CONVERGENCE!

The Great Paradox:

Just as Active Fund Management Becomes More and More Like Passive Indexing, So Passive Indexing Becomes More and More Like Active Fund Management

Remarks by John C. Bogle
Founder and Former CEO, The Vanguard Group
At
"The Art of Indexing" Conference
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It was almost exactly thirty years ago, on September 24, 1974, when The Vanguard Group was born. As we celebrated that milestone last week, it occurred to me that the opportunity to set the keynote for this gathering today would be a perfect time for a retrospective look at index investing, and an appraisal of where it stands today. Why? Because it was the creation of Vanguard, more than any other event, that led to the formation of the first index mutual fund.

This first strategic decision of our newly born enterprise was taken, not, I assure you, because we had a superior insight about the obvious reality that it is impossible for most managers, competing ably but among themselves, to outpace the returns delivered by the markets. Surely anyone who had even superficially considered the index fund idea must have realized that. Rather, it fell to Vanguard to create the index fund because it fit perfectly with my goal of creating a firm with a unique mutual structure that would put the shareholder first, and by so doing, become the industry's lowest cost provider of investment services.

Given the trade-off between manager revenues and shareholder returns, a typical fund management company, seeking to maximize its own revenues, would hate the idea of indexing. But a firm organized under a mutual structure—a management company owned by the shareholders of the funds it serves, and seeking to minimize investor costs—would love it. So while every firm in the investment field had the *opportunity* to form the first index fund, Vanguard also had the *motive*. Like the prime suspect in a criminal case, we alone had both opportunity and motive.[1] And so "First Index Investment Trust" (the fund's original name) was born.

Indexing has come a long way since that first index mutual fund was incorporated late in 1975. "Index fund" has become part of the language of investors, has gained almost universal acceptance in the world of academe, and has established the standard by which the investment performance of active managers is measured. And it has *worked*, providing to investors in properly structured index funds exactly what they were promised: their fair share of financial market returns, no more, no less—not quite 100%, but almost.

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[1] As I have often mentioned, my ideas on indexing were inspired by articles in professional journals by Dr. Paul A. Samuelson in 1974 and Charles D. Ellis in 1975. Even earlier, in 1973, in his classic *A Random Walk Down Wall Street*, Burton G. Malkiel had called for such a fund, although, alas, when we started it, I had yet to read his book. Several years after our index fund was formed, Dr. Malkiel joined Vanguard's board of directors, serving with distinction to this day. In 2001, Mr. Ellis, also with outstanding credentials, joined Vanguard's board.

The Paradigm of the Original Index Fund

What *is* it that has worked? For me, indexing still means today just what it meant all those yesterdays ago when that first fund was created, designed simply to track the returns and risks of the stock market itself, as measured by the Standard & Poor's 500 Stock Composite Price Index:

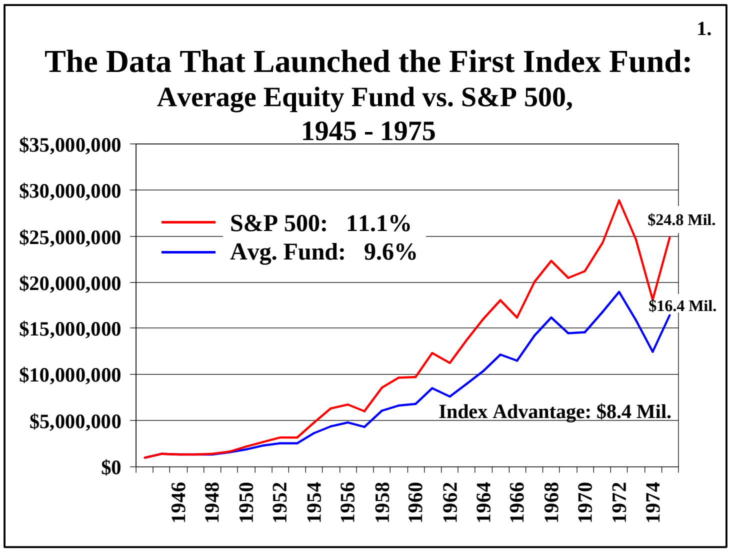
	1. The broadest possible diversification
Sustained over	**2. The longest possible time horizon**
Operated at	**3. The lowest possible cost**
With	**4. Optimal tax efficiency**
Thereby assuring	**5. The highest possible share of whatever investment returns our financial markets are generous enough to provide.**

That definition has held up well, and has been almost entirely responsible for the growth of our original index mutual fund from its $11 million initial underwriting in August 1976 to its present total of almost $100 billion ($140 billion if we include its institutional counterpart), the largest mutual fund in the world. The total of all indexed assets at Vanguard now exceeds $300 billion, by far the dominant part of our industry's $620 billion index fund total. We have witnessed, I believe, the triumph of the index fund.

That first fund's formation and birth were hardly without peril. It was no mean task to persuade a skeptical Vanguard board, only a few short months after we began operations in May 1975, that our first strategic move should be to plow this new and unexplored ground that was to prove so fertile. And it was an even more difficult a task to gather a group of Wall Street investment bankers to handle its initial public offering in the investment environment of the day.

After the great 50% stock market crash of 1973-74, the fund business was dead on its feet. Industry assets, almost entirely in equity funds, had tumbled from $62 billion in 1972 to $38 billion in 1974. With $9 billion of share liquidations for the period, $2 billion larger than the $7 billion in sales of new shares, the fund business was hemorrhaging. The idea of bringing a new equity fund to market—particularly one that, by having the temerity to be unmanaged, broke all precedent—hardly made the task easier. But we had a few potent weapons to begin the battle:

- The five sound underlying precepts of indexing, outlined a moment ago.
- The facts of life, in the form of a statistical study—in those ancient days, I actually did it by hand—showing that from 1945 through the first half of 1975, the 11.1% annual return on the Standard & Poor's 500 Stock Index had outpaced by 1.5 percentage points the 9.6% annual return of the average equity fund. As a result, an initial investment of $1 million would have grown to $24.8 million in the 500 Index, driven by "the miracle of compounding *returns,*" dwarfing the growth to $16.4 million in the average fund, overwhelmed by "the *tyranny* of compounding costs." The advantage: a cool $8.4 million. **(Chart 1)**
- The missionary zeal, infectious enthusiasm, and "press on" determination of all of us on the new firm's crew, which began with just 28 souls. (That claim may sound—and may be—self-serving. I leave that judgment to you.)



Answering the Prayers of a Nobel Laureate

But we overcame the obstacles we faced, wrote the prospectus of First Index Investment Trust, filed it with the SEC, distributed it, and awaited the public's response. It began on an exhilarating note. When I opened *Newsweek* magazine early in August 1976 and read this endorsement of the fund in Dr. Samuelson's regular column, I almost jumped out of my chair.

