system. *Baseball Weekly* will make more than \$500,000 this year and maybe \$1.5 million next year, but it could not have been done without *USA Today's* news and distribution system being in place. Therefore, *USA Today* cannot be judged solely on its immediate economic results to date. For the past two

years, it has bordered on profitability, and now we feel it is on the verge of a breakthrough.

Because our operations generate more cash than is required to sustain them, we have maintained a strong financial position. We would like to expand our interests in news and information through acquisition and through internal development. We set a new earnings target each year. Our budget process begins in the fall with each operating unit assessing its progress and estimating its prospects. We try to anticipate change and build on past success.

Conclusion

Gannett's long-term strategy has not changed much during the years. We aim to provide the best possible return for our shareholders by selling the highest quality newspaper products to more advertisers and more readers every year. From a financial perspective, success is measured by earnings. From our perspective, success is also measured by the quality of our products, our contribution to the community, and our commitment to equal opportunity.

Question and Answer Session

John J. Curley

Question: What incentives do you use to promote long-term thinking, vision, creativity, business judgment, and so forth? What do you do to push the long term?

Curley: In addition to payroll, where we have long-term plans, the incentives are fair all the way down and they are stock-related. We try to get to the entry-level department heads and people who run small groups. We also have a group called New Media that develops new projects. The people in this group function as entrepreneurs with ideas, and we are the venture capital people. Some of their projects run successfully, and some of them do not.

Question: Are buy-side analysts more patient than sell-side analysts, and if so, why?

Watson:¹ Yes, buy-side analysts are more patient. The buy-side owns the stocks; the sell-side never does.

Question: What do we do about the sell-side? How do we convince them to be more long-term oriented?

Curley: We must recognize that they have to eat, too. The goal is to convince them that the company has good long-term prospects and that they can ride out the short-term variations. They are under some strong economic pressures, however.

Question: Your stock has gone on a roller coaster ride since 1986. How much of that do you think

results from fundamentals and how much from portfolio managers with quick trigger fingers?

Curley: The company moved along at a fairly steady clip through October 1987, along with everybody else. As others came back, media companies did not because of the state of the advertising situation and because price-earnings ratios were very high. As the situation stabilized, the ratios came into line with the S&P 500. Stock prices shot up last year when Shearson said, "Let's get in the front," and then they declined as everybody said, "Well, the economy is still floating along, and the recovery is not really happening." We will probably see a little more of that going forward, but the net change might be on the plus side as classified advertising starts to come around. Retail volume is so high that if retail is lying along the ground through the fourth quarter, that makes a big difference in earnings.

Question: How does Gannett feel about quarterly accounting? Do you think it is important to keep your investors informed, or would you rather go to semiannual or annual reporting?

Curley: We will do whatever is required. We are happy to report quarterly. If the SEC wants monthly reporting, we can do it monthly. For many companies, semiannual reporting would be better. We publish our numbers on a monthly basis, so everybody knows where we are. Companies that are struggling or are playing games might prefer to see less frequent reporting.

Watson: I think it is easier to keep investors' expectations in line if companies report more often. When we report our monthly numbers, expectations can get out of line because the investment community tends to think a trend is developing based on one month. Our principal goal in investor relations is not to deprive anybody of information. When analysts get our monthly reminder of what is happening now, they tend not to get surprised. It also helps our credibility.

Question: How do you measure the performance of your pension plan and how often?

Curley: Most of our managers report quarterly, but others have longer time frames—in one case, four years. We try to be realistic.

Question: What is the fee structure for the managers given longer time frames—for example, the manager who has four years?

Curley: It is a two-part fee structure—a fixed fee and an incentive bonus. So, if they really hit, they get a big cut.

Question: As a corporate owner of two chains of newspapers, how do you value franchises?

Curley: We take every newspaper as it stands. We start by analyzing the situation. For example, if a paper is family managed, it may have a lot of relatives on the payroll. Many of these expenses can come out. We also look at how well the managers are running the business, what they have done with pricing, and what we

¹Susan Watson, vice president for investor relations, Gannett.

might be able to do with pricing and circulation. We would also look at the market, whether it is a major paper within a market and where that market is—Northeast or Southeast—and then we try to handicap the company based on where we think the growth is going to happen.

Question: Do you have a buyback program so that when you think your stock is undervalued you can prop it up?

Curley: We did have a buyback program, and now we bought the Gannett stock from the *Freedom Forum*, formerly the Gannett Foundation. So we do not plan to buy any more for a while.

Question: When you have an earnings shortfall, what do you tell investors?

