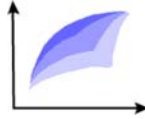


Efficient Frontier



William J. Bernstein

The ETF vs. Open-End Index-Fund Shootout

I have to admit I've been dubious about the exchange-traded fund format. I just couldn't figure out the *why* of these things, aside from fees, commissions, and sending financial journalists' kids to private school. [My first encounter with them](#)—the WEBS series (now iShares country funds)—nearly did in my spreadsheet package with the statistical equivalent of anaphylactic shock. These foreign birds were a tracking-error disaster, with humongous shortfalls caused by excessive turnover.

So I was skeptical when Barclays brought out a slew of new iShares, targeting every conceivable cross-sectional domestic index known to man and Gene Fama (even Russell 3000 Value and Growth funds, for God's sake!). Who needs these things when Gus Sauter can turn the same tricks in Vanguard's traditional open-end format? What difference do a few basis points of expense advantage make when Vanguard's tracking errors are uniformly positive by much larger amounts? And that's before fees, spreads, and premium/discount problems.

But life plays strange tricks on the morally certain. To my initial chagrin, an ex-neighbor of mine, after finding life as a small town Brahmin unrewarding, went back to study high-powered finance at Yale and wound up at Barclays. He then took it upon himself to send me to asset-class reeducation camp. Second, Jim Wiandt of [IndexFunds.com](#) had me review his upcoming monograph on the topic. (I have increasingly found myself the unwitting recipient of proposed drafts, but this one was a pleasure: concise yet comprehensive, fair, analytical, and well written. It's due out in April from Wiley.) And last, the Barclays' domestic offerings have defended their corner quite nicely.

As of July 31, all of Barclays' domestic cross-sectional funds have a one-year track record. While 12 months is not adequate to judge the performance of a single index fund, the aggregate performance of 19 iShares during this period gives a pretty good idea of Barclays' prowess in the domestic arena.

The funds at the top of the table provide direct head-to-head comparisons between Barclays, Vanguard, and the target index. The funds at the bottom have no corresponding Vanguard fund. (The iShares do not offer a Wilshire 4500 Fund.)

One-Year Returns: August 2000 to July 2001

	Index	Vanguard Fund	iShares Fund	Vanguard Tracking	iShares Tracking

				Error	Error
S&P 500	-14.32%	-14.42%	-14.28%	-0.10%	+0.04%
Barra 500 Large Value	3.97%	3.91%	3.80%	-0.06%	-0.17%
Barra 500 Large Growth	-29.46%	-29.72%	-29.32%	-0.26%	+0.14%
Barra 600 Small Value	25.32%	26.27%	26.34%	+0.95%	+1.02%
Barra 600 Small Growth	-3.71%	-2.97%	-3.27%	+0.74%	+0.44%
S&P 400 Midcap	5.58%	5.05%	5.97%	-0.53%	+0.39%
Russell 2000	-1.62%	-0.86%	-1.62%	+0.76%	+0.00%
Wilshire 5000	-14.98%	-14.87%	-15.20%	+0.11%	-0.22%
Barra 400 Midcap Value	27.86%	--	27.67%	N/A	-0.19%
Barra 400 Midcap Growth	-12.31%	--	-12.59%	N/A	-0.28%
S&P 600 Small Cap	12.00%	--	12.27%	N/A	+0.27%
Russell 1000	-14.70%	--	-14.79%	N/A	-0.09%
Russell 1000 Value	8.75%	--	8.68%	N/A	-0.07%

Russell 1000 Growth	-35.07%	--	-35.08%	N/A	-0.01%
Russell 2000 Value	23.74%	--	24.34%	N/A	+0.60%
Russell 2000 Growth	-23.31%	--	-23.40%	N/A	-0.09%
Russell 3000	-13.83%	--	-13.89%	N/A	-0.06%
Russell 3000 Value	9.72%	--	9.96%	N/A	+0.24%
Russell 3000 Growth	-34.25%	--	-34.50%	N/A	-0.25%
Wilshire 4500	-20.89%	-20.52%	--	+0.37%	N/A

The result is a dead heat: in the head-to-head comparison for the first eight funds listed, the average tracking error (after expenses averaging about 0.23%) was +0.20% for the Vanguard funds and +0.21% for the iShares funds. And this is no ordinary tie score—it's the equivalent of shooting eight even rounds with Tiger Woods. For the 11 iShares funds with no corresponding Vanguard fund, the average after-expense tracking error was exactly zero. Not too shabby, either.

It's not surprising that Barclays can walk the walk—they actually manage significantly more in indexed assets than Vanguard (almost \$1 trillion). The reason you may not have heard about them is that, until recently, they had no retail presence; most of their indexing was done under "white label" agreements for large institutions.

