The Wisdom of Investment – The Folly of Speculation

Keynote Address

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The Vanguard Group

at

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Way back in 1968, the Stanley Kubrick-Arthur Clarke film *2001: A Space Odyssey*—at once a story of human civilization, the space age, and the power of computer technology—put a durable imprint on this first year of the third millennium. But 2001 also marks a double anniversary year for indexing. Thirty years ago, in 1971 at Wells Fargo Bank, James Vertin, William Fouse, and John McQuown pioneered the effort by establishing the first indexed pension account for the Samsonite Corporation. And twenty-five years ago, in August 1976, the first index mutual fund, established by Vanguard eight months earlier, completed its initial public offering. In both cases, the starts were precarious.

At Wells Fargo, the tiny $6 million index account was invested in an equal-weighted index of New York Stock Exchange equities. Its implementation proved to be a nightmare, and in 1976 it was replaced with the market-capitalization-weighted Standard & Poor's 500 Common Stock Price Index. At Vanguard, we had earlier selected that same index as the standard for our newly-formed 500 Index Fund—known at the outset as First Index Investment Trust—and its offering raised but just $11 million. The fund was greeted by the investment community with derision, dubbed "Bogle's folly," and described as un-American, inspiring a widely-circulated poster showing Uncle Sam calling on the world to "Help Stamp Out Index Funds."

The other early indexers fared just as badly. When Batterymarch Financial Management first offered an index strategy in 1972, *Pensions and Investments* magazine awarded the firm its annual "Dubious Achievement Award." American National Bank of Chicago created an indexed common trust fund in 1974, but found few takers. When 1976 drew to a close, the total assets of index funds and pooled accounts probably totaled less than $100 million. Yet from that humble

and contentious start arose one of the most important and powerful investment ideas of the age, an age whose anniversary we celebrate at this Sixth Annual Superbowl of Indexing.

Two Schools of Indexing—Quantitative and Pragmatic

I think it's fair to say that there were two principal schools of index development. I'll call one the *Quantitative School*—the masters of mathematics led by Harry Markowitz, William F. Sharpe, and the Wells Fargo Financial Analysis Department, who reached their conclusions after doing complex equations and conducting exhaustive research on the financial markets. Princeton's Burton Malkiel also deserves a share of the credit. In 1973, in the first edition of his persuasive and ever-popular *A Random Walk Down Wall Street*, he endorsed the efficient market hypothesis and called for a no-load, low-fee mutual fund that simply buys the market and does no trading. In essence, the Modern Portfolio Theory developed by the Quantitative School proved that a fully-diversified, unmanaged equity portfolio was the surest route to investment success.

While the Quantitative School developed its profound theories, what I'll call the *Pragmatic School* simply looked at the evidence. Dr. Paul A. Samuelson's 1974 article *Challenge to Judgment* noted the incontrovertible brute fact that academics had been unable to identify any consistently excellent investment managers, challenged those who disagreed to produce "brute evidence to the contrary," and pleaded for someone, somewhere to start an index fund. And in 1975 in an article entitled *The Loser's Game*, Charles D. Ellis argued that, because of fees and transaction costs, 85% of pension accounts had underperformed the stock market. "If you can't beat the market, you should certainly consider joining it," Ellis concluded. "An index fund is one way."

In mid-1975, when I decided to start the Vanguard index fund, I was both blissfully unaware of the work the quants were doing and profoundly inspired by the pragmatism of Samuelson and Ellis. It was then that I pulled out all of my annual *Weisenberger Investment Companies* manuals, calculated by hand the average annual returns earned by equity mutual funds over the previous 30 years, and compared them to the returns of the Standard & Poor's 500 Stock Index. Annual Returns, 1945-1975: S&P Index 11.3%; average equity fund, 9.8%. To give that seemingly small percentage difference a high impact, I then showed that a hypothetical initial investment of $1,000,000 would have grown over the 30-year period to $25,000,000 in the Index vs. $16,500,000 in the average fund. I used my data, along with copies of the Samuelson and

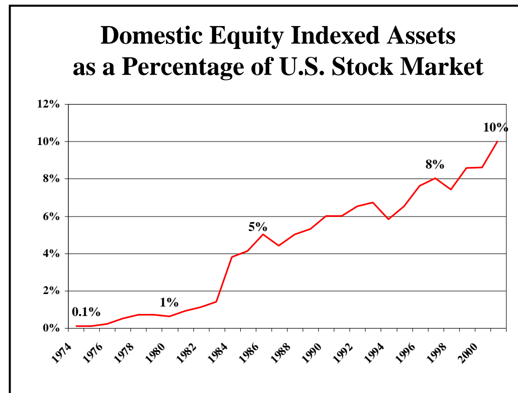
Ellis articles, to persuade a dubious Vanguard board of directors to approve the creation of the first index mutual fund.

