

**Elab 2.11**

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Many people invest their retirement savings in mutual funds which charge an annual fee. Others buy “index funds” that charge a smaller fee. It’s reasonable to think that the index funds actually provide a better return on investment to the saver. When I said this to an investment manager trying to sell mutual funds, he responded that his mutual funds actually outperform index funds. He sent me data on the rates of return over the last ten years of several funds that his firm handles and, indeed, they were typically better than the index funds.

I assume that the data he sent me are accurate and really do reflect the fund performances. But are they relevant? Is there a potential sampling bias?

The sampling frame for the cases the investment manager sent me is “the mutual funds currently in the firm’s portfolio.” How might a this sampling frame lead to a bias that makes the mutual funds look better than they really are? (Hint: Badly performing mutual funds go out of business.)

Explain why a more informative sampling frame might be “the set of mutual funds that the firm was trying to sell ten years ago?”