"Sooner than I dared expect," he wrote, "my explicit prayer has been answered. There is coming to market, I see from a crisp new prospectus, something called the First Index Investment Trust." He conceded that the fund met only five of his six requirements: (1) availability for investors of modest means; (2) proposing to match the broad-based S&P 500 Index; (3) carrying an extremely small annual expense charge of only 0.20%; (4) offering extremely low portfolio turnover; and (5) "best of all, giving the broadest diversification needed to maximize mean return with minimum portfolio variance and volatility." His sixth requirement—that it be a no-load fund—had not been met, but, he graciously conceded, "a professor's prayers are rarely answered in full."

(Less than seven months later, we answered the sixth part of Dr. Samuelson's prayer, abandoning the "supply-push" system of dealer distribution that had served the Wellington—now Vanguard—funds for nearly a half-century, and moving to a "demand-pull" no-load system. To state the obvious, I've *never* had cause to regret that decision.)

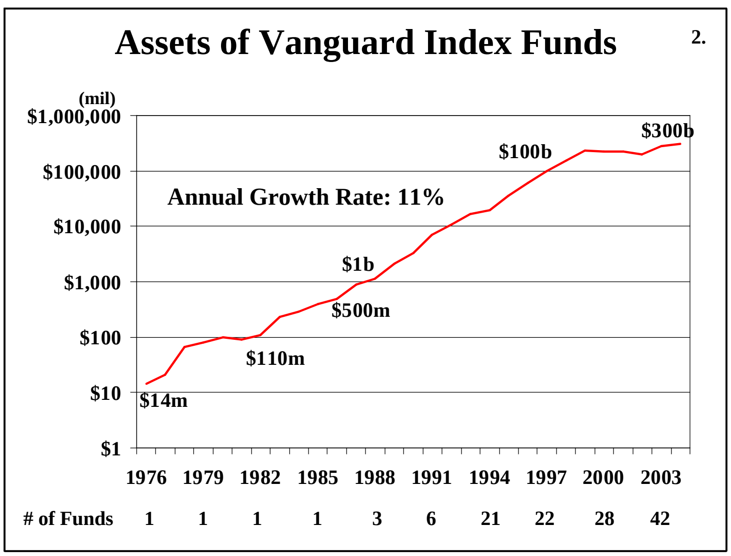
Even earlier, in June 1976, we had taken heart from a major cover story in *Fortune*: "Index Funds: An Idea Whose Time is Coming." It concluded that, "index funds now threaten to reshape the entire world of money management." Together, the endorsement of our ideas in those two articles buttressed our confidence that the $150 million IPO we and our bankers would soon bring to market would mark an exciting major step forward in the affairs of Vanguard, this tiny, barely newborn, organization overseeing less than $2 billion of assets and shrinking, day after day, from capital outflows generated by tiny investor purchases that were overwhelmed by massive share liquidations.

Alas, the disconnection that so often exists between ambitious plans and actual deeds—the slip, if you will, 'twixt cup and lip—again prevailed. When the books on the First Index offering were closed on August 30, 1976, purchase orders totaled not $150 million, but just $11,320,000. Disappointed, the underwriters offered to abort the deal, but we decided to go forward. While we too were deeply disappointed by the *figures*, we were elated by the *fact*: The world's first index fund was a reality, started in a beleaguered industry, by a minute upstart that, then less than two years of age, had just began to toddle.

The Growth of Indexing

Success came with speed that was truly glacial. That first index mutual fund didn't cross the $100-million asset milestone until 1982, and then only by virtue of $58 million of assets acquired through an opportunistic merger with an actively-managed Vanguard equity fund that had outlived its usefulness. Our index fund was not copied until 1984, and the second copy didn't arrive until 1986—a full decade from its founding, hardly a sign, in an industry so prone to quickly copying any good idea, that we were on the right track. These two new index funds, loaded with sales commissions and high expense ratios, were pallid versions of our original index fund, reminding one of Yogi Berra's wisdom: "If you can't imitate us, don't copy us."

But our commitment to indexing never faltered. **(Chart 2)** As the assets of First Index Investment Trust (renamed Vanguard Index Trust 500 in 1980, our first application of the Vanguard name to any of our mutual funds) gradually reached the $500 million-mark in 1987 and headed toward $1 billion, we expanded our index ambit, forming our Total Bond Market Index Fund in 1986, our Extended Market Index Fund in 1987 (enabling investors to own the remaining 20% of the U.S. stock market, and, combined with Index 500, to own the *total* market), quickly followed in 1989 by our Small Capitalization Stock Index Fund. As the `Eighties ended, we were overseeing four index funds, with assets of more than $2 billion.



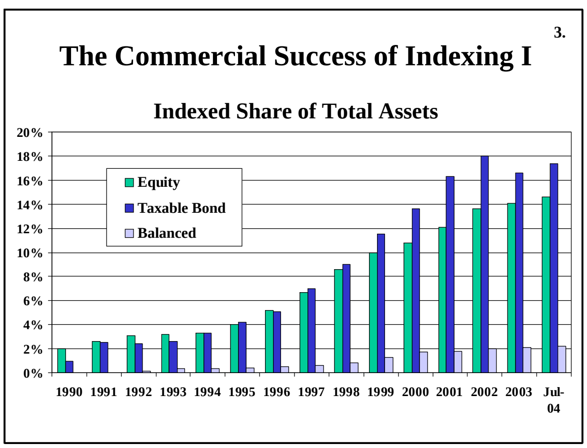
As we moved into the `Nineties, we continued to expand our index base—European and Pacific Index Funds (which could easily be combined into an EAFE Index Fund) in 1990, Total Stock Market Index, Balanced Index, and Growth Index and Value Index in 1992, with more soon to come. We also developed new variations on the "pure" index theme, with in 1994 alone, eleven more—the industry's first series of tax-managed funds (all three index-centered); the first bond-market-maturity segment index funds (What imagination! A long-term portfolio, an intermediate-term portfolio, and short-term portfolio. But sometimes the simplest ideas are the best); an Emerging Markets index fund; and a series of four "LifeStrategy" funds, each with a different level of equity exposure. Nearly two-dozen more index funds, even more specialized, followed. We crossed the magic $100 billion mark in 1997, and our growth barely paused. Today, the $300 billion assets of our 42 index-based funds constitute some 47% of the long-term assets under Vanguard's aegis. Indexing is Vanguard's driving force.

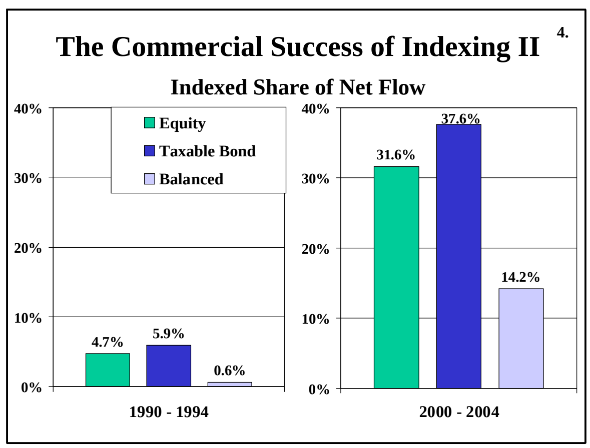
In the asset-gathering competition that characterizes the mutual fund industry, of course, our success hardly went unobserved by our rivals. While it took a long time, nearly 100 traditional active managers have now jumped on the index bandwagon, an endorsement of the concept that can scarcely be gainsaid. The fact that such marketing-driven firms as Fidelity, Dreyfus, T. Rowe Price, Scudder, Morgan Stanley, and Merrill Lynch have all put aside their reservations and joined the parade has made it impossible for even the most dyed-in-the-wool zealots who despise indexing to argue that it doesn't, in fact, work.