The idea of an index fund was hardly anathema to me. Way back in 1951, the anecdotal evidence that I had assembled in my Princeton University senior thesis on the mutual fund industry shaped my conclusion that funds "can make no claim to superiority to the market averages." When the newly-formed Vanguard began operations in May 1975, I had realized my dream of establishing the first truly *mutual* mutual fund complex. While the idea of an index fund would have hardly appealed to a high-cost fund manager whose very business depended on the conviction that, whatever his past record, he could outpace the market in the future, indexing would be a natural for Vanguard. Uniquely, we operated on an at-cost basis and sought to become the world's lowest cost provider of financial services. What is more, at the outset Vanguard provided only administrative services to our then-$1.4 billion fund group, which continued to rely on Wellington Management Company for all investment management and distribution services. Added to my conviction that indexing was a winning strategy, my powerful itch to expand our narrow mandate provided an irresistible urge to create the first index mutual fund. As I've often noted, many firms had the same opportunity, but like the prime suspect in a murder mystery, only Vanguard had both the opportunity *and* the motive.

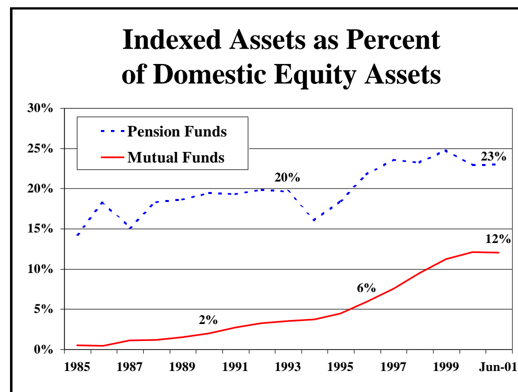
While the Quantitative School relied heavily on its capital asset pricing model and the belief that the financial markets were highly efficient, the Pragmatic School relied on the brute evidence of pension fund returns and mutual fund returns relative to the market, and the obvious fact that investment costs were largely responsible for the shortfall. But both schools agreed that owning the entire stock market, as represented by the Standard & Poor's 500 Index, was a way to capture close to 100% of the market's annual return. In a world in which the average manager, simply because of advisory fees and transaction costs, could capture only 75% to 85% of the market's annual return, indexing was *certain* to be a winning strategy.

From Heresy to Dogma

Well, what began as the heresy of a few fanatics a quarter-century ago and more has become the accepted dogma of the academic community, individual and institutional investors alike, and even a large number of investment practitioners. Market index strategies, unheard of at the outset, have grown to $6.5 billion in 1981, $235 billion in 1991, and $1.3 *trillion(!)* in 2001—from zero to 1% to 6% to 10% of the market value of all U.S. stocks



In the early years, pension funds accounted for by far the largest portion of indexed portfolios. But during the 1990s and through 2001, index *mutual funds* have been the driving force. While the rising market has carried pension fund index assets up eight times, since 1990, from $172 billion to $830 billion, the percentage of pension equity assets invested under index strategies has risen only slightly from 20% in 1990 to 23% today. During the same period, assets of index mutual funds have risen *eighty* fold, from $5 billion to $400 billion, from 2% of equity mutual fund assets to 12%. Truly, we are witnessing the triumph of indexing.



Disquieting Cross-Currents

But beneath the surface of this triumph lie disquieting cross-currents. In its original incarnation, indexing was a way to bring the *wisdom of investment* to those who could grasp the merit of complete diversification, buying essentially all of the stocks in the U.S. market, operating without advisory fees and at rock-bottom operating costs, minimizing turnover costs and extra taxes, and hanging on to each stock for Warren Buffett's favorite holding period—*forever*. All that was required was that investors accept the self-evident fact that capturing nearly 100% of the

stock market's annual return was an achievement earned only rarely and inconsistently by active managers, who were in any event almost impossible to identify in advance. The wisdom of index investing for the long-term was simple. It was straightforward. And it did *exactly* what it promised.

But the upsurge in mutual fund indexing in recent years has not been based solely on the wisdom of investing. It has also been based on the folly of speculation. Increasingly, and to an astonishingly unrecognized extent, indexing is being used, not to match the market but to beat it. Long-term ownership of the stock market as a whole is apparently not good enough. A whole variety of new index funds have been designed as engines to enable investors to capture superior returns. In some cases, the funds are based on indexes representing various styles or sectors of the market (small-cap growth indexes and large-cap value indexes, for example) In other cases, the funds are based on traditional broad market indexes (Standard & Poor's Depository Receipts—*Spiders*—for example), trading vehicles structured for short-term speculation rather than long-term investing. In still other cases, by a combination of both—for example, the technology-driven NASDAQ Qubes and the i-shares that index the South Korean stock market.

