

## **2. Market Efficiency**

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## Peter Lynch



“All the time and effort that people devote to picking the right fund, the hot hand, the great manager, have in most cases led to no advantage.”

## Warren E. Buffett

Chairman and CEO, Berkshire Hathaway, Inc.



“Most investors, both institutional and individual, will find that the best way to own common stocks is through an index fund that charges minimal fees.”



# Efficient Markets Hypothesis

Eugene F. Fama, University of Chicago

## The Hypothesis States:

- Current prices incorporate all available information and expectations.
- Current prices are the best approximation of intrinsic value.
- Price changes are due to unforeseen events.
- “Mispricings” do occur but not in predictable patterns that can lead to consistent outperformance.

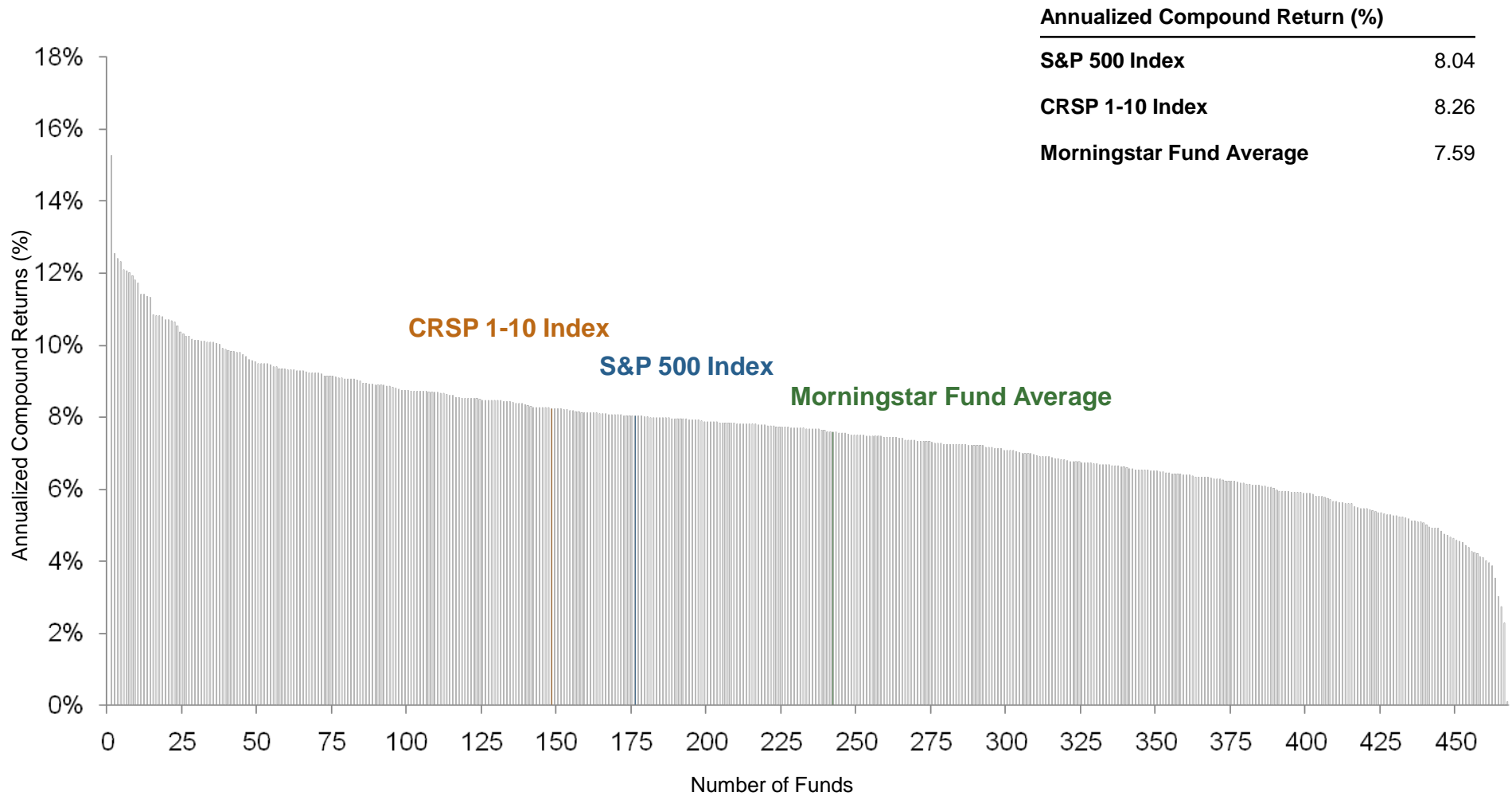
## Implications

- Active management strategies cannot consistently add value through security selection and market timing.
- Passive investment strategies reward investors with capital market returns.



# US Large Cap Returns

1995-2009



