

Risk and Risk Control in an Era of Confidence (or is it Greed?)



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In these extraordinary and volatile markets we are facing today, it's difficult for me to imagine more appropriate subjects than "Risk" and "Risk Control" to sound the keynote for an "Agenda for the Future"—the perennial theme, as I understand it, for this conference. It has been "Reward," of course, that has been the keynote of the past 18 years, and most particularly for the past six years, during which the longest and strongest bull market in the history of the world has taken a new lease on life. Even as "it is always darkest before the dawn," however, it may well always be brightest just before evening begins to fall. When *reward* is at its pinnacle, *risk* is near at hand.

Risk has been with us, well, forever. At the dawn of civilization in Rome during the second century B.C., for example, some of the characteristics of modern capitalism, financial markets, and speculation were already in place. Indeed, the term *speculator*—one who looks out for trouble—comes from ancient Rome. As Cato himself told us:

"There must certainly be a vast Fund of Stupidity in Human Nature, else Men would not be caught as they are, a thousand times over, by the same Snare, and while they yet remember their past Misfortunes, go on to court and encourage the Causes to which they were owing, and which will again produce them."¹

Although we cannot be certain whether our stock market today is the epitome of the same kind of speculative snare that has caught men a thousand times over, no investor today should forget those words. My point is not that we *are* now caught in one of those periodic snares set by the limitless supply of stupidity in human nature. Rather, my point is that we *might* be. Professional investors who ignore today's rife signs of market madness—of a bubble, if you will—are abrogating their fiduciary duty, and dishonoring their responsibility for the stewardship of their clients' assets.

Four Key Elements of Investing: Reward, Risk, Time, and Cost

How should that responsibility be honored? By recognizing that, for all of the projections and assumptions we make (and almost take for granted), there is one element of investing we cannot control: Reward. For future stock market returns are completely unpredictable in the short-run and—unless we know more about the world 25-years from now than we do about the world today—may prove even less predictable over the long-run. But we *can* control the other three primary determinants of investing: Risk, time, and cost, and we should focus on them.

Risk, and risk control, will be my main theme today, but first just a few words on the roles that *Time* and *Cost* play in investing. We can control time in two ways: First, by focusing on how much time will elapse from the date an individual investor or a corporate pension plan begins the accumulation of investment assets during the years of productivity and thrift until the investors will require the distribution

¹ Cited in *Devil Take the Hindmost: A History of Speculation*, by Edward Chancellor (1999).

of income, and even the drawdown of capital—essentially the liability on the balance sheet when retirement begins. We can control, after all, how many working years will pass before we retire, and we had best get as much time as we can on our side. Second, we can control the very time horizon over which we hold stocks. With our own free will, we have the power to choose whether we will be long-term investors or short-term speculators. With its 90% portfolio turnover, the fund industry has chosen *short*. My own chips are on *long*.

And, lest we forget, we can also control *Cost*. In my remarks today, I'm not going to place my customary emphasis on the costs of investing, for my sense is that you money managers, clients, and consultants here assembled have already done your best to hold your investment costs to the reasonable minimum. In the industry in which I've plied by trade for a half-century, however, "money is no object." Alas, it is the shareholders' money which is no object, and mutual fund costs are completely out of control. Over the past 15 years, for example, mutual fund fees and operating expenses, sales charges and transaction costs, opportunity costs, and the horrendous tax costs—generated, in turn, by grossly excessive portfolio turnover—have consumed nearly six percentage points—one-third—of the stock market's return of 18% per year. (It would take a truly remarkable money manager to leap that six-point hurdle for 15 years in a row!) In the last year alone, all-industry costs absorbed an estimated \$120 billion of the returns earned by mutual fund shareholders—an astonishing figure.

	Ability to Control	
	<u>Yes</u>	<u>No</u>
Risk	✓	
Time	✓	
Cost	✓	
Reward		✓

Reward: Out of Our Control

But what none of us can control is *Reward*. With few exceptions, generous investment rewards have been generated in the financial markets over the long-run. But we have the ability to predict neither when the rewards will occur, nor when they will depart from past norms. Our markets are remarkable arbitrageurs that reconcile past realities with future expectations. The problem is that future expectations often lose touch with future reality. Sometimes hope rides in the saddle, sometimes greed, sometimes fear. No, there is no "new paradigm." Hope, greed and fear make up the market's *eternal* paradigm.

The conventional wisdom is wrapped up in what we call "Efficient Market Theory," which holds that since the financial markets incorporate *all* knowledge of *all* investors about *all* things, they are by definition efficient, eternally priced to perfection. But I wonder, and no one has ever been able to explain to me why the market was perfectly priced on August 31, 1987, or January 2, 1973, or September 8, 1929, each of which was followed by a catastrophic market decline, ranging from 35% to 85%.