Assets of equity index funds now total $570 billion, nearly one-sixth of all equity fund assets. The growth of index funds has far surpassed the growth of the fund industry itself, reflected in the steady growth of its share of the three major industry sectors. The incursion into bond and balanced assets has been far smaller, but still healthy—$40 billion on the taxable bond side and $6 billion in balanced funds. But Vanguard's share of indexing remains dominant—currently 66% of all index mutual fund assets. Indexing, in short, has driven our growth.

Commercial Success, Artistic Success

The growth of its share of *assets* of stock, bond, and balanced funds respected by index funds has been remarkably steady.[2] **(Chart 3)** But its real impact can be seen in the growth of its share of *new cash flows*—purchases of index fund shares, less redemptions. Over the past five years, index funds have accounted for a full one-third of equity fund cash flow and 38% of bond fund cash flow, if only 14% of balanced fund cash flow. **(Chart 4)** To state the obvious: *Indexing has been a commercial success.*





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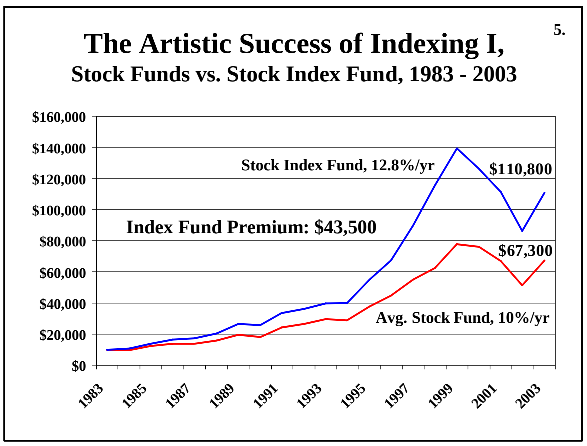
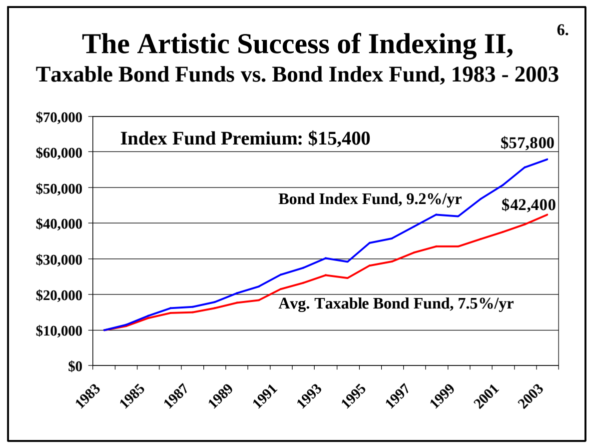
[2] I wish that I could devote more of my commentary today to the merits of bond index funds. But since the first index fund was a stock index fund, I've confined my comments largely to that aspect of indexing. However, in a market where the return spreads among active managers is so narrow and the cost advantage of indexing so powerful, the merits of intelligently-administered bond index funds are at least as great as in equity index funds.

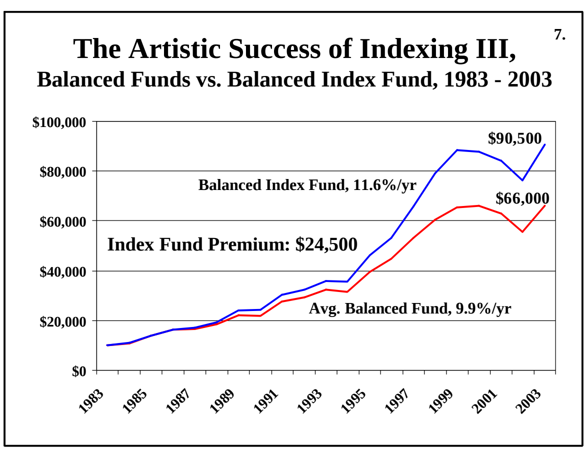
Why has indexing been such a commercial success? *Because it has also been an artistic success.* Over the past 20 years, for example, a (S&P 500) stock index fund would have outpaced the average equity fund by 2.8% per year. **(Chart 5)** A total bond market (Lehman Aggregate) index fund would have outpaced the average bond fund by 1.7% per year. **(Chart 6)** And a balanced (60/40 in the respective indexes) index fund would have outpaced the average balanced fund by 1.7% as well **(Chart 7)**. An investor who placed $10,000 in a low-cost index fund in each category twenty years ago would have increased his or her wealth by some $43,500, $15,400, and $24,500, respectively. And on an after-tax basis, given the remarkable tax *inefficiency* of actively-managed equity funds, the advantage would be even larger:

Return on $10,000 Initial Investment: 1983-2003

	Annual Return: Managed Funds[3]	Annual Return: Comparable Index Fund	Cumulative Return: Managed Funds	Cumulative Return: Comparable Index Fund	Index Fund Advantage	Advantage as percent of initial Investment
Stock Funds	**10.0%**	**12.8%**	**$67,300**	**$110,800**	**$43,500**	**435%**
Bond Funds	**7.5**	**9.2**	**42,400**	**57,800**	**15,400**	**154**
Balanced Funds	**9.9**	**11.6**	**66,000**	**90,500**	**24,500**	**245**







[3] Source: Lipper. Fund annual returns have been conservatively reduced by 0.8%, 0.3%, and 0.25% in the respective areas to reflect "survivorship bias." Index returns have been reduced by 0.2% per year to reflect index fund expenses.

Some idea of the raw power of the index fund advantage can be seen by relating its returns to that initial $10,000 investment. The *extra* return on that investment is astonishing: 435% for equity funds, 154% for bond funds, and 245% in balanced funds—a staggering extra return generated simply by owning those financial markets directly, rather than paying the high costs of intermediation that mutual funds incur.

The powerful incursion of indexing then, has radically injected change into a fund industry that would have been just as happy to have had it magically vanish into thin air. The appellation given to First Index Investment Trust when it was introduced, "Bogle's Folly"—like William Seward's purchase of Alaska, Robert Fulton's steamboat, and New York Governor DeWitt Clinton's Erie Canal—turned out to be anything but a folly. Like all radical departures from the conventional wisdom—*"you mean that no management whatsoever not only can, but must, and does, provide better returns than the aggregate net returns achieved by experienced, professional active money managers?"*—the index fund was at first ridiculed, then tolerated, then grudgingly accepted, then reluctantly endorsed, and finally copied *en masse*. It has changed how we think about investing.