So, back to the original question. Why deal with ETFs if you can own the same indexes without all the hassle of paying brokerage fees and spreads? Figure about 15 basis points in commissions and spreads each way. In the case of the iShares S&P 500 Index Fund, with its 9 basis-point advantage over the Vanguard 500 Fund, the ETF will take about three years to make up the difference. In all other cases, the iShares/Vanguard expense gap is smaller or even zero, so the ETF break-even points will range from very long to never. Even then, most of the time, the expense difference will likely be blown away by tracking-error differences. Nevertheless, there are several possible reasons for favoring ETFs:

1. First and foremost, if you are not a U.S. citizen, ETFs may well be your best fund choice. Residents of the land of the free and home of the brave do not appreciate just how miserable mutual fund offerings are outside these shores.

With outsized expenses and dismal ongoing performance, foreign mutual funds make the average U.S. brokerage house look like a charitable foundation. At a stroke, ETFs may make the World According to Bogle available around the globe.

2. ETFs offer the possibility of greater tax efficiency. Certain asset classes are inherently tax-inefficient, because index reconstitution forces sales of appreciated shares. ETF shares are created and redeemed at the level of "authorized participants" who assemble and break apart the shares from and into their component stocks. The techniques involved here are enormously complex and center around two facts. First, when shares of an ETF are taken out of the market by sales, they are redeemed "in kind" by breaking them up into their component stocks; this is not a taxable event. Thus, "authorized participants" who do this are able to redeem the shares with the lowest cost basis, leaving the more tax-efficient high-basis shares in the fund. Open-end funds usually do the opposite, leaving the low-basis shares. Second, much of the tax-inefficiency of mutual funds or ETFs comes with the re-jiggering of the underlying indexes; in both cases, the stocks kicked out of the index must be sold for cash, incurring capital gains. The ETF advantage is that if it has incurred a large amount of share turnover because of expansion and contraction of its asset base, then when the index re-jiggering occurs, the shares sold would have a higher cost basis than the corresponding shares in the open-end fund. *Two enormous caveats* must be considered. First, tax-efficient large- and small-cap market funds for the S&P 500 and S&P 600, respectively, are available from Vanguard. Further, there are some asset classes, like REITs, which are tax-inefficient even in the ETF format because of dividends. So we are really only talking about large- and small-value funds here. Second, at present, the added tax efficiency is only a theoretical advantage; in fact, ETFs can and do declare capital gains distributions—about 60% did last year. Thus, the potential tax advantage will take years to prove itself. It would be well to observe how ETF small- and large-value tax efficiency pans out before calling your broker.
3. If an asset class is not available from Vanguard, such as mid-cap growth and value, or the Russell funds, you can include it in your portfolio via ETFs. And going one step further, for my tastes, the Vanguard Small-Cap Value Fund is not diversified enough as a sole holding in this corner of the equity universe—it holds only 403 names. On the other hand, the Russell 2000 Value iShares Fund holds many more—1221 companies.
4. Paradoxically, if you're a very small investor and have fund holdings below the \$10,000 threshold, you will incur the Vanguard \$10 annual fee. For example, someone investing \$3,000 in a Vanguard index fund will lose 0.33% of annual return from the fee, whereas he can purchase the appropriate ETF for a \$10 commission at eTrade and never pay another cent in "low-balance" expenses.

ETFs obviously hold certain advantages for institutional players, particularly that they can be sold short. The notorious Nasdaq Cubes—QQQ—actually saw net share *creation* during the recent Nasdaq collapse for just this reason. Interesting factoid: the average holding period of a Cubes share is four days. ETFs also have a more dubious advantage for small investors: they can be traded intraday. Whoopee.

In the opinion of Mr. Wiandt, the common bugaboos raised about ETFs—the discount/premium problem, the bid/ask spread, and dividend-reinvestment drag—are not significant. In most cases, these are less than 0.25%. In addition, as more shares are created and traded, the arbitrage opportunities at the authorized-participant level will narrow the discount/premium spreads even more. But Mr. Wiandt raises a more important point, namely, that "an ETF is only as good as its underlying index." If the index consists of liquid stocks, then its ETF will trade with reasonable spreads and minimal discount/premium problems. And if the markets are highly illiquid, and especially if there are currency constraints, as occurred in the past few years with the iShares Malaysia Fund, then the discount/premium problem will be enormous.

Finally, there are investors who should *not* use ETFs. If you're making periodic investments or frequently rebalancing your portfolio, ETFs are a waste of time and money—you'll be eaten alive by commissions.

I'm still wary, but cautiously optimistic. I wouldn't fill my portfolio with ETFs yet; however, the day may soon come when they are a solid competitor to the traditional open-end index fund.



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