In this age of statistical abundance, to be sure, we see table after table of data showing annual returns in the U.S. stock and bond markets encompassing two full centuries. We quickly learn that stocks outpace bonds in **60%** of all **one-year periods**—well short of a sure thing. But the odds rise to **73%** when we go out **five years** and **82%** when we go out **ten years**. And over **25-year periods**, stocks

outpace bonds **more than 99%** of the time, about as close to zero risk as is imaginable here on earth. (I've deliberately committed the sin of using *outpace*. The correct phrase is: *have in the past outpaced*. Please join me expressing the idea correctly!)

Because we can never be certain of the *order* in which the annual returns will come, those kinds of cumulative data are period-dependent and therefore inevitably misleading. So, we try to rectify the problem by throwing each year's return into a sort of Waring blender, turn the dial to "puree," and pour out a fine potage. (Or is that a "mess of pottage," for which Esau traded his birthright?) At first glance this approach seems to provide more meaningful data. But the devil is in the details. So don't forget that this methodology goes under the title of a "Monte Carlo Simulation."

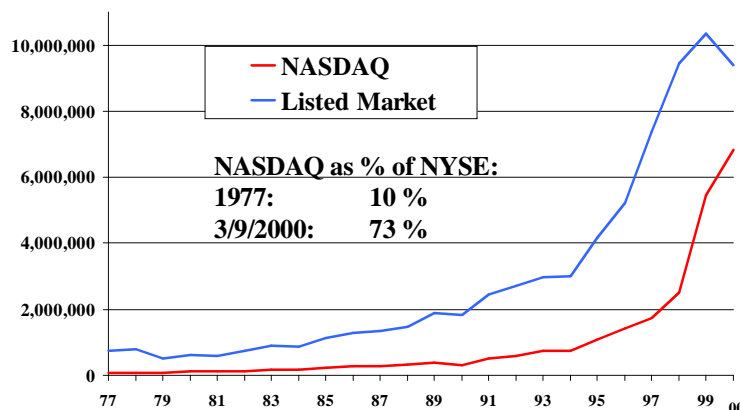
All of these statistics leave me apprehensive. Why? Because the future is not only unknown but unknowable. Yet with the acceptance of Modern Portfolio Theory; the ease of massaging data with the computer; and our existence (at least in the U.S.) in today's era of remarkable political stability combined with powerful economic growth, investors seem to have developed growing confidence that they can forecast future returns in the stock market. If you fall into that category, I send you this categorical warning: *The stock market is not an actuarial table.*

To which I add: When everyone assumes, at least implicitly, that the market *is* an actuarial table, that the past is inevitably prologue, and that common stocks, held over an extended period, will *always* produce higher returns than bonds—and at lower risk—then *stocks inevitably will be priced to reflect that certainty*. At that point, however, the certainty becomes that stocks will produce *lower* future returns, and at higher risk at that. It is impossible to escape the suspicion that such an actuarial mindset, if you will, is extraordinarily prevalent today among investment advisers, consultants, and economists—and, for that matter, the individual and institutional investors themselves. Forewarned is forearmed.

Risk in Today's Market

With all of the lip-service we pay to the notions of risk and risk control, how do we explain that by almost any conventional measure of stock valuation, stocks have *never* been riskier than they are today. Looking back 70 years, major market highs were almost invariably signaled when the dividend yield on stocks fell below 3%, or the price-earnings ratio rose much above 20 times earnings, or when the aggregate market value of U.S. equities reached 80% of our nation's gross domestic product (GDP). Yet today, dividend yields have fallen to just over 1%, so far from the old "risk" threshold as to render it seemingly meaningless. What is more, stocks are now selling at something like 32 times last year's earnings. And, with our \$9.4 trillion GDP and our \$17 trillion stock market, that ratio has not quite reached 200%. (Just be patient!) Clearly, if past data mean anything, risk is the, well, forgotten man of this Great Bull Market.

Market Capitalization: NYSE/Listed Market vs. Nasdaq



Even as we talk about the stock market, furthermore, let's be clear that today, more than any time I can recall, there are really *two* U.S. stock markets. One exists on the New York Stock Exchange, along with a few smaller markets for listed stocks. The other exists on the NASDAQ (the "over-the-counter" market). The relationship between the market capitalizations of the two has changed radically. The value of NASDAQ ran about 10% of the value of listed U.S. common stocks in 1977, rose to 26% by 1995, to 53% in 1999, and then to an astounding 73% in mid-March 2000. Since 1999 began, the capitalization of the listed market has remained roughly unchanged at \$9 trillion, while the capitalization of the NASDAQ has soared from \$2.5 trillion to \$6.8 trillion, or by 172%. (Note: Since mid-March, the value of the NASDAQ has fallen to \$5.6 trillion—\$1.2 trillion of, well, water over the dam—and is now valued at 62% of the listed market.)

Old Economy, New Economy?

