The Dream of A Perfect Plan

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Good morning. It's wonderful to be here in Phoenix, as I begin my 51st year, hard as it is for me to believe, in the mutual fund field industry. It all began when I read an article about mutual funds entitled "Big Money in Boston" in *Fortune* Magazine in December 1949, which inspired me to write my senior thesis at Princeton University on "The Economic Role of the Investment Company." When I graduated in 1951, I joined the industry and have been part of it ever since, ultimately heading up the fund management company that I'd joined at the outset. Alas, early in 1974, I was fired, which led directly to my founding of Vanguard in September 1974, just over 25 years ago. It's been a thrilling run, and I assure you the end is not in sight.

Over the years, I've come to respect Von Clausewitz' epigram, "the greatest enemy of a *good* plan is the dream of a *perfect* plan." I'll use that theme in this keynote speech as we consider the challenges of "Making Money" in year 2000 and in the new millennium. My theme will echo the fact that today all of us are trying to invest intelligently, as we consider our volatile financial markets; our U.S. economy, each day becoming more a part of the global village; and the implications of our revolution in information technology and communications that is speeding us into a truly new era.

In these wild days in the markets, deciding on an intelligent investment plan must seem both complex and confusing. What, you must wonder, is the best way to allocate your assets among stocks and bonds and cash, and even other kinds of assets? Once you make those decisions, how do you implement your plan? What role should mutual funds play? Which funds should you select from among the 7,500 that exist today? These are all tough decisions, especially since the world of investing may now be at a sort of inflection point. It is never easy to see around corners. But I'll try to help.

In this conference, you'll be exposed to a lot of common sense ideas for dealing with these complexities and uncertainties, and I urge you to consider them with care. I imagine you'll also hear many ideas that don't comport with at least my concept of common sense, and I urge you to disregard each one of them in direct proportion to its complexity, its decibel level, and the conviction of its advocates that a favorable outcome is assured. Avoid complex strategies that seem to provide temptingly easy solutions to eternally complex problems. But I warn you that complex solutions—let's call them "witchcraft"—always seem to offer a perfect plan, but rarely deliver on the promised dream. What is more, complexity is expensive. The simplicity of a good plan, on the other hand, can work not only effectively, but economically. The good plan works, not despite being inexpensive, but because it is inexpensive.

Asset Allocation

My remarks today will focus on equity mutual funds, but I want to begin with a brief word about asset allocation, for it is one of the most important investment decisions you must make. While there are complex systems that offer precise formulas for implementing the *perfect* asset allocation plan, the *good* asset allocation plan simply assumes that these nuances of investing are unpredictable. The good plan relies primarily on a straightforward and conventional balance between stocks and bonds. How much in each category? As ever, your investment balance must depend largely on your own needs and circumstances. Typically, the allocation might range from something as crude as, say, 50% in stocks and 50% in bonds for older, moderately risk-averse investors who have accumulated substantial capital, have reached normal retirement age, and need to draw down income. Or up to 100% stocks for young, confident investors who are just beginning to accumulate their first investments in a 401(k) retirement plan, and have scores of years before income will be an issue. In short, intelligent asset allocation is an inevitably imperfect combination of (1) the years you have remaining to accumulate wealth, (2) the amount of your assets, (3) the income you require, and (4) the courage to stay the course you have set for yourself. In an uncertain world—and it will be ever thus—getting your allocation *almost* right is better than getting it *precisely* wrong.

Since last autumn, moreover, the very term *stock* has been but a crude approximation of reality, for the dichotomy among the various types of stocks has been as large as I can recall in my long career. Consider that with the total stock market up 15%, the Standard & Poor's 500 Index is up 6%, mid- and small-cap stocks up 47%, the NASDAQ Index up 72%, and the Dow Jones average actually down 4%. Nonetheless, in an uncertain world, a highly-diversified stock portfolio remains the most sensible choice for the stock allocation, and once you've decided on this allocation I urge you to *stay the course* you have set for yourself.