Curley: The truth, and we tell them beforehand. We do not want people embarrassed by their estimates.

Question: Your attitude and actions toward investors are unique in this business. You definitely are long-term oriented. Do you sense that other corporations are going in this direction? What are the reasons they would not go in that direction?

Curley: Most of the media companies are going in that direction. I would say drug companies have also been long term in outlook. In other industries, it is less clear.

Policy Proposals for Long-Term Incentives

Norman F. Lent (R–New York)

Vice Chairman

Energy and Commerce Committee

United States House of Representatives

Many legislative proposals to encourage long-term investing are considered by the House of Representatives Energy and Commerce Committee. Proposals by House Republicans relate chiefly to regulatory reform in banking, fiscal and monetary policies, and the integrity of securities markets.

The House Energy and Commerce Committee, which is chaired by John Dingell (D–Michigan), has the broadest jurisdiction of any committee in the House of Representatives. The Ways and Means Committee turns out only one tax bill a year, but almost half of the legislation Congress enacts passes through the Energy and Commerce Committee. We have jurisdiction over environmental laws; oil, gas, and nuclear energy; the President's national energy strategy; insurance and insurance company solvency; transportation, including the recent national railroad strike; and food and drug laws, which deal with food labeling, food safety, and the generic drug scandal. We are constantly considering a major bill on one subject or another.

Pending Legislation

The legislation of most interest to AIMR originates in the Telecommunications and Finance Subcommittee. The most important effort of this subcommittee this year was the Brady Bill, HR6, sometimes called the administration's banking reform legislation. Second in importance to the banking bill are the amendments to the Government Securities Act. In light of the scandals at Salomon Brothers and in the markets for Treasury bills and mortgage-backed securities, some members of Congress think we cannot go far enough soon enough to correct that situation. Most Republicans understand the need to review regulation of the marketplace for Treasury bonds, Treasury bills, and Treasury notes, but considering the size of this market and the importance to the American economy of funding the government debt, any action we take should be very cautious, measured, and

absolutely necessary.

In addition to considering the finance bills before the Energy and Commerce Committee, some senior members of that committee, including myself, represent the committee in conferences with our Senate counterparts; these are known as joint House–Senate conference committees. These conferences usually take place on bills that have passed both houses, but in a different form. We try to mediate the differences between the two versions and come up with a unified proposal. Two conferences of interest to your organization are on the reauthorization of the Commodities Futures Trading Commission and the provisions of the Fair Trade and Financial Services Act contained within the Defense Production Act. Two other pieces of legislation that relate to the investment industry are financial planning legislation and the proposal to eliminate the quarterly reporting requirement for corporations. Congressman Rick Boucher (D–Virginia) has reintroduced his financial planners legislation, which is the same kind of “holding out” legislation he introduced in past years. H.R. 2412, Mr. Boucher's financial planning bill, would require anyone who used the title of “financial planner,” “financial consultant,” or similar term to register as an investment advisor with the Securities and Exchange Commission pursuant to the Investment Advisers Act of 1940. It requires significant increases in the amount of disclosure concerning fees charged by financial planners as well as disclosure of any conflicts of interest they may have as the result of selling products for commission. Finally, it would create a federal private right of action—i.e., a right to sue financial planners and investment advisors for violations of the act. Currently the Investment Ad-

visers Act does not include a private right of action. Almost everyone on the committee opposed his bill when it was introduced a couple of years ago, and I know of no additional support this time around. As yet, no hearings are scheduled on this, and if anything happens on the Boucher bill, it will probably be after the start of the second session of the 102nd Congress, in 1992.

Congressman Don Ritter (R-Pennsylvania) came up with legislation that, if enacted, would prohibit the SEC from requiring corporations to file quarterly reports—the Form 10-K. Some noteworthy House members, including the minority whip, Newt Gingrich, are cosponsors of that legislation. Mr. Ritter's idea is to induce corporate management to adopt a longer term view by allowing them to stop worrying about the quarterly report. They can report every two quarters or three quarters or whatever the terms of that legislation are. Again, no hearings have been held on this bill, and none are scheduled. This does not mean that you should not maintain your vigilance, however.

Encouraging Long-Term Investment

All investment, whether for the short or the long term, requires the investor to believe the future is going to look better than the past and the present. If investors do not believe that, they will probably stuff their savings under a mattress or buy something solid. Investing means accepting some degree of risk. If people do not have confidence in the stability of the institutions of our society and government, they will not invest. The Congress should try to create a climate of confidence and optimism that allows people to feel secure in investing for the long term.