We can examine the nature of this dichotomy by comparing the stocks in the so-called *Old Economy*, which have been stagnant, with the stocks of the *New Economy*, which have been following a near-parabolic arc into the stratosphere. In a recent study of this dichotomy, Bernstein Research divided the market into two categories: The New, consisting of technology, telecommunications, and Internet commerce; the Old consisting of everything else.² Their analysis reflects an Old Economy valued at \$10.6 trillion as 2000 began, and a New Economy valued at \$6.7 trillion, respective totals that are remarkably close to the NYSE/NASDAQ split, though not with precisely the same stocks in each.

The past earnings growth of each Economy has almost been identical. During the expansion of earnings that Corporate America has enjoyed since 1995, earnings in the New Economy have grown at 8% annually, compared to 7% annual growth for Old Economy companies, meaning that the New Economy has provided no more than a remarkably steady share of about 16% of total corporate profits during the period. But, despite this similarity—and I *do* know that markets are valued less on the realities of past earnings than on the hopes and expectations of future earnings—the stocks in the New Economy were valued at 101.6 times earnings as 2000 began—compared to 25.6 times for the stocks in the Old Economy.

New Economy vs. Old Economy*		
	Year-end	
Capitalization	1995	1999
New	\$ 1.1 T	\$ 6.7 T
Old	5.5	10.6
Ratio	20 %	64 %
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Reported Earnings		
New	\$ 49 B	\$ 66 B
Old	314 B	412 B
Ratio	16 %	16 %
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Trailing P/E		
New	23	102
Old	17	26
Ratio	1.3	4.0
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*Sanford Bernstein & Co. Inc.		

Yes, the stock market is a wonderful arbitrage mechanism, but when it begins to discount not just the future, but the hereafter, watch out!

² Bernstein Disciplined Strategies Monitor, January 2000

The Ultimate Test: Future Cash Flows

Why this note of caution? Because the theory you were taught in your finance classes is not only correct, but eternal. Sooner or later, the rewards of investing *must* be based on future cash flows. The purpose of any stock market, after all, is simply to provide liquidity for stocks in return for the promise of future cash flows, enabling investors to realize the present value of a future stream of income at any time. With current price-earnings ratios averaging more than 100 times, investors today clearly believe that the future streams of income in the New Economy will be enormous. How big must these cash flows be? Well, for the purpose of argument, let's assume that the investors who own the \$6.7 trillion New Economy today expect these companies to provide a 15% after-tax return a decade hence. That's almost \$1 trillion dollars . . . and that's a lot of money! Especially considering that these stocks earned just \$66 billion last year. But who among us can be certain that, in this New Era in the economy, earnings *won't* grow at the 31% annual rate required to reach that total?

The Buffett Analysis

I, for one, don't believe these optimistic expectations will be realized. But don't mistake my word for the truth. If we use the kind of methodology that Warren Buffett uses to measure corporate value, we can at least put some sort of rule of reason on that kind of earning power. Mr. Buffett tells us that corporate profits after taxes have generally been slightly below 6% of the nation's gross domestic product (GDP), and presents good reasons to expect that a much higher ratio is unlikely to prevail over the long term. If we assume that our nation's economy grows at a 6% nominal rate, the GDP in 2010 would be about \$16.5 trillion. If after-tax earnings in the Old Economy grow at that rate, they would rise from \$412 billion to \$740 billion. With the New Economy's \$980 billion, we have total corporate profits of \$1.7 trillion in 2010. At that level, projected corporate profits would be more than 10% of GDP, far above any share in history, and nearly double the fairly steady 5 ½% norm of the past. Nonetheless, that enormous share arguably represents the earnings expectations of today's investors. Their expectations are priced into the market, so the market, having discounted them once, will not discount them again. Put another way, unless that robust scenario comes true, market risk today is extremely high.

These historically high financial ratios and this crude economic analysis do not reflect my only concerns. Another is that the sheer mathematics of the market—even *assuming the continuation of box-car growth rates that are by no means assured*—seem to defy reason. A recent analysis by Professor Jeremy Siegel (author of "Stocks for the Long-Run," the source of virtually all of the data we use for long-term returns on financial assets) considered the nine large-cap companies that are currently priced at over 100 times 1999 earnings. Dr. Siegel accepted, for argument's sake, that the earnings of these companies would grow at their estimated average rate of 33% per year(!) over the coming decade—an even higher rate than I assumed earlier. Even so, for investors to earn a 15% annual return, they would have to sell at an average of 95 times their earnings five years from now, and 46½ times their earnings a decade hence. Based on his analysis of the nifty-50 era of the early 1970s, he reports "no stock that sold above a 50 p/e was able to match the S&P 500 over the next quarter-century." His conclusion: "Big-Cap Tech Stocks Are a Sucker Bet."