Source: Morningstar data provided by Morningstar Inc. Includes all Morningstar US large cap funds with fifteen-year returns, distinct portfolios only, as of December 31, 2009. The S&P data are provided by Standard & Poor's Index Services Group. CRSP data provided by the Center for Research in Security Prices, University of Chicago.

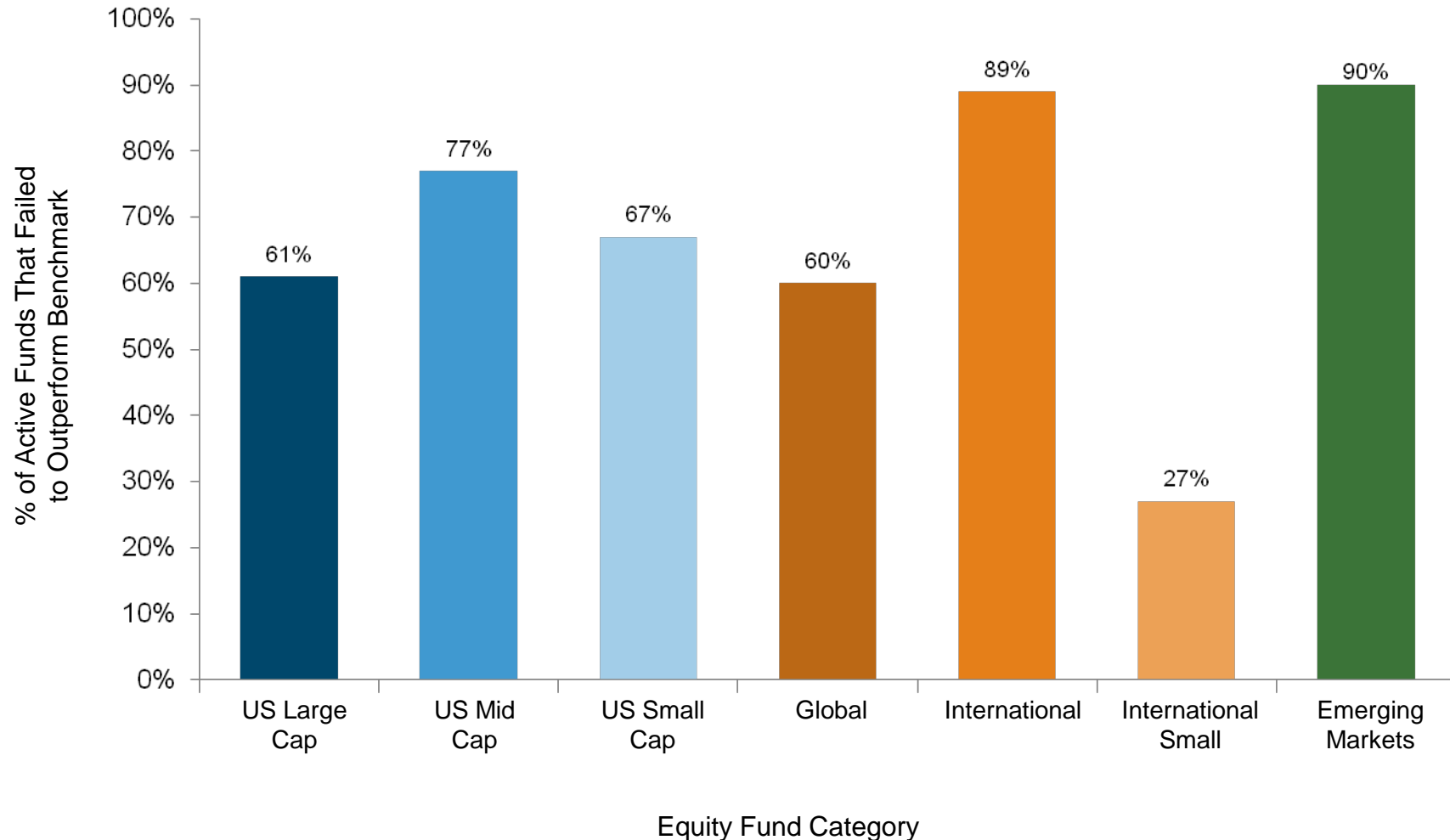
Indexes are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results. Values change frequently and past performance may not be repeated. There is always the risk that an investor may lose money.