Regulatory Reform in Banking

Our challenge is to eliminate the excuses so the American people are not afraid to invest in themselves. The first step is to ensure the structural soundness of our country's financial institutions. No one is going to invest for the long term when the newspapers report what seems to be a never-ending stream of bank failures. The banking industry is in the midst of its worst crisis since the Great Depression. In addition to the contraction in business brought about by the recession, banks have witnessed the erosion in their market share of the traditional trade—taking in deposits and making commercial loans. At the same time, consumer loans—another mainstay of the banking industry—are now made by companies of every description, from automobile and jet engine manufacturers to large retail

department stores.

In most other industries, companies diversify to avoid having the downturns in a single market sector destroy the profitability of the entire enterprise. Banking is a regulated industry, however. Banks must get permission from their regulators before embarking on any new enterprise. Current law does not allow banks to engage in any business activities that are not reasonably related to banking, so they are trapped in a contracting industry. Also by law, corporations cannot acquire banks and infuse their own capital into them. These regulations—along with the inability to respond to market forces—have become a noose around the necks of insured institutions, and that noose is slowly strangling the banking industry.

The Republicans in the House of Representatives and in the White House want to solve—in a fair, reasonable, and responsible way—the underlying structural problems causing the crisis facing the banking and financial services industries. Unfortunately, the Brady bill was reported out by the Energy and Commerce Committee with a split vote along party lines. The Democrats, who were the overwhelming majority in the House, voted for it, and the Republicans voted against it.

In my opinion, the Brady bill falls short of what is needed. It denies banks many privileges accorded them by their regulators and marches them back to a more limited area from which they can try to do business. We believe this legislation provides an inadequate foundation for regulatory reforms and in some cases will actually exacerbate current problems. If this happens, it will not matter how much money Congress votes to recapitalize the Federal Deposit Insurance Corporation, because it will never be enough. The \$70 billion to be infused into the deposit insurance fund will not be sufficient to ensure depositors against a systemic failure of the banking industry. Eventually, taxpayers will be tapped again and again to shoulder the burden of an ever-enlarging bank bailout.

I expect the banking reform bill reported by the Energy and Commerce Committee to run head-on into a not very good, but certainly more acceptable, version of the Brady reform package reported out of the House Committee on Banking. That confrontation will probably take place on the House floor sometime in the next several weeks. There are some efforts afoot to reach a compromise between the two versions to eliminate some of the contradictions in the two bills, particularly on Title IV. Title IV involves the possible marriage of commerce and banking by allowing corporations to own and put capital into banks. It particularly pertains to allowing banks to underwrite securities and possibly even sell insur-

ance, if not underwrite insurance. I think the insurance provision does not have a political chance, because insurance brokers are very powerful. The last thing they want is competition from neighborhood branch banks selling the same kind of insurance policies over the counter, probably at lower rates than the insurance agents and brokers offer. So a collision is going to occur very soon, and what will happen is anybody's guess.

Fiscal and Monetary Policies

A second way to increase the confidence of the investing public to encourage long-term investments is to improve the soundness of the economy through reduction of our federal deficit and the imposition of sound fiscal and monetary policies. This means controlling our profligate spending, containing inflation—which Milton Freedman once said was a form of taxation without legislation—and providing incentives for investment and savings. I have lost count of how many times Republican administrations and Republican members of Congress have called for the return of a capital gains tax differential. That particular tax incentive would encourage long-term investment, and most of us agree that would be beneficial to our economy.

The Integrity of Securities Markets

The final step Congress must take is to ensure that we have active enforcement of the securities laws to build confidence in our markets and provide another incentive for people to invest for the long term. People do not want to play very long in a game they perceive may be fixed. You can see this in the shock waves that have reverberated through the world's stock markets as a result of Salomon Brothers' admission that it had violated the rules of the Treasury Department governing the auction of

U.S. Government Securities. The responses to this admission include criminal and civil investigations by the SEC, the Department of Justice, and the Federal Reserve Board, as well as announcements by a number of Salomon Brothers' clients that they would discontinue doing business with that firm. I have no sympathy for the managers of Salomon Brothers who admitted to deliberately and consciously violating the Treasury Department rules. Unlike the E.F. Hutton matter of some years ago, in which the individuals involved were branch managers, Salomon's problems occurred at the top of its management.

The most important determination Congress can make from this scandal is whether the system for regulating the federal government securities markets is fundamentally flawed or whether it is sufficient but not properly enforced. It would be a shame if the acts of these few individuals brought about both the destruction of this once-fine firm and an overreaction by Congress in the form of sweeping new laws that could interfere with the auction process. That is in the offing in the Telecommunications and Finance Subcommittee. The members there, particularly Chairman Ed Markey (D-Massachusetts), believe they have a mission to see that a Salomon Brothers experience never happens again. If he has his way, Mr. Markey will try to enact new regulations, and that will have a chilling effect on the free and open auction market system that should prevail in the sale of government debt.

