

---

## VIEWPOINT

---

John C. Bogle

Founder and Former Chief Executive, The Vanguard Group  
President, Bogle Financial Markets Research Center

### The Index Mutual Fund: 40 Years of Growth, Change, and Challenge

Some 40 years ago, a new concept of investing—one broadly regarded by the financial community as trivial and likely to fail—began its path toward implementation. On 18 September 1975, at the board meeting of the one-year-old Vanguard Group, the directors approved my proposal that our firm form the world's first index mutual fund. Proud of our new creation, we named it First Index Investment Trust—now the Vanguard 500 Index Fund.

Ultimately, index funds would earn remarkable acceptance from individual and institutional investors alike. But all that glitters isn't (necessarily) gold. Almost a decade passed before the second index fund was formed, and it took two full decades (until the mid-1990s) for index funds to begin to earn broad acceptance. Much of that acceptance, however, reflected a major departure from the original "buy-and-hold" concept.

### The Triumph of Indexing

Despite a faltering start for that first index fund, mutual fund investors themselves have come to accept the value proposition offered by indexing. Assets of index funds have risen dramatically over the years—from \$11 million in 1975 to \$511 million in 1985 to \$55 billion in 1995, leaping to \$868 billion in 2005 and now standing at \$4 trillion. From 4% of equity mutual fund assets in 1995, the market share of index fund assets grew fourfold to 16% in 2005 and then more than doubled to a record high of 34% in 2015 (see **Figure 1**).

An even more dramatic story is told by the cash flow into (and out of) equity mutual funds. *Since 2008, index funds have accounted for 160% of net cash flows into equity mutual funds.* During those seven years, investors have made net purchases of almost \$1 trillion in

---

*Editor's note:* This article was reviewed and accepted by Executive Editor Stephen J. Brown.

*Author's note:* The views expressed in this essay are solely those of the author and do not necessarily reflect the opinions of Vanguard's present management.

passively managed index funds even as they have liquidated, on balance, \$600 billion of their holdings in actively managed equity funds—a remarkable \$1.6 trillion swing in investor preferences. Such a dramatic turnaround in investment strategy is, I believe, without precedent in the mutual fund industry.

The fundamental principles established by that first index fund are simple: Buy virtually the entire US stock market and hold it intact "forever," eliminate advisory fees, and minimize both operating costs and portfolio turnover. These simple principles have won the day. But in 1993, almost two decades after the creation of the original index fund, a new form of index fund—originally designed for stock traders and speculators—came into existence. That change and that challenge, little noted in financial history, will be long remembered.

### Hired and Fired

Let's start at the beginning. My inspiration for the idea of the index fund came in 1951 with my Princeton University senior thesis, "The Economic Role of the Investment Company." In it, I noted that mutual funds "could make no claim to superiority over the market averages"—a prescient, if imprecise, harbinger of what was to come. In the years that followed, my own investment experience unequivocally reinforced that conclusion.

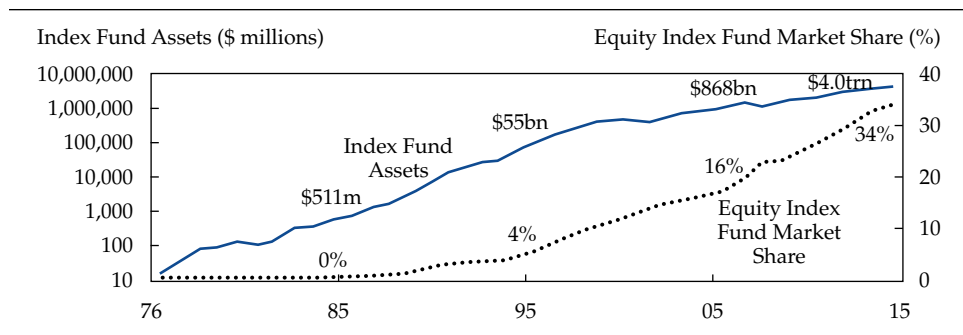
That Princeton thesis led me to a job in the mutual fund field. Following my college graduation in 1951, I was hired by Walter L. Morgan, the founder of the Wellington Fund, then managing \$145 million of assets. There I observed firsthand our frustrating—and ultimately fruitless—battle for significant performance superiority over our "balanced fund" peers. So, early in my career, I learned a vital lesson: *This is one tough business!*

In 1965, the conservative Wellington Fund (a balanced fund holding both stocks and bonds) was falling totally out of favor with investors and brokers. Mr. Morgan named me to lead his firm and to "do whatever is necessary" to reverse Wellington's sagging fortunes. This was the era of the hot "go-go fund," an era that would finally, well, go by 1969.