Reverberations

Just consider some of the major changes that indexing has wrought in traditional investing since that first index fund was created in 1975:

- **How investment professionals look at their portfolios**. It is now a commonplace for money managers to review their portfolios with a list that shows not only each security held and its portfolio weightings, but its comparable weight in the Standard & Poor's 500 Index, as well as the portfolio's diversification in each investment sector (technology, energy, etc.) compared with that of the Index. Further, it is hardly without precedent for a portfolio manager's supervisors to also ask for a list of the weightings of the S&P stocks that are *not* in the portfolio, and even demand reasons *why* they are not held.

- **Benchmarking.** Similarly, almost without exception, returns of managed fund portfolios are regularly (usually quarterly) compared with the returns of the S&P 500, and the discussion that follows is conventionally driven by an analysis of where and why the portfolio differs. For better or worse, we also now often see performance benchmarks by investment style—i.e., large-cap value, small-cap growth, etc. Nonetheless, the ultimate test of the combination of a manager's style and his stock selections remains is the extent to which the portfolio itself outpaces—or, more likely, falls short of—the stock market itself. (I believe that any evaluation that focuses solely on the *style* benchmark and ignores the *market* benchmark is inappropriate and inherently misleading.)

- **Redefining Risk**. As indexing has driven the focus on benchmarking, it has driven a new definition of risk. As we define it today, "risk" has come to have little relevance to what we all know it *really* is—the loss of substantial capital. Rather, risk is defined as the portfolio's volatility relative to the volatility of the benchmark. It takes only a moment of reflection to realize that this change has moved the focus from risk of the *client's* losing his money, to the risk to the *manager's* losing his client, the source of his gainful employment. It's hard to imagine that such a change is not, in the long run, detrimental to our financial markets, to say nothing of detrimental to our clients' wealth.

- **"Closet" Index Funds.** As benchmarking has become our talisman, and as investment risk has been redefined, we would expect to see the pervasive development of funds whose portfolios are shaped around an attempt to edge out the returns of the market index, all the while striving to maintain its risk characteristics. Unsurprisingly, we have seen exactly that. "Closet" index funds are commonplace today; an amazing 81% of all actively-managed funds in the Morningstar's comparable "large cap blend" style box have 90% or more of their returns explained simply by the returns of the S&P 500 Index.[4]

The managers most admired and applauded, however—those who buy stocks based on their intrinsic value and their price attractiveness—want nothing of such narrow benchmarking, and, more often than not, seem to have distinguished themselves by an almost *anti*-benchmarking approach—for example, Longleaf's Mason Hawkins; Legg Mason's Bill Miller; Windsor's John Neff; Dodge and Cox's investment committee (of all things); Paramount's Bob Rodriquez; and First Eagle's Jean Marie Evilliard.

- **Wall Street Recommendations.** The influence of indexing has also changed the very terminology used by the "sell-side" security analysts of brokerage and investment banking firms. Not so many years ago, they rated stocks as "buy," "hold," or "sell," though, given the nature of the great Wall Street marketing machine and the pressure not to offend actual and potential investment banking clients (that is, the managements of almost *all* corporations), there were few "sell" recommendations. Now, the near-universal terminology is "overweight," "equal weight," and "underweight," obviously a closet indexing approach.

The Simple Logic of the CMH

Nonetheless, the acceptance of indexing merely accelerated—and benefited from—the benchmarking trend that would have inevitably developed as the equity holdings of the mutual fund industry burgeoned. Let's face it: When the industry holds 1% of all U.S. stocks, its professional managers theoretically share at least a fighting chance to outpace the market. But when it holds 23% of all stocks as it does today (and fully 56% when mutual fund holdings are combined with the holdings of the firms' pension management affiliates) the probabilities against success for such a formidable aggregation of assets are staggering.

The fact is that the idea that this awesome mass of accumulated capital could somehow meaningfully outpace the market in total is absurd if we ignore costs, and inconceivable when we take costs into account. Indeed, as my earlier data for 1945-1975 showed, even a much smaller (and far lower cost) fund industry failed to do so, a failure that was, if unsurprising, hardly inevitable. But at our industry's present size, what was once unlikely but at least possible has become impossible. What happens is what has always happened, and will continue to happen in the future: Professional managers as a group will inevitably earn the market's return before the costs of financial intermediation, and, equally inevitably, lose to that return by the amount of that cost—now, I believe, in the range of $300 billion per year.

What we are seeing, then, does not require the acceptance of the EMH (Efficient Market Hypothesis, which in my view is largely but not entirely valid) but rather the realization of the reality of the CMH (Cost Matters Hypothesis), i.e., that investors in the aggregate will *earn* the gross return of the total stock market *before* costs, but *share* only in the amount of that return that remains *after* costs. It is that elemental fact that explains the inevitable artistic success of the index mutual fund in outpacing active management and assuring its commercial success in the past, even as it assures similar artistic and commercial success in the future.

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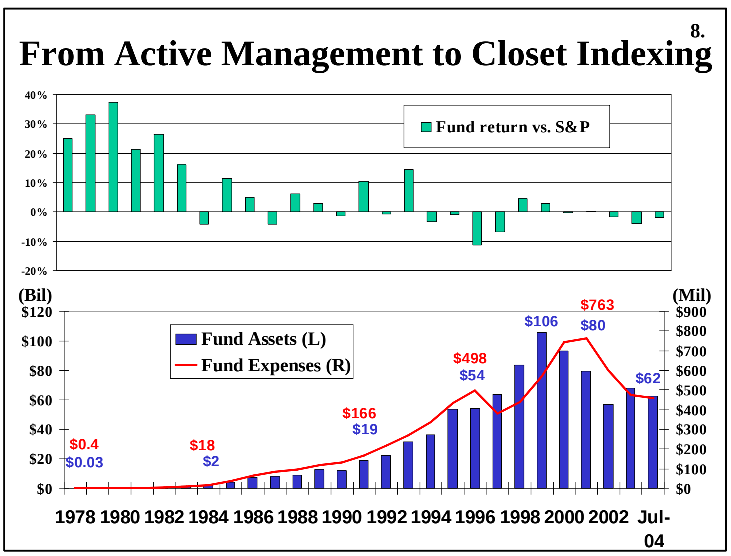
[4] Included in this total are quantitative funds whose specific policy is to outpace a given market benchmarks while rigorously retaining their risk characteristics. Since this policy is publicly described—even bragged about—they are not "in the closet," and are often described as enhanced index funds.

A Specific Example

Our industry's largest firm presents us with a truly classic case study in the growing importance of indexing and its implications for the future. So let's examine some of the actions and reactions of Fidelity Management and Research Corporation, which now manages an estimated $900 billion of assets, including equities valued at $620 billion, nearly 5% of all U.S. stocks.[5]

When Vanguard's unique index mutual fund was introduced almost three decades ago, Edward C. Johnson III, Fidelity's chairman, publicly scorned the idea: "I can't believe," he told the press, "that the great mass of investors are going to be satisfied with just receiving average returns. The name of the game is to be the best." In those ancient days, Fidelity *was* deemed to be a superior manager, though in retrospect much of its success had been achieved by the aggressive investment strategies it followed during the boom of the "go-go" era during the mid-1960s. Even Mr. Johnson himself managed a hot fund (Fidelity Trend Fund) during that era. But the risks Fidelity's funds assumed came home to roost, as five of their eleven funds tumbled by 50% or more in 1973-1974, including Fidelity Trend Fund. (By 1965, Mr. Johnson had turned the portfolio over to the first of the six managers to follow him.)