Are Big-Cap Tech Stocks a “Sucker Bet?”		
9 Large Tech Stocks vs. S&P 500		
	<u>Avg. Tech Stock</u>	<u>S&P 500</u>
1999 P/E	257 x	35 x
Est. Growth in EPS	33 %	12.5 %
2005 P/E*	95 x	30 x
2010 P/E*	46 x	27 x
*Required P/E assuming return of 15% for tech stocks and 10% for S&P 500.		
Source: Prof. Jeremy J. Siegel		

As a veteran of the Go-Go Era in the market during the mid-to-late 1960s, I observe disquieting similarities with today’s tech-driven markets. During 1963-1968, based on their over-heated records of past performance, the Go-Go funds drew ever larger portions of mutual fund cash flows. Five major funds turned in a total return of +344%, almost 3½ *times* the 99% gain of the S&P 500, and their assets promptly leaped 17 times over, from \$200 million to \$3.4 billion. Alas, retribution quickly came, and they posted negative returns averaging –45% through 1974, a period when the S&P was off just -19%. None of those Go-Go funds has prospered, and few have even survived.

Technology funds today are generating relative returns that are remarkably similar to those of the Go-Go era. Five of today’s most successful funds have earned an average return of 403% during just the past three years, four times the 92% gain in the S&P 500. Their assets have soared seven times over, from \$5.6 billion to \$40 billion. And in another disquieting similarity, the records of both groups of funds are not without suspicion. In the Go-Go era, it was “letter stocks,” private placements that funds bought from company insiders at large discounts and promptly marked-up to current value, that inflated fund returns. And in this era, it is hardly unreasonable to assume that hot IPOs may have inflated the records of the technology funds. Absent clear disclosure of the facts, investors would be foolish to consider such returns as a harbinger of the future. In any event, just as the Go-Go era of 35 years ago proved just another extraordinary popular delusion, so the Tech-Boom era of the turn of the millennium may prove just one more madness of crowds.

Deja Vu?			
Comparison of Go-Go Era to Tech-Boom Era			
	<u>5 Large Go-Go Funds</u>		<u>5 Large Tech Funds</u>
1963-1968		1997-2000	
Fund return	344 %	Fund return	403 %
S&P return	99	S&P return	92
Ratio	3.4 x	Ratio	4.3 x
1963 assets	\$ 200 M	1997 assets	\$ 5.6 B
1968 assets	3.4 B	2000 assets	40 B
Increase	17 x	Increase	7 x
1969-1974		2000-2005	
Fund return	-45 %	Fund return	?
S&P return	-19	S&P return	?
Ratio	2.4 x	Ratio	?

Yet another concern I have is today's high level of speculation. One of the best measures is, for me, a bittersweet one: the fascination of investors with market index funds that can be—and are—traded like individual stocks: Spiders, Webs (Cute! Just a fun game, or so it seems), Qubes, and eShares. A quarter-century ago, when I started the first index mutual fund, I viewed it as the ultimate in long-term investing—diversified, buy and hold, low-cost, and high tax efficiency—and it has worked marvelously. Ironically, these new index proxies are the ultimate in short-term speculation, and I cannot imagine that such speculation will serve investors well. Investors are now trading S&P-500-like Spiders at an annual turnover rate of nearly 2000%, and NASDAQ-like Qubes at a turnover rate of nearly 13,000%—average holding periods of just 18 days and 2.8 days respectively. Their combined volume is staggering; if present volumes hold, some \$1.5 trillion(!) of these shares will be traded this year. In the hectic market of April 4, 2000 alone, trading in these two listings totaled \$10 billion! Welcome to the new millennium.

So, let me be clear: You can place me firmly in the camp of those who are deeply concerned that the stock market is all too likely to be riding for a painful fall—indeed a fall that may well have begun as I began to write this speech ten days ago. From Milton Friedman to Robert Schiller (author of the newly-published “Irrational Exuberance”), to John Cassidy of *The New Yorker*, and Steven Leuthold, Jeremy Grantham, Jeremy Siegel, Julian Robertson (who just threw in the towel), Gary Brinson (whose convictions may have cost him his job), and Alan Greenspan (whose conviction's haven't). Viewed a decade hence, today's stock market may just be one more chapter in “Extraordinary Popular Delusions and the Madness of Crowds.”

Controlling Risk

All of us who serve as stewards of other people's money have a special responsibility, not only to consider the level of risk in the stock market today, but to control the risks to which our clients are exposed. There are three principal approaches to risk and risk control that I'll now discuss. 1) Ignoring equity risk; 2) Reducing risk by broadening diversification among sectors of the equity market; and 3) Reducing risk by reducing equity exposure.