# The Failure of Active Management

## Percentage of Active Public Equity Funds That Failed to Beat the Index

July 2004-December 2009



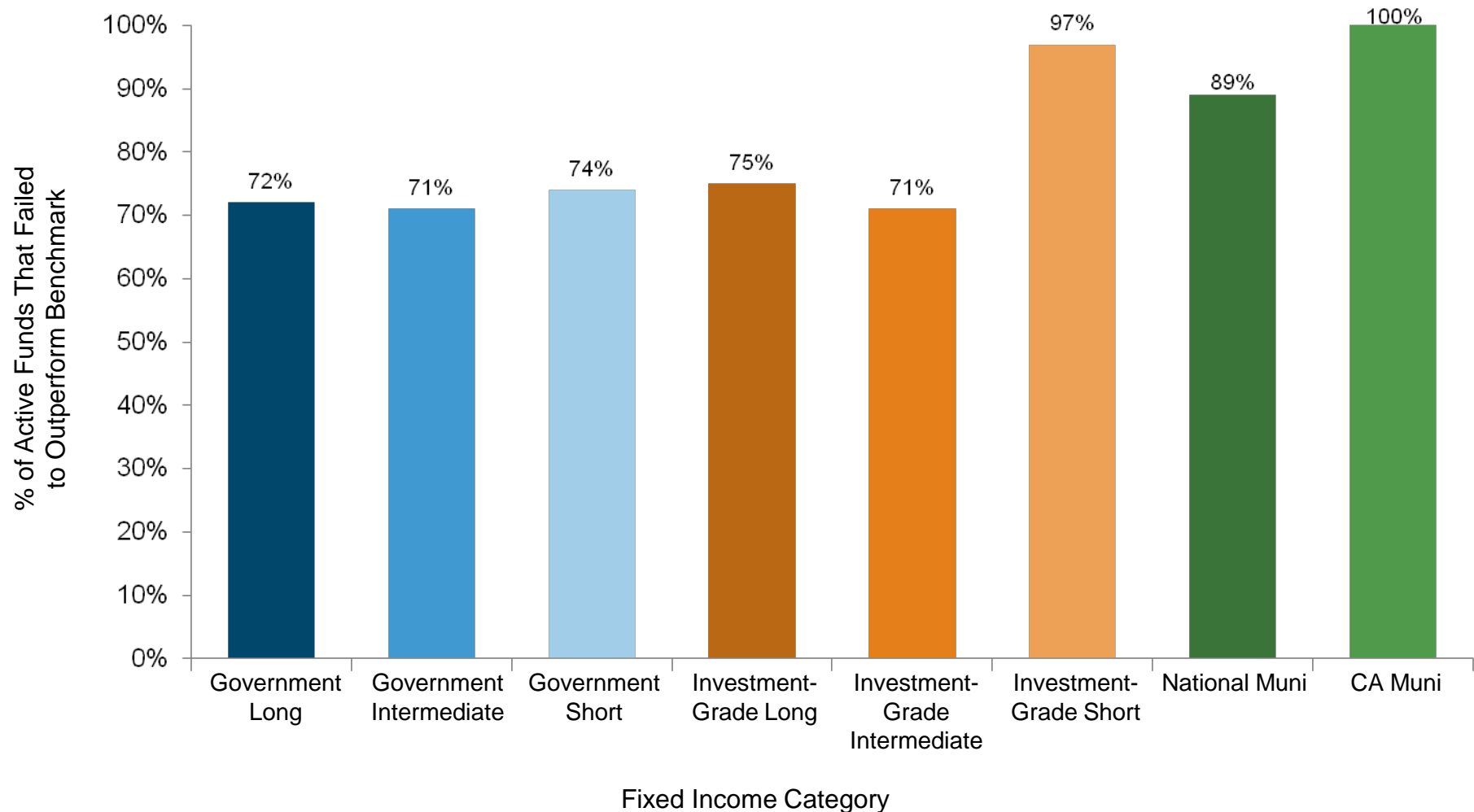
Source: Standard & Poor's Indices Versus Active Funds Scorecard, March 30, 2010. Index used for comparison: US Large Cap—S&P 500 Index; US Mid Cap—S&P MidCap 400 Index; US Small Cap—S&P SmallCap 600 Index; Global Funds—S&P Global 1200 Index; International—S&P 700 Index; International Small—S&P Developed ex. US SmallCap Index; Emerging Markets—S&P IFCI Composite. Data for the SPIVA study is from the CRSP Survivor-Bias-Free US Mutual Fund Database.