In my view, owning the market and holding it forever is the ultimate strategy for winners. When investors, in the hope of carving out an edge, use index funds to make outsized bets on narrow market sectors or to vigorously trade their portfolios, they have adopted the ultimate losers' strategy. When investors abandon the wisdom of investment and undertake the folly of speculation, using a great idea to implement a flawed strategy, they are bound to be disappointed.

There is an old prayer that reads:

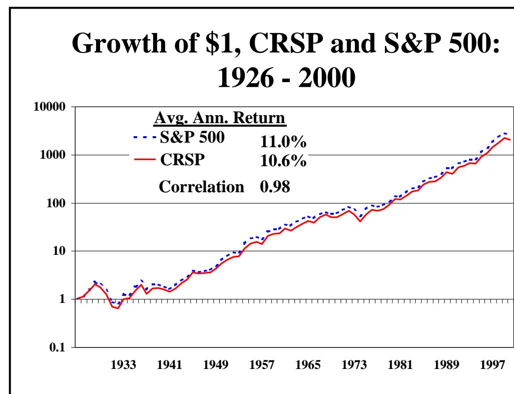
God grant me the serenity
To accept the things I cannot change,
The courage to change the things I can,
And the wisdom to know the difference.

I hope it is wisdom rather than stubbornness that persuades me that I can help to change what is going on today in indexing and return us to our roots. First, I'll present a perspective on the remarkable success investors have achieved when indexing has been properly used for investment purposes, and then I'll discuss why investors will achieve self-defeating results when index strategies are abused for speculative purposes.

The Wisdom of Investment

In the quest to own the total stock market, the first index mutual fund was designed to replicate the results of the Standard & Poor's 500 Stock Index. So, shortly afterward, was that original Samsonite pension account. That Index proved to be a marvelous choice. Yes, the S&P 500 is a large-cap *index*, but the U.S. stock market is a large-cap *stock market*, and the S&P 500 typically accounts for 70% to 80% of its market capitalization. Yes, the 500 was dangerously exposed to technology (34% of its value) as the great bubble reached its maximum inflation in March 2000, but so was the U.S. stock market. And yes, the S&P committee that adds stocks to and deletes stocks from the Index has often seemed to select the *hottest* stocks of the day, but the fact is that it is simply keeping the Index in synchronization with the *largest* stocks of the day. Indeed, it is estimated that a portfolio simply owning the largest 500 stocks in our marketplace would carry a long-term correlation of something like 0.999 with the S&P 500 Index.

Two facts may surprise you: First, the long-term correlation of returns between the Standard & Poor's 500 Stock Index and the total U.S. stock market (measured since 1926 by the University of Chicago's Center for Research in Security Prices—*CRSP*—and since 1972 by the Wilshire 5000 Index) is a remarkable 0.98%. Second, the S&P 500 has actually turned in a slightly *higher* annual return than the stock market over the full 75-year period: 11.0% vs. 10.6%, suggesting that small-cap and mid-cap stocks as a group have produced an annual return of about 9.6% per year. Of course there were—surprise!—frequent reversions to the mean during the period, with large caps doing much better during the depression years than from the end of World War II through 1955, and then during the great bull market that ran from mid-1982 to March 2000. But the fact is that the S&P 500 index that we selected in 1975 as the benchmark for the Vanguard 500 Index has stood the test of time. I have no doubt that will do so long into the future.



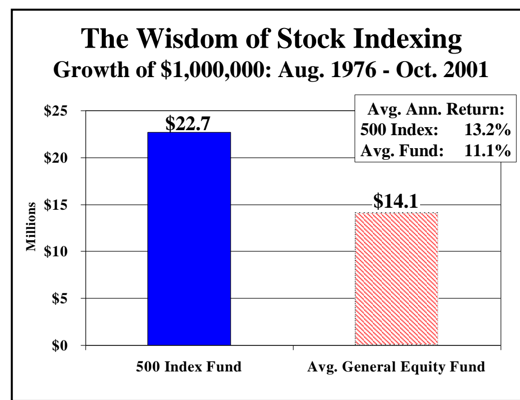
The Total Stock Market Index

Nonetheless, I continue to favor the Wilshire Total U.S. Stock Market Index as the prime benchmark for an index strategy—not to the exclusion of the S&P 500, but as the place to begin for most investors who are not yet indexing. While returns of the two indexes are apt to be identical over the long-run, there seems little to be gained by accepting any short-run deviation from the market. At Vanguard, we began to implement the total market strategy in 1987 with the creation of the industry's first Extended Market Index Fund, (based on the Wilshire 4500 Index), enabling investors to fill out their S&P 500 portfolios by adding the rest of the market. But, convinced that this two-pronged strategy might someday result in surprisingly high portfolio turnover as stocks moved back and forth between the indexes, in 1992 we introduced the first total stock market index fund, based on the Wilshire 5000 Index. I believe that it is only a matter of time until the total stock market, most easily measured by the Wilshire 5000, becomes the basic standard for the broad-based indexing strategy.