But it is in Fidelity's Magellan Fund that we see the greatest example—indeed the virtual apotheosis—of how the fund industry has changed. Under the aegis of the legendary Peter Lynch, it had a truly sensational run from 1978 to 1983, outpacing the S&P 500 Index by an astonishing 26 percentage points . . . per year! **(Chart 8)** With such success, the fund's assets burgeoned during that period from a mere $22 million to $1.6 billion. While its performance then reverted *toward* the mean, its excess return from 1984 through 1993 remained a healthy four percentage points per year. By then, its assets had grown to a staggering $31 billion.



[5] Hesitant as I have been to "name names" in my public remarks, this audience can hardly be unaware of the examples I'll present here, and would know the firm I was describing even if I coyly avoided using its name. What's more, the firm recently abandoned similar restraint by specifically mentioning Vanguard in its full-page advertising comparing, of all things, the expense ratios of the respective firms' index funds.

In 1990, Mr. Lynch retired as portfolio manager, and Magellan's excess returns began to dwindle, losing to the S&P 500 in five of the next seven years. Nice gains came in the next two years, followed four of five losing years, including the current year-to-date. In all, since 1993, the fund has fallen an average of more than two percentage points per year behind the 500 Index—a far cry from the success of its earlier years. Yet, in a soaring stock market the growth of the fund's assets persisted, from $31 billion at year-end 1993, to $106 billion at the close of 1999, and even, after the crash, $62 billion today.

Reversion to the Mean

The larger the fund grew, of course, the more it came to resemble an index fund. Reversion to the market mean strikes again! In 1978-1982, the S&P return explained 82% of the return of Magellan, but in 2001-2004 fully 99%. I'm *not* arguing that is bad. (After all, I'm an indexer!) But I *am* arguing that cumulative management fees and operating expenses of $5 ½ *billion*(!) during a ten-plus-year period when the fund lagged the market by two percentage points per year (largely because of those costs) is, well, absurd—a waste of corporate assets. Absurd, I quickly add, when looked at from the vantage point of the investors who are paying them. From the standpoint of the management that is receiving them, they are the soul of rationality: "We made the fund large, and we deserve to be paid for that accomplishment." Make what you will of that argument.

Magellan Fund today is the prototypical closet index fund. But it is hardly Fidelity's only index-linked fund. Ten of its 15 largest equity funds have correlations with the market of between 0.92 and 100 (even excluding the aforementioned Fidelity Trend Fund, now itself with a eye-popping correlation of 0.99), only one of which succeeded in outpacing the index during the past decade. The reality is that such funds are virtually locked into closely approximating the returns delivered by the stock market itself. *But only before the deduction of the substantial fees, operating expenses, and portfolio turnover costs they incur*. It would take a Herculean leap of faith to believe that, after the deduction of such costs, they could match the returns of an index fund.

Thus, I was surprised to read in a recent *Wall Street Journal* article that, despite Magellan's lag to the S&P 500 since 1998 under his aegis, Robert Stansky, Magellan's portfolio manager, not only expects to *beat* the market, but "to beat it over time by two to five percentage points annually." With a 99% correlation with the market, and the two (or more) percentage point handicap of the fund's all-in costs, that would require a sustained three to seven point margin of advantage, something not a single mutual fund has attained over the past decade. But of course the past may not be prologue, and I wish Mr. Stansky well.

As funds reach box-car asset levels, of course, closet indexing is inevitable. After all, because of the high market impact costs of portfolio turnover that tie the funds of large organizations, Gulliver-like, to the market itself, the soaring size of Fidelity's equity position was inevitably accompanied by much more restricted investment decision-making. Fidelity's portfolio turnover has plummeted, from 100% in 1980 to 50% last year. The firm recently faced up to that reality, plunging aggressively into the growing index parade.

"If You Can't Beat 'Em, Join 'Em"

Following the ancient aphorism, "if you can't beat 'em, join em," the firm had started its first index fund, modeled on the S&P 500, out of commercial necessity in 1988. But their recent decision to slash, if only temporarily, the expense ratios of their index funds and launch an expensive advertising campaign to catch the public's eye clearly reflects a new strategic commitment to build their indexing business. (It is fair to speculate that both the "loss leader" strategy and the advertising costs are, in effect, subsidized by the fees paid to Fidelity by its actively-managed and closet index funds.)

With the clear success of indexing, the debilitating costs of active management, and the straitjacket of massive size, it's hard to imagine they had any other choice. The firm's first move was to temporarily reduce the expense ratios of their index funds to an annualized rate of ten basis points (from the previous level of 25 basis points), blasting out the news in full-page newspaper broadsides.[6] **(Chart 9)** As one commentator noted, this was a frontal assault on Vanguard's franchise as the low-cost provider of index funds; not "a shot across the bow," but "a shot right at the mast." A price war—uniquely, in my experience, a war to *lower* prices rather than to *raise* them—has broken out.

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As few have noted, however, this price war comes at a time when a *really* low-cost stock index fund—part of the $130 billion Federal Employees Thrift Savings Plan—is already operating at a mere seven basis points, and is driving to reduce that cost to five basis points in 2005 and to four in 2006. Since cost is *almost* everything in an index fund, this action will serve to drive out any complacency in the attitude of index managers. Index fund investors will be well served—and active managers and high-cost indexers ill-served—by the arrival of this price competition.

It will be interesting to observe Vanguard's response, if any, to this assault on its franchise: to sit tight (after all, Fidelity has waived fees before and then raised them back later); or to throw down the gauntlet with its own (perhaps temporary) waiver. Only time will tell how the marketplace responds, especially how the larger Vanguard index fund investors, who already pay Vanguard just ten basis points, react. But perhaps the most important reaction to Fidelity's, well, change of heart, will be whether investors continue their willingness to pay exorbitant fees for putative actively-managed funds that are in fact closet index funds. Surely Fidelity is the textbook example of how active management has converged toward passive indexing in the fund industry.

And it's not only Fidelity. When 656 of 1,873 equity funds in the Morningstar "style boxes" have correlations with the market that exceed 0.90, that convergence is almost palpable. It's hard to imagine that this convergence will not only continue but accelerate in the years ahead, with major implications for the way funds are managed, the strategies they employ, the fees they charge, their

[6] Clearly, if the firm intended to permanently reduce their index fund fees, they would have submitted a new advisory agreement for the approval of their shareholders. However, such a step would have precluded raising the fees again later, without again requesting approval.

portfolio turnover, and the asset levels at which they close their doors to new investors. With thanks to the rise of the index fund, these issues will shape the way the industry operates, and will ultimately help us all to more effectively serve mutual fund shareholders.