Why not try to time the market? *Because market timing cannot be done successfully*. Emotions lead you to increase your stock holdings when you're optimistic and ebullient (that's why stocks get too high), and to reduce your stock holdings when you're pessimistic and scared (that's why stocks get too low). But increasing your stock allocation when prices are high and reducing it when prices are low is completely counterproductive. What is more, captured by the emotions of the day, most investors consider changing their allocations without recognizing that that it only *one step* in a *two-step* process. Assume for example, that the recent market turbulence convinces you to reduce your stock holdings, say, from 60% of assets to 40%. What do you do *next*? It all depends. For there are only two possibilities: You could be right. Or you could be wrong.

- What if you're *right*? The market drops 25%. Do you restore your original balance? Probably not. You *fear* that it will go down further. What about a 50% drop? "Now," you say. I doubt it. For with the Dow at 4900, you're scared to death. So even though you were right, you end up being wrong if you never get back in.
- What if you're *wrong*? The market *rises* 25%. Do you buy back in? Probably not. You *hope* that it will fall back so you can reinvest without penalty. A 50% drop? No. You're confident you're right about the coming decline, and you still hope that time will validate your judgement. But when the market rise you didn't expect reaches 100%, you finally succumb to the mania and restore your original 60% equity position. The day that you do this, I'd venture to say, will bring you back into the stock market on the very day it reaches its all time high. Wrong first, and then *really* wrong the second time around!

Being right *twice* in the financial markets, in short, is virtually impossible. Better to enjoy the *long-run* and productive economics of equity investing—earnings and dividends, stable and growing over time—and ignore the *short run and counterproductive emotions* of equity investing—essentially encapsulated in price-earnings multiples that surge madly to and fro, often for little obvious reason. To protect yourself from these counterproductive emotions, the best strategy is to set your asset allocation at a level that is right for you, taking into account each of the four factors I enumerated earlier. And then change it *only* if any of those factors change. In short, follow the most careful single rule of investing ever expressed: *Stay the course*.

The fact is that we know little about the future returns that stocks will provide. But we do know that we must rely primarily on stocks for capital appreciation and on bonds for income, and we have to realize that stocks involve substantial risks. While this is indeed a new era for our remarkably productive economy, *I do not believe that it is a new era for the stock market*. The old market paradigm—revolving around hope, fear, and greed—is eternal, and the often counterproductive emotions of investors are a powerful market force. So, no matter what you read about the historical returns of common stocks, I assure you that the stock market, driven as it is by both economics *and* emotions, is not an actuarial table. Please don't learn that the hard way!

Investing the Stock Allocation

Despite today's heady valuations, the common stock portion of your allocation remains the only sensible approach to building your capital over the long-term. So the question becomes: Which equity mutual funds will build your capital with the greatest effectiveness? The *perfect* plan would be to identify one or more mutual funds that may provide a return significantly greater than that of the stock market. And the lesson of history shows us that some mutual funds *have* in fact outpaced the market. But that lesson also shows us that there are long odds against selecting the winners in advance. Thirty years ago, there were but 355 stock funds, and fully 189—more than half!—failed even to *survive* the period. Only 14 funds beat (by as little as a single percentage point) the return on the stock market as a whole. That is, on a pre-tax basis, the fund investor had only one chance out of 25 to surpass the market's return by a significant margin.

What about the others? Well, 53 came within a single percentage point above or below the market, statistical noise that reflects a market-equivalent return. That left 97 funds one percentage point or more *behind* the market, seven losers for each winner, and bigger losers at that. Fully 27 funds fell short of the market by more than three percentage points per year compared to only a single fund that out-gained the market by that amount. Not only are the odds against implementing a perfect plan by selecting winning funds long, but the penalties for failure are disproportionately large.