The Wisdom of Stock Indexing

After more than a quarter of a century of stock indexing, how has it worked? Unbelievably well! Consider the results of Vanguard's 500 Index Fund since its initial underwriting in 1976. First, it survived, something that can't be said about 160 of the 356 equity funds in existence when we made our debut. Second, it has provided just what it promised: performance excellence. On average, the surviving funds delivered an annual return of 12.6% compared to 13.2% for our 500 Index Fund. If we reduce the average fund return by 1.5% to account for the estimated survivor bias, the value of the average fund's return would drop to

11.1%[1], and an investment of $1,000,000 made on August 30, 1976 would have grown to $14.1 million; the final value of the same investment in Index 500 would have grown to $22.7 million. Interestingly, the difference of $8.6 million was almost exactly the same as the $8.5 million index fund advantage reflected in the 30-year study of fund performance that I presented to the Vanguard directors when I proposed the first index mutual fund way back in 1975. Clearly, the index advantage has remained substantially intact over the years. If 55 years of experience constitutes a reasonable standard, stock indexing has met the test of time, and its wisdom now seems beyond reasonable challenges.



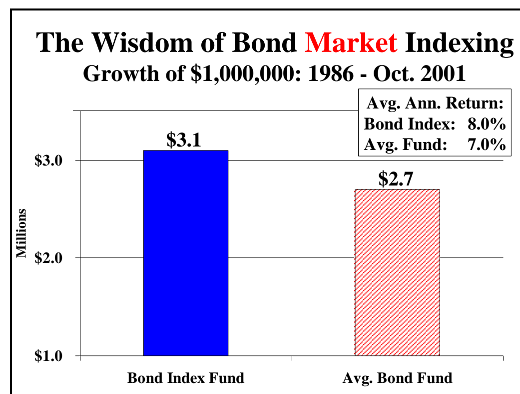
The Wisdom of Bond Indexing

While it is seldom acknowledged, bond indexing works every bit as well as stock indexing. Indeed, because the returns of individual bond funds have such a high cross-correlation, the index advantage is even more obvious. It took me until 1986 to get around to starting Vanguard's Total Bond Market Index Fund, and it has been an unarguable investment success[2], outpacing fully 170 of the 192 managed bond funds that survived the subsequent 15 years.

Since the fund's inception at the close of 1986, our bond index fund has delivered a return of 8.0% per year, vs. 7.0% for the average bond mutual fund, that one percentage point difference is accounted for largely by the costs of investing (an expense ratio advantage of about

[1] Actual survivor bias is probably considerably higher. Princeton's Burton Malkiel estimates it at 4.1% per year during the 15 years ending in 1991, and it would doubtless be even larger over 25 years.
[2] I apologize for using the Vanguard bond and balanced index funds in these comparisons, but our Total Bond Market Index Fund is the only publicly-available such fund with a long history; our three defined-maturity bond funds are still unique; and our Balanced Index Fund remained one of a kind until 2000.

70 basis points and turnover cost about 30 basis points lower). I hardly need note that an advantage of a full percentage point in the bond market—easily explained, achieved without extra risk, and virtually certain—is the functional equivalent of a license to steal for the bond fund investor. And that saving adds up. A $1 million investment in the bond index fund would have grown to $3.13 million from 1986 through October 2001, compared to $2.73 million for the average bond fund—a $400,000 advantage that comes not by mathematical legerdemain but simply by shifting the allocation of the returns generated in the bond market from the fund managers to the fund owners. From the croupiers to the gamblers, if you will.

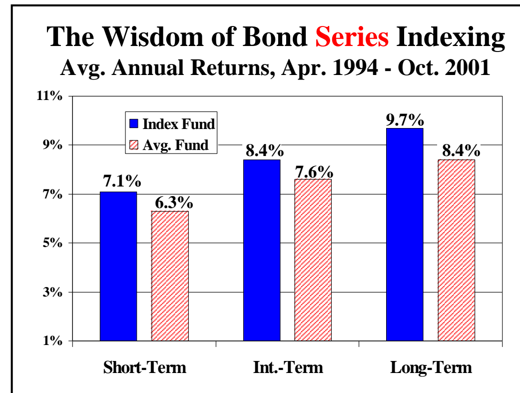


While the returns of bond funds are less diffuse than the returns of stock funds, the bond group nonetheless includes a diverse array of maturity and quality classes, meaning that comparisons of bond funds as a group with an index of the total bond market is not always representative of reality. Further, many investors don't seek to own "the bond market." Rather, they may prefer to commit to its short-term or intermediate-term or long-term segment. For this reason, back in the winter of 1994, we also formed the first (and, inexplicably, still the only) series of defined-maturity bond index funds. When compared with their peers following similar policies, they show the same magnitude of advantage.