The Great Paradox

So now to the other half of the great paradox: As active fund management becomes more and more like passive management, so *passive indexing is becoming more and more like active management*. Nothing could better illustrate that paradox than the title of this conference—"The Art of Indexing"—and its agenda—"the rising tide of . . . new products that will benefit investors"; "the expanding world of ETFs"; "the increasing role of index derivatives"; and so on.

The original index fund, of course, required little, if any, "art." It's hardly an art to own the 500 stocks in the S&P 500 Index, own them at low cost, hold them forever, and let the chips fall where they may. But in today's sprawling index fund marketplace, "art" may be a fair enough description, though I warn you that the word "art" means not only "the principles governing a craft," but also "trickery and cunning."

The New Paradigm of Indexing

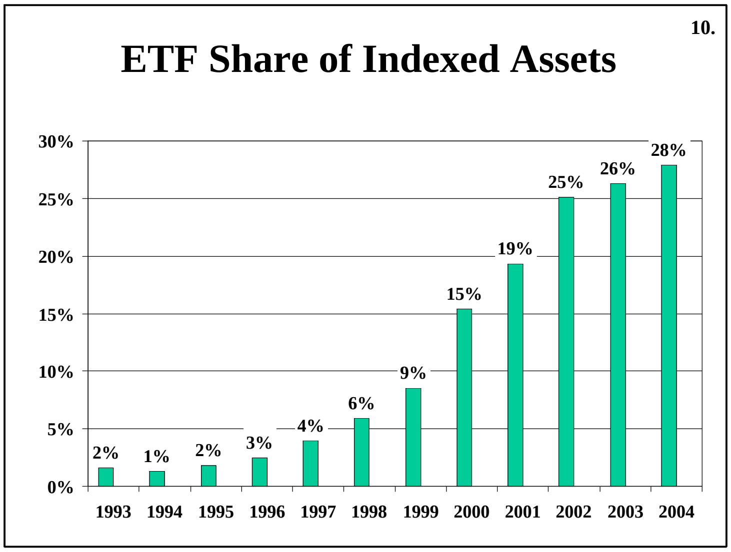
Consider how "The Art of Indexing" compares with the original paradigm. If investing for the longest possible time horizon was the original paradigm, surely using index funds as trading vehicles can only be described as short-term speculation. If the broadest possible diversification was the original paradigm, surely holding discrete—even widely-diversified—sectors of the market offers far less diversification. If the original paradigm was minimal cost, it's clear that holding market sector index funds that are themselves low-cost obviates neither the brokerage commissions entailed in trading them nor the tax burdens entailed if one has the good fortune to do so successfully.

And as to the final, quintessential, aspect of the original paradigm—assuring, indeed virtually guaranteeing, the achievement of the stock market's return—the fact is that an investor who trades ETFs—after all the selection challenges, the timing risks, the extra costs, and the added taxes—has *absolutely no idea* of what relationship his or her investment return will have to the returns earned by the market itself. So the ETFs march to a different tune than the original, and I'm left to wonder, "what have they done to my song, mom?"

	Basic Index Fund	**Exchange Traded Funds**		
		Broad Index		**Specialized**
		Investing	**Trading**	**Index**
Broadest Possible Diversification	**Yes**	**Yes**	**Yes**	**No**
Longest Time Horizon	**Yes**	**Yes**	**No**	**Rarely**
Lowest Possible Cost	**Yes**	**Yes**	**No***	**No***
Greatest Possible Tax Efficiency	**Yes**	**Yes**	**No**	**No**
Highest Possible Share of Market Return	**Yes**	**Yes**	**Unknown**	**Unknown**

***Including trading costs.**

The Exchange Traded Fund, the imaginative creation of Nate Most[7] more than a dozen years ago, has become, in recent years, a significant part of the $570 billion index fund asset base—a 28% share, up from just 9% at the close of 1999, albeit a growth in market penetration that has slowed considerably in recent years. **(Chart 10)** Despite their stark contradiction of the five concepts underlying the original index fund, ETFs have become a force to be reckoned with in the indexing arena.



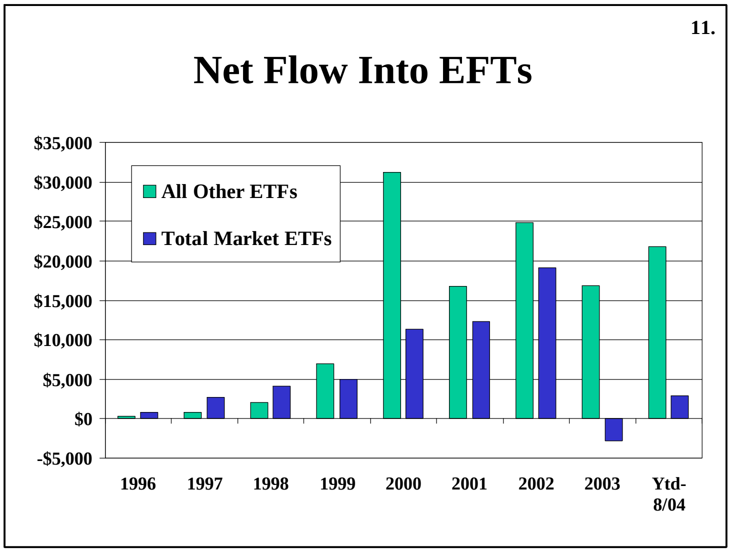
Assets and Cash Flows

When we look beyond the aggregates, it becomes clear how far ETFs have departed from the norm. As this table shows, the diversity of the investment choices available is remarkable:

Number Of Funds	ETF Type	Examples	Total Assets
7	Total Stock Market	Spider/Viper	$64 billion
10	Other Broad Indexes	Qubes, Diamonds, EAFE Intl.	40
32	Market Styles	Growth, Small-Cap	39
61	Market Sectors	Tech, Telecom, Energy	19
25	Foreign Countries	Japan, Brazil	12
5	Bond	----	6
140	Total		$180

[7] In 1990, as he developed his ideas for ETFs, Mr. Most visited me in my Valley Forge office to solicit my support. I described several flaws in his concept, but told him, even if he could correct them, Vanguard would not be interested, because we believed that like trading stocks, trading index funds was a losing strategy. As he tells the story, on his train ride back to New York, he fixed the flaws I'd noted. The rest, as they say, is history.