# The Failure of Active Management

## Percentage of Active Fixed Income Funds That Failed to Beat the Index

July 2004-December 2009

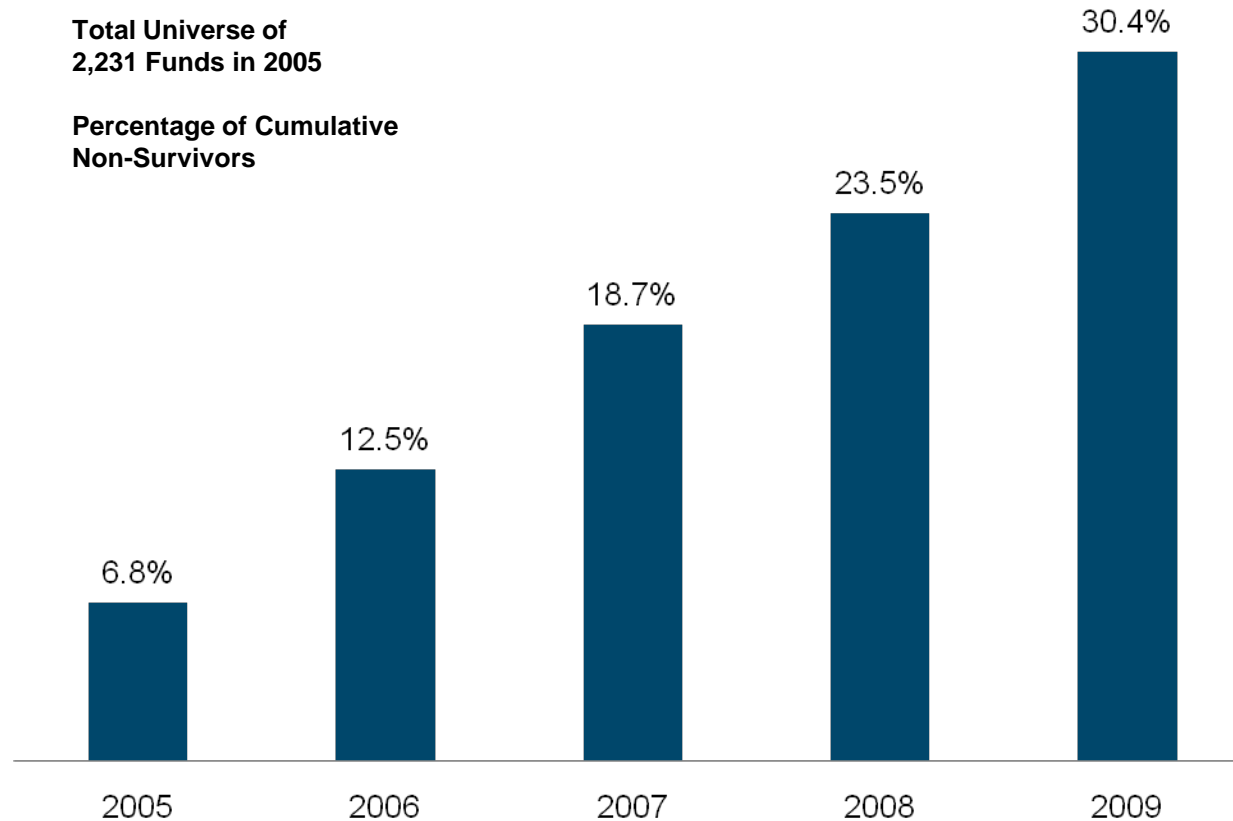


Source: Standard & Poor's Indices Versus Active Funds Scorecard, March 30, 2010. Index used for comparison: Government Long—Barclays Capital US Long Government Index; Government Intermediate—Barclays Capital US Intermediate Government Index; Government Short—Barclays Capital US 1-3 Year Government Index; Investment Grade Long—Barclays Capital US Long Government/Credit; Investment Grade Intermediate—Barclays Capital US Intermediate Government/Credit; Investment Grade Short—Barclays Capital US 1-3 Year Government/Credit; National Muni—S&P National Municipal Bond Index; CA Muni—S&P California Municipal Bond Index. Data for the SPIVA study is from the CRSP Survivor-Bias-Free US Mutual Fund Database. Barclays Capital data, formerly Lehman Brothers, provided by Barclays Bank PLC.



# Non-Surviving Equity Funds

Actively Managed US Equity Funds  
2005-2009



On average, 7.0% of the actively managed equity fund universe disappeared each year.

During 2005, 6.8% of the fund universe disappeared. By the fifth year, 30.4% of the fund universe (678 funds) had disappeared.

Reasons for non-survival likely include closure due to poor investment results.

Data provided by CRSP Survivor-Bias-Free US Mutual Fund Database. Sample includes mutual funds existing as of 12/2004. Returns analyzed for the five-year period from 2005-2009. Multiple share classes are aggregated to fund level. Index funds, inverse funds, and leveraged funds are excluded.