Dealing With Risk - Part I

Ignoring Equity Risk

- 1. Assume Present Ratio is Appropriate to Investor's:**
 - A. Time Horizon**
 - B. Liability Structure**
 - C. Need for Income**
 - D. Courage**

- 2. Best Advice: “Stay the Course”**

The first approach, simply ignoring equity risk, is not as stupid as it may sound. Indeed, if the equity exposure of the portfolio is deemed appropriate to the client's time horizon and need for income (dividend yields and interest coupons, *not* capital gains), there are far worse strategies than simply

“staying the course,” a phrase which I have described as the single best piece of investment wisdom ever spoken. Such a solution implicitly assumes that the steward has *already* controlled the risk in the account, gradually reducing equities as, for example, the time for drawing down income or capital at retirement approaches, and probably having reduced equity exposure to (or at least toward) the account’s norm as the Great Bull Market has carried the equity ratio ever upward. For example, a 60% equity position when the market rise began in mid-1982, untouched, would today have increased to 85%. (It should not go without saying that, taking no action whatsoever and letting the profits ride would have been a far more profitable strategy, so far at least. And continuing to bet the house’s money is, after all, the conventional strategy of the gambler.)

Ignoring equity risk, to be sure, assumes that the client—or the client’s investment committee—has both the financial resources and the emotional stability, indeed the courage (the guts, if you will), to stay the course. But make no mistake about it, even the best of intentions have a profound tendency to vanish when the stock market drops 50% (as in 1973-74) or even 35% (as in 1987). Panic is at best not a pretty emotion, and when panic is in the streets investors can turn ugly and act in ways that directly counter their own best interests. The counterproductive *emotions* of investing have had a way of eroding—and in some cases even destroying—the assets that have been created over the years by the productive *economics* of investing. Holding tight, moreover, means not engaging in market timing, which any intelligent investor must recognize is a *two-decision* process that requires not only *selling* right, but knowing when the day comes to reverse engines and *buying* right. It is not easy.

For me, staying the course implies owning a broad cross-section of the U.S. markets: growth stocks and value, large stocks and small, Old Economy stocks and New, listed stocks and NASDAQ. It’s always tempting to make heavy sector bets, but betting is, well gambling, nowhere more obvious than in the (temporary to be sure) devastation wrought upon value investment strategies during the past five years (S&P Growth Index up 304%, Value Index up 157%). While the reversion to the mean that has been the eternal rule among market sectors strongly suggests that value’s day is now in prospect, timing is hazardous duty, so my own view is that the optimal long-term strategy is to own a broad cross-section of the U.S. market. It will hardly surprise you that I’d realize that goal by owning the *broadest-possible* cross-section—a total stock market index fund. But for you who believe you can beat the market, be my guest. And good luck. (*I really* mean it!)

Ignoring equity risk, of course, in effect assumes that the economics of investing in U.S. stocks—the core portfolio for nearly all investors—will remain productive over the years ahead. I, for one, see no reason that this should not be the case. The powerful growth in our economy, our capacity for technological innovation, our global hegemony, the work ethic of our labor force, our rising productivity, all should be positive signals of future progress. And yet one can never be certain. Just a decade ago, each of those five factors—growth, innovation, global power, work ethic, productivity—defined the *Japanese* economy. (Remember “The Rising Sun”?) But for the better part of a full decade now, the Japanese economy has been a pallid shadow of its former self and the Tokyo market a near-perennial bear. (The Nikkei Index fell from a high of almost 40,000 in 1989 to a low of around 13,000 in 1998. It is now at about 20,000. Would most of today’s U.S. investors have stayed the course through such rough seas? Not unless they were prepared to assume such risks.) So, we must never forget that “it *can* happen here.” However far-removed that prospect may seem today, a lot can happen in a decade.

Dealing With Risk - Part II

Broadening Equity Diversification

1. Options

- A. Growth *and* Value**
- B. Large *and* Small**
- C. International**
- D. Gold**
- E. Alternative Investments**

2. Effect on Risk: *Less* portfolio volatility, but *more* risk in individual holdings.

The second approach to risk control is broadening the conventional focus of an equity portfolio in marketable U.S. equities to encompass other equities that have *reliably* different correlations with the U.S. market, dominated as it is by large cap growth and value stocks. I emphasize the word “reliably.” While the returns on large-cap and small-cap stocks, and on growth and value stocks, have often had different correlations, they have been, and I assume will continue to be, spasmodic and mean-reverting. This brings us right to “Modern Portfolio Theory” (MPT), the cardinal principle of which is portfolio diversification: The broader the diversification, the lower the specific risk. In the ideal portfolio (the all-market index fund) *all* specific security risk is diversified away.