But in 1966, I put aside my skepticism and merged our firm with a far smaller investment advisory firm run by the young managers of the

---

*Viewpoint is an occasional feature of the Financial Analysts Journal. This piece was not subjected to the peer-review process. It reflects the views of the author and does not represent the official views of the FAJ or CFA Institute.*

**Figure 1. The Growth of the Index Fund**

Sources: Morningstar; Strategic Insight Simfund.

aggressive Ivest Fund. That fund would flourish for a few years but then falter and fail, now consigned to the dustbin of history. Under the aegis of our new money managers, the performance of the Wellington Fund and most of our other funds also plummeted, and in January 1974, my new partners fired me—a perverse outcome indeed! My prospects were bleak.

Just eight months later, I attempted to salvage my career by founding a new firm. (The saga of its convoluted creation is too long and complex to recount in this article.) It would be the industry's first *mutual* mutual fund organization, owned and controlled by its fund shareholders—not, as under the conventional industry structure, by an external management company. It would operate on an “at-cost” basis. On 24 September 1974, right before the bottom of the 1973–74 bear market, we were incorporated with the name that I had chosen, “Vanguard.”

Our vision was to become the world's lowest-cost provider of mutual funds in an industry in which “costs matter.” Yet none of our peers sought to compete on costs. Facilitated by our mutual structure and our later decision to move to a “no-load” distribution network and eliminate stockbroker sales of our funds, achieving that “lowest-cost” goal would be easy—but only if we survived those dismal early days. (Our first business plan was simply to get through the day!) By the early 1980s, our negative cash flows had turned positive. We had at last turned the corner.

## Friendly Persuasion

“Strategy follows structure” was my central tenet. Given the minuscule costs of index funds, it quickly became apparent that our unique structure almost demanded that we form the first index fund, because the low-cost index fund was the key to capturing almost the entire return of the US stock market. Vanguard's structural cost advantage over our competitors virtually necessitated that index funds become a major thrust of Vanguard's strategy.

But what would it take to persuade the members of Vanguard's board of directors—conservative to a fault—to approve an unprecedented innovation? Such a fund belied the deeply embedded notion that the professional management of Other People's Money—the mutual fund industry's core selling point—was necessary. (Ignore, if you can, the obvious reality that for equity fund managers as a group, the high costs of management make beating the market index over the long term virtually impossible.)

Two strong pillars supported moving my concept of indexing from vision to reality. The first pillar was intellectual support. I found this pillar of support from none other than eminent MIT professor Paul A. Samuelson. Just a year before our 1975 board meeting, this Nobel laureate had laid out his case in the inaugural issue of the *Journal of Portfolio Management*.<sup>1</sup> In his paper (“Challenge to Judgment”), Dr. Samuelson pleaded for some institution to set up a portfolio that tracked the S&P 500 Index. In my presentation to the board, his paper was marked “Exhibit A.” His name and reputation gave credibility to my proposal.

The second pillar was analytical support. Did the data support my case that passive index funds could outperform their actively managed counterparts? I compared the annual returns of the S&P 500 with those of the average equity mutual fund over the previous three-plus decades. In my second exhibit, I reported my findings to the directors. (In those days, nearly all equity funds were invested largely in blue-chip stocks, making the comparison with the large-cap-dominated S&P 500 a fair one.)

The results were impressive. From year-end 1945 through mid-1975, the S&P 500 earned an average annual return of 11.3%, an advantage of 1.6 percentage points (pps) over the return of 9.7% earned by the average fund—a compounded 30-plus-year advantage of 863 pps. In other words, the cumulative value of a \$1 million initial investment in the S&P 500 and in the average equity fund would have grown to \$25,020,000 and \$16,390,000, respectively—an advantage of \$8,630,000 for the index. Persuaded both by

the Samuelson endorsement and by this compelling evidence, the board unanimously approved my proposal. First Index Investment Trust was organized on 31 December 1975.