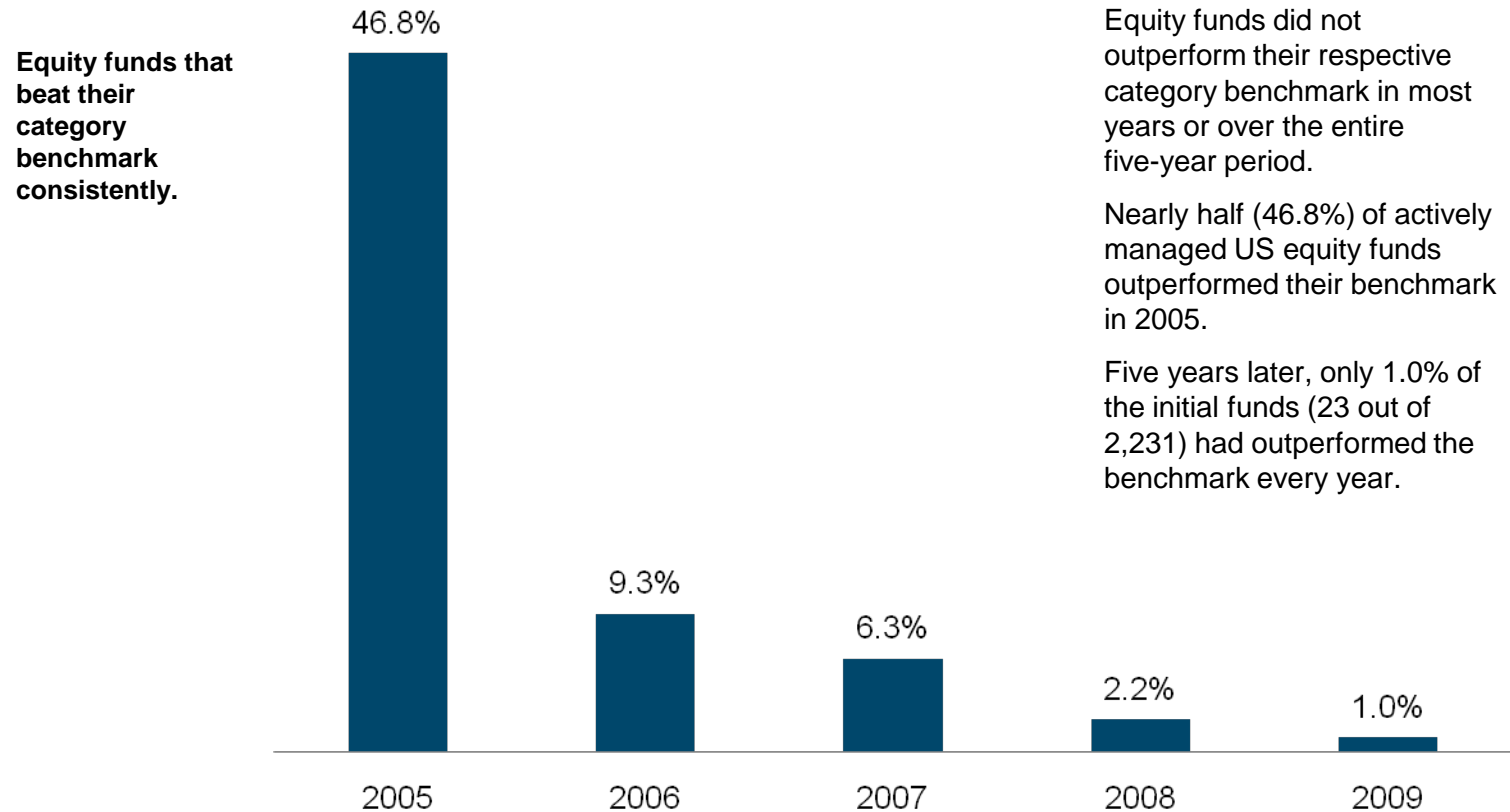
A benchmark is a standard against which the performance of an individual security or group of securities is measured. It is usually based on published indexes of securities of the same or similar class. However customized ones may be used to suit a particular investment strategy. Past performance is not a guarantee of future results. Values change frequently, and past performance may not be repeated. There is always the risk that an investor may lose money.