From the inception date of our funds, here are the annual returns, net of all costs: Short-Term Bond Index Fund, 7.1%; average short-term managed fund, 6.3%. Intermediate-Term Bond Index Fund, 8.4%; average intermediate-term managed fund 7.6%. Long-Term Bond Index Fund, 9.7%; average long-term bond fund, 8.4%.[3] Seven years to be sure, is a fairly short period to test the efficiency of defined-maturity bond index funds. But the obvious reasons for the index

[3] The average long-term active fund has a significantly lower maturity than the bond index, and accordingly earned an actual return of 7.5%. The 8.4% return represents the return adjusted upward to reflect its lower risk.

fund advantage—expense ratios that are 70% lower on average and portfolio turnover that is reduced by some 50%—strongly suggest that bond indexing will continue to deliver superior returns in the future.

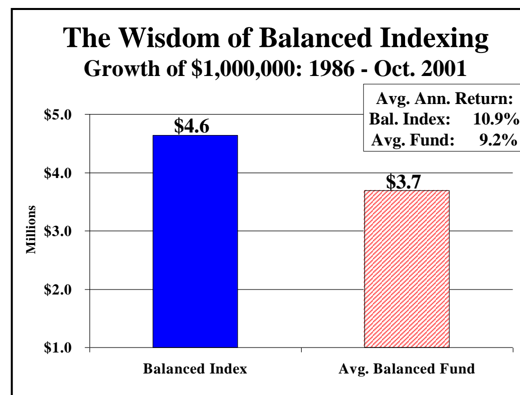


While the wisdom of bond indexing, like the wisdom of stock indexing, seems beyond challenge, there is precious little bond indexing going on in the fund industry. Not a single fund sponsor has yet to challenge Vanguard's monopoly in the three defined-maturity categories, and the total assets of *all* of the bond market index funds managed by our rivals has yet to reach $6 billion. By contrast, assets of the Vanguard bond index funds now themselves approach $26 billion and assets of our Total Bond Market Fund, at nearly $21 billion, mark it as the second largest bond mutual fund in the world. Clearly, we need more education, awareness, and development of bond indexing for those with the wisdom to invest for long-term returns in the bond market.

The Wisdom of Balanced Indexing

If both stock index funds and bond index funds are so demonstrably and explicably effective, why not a balanced index fund? That's exactly what we created in 1992. The fund allocates 60% of its assets to the Wilshire 5000 Total Stock Market Index and 40% to the Lehman Brothers Aggregate Bond Index, rebalancing essentially on a daily basis. It has worked inordinately well.

Given our fund's relative youth, let's look at balanced indexing over a longer-term time horizon. Using the fund's actual results during the past eight years and recreating the results of a composite 60/40 balanced index for the earlier years (and deducting appropriate costs), we can examine a full 15-year period. The results are impressive: The average annual return for the balanced index fund from the end of 1986 through October 2001 came to 10.9%, vs. 9.2% for the average balanced fund, a 1.7 percentage point advantage, once again explained largely by relative costs. An initial investment of $1 million grew to $4.64 million in the balanced index fund vs. $3.69 million in the average managed balanced fund—an advantage of nearly $1 million, again obtained simply by shifting the allocation of market returns *away* from the managers and *toward* the investors.



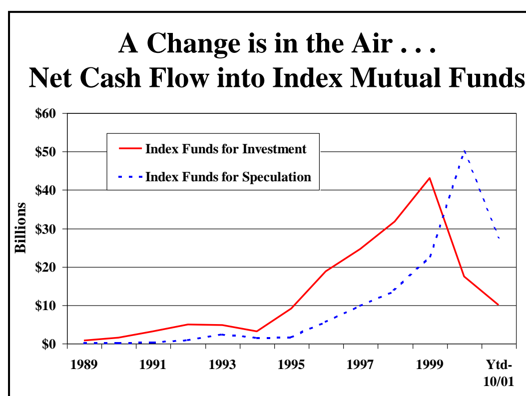
The consistency of the balanced index fund's superiority was remarkable. It provided virtually the same returns in five years, and lower returns than the balanced fund average in *only a single year* (2000), earning a higher return in nine of the 15 years. What is more, it achieved its superiority with a risk exposure 10% *below* that of the average balanced fund (standard deviation of 9.2% vs. 10.3%).