The classic example of broadened diversification, of course, is the addition of foreign stocks to U.S. equity portfolios. The record is crystal clear that, *if we accept standard deviation as our risk measure*, the use of foreign equities reduces risk. The problem is that I’m not at all sure that it is proper to use standard deviation as a proxy for risk, and even less sure that we should use risk-adjusted return as a proxy for investment success. After all, over-simplifying ever so slightly, the Sharpe ratio for calculating risk-adjusted return equates an extra percentage point of return with an extra percentage point of risk. But this much must be clear: *An extra percentage point of long-term return is priceless, and an extra percentage point of short-term standard deviation is meaningless.* So what *investment* purpose is served by dividing the meaningless into the priceless, weighting both equally? I’ll leave it to you to answer that question, even as I applaud the Sharpe Ratio for serving a useful *academic* purpose in objectively weighing returns earned against risks assumed.

The “Efficient Frontier”

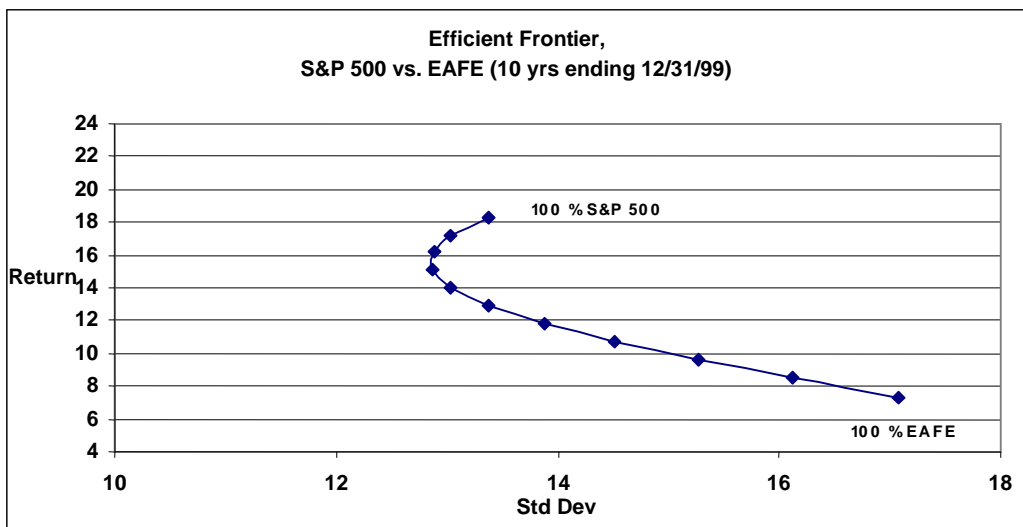
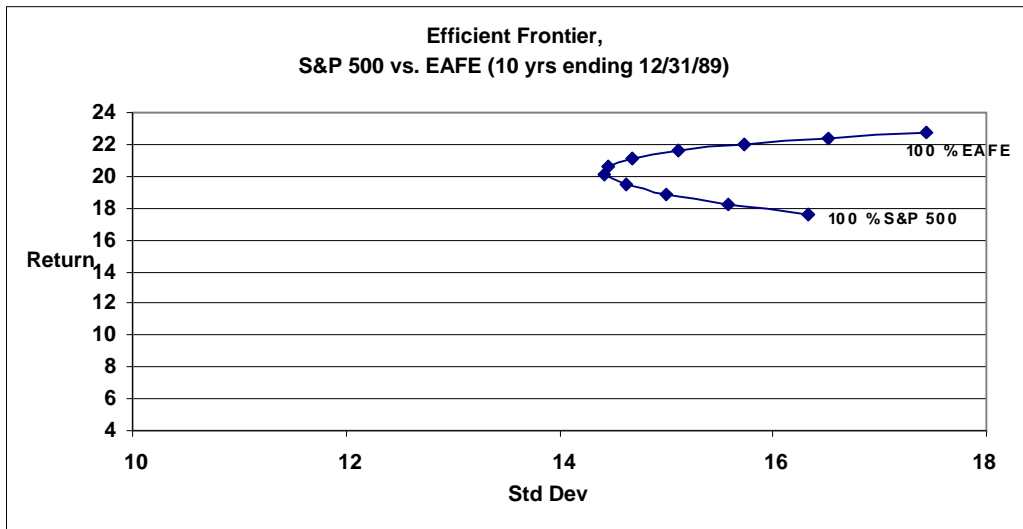
When we consider the impact of international diversification on U.S. portfolios, we are led quickly to the famous “Efficient Frontier” of the financial academy. Clearly, the ultimate diversification would be to own the entire World portfolio, now about 50% U.S., 25% Europe, 15% Japan and Pacific, 10% emerging markets. But a decade ago, it was 50% Japan and Pacific, 30% U.S., 15% Europe, and 5% emerging markets. But I’m not at all convinced that a U.S. investor should have had 70% of assets outside the U.S then, or even 50% of assets outside the U.S. now.