## Repeating the Comparison 40 Years Later

During the summer of 2015, as our Vanguard 500 Index Fund's 40th anniversary approached, I decided to calculate what a comparable study would show for the three-plus decades then ending. Eerily, the results almost precisely matched those of the study that I had prepared four decades earlier (see **Table 1**). The index advantage over the equity fund was identical: 1.6 pps a year. The S&P 500 annual return was 11.2% and the annual return of the large-cap funds was 9.6%, for a cumulative advantage of 946 pps.

The virtual identity of the two returns for the first and second periods was, of course, little more than a random statistical freak. But the consistent spreads in favor of the S&P 500—based largely on the drag of the “all-in” costs of actively managed funds—have been verified in virtually all longer-term periods. Further, the remarkably high correlations ( $R^2$ ) confirm the validity of the comparison.

In the original three-decade period, 96% of the fund returns were explained by the returns of the S&P 500 ( $R^2$ ); the corresponding number for the recent period was 99%. In both periods, risk (standard deviation of returns) was only slightly higher for the S&P 500. In both periods, the S&P 500 earned significantly higher risk-adjusted returns as measured by the Sharpe ratio: 0.42 versus 0.38 in the earlier period, and 0.48 versus 0.39 in the later one.

The returns earned on stocks in both periods were well above the (100-year) historical annual norm of 9.0% and far above my own reasonable expectations for stock returns during the next 10 years.<sup>2</sup> But the consistency of the index advantage, the high correlations, the comparable volatility, and

the superior Sharpe ratios over six decades reaffirm that the sound principles of the broad-market, low-cost index fund have met the test of time.

## Is Turnabout Fair Play?

Forty years ago, predicting the eventual domination of the mutual fund industry by index funds that has now come to pass (illustrated by their massive fund cash flows since 2008, described earlier) would have seemed like madness. At the outset, the 1976 IPO for First Index Investment Trust was a flop; a planned underwriting of \$150 million (big for those days) produced only \$11 million. Describing the new fund as “Bogle’s Folly” reflected the Wall Street consensus. That reaction was captured by a large poster published by one brokerage firm: a harried Uncle Sam feverishly stamping “UNAMERICAN” on index fund stock certificates. “Help Stamp Out Index Funds,” the poster read. “INDEX FUNDS ARE UNAMERICAN!”

What a difference 40 years make! Yes, index funds continue to be the investment of choice for Main Street investors—whom they were primarily designed to serve—soon joined by a wide array of pension funds and thrift plans. But index funds have now become the darlings of Wall Street. To a remarkable degree, they have taken a different form: exchange-traded (index) funds (ETFs) that can be—and frequently are—“traded all day long, in real time” (an excerpt from an early ETF advertisement), held largely by financial institutions and mostly used for speculation, hedging, arbitrage, or other short-term purposes.

Today, the assets of equity ETFs total \$1.7 trillion—fully half of the \$3.4 trillion of total assets invested in equity index mutual funds. TIFs account for the other half. (TIF is an acronym that I created to identify *traditional index funds*, such as that original broad-market, low-cost, no-load index fund, designed to be bought and then held “forever.”)

**Table 1. Déjà Vu? Three Decades of Index Superiority—Twice**

	1945–1975		1985–2015	
	Average Equity Fund	S&P 500 Index	Average Large-Cap Fund <sup>a</sup>	S&P 500 Index
Annualized return	9.7%	11.3%	9.6%	11.2%
Index advantage	—	1.6%	—	1.6%
Cumulative return	1,539%	2,402%	1,548%	2,494%
Index advantage	—	863%	—	946%
Standard deviation	16.4%	18.6%	16.8%	17.3%
Sharpe ratio	0.38	0.42	0.39	0.48
$R^2$	0.96	1.00	0.99	1.00

Note: The starting dates are 31 December 1944 and 31 December 1984; the ending dates are 30 June 1975 and 30 June 2015.

<sup>a</sup>By the start of this period, equity fund portfolios had become far more diverse. This series represents the average return of the Lipper large-cap funds category, the most appropriate comparison for the large-cap-dominated S&P 500 Index.

Sources: Wiesenberger Investment Companies; Morningstar.