Why was it so difficult for these mutual funds to merely match the return of the stock market? To answer that question, I need only point out that, in all respects save one, the stock market is a gambling casino. In the casino with which we are familiar, gambling is a zero-sum game. One gambler's loss is another's gain—until the croupiers rake off their share of the wagers. It is true at the roulette tables and at the racetrack alike. After the croupiers' rakes descend, the casino is a loser's game. The longer the investor stays in the gambling casino, the greater the certainty that he will, finally, be wiped out.

What is different in the stock market casino? Only that investing in equities is not a zero-sum game, but a positive-sum game. Or at least it has been during most of past history. With the profitability and growth of corporate America, stock prices have risen steadily over the years. Yet each day,

investment professionals and amateurs alike are trading with one another. When the seller wins, the buyer loses, and vice versa. So in the stock market, the returns earned by all investors are inevitably average, and *beating the market* is a zero-sum game. But, just as in the regular casino, it is only a zero-sum game until the croupiers rake off their shares. Then, investors as a group must, and do, fall short of the market's return. Beating the market, too, is a loser's game.

There are lots of croupiers in the stock market casino. Fund managers and operators; salesmen who sell fund shares; investment brokers who execute fund portfolio transactions. Even the Federal Government finds itself among the croupiers, for fund portfolio turnover generates realized capital gains, and therefore taxes. Given all of these subtractions from the market's return, the good plan relies on this surprising, if obvious, rule for measuring investment success. The central task of investing is to realize the highest possible portion of the annual rate of return earned in the financial asset class in which you invest—recognizing, and accepting, that that portion will be less than 100%.

Let me explain. It is simply a mathematical *impossibility*—a definitional contradiction—for all investors *as a group* to reach 100% of the stock market's annual return. Yes, it is *possible* to select funds that succeed in earning, say, 105% of the market's annual return. But the odds against doing so are about 25 to one as I noted earlier. Further, history also tells us that the *probable* outcome is that the average fund will earn only about 80% of the market return. If this is iconoclasm, so be it. But fund shareholders as a group face just such a shortfall, and recognizing that fact is the first step toward developing a good plan for equity investing.

There is an optimal—and obvious—way to closely approach the 100% target: Simply own the market. It is easy. An all-stock-market index fund, in substance, owns shares in every publicly-held business in America, and holds it for as long as the business exists. By slashing the croupiers' take, such ownership is available at extremely low cost: No advisory fee; no sales charges; virtually no portfolio turnover and therefore nominal transaction costs, few realized gains, and minimal taxes. The all-market index fund is the croupier's dark nightmare, and the investor's bright dream. The simplest of all approaches to equity investing, then, is to invest solely in the shares of a single all-market equity index fund—just one fund. It is a good plan. And it works, regularly producing more than 98% of the market's pre-tax return.

But I'm a realist. I recognize that in the real world, lots of all-too-human traits get in the way of a simple, all-encompassing index fund approach. "I'm too smart for that;" you may think. "Even if the game is expensive, it's fun." "It can't be that simple." These are the all-too-common refrains in the minds of investors—am I speaking for you?—who choose to pursue the conventional strategy of relying entirely on actively-managed funds to implement their investment strategies. For mutual fund investors, "hope springs eternal" in the search for funds that will beat the market in the future. But Alexander Pope's full couplet reads: "Hope springs eternal in the human breast; Man never *is*, but ever *to be* blest." Just as the dream of the perfect plan has little chance of coming reality, so the anticipation of being blessed inevitably falls short of the realization.

The main factor that causes investors to ignore the good plan of indexing is not only that it is boring—the market return is only, well, the market return—but that the index strategy seems dumb. In a sense, of course, it is. But as it turns out, the dumb strategy leads to a smart, even brilliant, decision. Hear Warren Buffett on this subject:

"By periodically investing in an index fund . . . the know-nothing investor can actually out-perform most investment professionals. Paradoxically, when "dumb" money acknowledges its limitations, it ceases to be dumb."

