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Why Does the Law of One Price Fail? An Experiment on Index Mutual Funds

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Mutual fund fees vary dramatically across firms even though the industry has hundreds of competing firms. In this experimental study, we explore how people make decisions among mutual fund options, varying the salience of information about mutual fund fees and past returns.

In our first experiment, we give subjects four S&P 500 index fund prospectuses and ask them to allocate $10,000 among these funds. Because the funds invest in the *identica*l portfolio of stocks, they should have a nearly identical investment return except for the fund fee. Some of the subjects were given only the fund prospectuses (with fee information imbedded in a very long document). Others were given a one-page summary of fund fees, along with the prospectuses. A third group was given a summary sheet showing each index fund's annualized return since inception – an irrelevant document, because of the different dates of inception, and the identical underlying portfolio of fund investments.

Those receiving the fee summary sheet chose lower-cost index funds on average. But even with the summary sheet, over 80% still failed to minimize the fees on their investment. Those receiving the past return summary sheet chose funds with higher past returns, despite the irrelevance of the information (and its being coupled with higher fee funds). The bulk of the participants in the experiment were MBA students at a leading business school. Similar results were found in a second experiment in which participants chose between four actively managed small cap value funds.

We draw the following inferences from these experiments: First, many people do not realize that fund fees are important in making an investment decision. Therefore, it is unlikely that their search effort is directed towards finding fees. Second, the subset of investors that realizes fees are important often cannot accurately identify the fee information in the prospectus. Third, making fee information transparent reduces allocations to high-cost funds. Fourth, even when fee information is transparent, investors do not invest in the lowest-fee fund. In the index fund experiment, providing the fee summary sheet does not drive the chosen portfolios to the minimum-cost boundary. Therefore, search costs alone do not fully account for the willingness to hold high-fee index funds. Subjects instead seem to value non-fee attributes of index funds. Fifth, investors are swayed by salient but irrelevant returns information. Providing the returns summary sheet to index fund experiment subjects caused them to chase historical returns. And finally, investors in high-cost index funds have some sense that they are making a mistake. In the index fund experiment, higher fees are paid by subjects who report having less confidence that their choice is optimal for them, a higher likelihood of changing their portfolio in response to professional investment advice, and less general investment knowledge.

Our results support a growing body of evidence that individual investors are not well equipped to make optimal asset allocation choices in the current regulatory environment. Our results also have implications for several important public policy issues. First, policymakers need to think carefully about how to select the fund options in a personal account component of the Social Security system. Second, it is important to create incentives for intermediaries, such as 401(k) plan providers and state 529 college-savings plan administrators, to pay attention to mutual fund fees, since many individual investors are not doing so themselves.

Finally, policymakers should consider not only what information is disclosed, but also how it is disclosed. If important information such as a fund's expense ratio and load were required to be made salient/transparent, rather than being buried in a long prospectus, we anticipate that there would be a significant aggregate reallocation of assets towards low-cost funds.

The full working paper is available on our website, www.nber.org/programs/ag/rrc/books&papers.html as paper NB05-06.

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