While the *assets* of ETFs, dominated by the relatively broad market indexes, are small relative to traditional index mutual funds, they have grown at a more rapid rate. In terms of *cash flow*, ETFs have drawn $150 billion of net new money since 1999, even larger than the $114 billion flowing into their traditional cousins. What's more, the flow into style, sector, and foreign funds has overwhelmed the flow into the broad stock market index funds. While in the early ETF years, these broad funds accounted for 100% of the total inflow, during 1999-2003 they accounted for less than one-half, and so far this year their $3 billion of cash flow has represented only 12% of all ETF flow, with the less-diversified groups adding $22 billion. **(Chart 11)**



But those all-stock-market ETFs are, in my view, the *only* instance in which an ETF can replicate, and possibly even improve on, the five paradigms of the original index fund. *But only when they are bought and held for the long-term*. Their annual expense ratios are usually—but not always—slightly lower than their mutual fund counterparts, although commissions on purchases erode, and may even overwhelm, any advantage. While in theory their tax-efficiency should be higher, practice so far has failed to confirm that theory. But the fact is that their use by long-term investors is minimal. The Spiders are, in fact, marketed to day traders. As the advertisements say, *"Now you can trade the S&P 500 all day long, in real time."*

We know that ETFs are largely used by traders. The turnover of Spider shares is now running at about 2400% per year, compared to 20% for the shares of that original index fund. The turnover of the NASDAQ Qubes is even higher, at 3,700%(!) per year, and of course the turnover *within* the NASDAQ Index and the Dow Average are themselves substantial. It's only guess work, but perhaps 20% of the assets of these broadly diversified funds are held by long term investors, or about $12 billion. The remainder of the Spider-type holdings, I presume, represents the activities of arbitrageurs and market makers, making heavy use of short-selling and hedging strategies.

A Vast Departure

Thus $168 billion of the $180 billion ETF base represents a vast departure from the beneficial attributes of the original index fund. Trading in all types of ETFs is high. Specialized ETFs are diversified only in their narrow arenas; owning the semi-conductor industry is not diversification in any usual sense, nor is owning the South Korean stock market. While sector ETFs themselves frequently have the lowest expense ratios in their fields, they can run three to six *times* the level of the lowest-cost all-market index funds. What is more, they carry not only the costs of trading, but are often sold as parts of actively-managed portfolios with adviser fees of 1% or more, or in wrap accounts with annual fees of 1.5% to 2.0% or more. While the *portfolios themselves* display far lower turnover than that of their actively-managed counterparts, their *investors* typically turn over their shares at a remarkable average of some 3000% per year.

The net result of these differences is that sector ETFs are virtually certain to provide, as a group, returns that fall well short of the returns delivered by the stock market itself. Perhaps 1% to 3% a year is a fair estimate of these all-in costs, many times the 10 to 20 basis-point cost of the best index funds. It is not a trivial difference. For no matter how often derided or ignored, the tautology remains that sector investors must and will earn a net return equal to the gross return of that sector, less intermediation costs.[8]

But only to the extent they buy and hold them. For whatever returns each sector ETF *itself* may earn, the *investors* in those very ETFs will likely, if not certainly, fall well behind them. For there is abundant evidence that the most popular sector funds of the day are those that have recently enjoyed the most spectacular recent performance, and that such "after-the-fact" popularity is a recipe for unsuccessful investing.

Let's Look at the Record

The record of regular mutual funds investing in market sectors sends up a red flag that warns of a serious storm in prospect. The 25 most popular sector funds of the recent era, for example, earned a *positive* average annual return of 5.5% during the up-and-down-and-up period of 1998-2003, in fact, slightly ahead of the stock market's return of 3.8% per year. But, the average sector fund *investor* actually lost money, with a negative (dollar weighted) return of minus 8.3%, an astonishing 13.8 percentage points less. By the way of contrast, the comparable figures for the 25 largest diversified equity funds were: fund return 3.7%, investor return 1.3%, a negative gap of only 2.4 percentage points, a small fraction of the deficit incurred by the remarkably counterproductive timing of sector investors.

Compounded for the full six-year period, the loss of capital in sector funds was staggering. While the cumulative return was a positive 43%, the cumulative return of the average sector fund averaged a capital *loss* of minus 26%, an astonishing 69-point negative differential. (In the worst case, the differential was minus 190 percentage points!) While the average diversified fund itself gained 26% cumulatively, its investors gained an 11% appreciation, admittedly modest, but a solid 37 percentage points of return ahead of their sector cousins. Given these data, it is almost impossible to deny that, for the overwhelming majority of investors, sector fund investing is playing with fire. **(Chart 12)**

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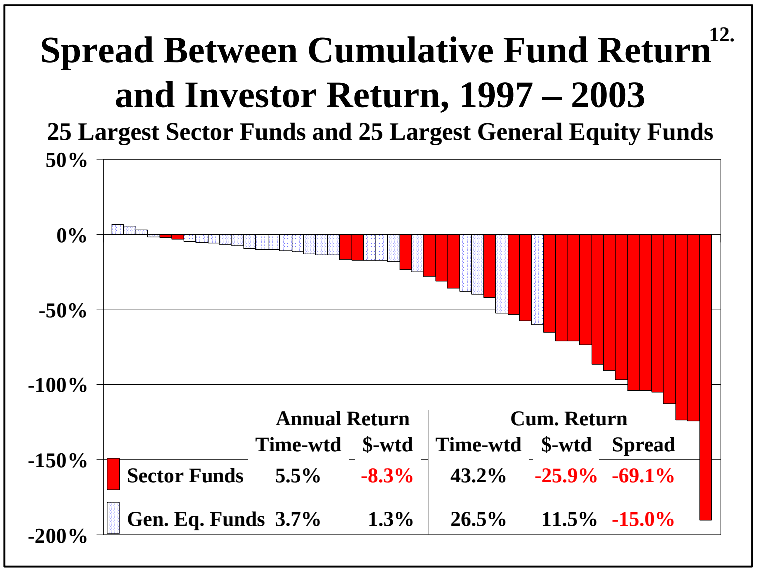
[8] I confess to my own share of responsibility for the development of style index funds. When we created the industry's first Growth Index and Value Index funds in 1992, I believed that the former would be used by younger investors seeking tax-efficiency and willing to assume larger risks, and the latter by older investors seeking higher income and happy to reduce their risks. Alas, while the original idea was strong, the ensuing reality was weak. While investor interest in the two funds was well-balanced during the relatively placid stock markets of the mid-1990s, during the bubble that followed investors poured $11 billion dollars into the soaring Growth Index Fund, five *times* the $1.8 billion invested in the Value Index Fund. *Mea culpa*.



Those fund managers who offer sector ETFs must be aware of this counterproductive pattern, if not of these exact figures. For it is a commonplace that when investors act on the eternal stock market emotions of hope, greed, and fear, they make the wrong choices. They seek out sectors that have lead the market, and then shun those sectors when they lag. While the duration of that pattern of reversion to the mean is not predictable, the pattern itself is as sure a phenomenon as can be witnessed in the stock market. The *economics* of owning the U.S. stock market has yet to fail to create long-term value for its participants; the *emotions* of trying to outguess it by positive selection or market timing has devastated investor wealth.

"Don't Just Stand There. Do Something"

Yet we live in a world where "don't just stand there, do something," is the watchword. Ignore the fact, please, that the stock market is essentially a closed system in which when you buy a stock, someone else sells it to you, and vice versa. And when you *exit* the stock market, someone else *enters* it. But when money changes hands in the market, it is not a zero-sum transaction, it is a loser's game, with the croupiers of our system of financial intermediation enriched not only by being the middle-men for each transaction, but by charging the management and advisory fees involved in supervising and maintaining the accounts of those who are doing the transactions.