While most balanced *mutual funds* have traditionally hewed to a fairly steady equity ratio of around 60% in stocks, the same can not be said about *pension funds*. To their obvious detriment, U.S. public and private pension funds had just 42% of assets invested in equities at the start of the great bull market in 1982, but 63% at the March 2000 high. Hardly a winning timing strategy! So the simple wisdom of holding a balanced index fund with a fixed bond-stock ratio, for individuals and institutions alike, seems yet another winning long-term investment strategy. The record, then, is clear: the wisdom of investment has resulted in a clean sweep for stock, bond, and balanced index funds alike.

The Folly of Speculation

This wisdom of investment has been the powerful engine that has driven indexing to its position of dominance in institutional and individual portfolios today. That wisdom continues to dominate indexing in public and private plans. But in the mutual fund industry—now responsible for 41% of total indexed assets compared to just 3% in 1990—change is in the air. Most of the growth of indexing during recent years has been based, less on the wisdom of investment, than on the folly of speculation. This speculation is based in part on the idea that betting on particular market sectors—say, technology or growth or small-cap or emerging markets—will enable investors to outperform the market for a time. The fund industry has helped to foster this trend not only by forming hundreds of actively-managed technology and aggressive growth funds, but also by offering index funds that focus on relatively narrow market segments. The speculation is also based on the offering of funds that, while they own broad stock market indexes, enable and indeed encourage market timers and traders to opportunistically trade the index in, as it is said, real time.

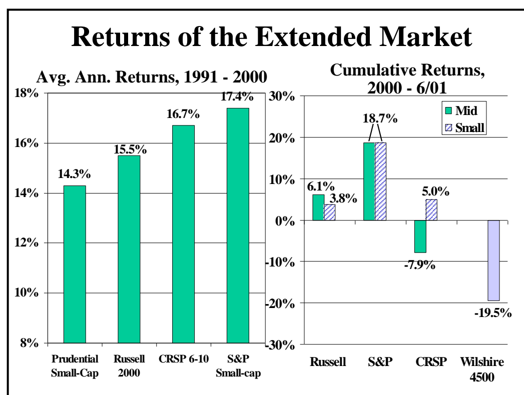
While it has not been fully recognized, the development of speculative index funds is a major trend. As recently as 1998, assets of market segment funds and exchange-traded-funds (ETFs) totaled $50 billion, just 25% of the $195 billion assets of the traditional S&P 500 and all-market index mutual funds. Since then, those non-traditional index assets have more than doubled to $115 billion, and now are equal to more than 50% of the $225 billion for the traditional funds. In 1998, $32 billion of investor capital flowed into investment indexing and $13 billion into speculative indexing. But so far in 2001, just $10 billion has flowed into investment indexing—one-third of the 1998 level—while nearly three times as much—$27 billion—has flowed into speculative indexing. This new generation of speculative index funds may well provide a better way to bet on market sectors than owning actively-managed sector funds, or a better way to trade securities and time the market than day-trading in individual stocks. But mark me down as one who is not a betting man, and one who believes that speculation is not only a loser's game, but a game in which most losers lose big, and many losers lose all. If so, the current trend in which speculative indexing is overwhelming investment indexing is a counterproductive transmogrification of the values that the original index pioneers held high.



Indexes of Market Segments

The problem with segment indexes is *not* that they have failed to perform effectively. Over the past decade, equity index funds have outpaced their comparable actively-managed peers in eight of the nine Morningstar style boxes, and when the bias of returns in favor the better-performing funds that have actually *survived* the decade is taken into account, the index advantage rises even further. Rather, the problem is that once we move away from large-cap and all-market indexing, portfolio turnover soars, with attendant turnover costs and tax-inefficiencies that erode the advantage that indexing usually carries. For example, more than 600 stocks have exited the Russell 2000-stock small cap index in each of the past two years, replaced by 600 new entrants. I think we owe it to ourselves to challenge the way these indexes are constructed, and to ask ourselves whether the rapid circulation of dollars (about 60% per year) among a floating menu of small-or mid-cap stocks represents a valid long-term investment strategy, even granting that the returns of the smallest-cap stocks (but *not* small- and mid-cap stocks as a group) seem to have garnered a long-term advantage over the returns of the market as a whole.