## Few Consistent Equity Fund Winners

Actively Managed US Equity Funds  
2005-2009



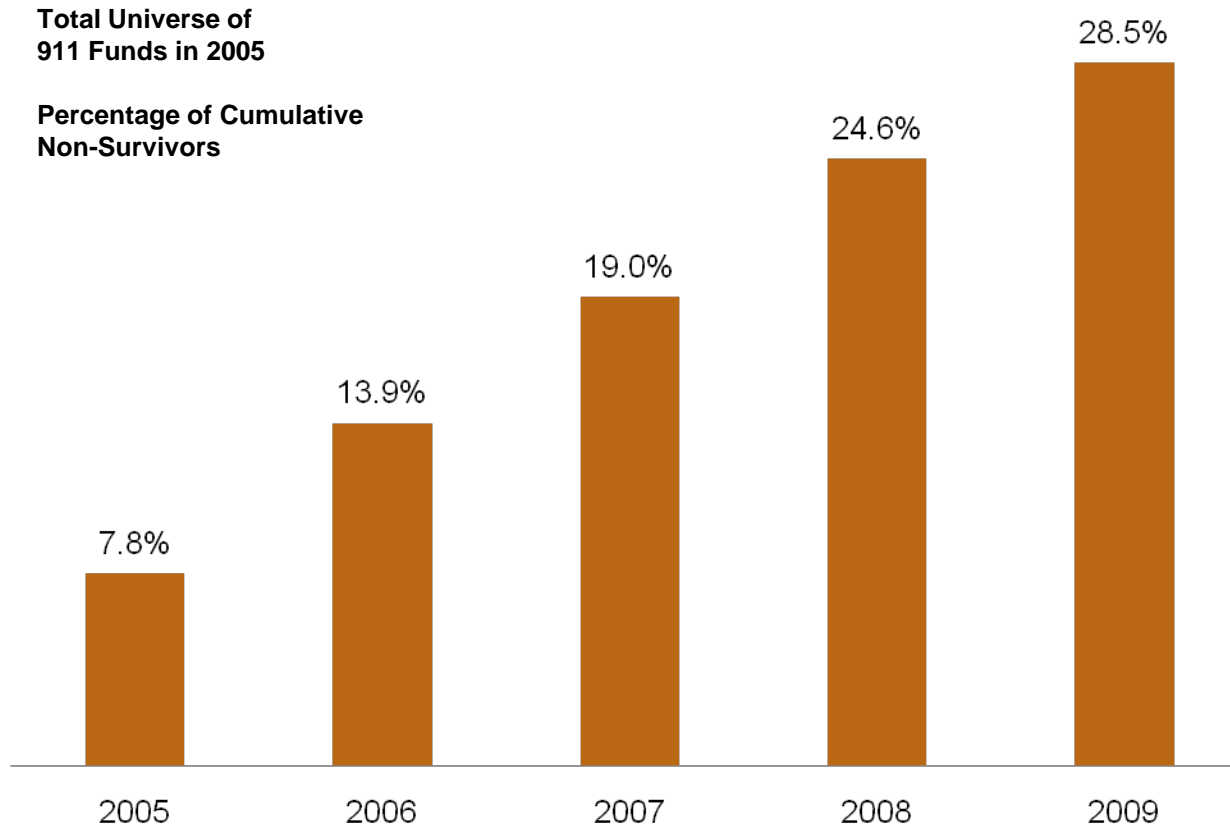
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# Non-Surviving Bond Funds

Actively Managed US Bond Funds  
2005-2009



On average, 6.5% of the actively managed bond fund universe disappeared each year.

During 2005, 7.8% of the funds had disappeared. By the fifth year, 28.5% of the fund universe (260 funds) had disappeared.

Poor investment results is one likely reason for non-survivorship.