The index fund strategy, then, is a good plan—maybe even the best plan available to most of us mere mortals. But it is not *necessarily* the best plan. While the odds against picking a superior mutual fund have been powerful, they have not been insurmountable. In a given decade, perhaps one fund in five has beaten the market (before taxes). And there are some simple common sense principles that should help you to select funds that can earn a generous portion of the market's return, although they too are all too likely to fall short of 100%. If there are long odds against success in outpacing the market, at least going about the task of fund selection intelligently can help you to insure against a major failure. So let me give you eight rules that may help you to do just that.

Rule 1. Select Funds With Low Expense Ratios

I've said "costs matter" for so long that the portfolio manager for one of our funds gave me a Plexiglas pillar with the Latin translation: *Pretium Refert*. But costs *do* matter, and their impact will likely grow in importance in the years ahead. For the fees and operating costs paid to fund manager-croupiers are responsible for a major share of the shortfall of the typical mutual fund to the stock market. The industry's estimated $2\frac{1}{2}$ % annual all-in cost, for example, would consume fully 17% of a market return of 15%, leaving 83% for you. But as returns revert to lower levels, it gets worse. That same cost would consume 25% of a market return of 10%. And if the going got really tough, say, in a 5% market, fund costs of $2\frac{1}{2}$ % would confiscate fully 50% of the market return, leaving only 50% for the investor—a far cry from the 100% desideratum of the good plan. So select funds with low expense ratios.

Rule 2. Emphasize Funds with Low Portfolio Turnover

Once your money is invested in a fund, the next croupier's rake begins to sweep. Most funds continue to buy and then sell securities unremittingly, and then sell them and buy them over and over again. Believe it or not, fund portfolio turnover rose to an all-time high of 90% last year. The average fund held onto the average stock for just 406 days—a holding period far more akin to short-term *speculation* than to long term *investing*, which, not so many years ago, is what this industry was all about. The rake wielded by the brokers, investment bankers, and traders typically consumes ½% to 1% of fund returns each year.

This high turnover is in part the product of trading by hyperactive portfolio managers, unable to sit quietly in a room and anxious to garner a performance edge on their peers, however fruitless the quest. But there is also turnover among the managers themselves. All too often when a manager departs, the new manager's broom sweeps clean, as he reorders the portfolio to comport with his own strategies. Believe it or not, the average mutual fund manager lasts just five years. So be aware, not only of a fund's turnover rate, but its propensity to change managers around, sometimes at the drop of a hat. Do your best to find funds both with portfolio holdings *and* portfolio managers that will stay the course.

3. Realize that Taxes are Fund Costs, Too

There is yet a third croupier in the fund casino. And in this bull market era, it happens to be the greediest croupier of them all: The Federal Government. Make no mistake about it, Uncle Sam *loves* the mutual fund industry, for it helps balance his budget by generating all those taxes on realized gains. Impatient, aggressive fund managers buy and sell stocks at a furious rate and pay virtually no attention whatsoever to the taxes such activity will require you to pay. *They* can ignore taxes, but you *can't*.

There is awesome value in deferring taxes—and deferring them for as long as you can. Taxes you pay today cannot compound to your benefit tomorrow. Each dollar of capital gain you defer is equivalent to an interest-free loan from the Federal Government, indeed a loan that needs not be repaid until *you* decide, and, even better (in a sense!), a loan that is totally forgiven on your death. Yet fund managers not only require you to prematurely pay the 20% tax on *long-term* capital gains, they also realize some one-third of all capital gains on a *short-term* basis, forcing you to pay taxes at rates up to the 40% maximum on dividend income. So seek tax-efficient funds.

4. Be Careful About What You Pay for Fund Selection Advice

Many investors need sensible advice in fund selection and asset allocation—and many do not. If you are convinced you do not need advice, it is unwise to pay for it, either in the form of front-end sales commissions, or 12b-1 sales fees included in a fund's expense, or fees paid to registered investment advisers and financial planners. Alas, some fund advisers are clearly croupiers wielding wide rakes. How else to describe mutual fund firms which are collectively spending up to \$1 billion annually of their shareholders' hard-earned money on the advertising campaigns you see incessantly on television? Those are *your* dollars the marketers are spending, not to help you, but to bring in new investors. Consider carefully whether you want your assets used for this purpose.