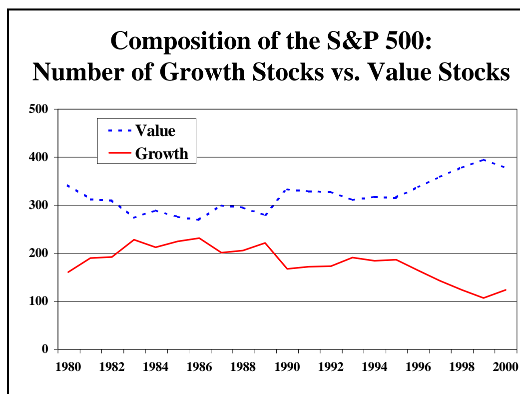
Nonetheless, problems remain, including the fact that there is considerable diffusion among the returns of the various sub-indexes. The average rate of return over the past decade, for example, was 17.4% for the S&P 600 Small-Cap Index, but 15.5% for the Russell 2000. In 2000-2001 (through June 30), the S&P 400 Mid-Cap Index and the S&P 600 Small Cap Index both delivered +18.7%, while the Wilshire 4500 Index of *all* mid-and-small cap stocks *declined* by 20%. When we have to predict not only which *segment* will lead the way, but which *index* of that segment will lead the way, we've departed a long way from the basic wisdom of owning the entire market.



Growth vs. Value

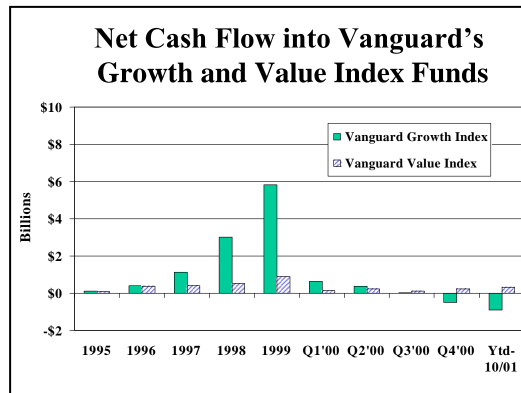
Similar issues can be raised about growth and value indexes. The major index provider—S&P/Barra—sorts stocks into the two classes primarily on the basis of relative price to book value. The stocks with higher P/B ratios are placed in the growth index, and those with lower ratios are placed in the value index, with each index accounting for one-half of the market's capitalization.

With the enormous outperformance of large-cap stocks during the bull market, the number of growth stocks plummeted from 230 to 106. The very success of Microsoft, Cisco, Intel, etc. miraculously transformed 124 of yesterday's growth stocks into today's value stocks, raising their number from 270 to 394 by early 2000. When the fall came, the newly growth-laden value index outpaced but 24% of all large-cap value funds during the year ended September 30, 2001, while the growth index, having lost so many growth stocks, outpaced fully 79% of all large-cap growth funds. This period became one of a very few departures from the superiority of these two indexes over their actively managed peers.



When I led Vanguard to offer the fund industry's first small-cap index fund in 1989, and its first growth and value index funds in 1992, I found nothing in stock market history to suggest either such high turnover or such radical changes in the composition of style indexes. My idea was to offer particular funds that investors would buy and then hold for the long-term, either to diversify an actively-managed portfolio by adding market segments that were not included, or to do some intelligent portfolio allocation under special circumstances; i.e., a growth index fund for a young investor accumulating assets and seeking capital growth and tax-efficiency, a value index fund for the investor seeking higher dividend income and perhaps lower risk at retirement.

Alas, to an important degree, those good intentions have been frustrated by investors who seem to use the growth and value index funds to make counterproductive investment decisions, just as they do even more spectacularly with actively-managed funds. At first our two index funds proved equally attractive. During 1992-96, investors placed approximately $700 million in both growth and in value. But as growth stocks soared, the temptation to jump on the bandwagon proved too strong to resist. During 1997 through the first quarter of 2000, investors poured $10.6 billion into the growth index fund, vs. $2 billion into value. At just the wrong time, shareholders had $16 billion invested in the growth index, but only $3½ billion invested in the value index—all too similar to the trends among actively managed growth and value funds.



While segment indexing has provided good relative returns, I am confident it can provide even better returns if we design improved indexes, better risk disclosure, and perhaps redemption fees to deter short-term investors. I assure you that I will be thinking long and hard about how to create better segment indexes, and how to avoid their counterproductive use as trading vehicles rather than as investment vehicles. I hope you will do the same.

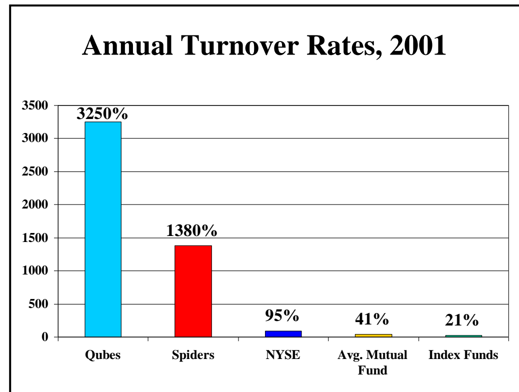
Using the S&P 500 to Speculate. Why?