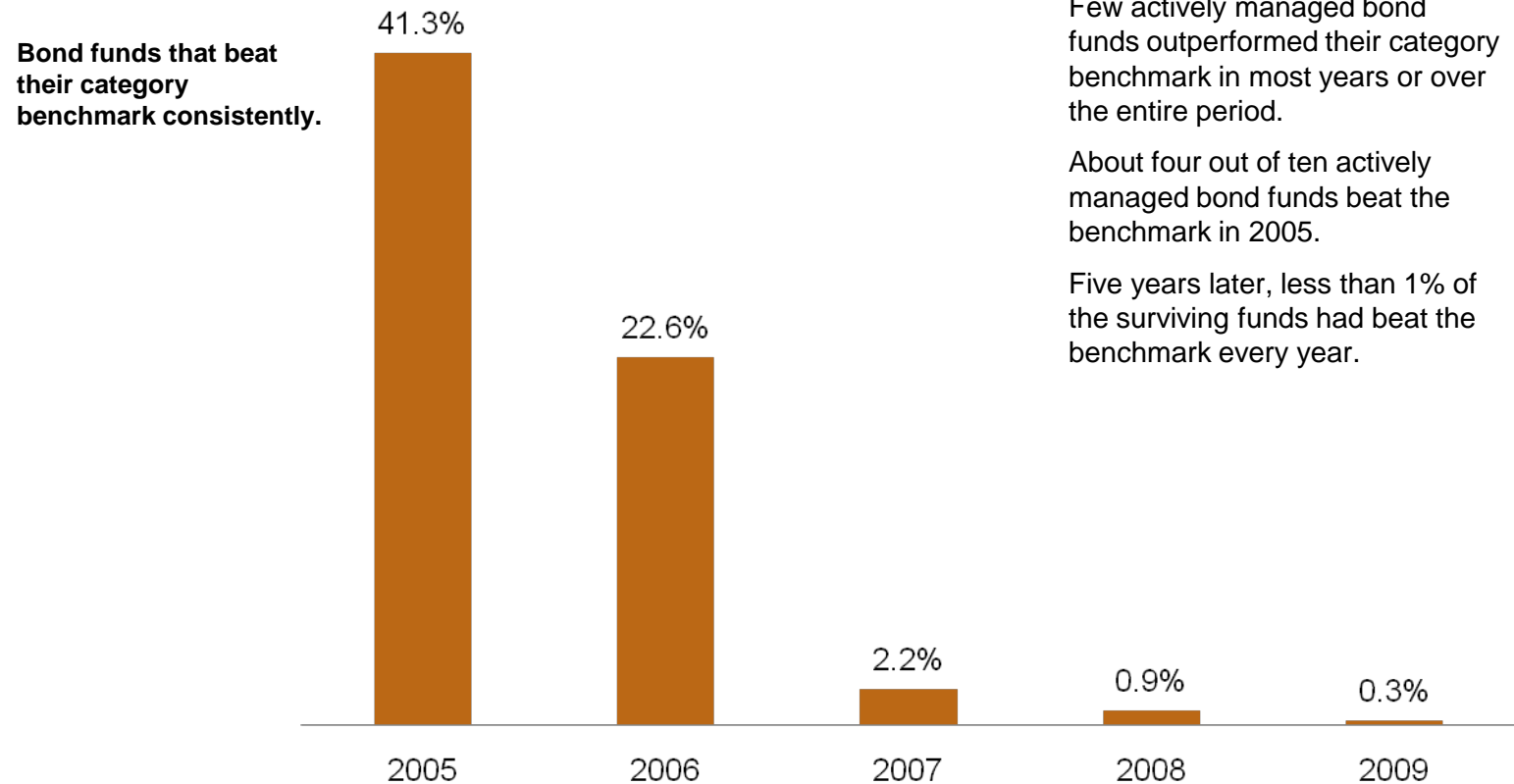
Data provided by CRSP Survivor-Bias-Free US Mutual Fund Database. Sample includes mutual funds existing as of 12/2004. Returns analyzed for the five-year period from 2005-2009. Multiple share classes are aggregated to fund level. Index funds, inverse funds, and leveraged funds are excluded.

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# Few Consistent Bond Fund Winners

Actively Managed US Bond Funds  
2005-2009



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