

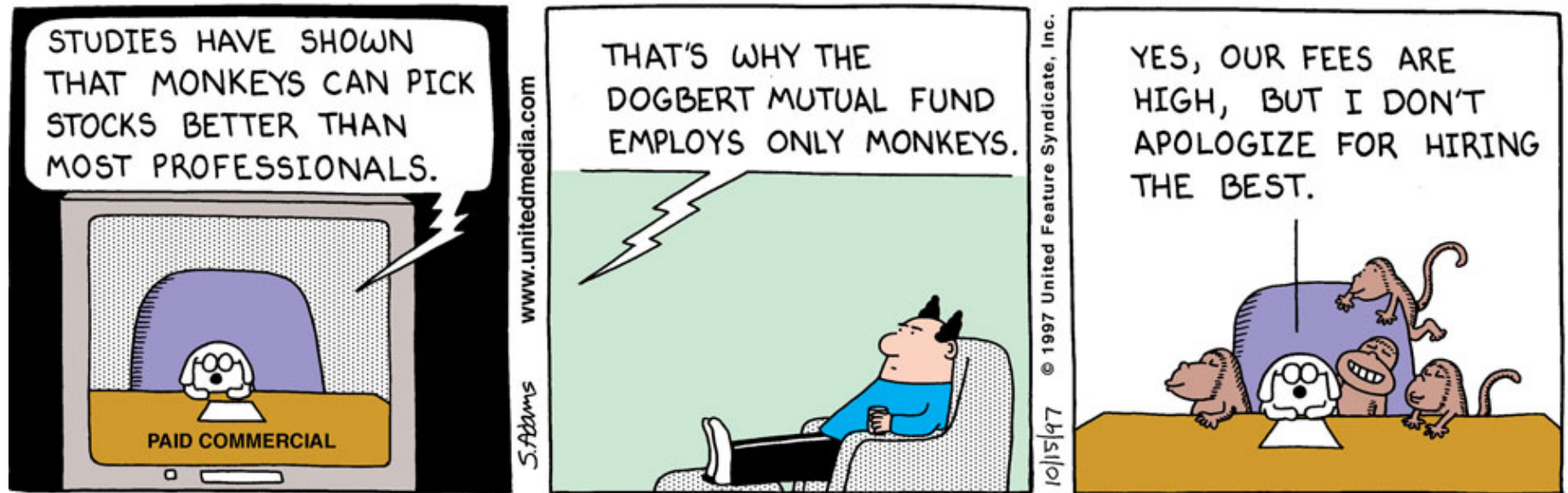
## Superior Performance?

Do investment professionals achieve superior performance? Do funds managed by them earn economic profits?

If financial markets are efficient, then no economic profits are possible.

Overall, research finds no evidence for superior performance by investment professionals.

One interpretation would be that competition among the professionals brings about correct pricing and rules out any economic profits.



## **Mutual Funds**

One can test the performance of mutual funds, since their performance is public information.

## **Comparison to a Stock-Price Index**

One test is to see what fraction of funds outperforms a stock-price index. If the market is efficient, then on average half of all funds will outperform the market index.

Overall research finds this result.

## Consistency

Another test is whether funds with superior performance in one period also perform in a superior way in a later period.

For long periods, research finds no evidence that superior performance persists.

## **Selection Bias**

*Selection bias* can make any effective testing difficult. How does one select a sample of funds to study?

If the selection is in any way based on the performance of the fund, then the sample is biased, and any test is perhaps invalid.

## Example

Suppose that one studies all funds that have been in business for the last 25 years.

This sample is biased. Funds that were unsuccessful will have gone out of business, whereas successful funds will stay in business. Consequently the funds in this sample on average will have done well.

## Example

Suppose that one studies all funds that have assets over \$1 billion.

This sample is biased. Successful funds will gain assets, and funds that have been unsuccessful will lose assets.

Consequently a large fund probably has a good historical record.



## **Solution**

Suppose that one wishes to study investment performance during the past 25 years. The key is to select the sample of funds in a way unrelated to the performance during that time.

One needs to select the funds based only on information available 25 years ago. For example, one might select the funds from a list published in an old magazine or newspaper.