I now turn to my second concern about the folly of speculation—the perversion of the S&P 500 and total stock market index into uses for which they were never intended. To be clear, I think the ETF is a brilliantly designed product. It can provide virtually complete exposure to the U.S. stock market; it generally operates at a cost fully competitive with the lowest cost regular index funds and so far below the numerous high-cost index funds that have been foisted on unsuspecting investors that it ought to be an embarrassment; and it provides at least the same tax-efficiency as its conventional index fund counterparts. Those are not trivial advantages, and they will serve well *those investors who buy them and hold them for the long-pull*. But they have been overpowered by one enormous disadvantage. Just like an individual stock, an ETF can be traded all the day long, in real time, and it is obvious that the overwhelming majority of their holders use them for that purpose. During the past year alone, investors have traded *$1 trillion* (!) in Spiders and the Qubes combined. It is beyond my comprehension how all of this thrashing about in the stock market can possibly serve those investors well.

The Spiders were the original ETF, and remain the largest. Their assets now total $25 billion, down from $30 billion last June. About $1.5 billion of their shares are traded each day—an annualized total of nearly $400 billion, for a turnover rate of 1380%. This is hardly your traditional index fund, which (at least in our case) has a total redemption rate of about 20%, about 98% below the turnover of this ETF. Clearly, investors are using Spiders just as the advertisements recommend: "*Buy and sell the S&P 500 just as easily as you trade a single stock. . . with real time pricing, you can trade your position throughout the trading day*." To state the obvious, this is a blatant appeal for investors to engage in the folly of speculation, not to the wisdom of investment.

Spiders are by no means the least of the ETF problem. The Qubes that replicate the NASDAQ 100 Index win that distinction. In less than two years, the assets of the Qubes have soared from $5 billion to $20 billion. Bear in mind that the technology-stock-driven NASDAQ Index represents a sector of the market so large that at the peak of the bubble its "new economy" market capitalization of $7.2 trillion threatened to exceed the "old economy" market cap of $10.2 trillion of stocks listed on the New York Stock Exchange. (There may be a message in the fact that no ETF invested in the NYSE index has yet been created. But be patient!) On an average day in 2001, $2½ billion of Qubes change hands (much more when markets turn volatile), for an annualized total of nearly $700 billion. The turnover of these ETF shares is something to behold:

3250% per year, compared with 95% for New York Stock Exchange issues, 41% for mutual fund investors, and 20% for investors in traditional index funds. I cannot imagine that the investors who are engaging in this feverish trading are enriched by it, while the croupiers are assured of profits, the gambler are assured of losses.



Together, Spider-like and NASDAQ ETFs constitute some $45 billion of today's $68 billion of ETF assets. There are also 20 style-box ETFs ($12 billion), 46 industry sector funds ($9 billion), and 25 funds for specific countries ($2 billion). In each case, turnover is high, paralleling the higher turnover of the larger ETFs, and few seem to be used as long-term investments. The industry-sector group, as you can imagine, is heavily weighted toward industries that have been in the public eye, usually because of hot performance, and the foreign group is similarly weighted by the better-performing countries and regions. But the use of indexes representing various segments and single nations is questionable enough as a long-term strategy, even without adding high trading activity and market timing to the already large uncertainty. Surely when investors use ETFs and trade them as if they were individual stocks, it must be the ultimate folly of speculation, about as far as one can possibly imagine from the wisdom of investment represented by buying and holding the U.S. stock market. One phrase that come to mind describes the difference well: *Polar opposites*.

So What's To Be Done?

I hope you will forgive me for the bluntness of my remarks, but there is a reality that we all have to face. I spoke of it here two years ago: "Believe me. There is a material difference between designing a product that sells, and creating an investment that serves." To put it harshly, we have to decide whether we are in the business of marketing or in the profession of investing.

That it is not easy to draw a bright line between the two does not mean that the line does not exist. The newer index funds, so long as they are marketed as vehicles for hyperactive trading and for short-term bets on narrow market sectors, represent the application of speculative folly. The traditional index funds that were developed a quarter-century ago, on the other hand, represent the application of investment wisdom that has served investors not just well—in stocks, in bonds, and in balanced accounts—but incredibly well.

The new breed of index funds may deserve a place in the portfolios of speculators. But I urge that we try to educate investors as to their proper use, that we caution them about the risks and costs, that we improve their design, and that we somehow constrain their use in market-timing strategies. And I also urge that we not succumb to the fashions of the day, but instead spend far more resources on drumming home one undeniable message: Buy-and-hold, long-term, all-market-index strategies, implemented at rock-bottom cost, are the surest of all routes to the accumulation of wealth. Just remember Carl Sandburg's words. *When an institution perishes, one characteristic can always be found: it forgot where it came from.*