That said, there are many investment advisers and brokerage executives for whom the term "croupier" is in no way appropriate. Indeed, the best advisers are exactly the opposite: They can help you to minimize the many pitfalls of fund selection, provide you with sound asset allocation guidance, and give you personal attention. If you need this sort of help, get it! But be sure to carefully select your adviser and know exactly what fees are involved.

Rule 5: Beware of Past Performance to Predict Future Performance

For your dream of a perfect plan to be realized, you must select superior mutual funds. To an amazing extent, investors rely on past performance to make their selections. If you do so, I warn you, you are leaning on a weak reed. For there is simply no way of predicting a fund's future success based on its past track record. Indeed, there is but one thing that appears certain about the future relative performance of successful funds: Their performance superiority will not be sustained. The profound tendency of yesterday's top performing funds to become tomorrow's below average funds is called "reversion to the mean"—a sort of law of gravity that seems to be almost universally applicable in the financial markets.

Mean reversion is *not* a statistical aberration. The returns of the top quartile funds during the 1960s fell from 5% above the stock market to below it in the 1970s. The top funds during the 1970s fell from 4.6% above the market to below it during the 1980s. And the top funds during the 1980s fell from 2.8% above the market to 1.6% below it during the 1990s. Reversion to the mean in fund performance seems not only consistent—a 4% to 5% reversion in each of those three cases—but almost preordained, frustrating the dreams of so many investors who invest on the basis of past returns.

Rule 6: Rely on Past Performance to Measure Consistency

While the dream of the perfect investment plan will rarely be fully realized, there *are* ways to avoid having it become a living nightmare. If fund performance cannot foretell the future—*and it cannot*—it can still help us to select funds that have enjoyed reasonably consistent *past* success, and I would argue, have a fighting chance to earn consistent *future* returns relative to peer funds with similar

styles and objectives. Compare, for example, a large-cap blend (growth and value) fund with other large cap blend funds, and see how it stands each year. Morningstar makes this task easy, with charts showing whether each fund has been in the first, second, third, or fourth quartile among its peers during each of the past 12 years. For a fund to earn a top performance rating means, in my mind, at least six to nine years in the top two quartiles and no more than one or two in the bottom quartile. In this chart, the "good" fund is in the top half in eight years, in the bottom quartile but once. The "bad" fund is in the top half seven times, in the bottom quartile, four. Consistency of return, not aggregate return, tells the important story to the intelligent investor.

Rule 7: Be Aware of Risk Variations

Past performance can also tell us a lot about risk. *Risk is a crucial element in investing*. There are marked variations from one style to another, reflected in the fact that value funds tend to carry distinctly less risk than growth funds, and large-cap funds less risk than small-cap funds. Small-cap growth funds, for example, have carried risk that is 48% *higher* than the average fund, while large-cap value funds carry 7% *less* risk—a 55 percentage point risk differential. Relative fund *risks* have carried a healthy degree of consistency, so, especially in these volatile markets, ignore risk at your peril.

An important note: While you're looking at all those performance figures, never forget there is more to fund selection than numbers. To me, the character, integrity, stability, and judgment of a fund's management are the qualities on which your dream of the perfect plan should rely. In all of your searching for the *quantities* that describe investment returns, I urge you not to ignore the *qualities* of those whom you choose to serve as the stewards of your precious assets.

Rule 8: Don't Own Too Many Funds—And Don't Trade Them

One final rule: Limit the number of funds you own, and don't trade them. To paraphrase an old adage, "too many funds spoil the perfect plan." Why should this be so? First, the more funds you own, the greater the chance that a truly inspired fund selection will have its success spoiled by another fund that falls on its face. The problem has been called "diworsesification," for it leads investors to build a portfolio of funds holding so many individual stocks that it looks like an index fund, yet is bereft of the index fund's positive attributes of exceedingly low cost, minimal portfolio turnover, high tax efficiency, and clarity of investment objective. Such a blunderbuss approach to fund ownership relinquishes far too much good in the search for the perfect.