## ETFs: Three Distinctly Different Approaches

Today, there are only about 12 US broad-market equity ETFs, similar in portfolio construction to that original S&P 500 Index fund. Their assets currently total \$337 billion, about one-fifth of total assets of equity ETFs. The remaining 1,800 ETFs have a far narrower focus—stocks of single nations, industry sectors, “smart beta” strategies (don’t ask), and casino-like ETFs in which investors can speculate (i.e., bet) on whether the stock market will rise or fall, with as much as triple leverage. (I’m not making this up.)

Both kinds of ETFs (broad or narrow in focus—even those with portfolios tracking the S&P 500, identical to that first index fund) are traded at a frenzied pace. Through September 2015, shares of the 100 largest ETFs, valued at \$1.5 trillion, were turning over at an annualized volume of \$14 trillion, a turnover rate of 864%.

By way of comparison, the annualized turnover volume of the 100 largest stocks, valued at \$12 trillion, is running at \$15 trillion for the same period, a turnover rate of 117%. Trading in the 100 largest ETFs thus represents about 89% of such stock trading, up from a mere 7% 15 years ago. Given these powerful data, it is hardly unfair to describe today’s ETFs—as a group—as the modern way to speculate in the stock market.<sup>3</sup>

Assets of US ETFs, including bond ETFs, now total \$2 trillion. But the variety of objectives and strategies of ETFs—many of which are index funds in name only—is wide indeed. The level of ETF turnover also varies widely. Some ETF managers focus on attracting high-turnover institutional traders; others strive to serve largely individual investors. **Table 2** shows some of these differences. For instance, State Street Global Advisors appears

most focused on institutional trading (some 90% of the shares of State Street’s S&P 500 SPDR are held by institutions), whereas Vanguard seems most focused on individual investors and their brokers and advisers.

But even the highest institution-dominated turnover rate pales in comparison with the turnover rates of most ETFs designed to attract investors (really speculators) who like to gamble. Their selling proposition: “Bet on which way the market is going, and if you’re confident, do so with triple leverage.” In 2015, the average annualized turnover of the shares of four of the most active ETF providers (though relatively small and held almost entirely by individuals) ranged from 953% to 10,308%.

It is important to recognize the differences among three distinct classes of ETF investors:

- Financial institutions that use ETFs as trading vehicles—sometimes to speculate, sometimes to hedge, sometimes to arbitrage, and sometimes to implement other short-term strategies. These institutions are by far the largest traders of ETF shares.
- Individual investors who trade rapidly—easily done with ETFs on a momentary basis at relatively low (but not zero) cost—the next largest segment.
- Individual investors and their financial advisers who prefer to use brokerage platforms and trade only moderately and strategically—as well as a growing cadre of “robo-advisers,” whose computer-based allocations for their clients tend to be fairly stable but who may trade often in order to harvest tax losses. Also, certain withdrawal strategies (e.g., generating income in retirement) can be easier to implement with ETFs than with TIFs, although ETF trading costs are generally higher than those of no-load TIFs. This third segment appears to be the smallest.

**Table 2. Assets, Institutional Ownership, and Turnover: ETFs of Various Sponsors, 30 August 2015**

	Total Assets (\$ billions)	Institutional Ownership (%)	Annualized Turnover (\$ billions)	Annualized Turnover (%)
<i>Largest ETF sponsors</i>				
BlackRock	809	62	4,910	606
Vanguard	469	43	908	193
State Street	<u>409</u>	<u>63</u>	<u>8,692</u>	<u>2,122</u>
	1,687	56	14,510	859
<i>Most active ETF sponsors</i>				
PowerShares	97	40	928	953
ProShares	25	12	873	3,444
Direxion	9	5	506	5,551
VelocityShares	<u>3</u>	<u>7</u>	<u>299</u>	<u>10,308</u>
	134	16	2,606	1,936

Sources: Morningstar; NASDAQ.



## Which Strategy Wins?

That first index mutual fund—the TIF model—was designed to serve long-term investors. The ETF model, however, seems designed to provide a new way for institutional and individual short-term speculators to trade to their hearts' content—and thus a new opportunity for Wall Street to make profits from index funds. That fact alone helps explain why the index fund is no longer that “unAmerican” pariah of 1976, needing to be “stamped out” before it led to a pandemic.