Most of the academic community rejects the full market-weight strategy but endorses a more sophisticated form of analysis to set the structure of the global portfolio. The analysis involves the calculation of an *efficient frontier*, which is designed to determine the precise allocation of assets between

U.S. and foreign holdings. The goal is a combination that promises the highest return at the lowest level of risk (i.e., the lowest volatility of return acceptable to the investor). I am skeptical of this approach as well, for the efficient frontier is based almost entirely on *past* returns and *past* risk patterns. That bias may be unavoidable—after all, history is our only source of hard data—but past relative returns of stock portfolios and (to a lesser degree) past relative volatility are hardly reliable harbingers of the future, and may even be counterproductive.

Consider how the global efficient frontier has shifted over time. Ten years ago, the highest returns (+23%) had come from a 100% foreign EAFE portfolio, the lowest from 100% in the U.S. (+17%). Yet in the ensuing decade, precisely the reverse was the case—U.S. +18%, EAFE +7%. Slavish reliance on history seems particularly flawed in markets where currency fluctuations create substantial extra risk—a special risk that no investor is obliged to assume. Further, the idea that foreign stock markets do not have high correlations with the U.S. stock market has in itself come into doubt. The fact is that, while the correlation was indeed at low levels (about 0.20) during the two decades ending in 1992, the correlation has since leaped up to 0.60. Who is to say that, in an ever more global economy, it won't continue its rise to 0.70 or even to 0.80 or more in the years ahead. So, as in all things, treat history with the respect it deserves...*no more, no less.*

Further, extremely small variations in risk often separates the optimal portfolio from those deemed less efficient. For example, in the decade ended in 1989, the lowest standard deviation (60/40 U.S./foreign) was 14.4 percent, compared to 15.0 percent for both a 30/70 mix *and* an 80/20 mix (purportedly the most efficient). Conversely, in the 1999 decade, the 12.8 percent deviation for the lowest risk (70/30 U.S./foreign) portfolio compared with the 13.4 percent figure both for a portfolio holding 100 percent U.S. equities, and one holding 50 percent U.S.—allocations that are, well, worlds apart. These tiny differences in volatility—in both cases, only a half percentage point—are so small as to be almost invisible to any real-world investor, particularly one who is not willing or able to engage in the arcane methodology required for calculating the standard deviation of monthly returns, even assuming that such deviation is a valid proxy for risk. Finally, even when long-term correlations are low, this reduction in standard deviation is often lost in sharp market downturns and in longer bear markets. In the words of Professor Bruno Solnik, “Diversification fails us just when we need it most.” With all these weaknesses, such analysis seems an unwarranted triumph of process over judgement.



Did He Say “Gold”? Or “Alternative Investments”?

If the idea is truly to reduce risk (or to be clear, standard deviation) by the introduction into the portfolio of asset classes with low correlation to the U.S. market, what about gold? I may be the first serious investor in decades to bring up the subject of gold as a useful portfolio diversifier, but surely it fills the bill! (Others, such as James Grant, discuss gold as an investment opportunity, but I’m just not so sure.) Gold stocks have had a correlation of about 0.05 with the U.S. market, doubtless the smallest figure for any discrete sector of our market. A few decades ago, gold was considered *the* diversifier, just as foreign stocks are in this more recent era. So I emphasize that while diversifiers may serve a useful purpose, *investors are unwise to diversify their equities ever more broadly merely for diversification’s sake.* Rather, we must consider the tangential relationship between standard deviation and risk, the implications for long-term returns when we reduce short-term risks, and the amount of real risk we are assuming.

In this context, I'd like to touch briefly on one more diversifier, made especially popular in recent years by the well-publicized investment strategies of some of the nation's largest college endowment funds. I am referring to *alternative investments*, including hedge funds, venture capital, private equity, and real estate, all of which appear to have low correlations with marketable stocks. These endowment funds (also heavy users of foreign stocks) have undertaken these alternative investments at the expense of their traditional U.S. equity holdings. However, the record is not at all clear that this more diversified bundle of equities has enhanced returns over what a conventional 65/35 stock/bond portfolio, benchmarked to the accepted market indexes, has provided.

What is more, many alternative investments have characteristics that make them considerably *riskier* than U.S. stocks as a group: the business risk of new enterprises, the financial risk of real estate, the leverage risk of hedge funds. And foreign stocks, too, carry larger risks, for the emerging markets, economic risk; for many nations, severe political risk; for *all* such markets, currency risk. I urge you to consider the wisdom of reducing short-term *volatility* risk by assuming the substantially higher *financial* risk in owning alternative investments in the portfolio. Let's never substitute the precise analysis of past data for the wisdom God gave us to make sound judgments.