Active trading of your mutual fund shares is also counterproductive. The average investor today holds funds for but three years, an absurdly inadequate time frame for appraising the results of an investment program that should be inherently long-term—even lifelong—by nature. What is worse, the funds may have been ill-selected in the first instance—funds with inflated performance, funds investing in hot market sectors, funds advertised on television, funds that relinquish far too much of their profit to taxes, funds with high costs that didn't seem to matter when their past records looked so good. The dream of a perfect plan will *never* come true if you trade mutual fund shares as if they were stocks. The essential idea is the same as that for your asset allocation: *Buy right and hold tight*.

The Good Plan or the Perfect Plan?

The good plan or the perfect plan? Only you can decide. But please do not ignore the lessons of history. Let's conclude with this comparison of a low cost, no-load, low turnover all-market index fund with the average managed equity fund. During the past 15 years, the average pre-tax return of the total

U.S. stock market was 17.2% per year. The index fund would have provided an annual rate of *after-tax* return of 16.1% to the investor, compared to just 11.8% per year for the active fund, a gap of fully 4.3 percentage points each year, reflecting the impact of sales *cost*, opportunity *cost*, management *cost*, transaction *cost*, and tax *cost*.

As both returns and costs compound, the difference widens. The after-tax value of an initial \$10,000 investment at the end of the period: Market index fund, \$93,900; average managed equity fund, \$53,300. In both plans, the investor put up 100% of the capital and assumed 100% of the risk. In search of the *perfect* plan, however, the investor in the average fund received only 49% of the market's reward, relinquishing 51% to the croupiers. On the other hand, by holding the croupiers' share to 13% of the market's cumulative return (largely taxes), the investor who relied on the *good* plan of a market index fund retained 87%.

Now, you may believe you can realize your dream of the perfect plan by selecting funds that do better than the industry average. And I grant that is at least possible—but *only* if you honor the eight basic rules I've presented today, largely by minimizing the take of all of those croupiers out there. Put another way, to achieve the *perfect* plan, learn all that you can from the *good* plan. And never forget that even if you beat the odds and succeed in outpacing the disappointing results of the *average* fund, you will need to achieve a truly Herculean improvement to outpace the results of the all-market index fund.

The value of the index fund is *not* that it can beat the market. It can't. But it has proved to be the optimal way "to realize the highest possible portion—albeit slightly less than 100%--of the pre-tax annual return earned in the market." That may seem a modest objective, but only before we compare it with the results of most actively managed funds. Burdened by excessive costs and taxes, promoted based on outlandish claims of past performance success that does not recur, managed with strategies that call for a short-term focus—it's little wonder that few funds even come close to 100%. My rules should help you find those funds.

Sadly, only a fairly small number of funds filter through my eight screens. There ought to be lots more. This industry needs to get its house in order. So demand funds that measure up to your standards. If you make your own investment decisions with common sense and intelligence, the industry will be *forced* to change and serve shareholders more efficiently and effectively, reducing costs, risks, turnover, and hyperbole alike. Finally, it is you—the fund shareholders, the *owners* of the fund—who must be served. You deserve a fair shake, and I'll keep speaking out until you get it.

A recent column in the *Boston Globe* compared marriage and mutual funds got the issue just right: "The ideal mutual fund is one we can have and hold, in sickness and health, in good times and bad, for as long as we live." The author urged investors not to have flings with hot funds nor to be seduced by the lust for exceptional returns, but to have a long-term relationship with funds with character, stability, and consistent long-term performance, a relationship characterized as "true love." While few active funds will measure up, the good plan I've described today—the all-market index fund—will meet that standard. So never forget this maxim: "The greatest enemy of a good plan is the dream of a perfect plan."

Note: The opinions expressed in this speech do not necessarily represent the views of Vanguard's present management. \bigcirc Copyright 2000 by John C. Bogle