Conclusion

I believe the answer to encouraging long-term investment lies in the three *i*'s—*innovation* in the financial markets, *incentives* in the tax code, and *integrity* in the markets through strict enforcement of the law.

Question and Answer Session

Norman F. Lent (R—New York)

Question: What are the issues surrounding the frequency of corporate reporting that will determine the eventual vote? How can we make our voice heard on these issues?

Lent: The concept that needs to be debunked is that the reason U.S. companies are so attuned to the short term is related to the quarterly return: The board and the board of directors must have a quarterly dividend to keep their stockholders happy; in contrast, Japan does not get hung up on quarterly results. Mr. Ritter believes that the answer to our problems is to eliminate the quarterly report. But because most of us on the commerce committee have spoken with organizations like yours, we think it is a bad idea that should not fly.

How do voters get their views across? The best way to alert a member of Congress to a question you feel strongly about is to find out who his constituency is. In other words, when somebody from Utah walks into my office, he is unlikely to see me. If someone calls from the Fourth District of Nassau County, however, I pay attention. That is what happened when we were deliberating on the banking bill. I started getting calls from my hometown insurance brokers. Suddenly I lost my zeal for the concept of banks getting into the insurance business because I received telephone calls from people in the Kiwanis and Rotary and from people who have been active in politics and local government and are opinion-molders in my district. Write a letter, make a phone call, or request an appointment to explain what is wrong

with the bill. Letters from your organization on your letterhead will probably be looked at carefully, but there is no substitute for a hometown call from a real voting constituent—preferably one with a large family, all of voting age.

Question: Realistically, what is it going to take to get the capital gains tax passed?

Lent: I think getting it passed will be difficult, but I would be pleasantly surprised if we received capital gains relief. President Bush pushed very hard for this. He made it a cornerstone of his budget negotiations, and it became acceptable to the Democratic leadership to use this tax to help the rich, in contrast to the tax reforms that they had on the table, which were aimed at the lower classes and lower middle-income people. They were saying Bush belongs to a country club, owns a yacht, and he is trying to help all his friends on Wall Street by lowering the capital gains tax. What is now permeating through the public is that if John Doe has to sell stock from his portfolio or some other asset, he will benefit from a capital gains cut. The more people step forward and say they, too, would like to see relief and contact their Democratic representatives, the more likely it is going to happen. Unfortunately, the two parties are so entrenched in their positions, enactment is going to be very difficult.

Question: Once the banking bill gets to the floor of the House, what do you think will happen?

Lent: The banking bill is very

big, and much of what is in it is not at all controversial. For example, the so-called banking powers provision, which would allow banks to cross state lines, is not particularly controversial; also, some of the regulatory provisions are not controversial. Title IV questions whether corporations should be able to own banks: Should General Motors, Xerox, or IBM be able to buy a bank, like they are now able to buy a savings and loan?

Large corporations have taken over about 100 savings and loans about to go belly-up. Not one of those S&Ls has gone under. The Brady bill would let corporations take over banks. The opponents of this bill feel it would be terrible if we allowed the banks—which they say have not made a success of the business in which they are supposedly expert—branch into underwriting securities and underwriting and selling insurance.

Twenty years ago, 10 of the top 25 banks in the world were U.S. banks; today, none of them is. The reason is that the banks in Europe, Korea, and Japan have far greater powers than the banks in this country. To make our banks competitive in the new world market, we have to give them more flexibility and let some of them be saved by large corporations.

We offered an amendment to the banking legislation that would not allow corporations to buy *any* bank; it said corporations could buy failed or failing banks, which we carefully defined, rather than allowing them to buy any bank. The corporate buyers would have to take the bad loans with the good loans—that is, they

could not handpick a bank and leave the rest to the FDIC. This amendment did not pass, but we are going to keep at it, and when the bill comes to the floor, we will resurrect this particular amendment.

Probably what will happen is

that the banking bill from the Banking Committee will be brought to the floor and the Dingell bill from the Energy and Commerce Committee will be allowed to be offered as a substitute, at least insofar as Title IV is concerned. Most of the rest of the

banking bill will pass. So even if we drop Title IV because of a deadlock, enough of the bill will be left unscathed that it will pass. The headline will read "Banking Reform Bill passed in Congress," and then you will read at the bottom that Title IV was eliminated.