Dealing With Risk - Part III

Controlling Equity Exposure

1. Bonds

A. Most reliable method of risk reduction

B. Deals with consequences, not probabilities

2. Risk Control

A. Benchmark Risk ("Style Drift")

B. Real Risk ("Losing a lot of Money")

So far, I've given you two strategies for dealing with risk in today's heady markets: (1) Getting your asset allocation right, maintaining a long-term time horizon, and staying the course; and (2) diversifying some risk away by introducing equities with reliably different correlations with the U.S. market. But what if you can't afford to ignore risk, either because your clients are not prepared to "tough it out" in the difficult markets we may face, or because your client portfolios are not properly structured? And what if you share my misgivings about the real protection available by diversifying into what may be riskier asset classes in the paradoxical quest to reduce the volatility risk of the equity portfolio? One major option remains: Controlling risk by reducing equity exposure.

I conclude that *the single most effective way to control risk is by controlling equity exposure*. For risk, as America's risk guru Peter Bernstein tells us in *Against the Gods*, "is about mystery. It focuses on the unknown, for there would be no such thing as risk if everything were known." Mr. Bernstein quotes Pascal: "Which way should we incline? Reason cannot answer." In short, we simply do not know, and probabilities—that darned "actuarial table" again—do not give us the answer. He then notes, "outcomes are uncertain, but we have some control over the consequences of what does happen. And that is what risk management is all about." Put another way, we must base our asset allocation not on the *probabilities* of choosing the right allocation, but on the *consequences* of choosing the wrong allocation.

Since I agree with that analysis, I am deeply troubled about how the investment profession has come to define risk management today. As Jeremy Grantham recently noted, “when money moves from the hands of amateur investors to the hands of professional investors, the concept of *real* risk is replaced by the concept of *benchmark* risk.” And so we have the eleventh commandment of investment management: “Thou shall not permit style drift.” The order of the day for investment managers seems to be to limit variations from their benchmark style so that their judgments won’t cost them their jobs. As a result, risk control has come to mean, not controlling the client’s *principal* risk, but controlling the manager’s *career* risk.

“Style drift” means that growth managers can’t buy value stocks, nor can small stock managers buy large stocks. If the time horizon is long, the variations moderate, and the principle of mean reversion holds, avoiding style drift may not cause irreparable harm to a portfolio’s investment returns. (However, I reiterate my own stock preference for the “style” set by the total U.S. stock market.) But when style drift comes to mean, as Mr. Grantham says, “above all, that equity managers can’t buy bonds,” there is an obvious flaw in our system of capital formation. For bonds—diversified portfolios of U.S. Treasuries and A or better corporates with little credit risk—are, finally, the investor’s only real protection against the most dire consequences of the inevitable uncertainty of equity ownership.

Consideration of bonds as an important asset class implicitly requires us to recognize, as I quoted in *Common Sense on Mutual Funds*, that “risk is *not* short-term volatility, for the long term investor can afford to ignore that. Rather, because there is not a predestined rate of return, only an expected one that may not be realized, the risk is the possibility that, in the long-run, stock returns will be terrible.”³ Put another way, the risk is that the investment portfolio might not provide its owner—individual or institution—with adequate cash to meet future requirements for essential outlays. In short, that the investor will lose a ton of money, just when it is needed the most.

No one knows whether or not bonds will provide higher total returns than stocks over the next decade or quarter century. But we do know this: that bonds will produce far higher *income*. I don’t mean to be a Luddite, but income remains important, and a bond portfolio today, without compromising on quality, can produce a yield of 7 1/2%, \$75,000 of income per million dollars of capital. An all-market stock portfolio can provide a yield of only about 1%—a bit more than \$10,000. Even if its dividends grow at 6% per year, it won’t be until 2036 until the stock portfolio pays \$75,000, and until 2057 until the *cumulative* dividend payments aggregate to the cumulative bond interest payments. In these days when it is so easy to spend *principal*, it is easy to ignore *income*. But I believe that this situation will prove transitory, not eternal. Nonetheless, fixed-income investments are not only our only real means of controlling risk, they are now our only real means of generating income. In a world of box-car total returns on stocks, risk is often ignored, bonds deemed irrelevant, and income old-fashioned. But when the going gets tough, all three—risk, bonds, and income—will come into their own again.

A Final Thought

And so ends this long journey through the thicket of risk and risk control in an era of confidence, and perhaps even greed. I’ve spent much time telling you why I think stocks are facing outsized risks today, and the recent surge of market volatility may be the harbinger, that after all these years, risk is again coming home to roost. I’ve also presented three distinct means of dealing with equity risk, from ignoring it, to reducing short-term volatility, to dealing with real protection against losing capital when capital is most needed. While I cannot give any investor a neat formula for risk control, I am comforted

³ Lawrence Siegel, the treasurer of the Ford Foundation, writing in the *Journal of Portfolio Management*.

to share that inadequacy with the likes of Paul Samuelson, who tells us, “there is no way any professor of economics or any minister of the church can tell you what your risk tolerance must be.”

No, nor can any Wall Street seer, nor any money manager, nor any indexing advocate, nor even any grizzled veteran of 50 years in this wonderful business.

Note: The opinions expressed in this speech do not necessarily represent the views of Vanguard’s present management.
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