So we are inevitably left with a certain melancholy about the objectives of those who provide these intermediation services. They must be well aware that most investors will be best served by the kind of all-market index strategy that I outlined at the outset. Indeed, as he relinquished the reins of Magellan in 1990, even Fidelity's remarkable Peter Lynch declared, *"most investors would be better off in an index fund."* He was right! But we all have businesses to run, and, however unfortunately, we feel great pressure to give the customer whatever he or she wants—a fact of life that, for better or worse, rules at least as strongly in financial services as it does in automobiles, perfume, toothpaste, and jewelry.

All of this shuffling of financial paper, of course, represents a cost that ill-serves investors. As Benjamin Graham pointed out way back in September 1976—coincidentally, only moments after the first index fund was launched—"the stock market resembles a huge laundry in which investors take in large blocks of each other's washing, nowadays to the tune of 30 *million* shares a day." (He could not have imagined today's volume: three *billion* shares a day.)

"Don't Do Something. Just Stand There"

Alas, the reverse proposition, "don't do something, just stand there," *while the inevitable strategy of all investors as a group*—think about that, please—is not only counterintuitive to the emotions that play on the minds of virtually all individual investors, but also counterproductive to the wealth of those who market securities and manage securities portfolios. While it is easy to argue that investors should ignore indexing because they have different objectives and requirements, Ben Graham had an opinion on that too: *"only a convenient cliché or alibi to justify the mediocre record of the past."*

Let me freely concede that there are sound uses for ETFs. Buying Spiders and Vipers and holding them for life is a winning strategy. The employee of Microsoft is hardly a fool to own all market sectors except for technology. The wisdom of the owner of a portfolio of highly-appreciated large-cap stocks who purchases and holds a small-cap ETF can hardly be faulted. But so far at least, there is little evidence that it is such transactions that are driving the growth of ETF index funds.

Rather it is trading in broad market ETFs and the rise of sector ETFs that are in today's driver's seat. While trading sector ETFs may well be cheaper and more efficient than doing the same in individual stocks (or, for that matter, in regular mutual funds), all of that vigorous activity inevitably constitutes a reduction in returns earned by investors as a group, and can slash the potential returns of the individuals who try it. Put another way, while sector ETFs may well represent a better way to speculate, place me firmly in the camp of those who believe that *any* speculation in stocks is the ultimate loser's game.

In addition to their growing use by individual investors, investment advisers, and brokers as a more efficient way of implementing active investment strategies, ETFs are increasingly used as a tool for active managers, "trading on downticks, used in hedging strategies, and useful for increasing or decreasing investment exposure to a sector or in shifting asset allocations . . . (quickly) acting without picking specific stocks and then replacing the ETF with individual names when you have more time for research," according to Byron Wien, Morgan Stanley's highly-respected market strategist. As a result, he predicts, "within five years . . . their use will be common in the field of active portfolio management." No comment could better illustrate the clear convergence of passive indexing and active management.

Wrapping Up

How will it all turn out? How will this great paradox—active management becoming more and more like passive indexing even as passive indexing becomes more and more like active management—be resolved? Let me close with a few ideas.

First, so long as the managers of today's giant fund complexes maintain, let alone increase, the massive equity fund assets they now oversee, there will be less and less escaping the high market correlations that accompany it. As active management continues to morph into passive indexing—already approaching the commonplace in the large-cap fund category—managers will have to reduce their fees commensurately. After all, a correlation of 99 comes close to meaning that 99% of the portfolio is effectively indexed. A 1 ½% expense ratio on the remaining 1% of the portfolio, therefore, represents an annual fee of 150%(!) on the actively-managed assets. Clearly, something has to give. I believe it will be the fee.

Even if investors are willing to tolerate that cost at the moment, it is only a matter of time until they realize that their ongoing deficit to the stock market's return is a reflection of the simple fact that they effectively own an index fund, but at a cost that is grossly excessive. "If it looks like a duck, waddles like a duck, and quacks like a duck, in all likelihood it *is* a duck." But a duck, if you will, with none of the advantages of the kind of broad market, long-term, low-cost, tax-efficient index fund that was first designed nearly three decades ago. So, I expect that original passive index strategy will continue to expand its dominance over traditional mutual funds in the years ahead.

With respect to the opposite trend—the metamorphosis of passive indexing into active management—my conviction is that there are only limited prospects for that trend to markedly expand. But despite the fact that to "just stand there" remains the winning strategy, the unwillingness of investors to do so, and the need of financial intermediaries to justify their existence, means that trading in ETFs won't soon go away. Indeed, the apparent coming of leveraged ETFs, currency ETFs, commodity ETFs, and even actively-managed ETFs suggest that the peak has not yet been reached. But while investors, acting on their emotions, will continue to jump on the ETF bandwagon for a time, they will not ignore their own economic interests forever.

That message is gradually getting out to the world. Coming from me, it may sound radical. But even the conservative editorial opinion page of *The Wall Street Journal* has joined the chorus: "Will fund customers keep supporting the enormous overhead required to sustain ineffectual, unproductive stock picking across an array of thousands of individual funds devoted to every 'investing' style and economic sector or regional subgroup that some marketing idiot can dream up? Not likely. A brutal shakeout is coming and one of its revelations will be that stock picking is a grossly overrated piece of the puzzle, that cost control is what distinguishes a competitive firm from an uncompetitive one."

For those active investors—and active managers—who are using index funds that are different—not just in degree, but in kind—from that original fund of nearly 30 years ago, I do not foresee a favorable long-term outcome. Sooner or later, the job of investment strategy is to deliver to investors their fair share of market returns. Investment programs designed to build businesses will, of course, succeed for a time. But if they fail to build client wealth, they will ultimately fade away.

Lead into Gold?

So mark me down as an index fundamentalist, a passionate believer that the original index fund design, even all these years later, continues to represent the Gold Standard for investors. If that is true, then by definition every *other* strategy—whether managed, indexed, sector- or style-specific, trading, or anything else—represents, at least theoretically, a dilution of that standard. Yet even as the alchemists of ancient days vainly sought to change lead into gold, so too, do many of today's financial intermediaries seek to provide a similar alchemy in the financial markets. I do not deny that some small number will surely do just that. But I struggle to develop any methodology (other than relative costs!) for identifying winning strategies or winning funds in advance, and for successfully predicting how long those winning strategies will persist and how long those portfolio managers will continue to manage the funds that have delivered those superior returns.

I believe it is up to those who believe they can do so to provide not only the *statistical* support, but the *intellectual* support, for their position, as well as to affirm how long they expect to continue to serve the funds they manage. Absent such support, active management will continue to converge with passive indexing, and passive indexing will return to its historical roots. There is too much at stake in providing optimal wealth to the investors who have entrusted their hard-earned dollars to us for investment professionals to allow a Gresham's law to prevail in which bad indexing drives out good indexing. "Good indexing," clearly reflected in the concept of that very first stock market index fund—the original paradigm—cannot, finally, be shaken or compromised.

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