



Today's Research Question: Why Do Investors Choose High-fee Mutual Funds Despite the Lower Returns?

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With their combination of low fees, tax efficiency and simple, autopilot investing style, index funds seem to have captivated American investors. Indeed, the Vanguard 500 Index Fund is the third largest of the more than 8,000 funds, with assets exceeding \$111 billion. And investors have plowed money into the newest indexers, called exchange traded funds. ETF assets hit \$296 billion in 2005, up from just over \$1 billion 10 years earlier.



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Clearly, investors have embraced the core belief that minimizing annual fees boosts long-term gains.

Or have they? Three researchers at Wharton, Yale and Harvard wanted to find out. Why, they wondered, do investors persist in holding trillions of dollars in high-fee funds despite the well-publicized evidence that low-fee alternatives offer higher returns over the long run? "It struck us that most people just don't know what mutual fund fees are. So we set out to actually test that," says [Brigitte C. Madrian](#), professor of business and public policy at Wharton. The result is a paper entitled, "Why Does the Law of One Price Fail? An Experiment on Index Mutual Funds," by Madrian, James J. Choi, professor of finance at Yale, and David Laibson, economics professor at Harvard.

Their conclusion: Investors appear to have a poor grasp of the fee issue, failing to minimize fees even when the benefits are presented in a clear and incontrovertible disclosure. "Most investors don't understand the importance of mutual funds' fees," Madrian notes.

To zero in on the issue, the researchers asked test subjects to choose among a variety of index-style funds with identical stock holdings but different fees.

Index funds buy and hold the stocks or bonds contained in an underlying market gauge, such as the Standard & Poor's 500 index, composed of the 500 largest stocks traded on American exchanges. The index fund simply holds those securities, providing the investor with returns matching the index's, minus the fees. In contrast, actively managed funds employ teams of portfolio managers and researchers who hunt for the hottest investments. Much research has shown that, over long periods, few of these managers can match index funds' performance, let alone beat it. The chief reason is the higher fees managed funds charge to pay for the securities hunt.

A typical managed fund investing in stocks carries an expense ratio, or annual fee, equal to about 1.3% of each investor's holdings, while the cheapest index funds charge 0.2% or less. Over time, this can make a big difference. If two funds contained identical portfolios returning an average of 10% a year before fees, an investor putting \$10,000 into one with a 1.3% expense ratio would have \$53,038 after 20 years. An investor who chose the fund charging 0.2% would end up with \$64,870.

Some investors would nonetheless choose the high-fee fund in hopes its managers could more than make up for fees by picking top-performing securities. Or the high-fee fund might offer other benefits, such as investment advice from the brokerage or fund company that sold it.

But with all other factors removed, leaving the two funds identical except for fees, it would seem that sensible investors ought to choose the low-fee fund. To see if they would, Madrian, Choi and Laibson recruited two groups of students in the summer of 2005 -- MBA students about to begin their first semester at Wharton, and undergraduates (freshmen through seniors) at Harvard.

All participants were asked to make hypothetical investments of \$10,000, choosing from among four S&P 500 index funds. They could put all their money into one fund or divide it among two or more. "We chose the index funds because they are all tracking the same index, and there is no variation in the objective of the funds," Madrian says. "By and large, they all generate the same performance. So the only difference in the actual returns you are going to get at the end of the day is generated by fees."

Participants received the prospectuses that fund companies provide real investors. And, they were told that at the end of the experiment, one participant would be randomly selected to be paid any profit his or her investment choices had generated from September 1 through August 30. This gave participants a financial incentive to pick the fund, or combination of funds, they thought most promising.

One group of participants also received a "fee sheet" that broke out information from the prospectuses on fees charged by each of the four funds. It explained that funds charge fees, and it showed how to figure the impact of fees and loads, or sales commissions, on investment returns. The funds' annual fees, or expense ratios, ranged from 0.59% to 0.8%. Each fund also charged a front-end load, or sales commission, ranging from 2.5% to 5.25% of the amount invested. The sheet reported the combined effect of the two charges on a \$10,000 investment over one year.

The students, therefore, were shown that the Allegiant/Armada S&P 500 fund would charge \$309 over one year, the UBS S&P 500 Index fund would charge \$320, the Mason Street Index 500 fund \$555 and the Morgan Stanley S&P 500 fund \$589.

Instead of the fee sheet, a second group received a "returns sheet" reporting each fund's average annual returns since the fund was started, net of fees, loads and other charges. Since the four funds' portfolios were identical, returns varied only because the funds' inception dates were different, with the data covering different time periods when the market's behavior varied.

The Allegiant/Armada fund had returned 1.28%, the UBS fund 2.54%, the Mason Street fund 5.9% and the Morgan Stanley fund 2.54%.

A control group received the prospectuses but not the fee or returns sheets.

A knowledgeable investor trying to get the largest possible return in the future would ignore the past-performance data, since the different periods covered made any comparison apples to oranges. Because the four funds held the same securities in the same portions, their future performance would be identical before the impact of fees was deducted.

Therefore the logical choice was the fund with the lowest fees -- the Allegiant/Armada fund. "We kind of stripped away all of the other elements that might drive your investment decisions and boiled it down so that the fees should be the only thing that should matter," Madrian says.

But the students "overwhelmingly fail to minimize index fund fees," the researchers write. "When we make fund fees salient and transparent, subjects' portfolios shift towards lower-fee index funds, but over 80% still do not invest everything in the lowest-fee fund."

In fact, the mean fee paid by the students was 1.22 percentage points above the minimum they could have paid -- enough to dramatically reduce long-term gains. Most students spread their money among two or more funds -- a pointless move since the funds were the same. "They probably really don't understand what an S&P 500 index fund is, because there is no more diversification to be gotten from spreading your money among the funds," Madrian says.

Among the MBA students who received the fee sheet, the combination of funds chosen produced a mean annual fee of \$366, compared to the \$309 they would have paid by concentrating in the fund with the lowest fee. For the undergraduate Harvard students, the mean fee was \$410.

Results were even worse for the students given the returns sheet instead of the fee sheet, even though all the fee data was still available to them in the prospectuses. The mean fees paid were \$440 for the MBAs and \$486 for the undergraduate Harvard students. The control group fell in between, with a mean of \$421 for the MBAs and \$431 for the Harvard students.

Since students who received the returns sheet posted the worst results, it was clear they had used this information improperly. "When we make index funds' annualized returns since inception (an irrelevant statistic) salient, portfolios shift towards index funds with higher returns since inception," the researchers write.

This was especially damaging because the researchers, in selecting from among the hundreds of S&P 500 indexing products available, chose ones in which the higher returns from inception were coupled with high fees.

The experiment did indicate, however, that students had some sense of the importance of fees, as they put more money in the lower-fee funds. Among the MBAs who received the fee sheet, for example, nearly 20% put all their money in the cheapest fund, paying only \$309. No student in any group put all of his or her money into the fund with the highest fees, \$589. The bulk of the investments were made in the two funds with the second and third highest fees.

Because the students who received the fee sheet did better than the others, "what we draw from this is that disclosure matters," Madrian says "But how information is disclosed also matters.... "What our study suggests is that people do not know how to use information well.... My guess is it has to do with the general level of financial literacy, but also because the prospectus is so long."

Investors might benefit, she says, if regulators required fund companies to disclose fee information, and its importance, in a brief form providing standards for comparison -- something like the nutrition labels on food containers. In other words, suggests Madrian, "Come up with something that is shorter, more digestible and more informative."

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