Most of today's 1,800 ETFs are less diversified, carry greater risk, and are used largely for rapid-fire trading—speculation, pure and simple. “Follow the money” is a useful aphorism to explain why Wall Street has jumped on the bandwagon of indexing, another surprising turnabout from the original concept.

But logic more than stubbornness (I think!) convinces me that the model of that first index mutual fund—tracking the S&P 500; operating with minuscule all-in costs (now as little as 0.05% of assets), nominal portfolio turnover, tiny (if any) transaction costs, and high tax efficiency; and designed to be held “forever”—remains the optimal way for investors to earn their fair share of whatever returns, good or bad, our stock market delivers.<sup>4</sup>

## Conclusion: The Chief Cornerstone

The index fund's dominance of the mutual fund industry belies its discouraging initial reception 40 years ago. Perhaps we should not be surprised. Similar turnabouts have happened before. As the

Good Book reminds us, “The stone that the builders rejected became the chief cornerstone.” And the index fund has become just that, the chief cornerstone of the mutual fund industry.

Being the “first mover” in the index fund arena—the stone that was rejected four decades ago—and then creating the first broad lineup of index funds, all the while preaching the gospel of indexing from a “bully pulpit,” have sparked Vanguard's unarguable leadership in the field. That original index fund, which began with \$11 million of assets, has become a major part of a huge index fund family, now accounting for more than \$2 trillion of Vanguard's \$3 trillion asset base. Yes, indexing has proved to be not only a winning investment strategy for its shareholders but also a winning business strategy for its creator.

Don't take my word for it. In his foreword to my first book, *Bogle on Mutual Funds: New Perspectives for the Intelligent Investor*, Paul Samuelson wrote that Vanguard “has changed a basic industry in the optimal direction” (Samuelson 1993), and his conviction never wavered. David Swensen, Yale University's endowment fund chief, has concluded that “a passive index fund managed by a not-for-profit investment organization represents the combination most likely to satisfy investor aspirations” (Swensen 2005). Warren Buffett has also endorsed indexing, directing that 90% of the assets of the trust he has established for his wife be invested in a low-cost S&P 500 Index fund. For investors who think they can pitch against this “Murderers' Row” of three great batters and strike them out, I can say only, “Good luck.”

## Notes

1. Paul A. Samuelson, “Challenge to Judgment,” *Journal of Portfolio Management*, vol. 1, no. 1 (Fall 1974): 17–19.
2. In the interim period, 30 June 1975 to 31 December 1985, the annual return of the S&P 500 was 13.3%, bringing its return to 12.3% over the full 1945–2015 period—a remarkable era in stock market history. It would be unwise in the extreme to expect such a generous past return to be prologue to the future.
3. The SPDR (Standard & Poor's Depository Receipt, or “Spider”) S&P 500 constitutes the largest ETF, which is, day after day, the most widely traded stock in the world. With \$150 billion of assets, the dollar volume of its annualized trading volume in 2015 was running at an annual rate of \$6 trillion, a turnover rate of 3,300%.
4. In the spring of 1991, the late Nathan Most of the American Stock Exchange visited me in my Valley Forge, Pennsylvania, office. He had designed a novel approach to indexing—what

would become known as the ETF—and he wanted to partner with us, using our Vanguard 500 Index Fund as the trading vehicle. He was a fine gentleman and took with equanimity my on-the-spot decision—without much reflection and with no consultation with my staff—to relinquish the opportunity for yet another Vanguard “first” that would have combined Most's innovative structure and Vanguard's largest index fund. But I believed then—and I believe now—that buying and holding a broad US stock market index fund is *investing* that will serve long-term index investors well. I also believe that trading any index fund “in real time” is *speculation* that will, finally, poorly serve short-term index traders. Many who know this story describe it as a major failure on my part. I consider it a major success and have no regrets. Standing on principle is the right course of action.

## References

Samuelson, Paul. 1993. “Foreword.” In *Bogle on Mutual Funds: New Perspectives for the Intelligent Investor*. By John C. Bogle. New York: McGraw-Hill.

Swensen, David. 2005. *Unconventional Success: A Fundamental Approach to Individual Investment*. New York: Free Press.