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The US Mutual Fund Landscape

2016 Report

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The Mutual Fund Landscape

2016 Report

This report documents survivorship and performance of US mutual funds, and shows the negative impact of high fees and turnover on returns.

The data reveals that few mutual funds have delivered benchmark-beating returns and quantifies an investor's challenge to identify outperforming managers in advance.

Findings

- Most mutual funds underperformed their benchmarks.
- Strong track records failed to persist.
- High costs and excessive turnover may have contributed to underperformance.

Lessons

- The market does a good job of pricing securities, making it difficult for managers to outperform by trying to outguess other participants.
- Managers in search of mispricing face high cost barriers as they try to beat the market.
- Successful fund investing involves more than picking past winners.
- Consider a fund's market philosophy, investment objectives, strategy, trading costs, and other factors.

Overview:

The US Mutual Fund Industry

Assets under Management

Survivorship and Outperformance
- ❖ Equity Funds
- ❖ Fixed Income Funds

Do Winners Keep Winning?
- ❖ Equity Funds
- ❖ Fixed Income Funds

High Costs Make Outperformance Difficult

High Trading Costs Make Outperformance Difficult

Report Summary

Data Appendix

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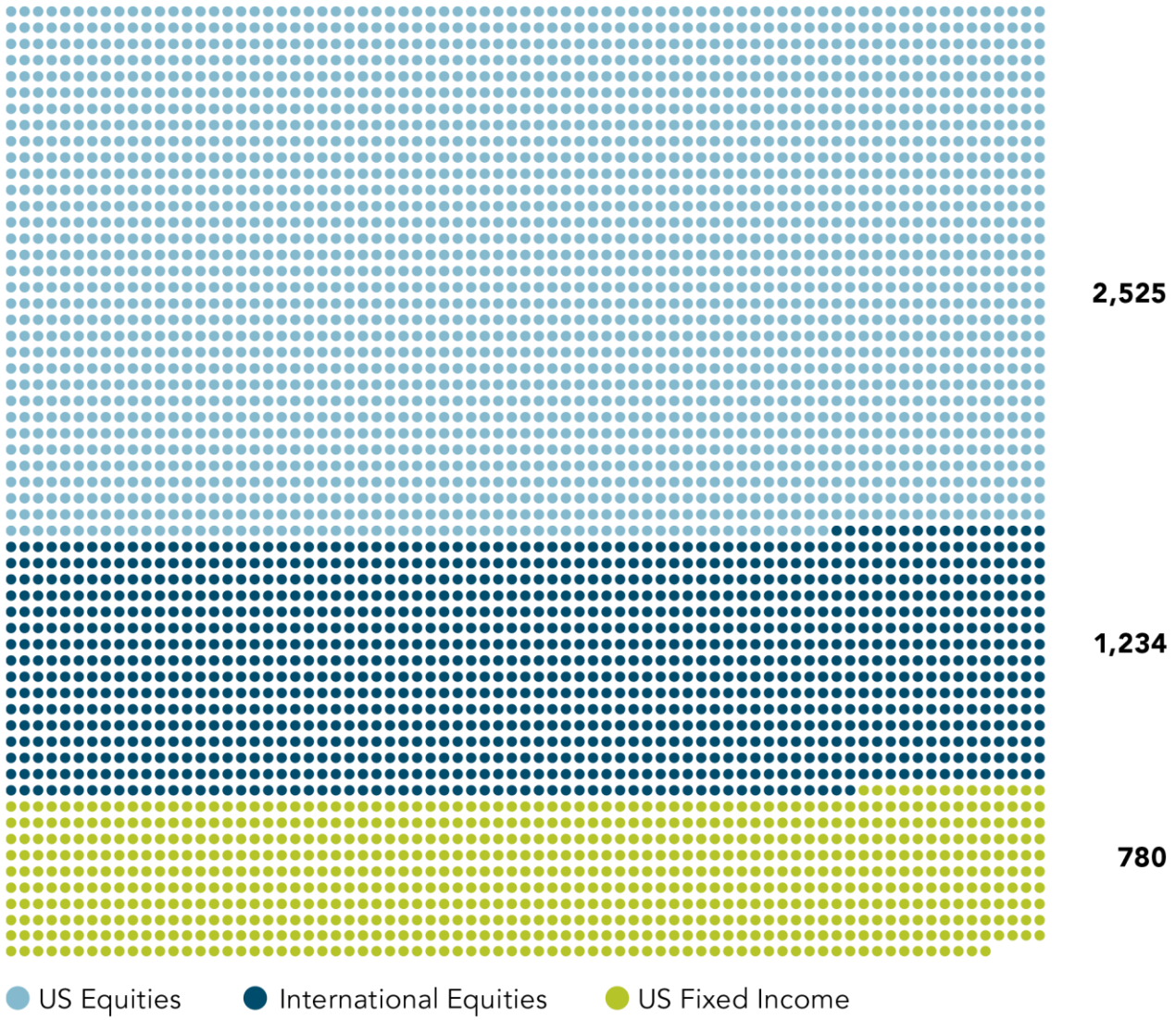
Representative Sample of US Mutual Funds

Number of equity and fixed income funds, 2015

This study evaluates a sample of more than 4,500 US mutual funds that represent about $6.6 trillion in wealth at the end of 2015.



In US dollars. Number of US-domiciled funds in the sample as of December 31, 2015. International equities include non-US developed and emerging markets funds. Sample excludes index funds. **See Data appendix for more information.**
US-domiciled mutual fund data is from the CRSP Survivor-Bias-Free US Mutual Fund Database, provided by the Center for Research in Security Prices, University of Chicago.

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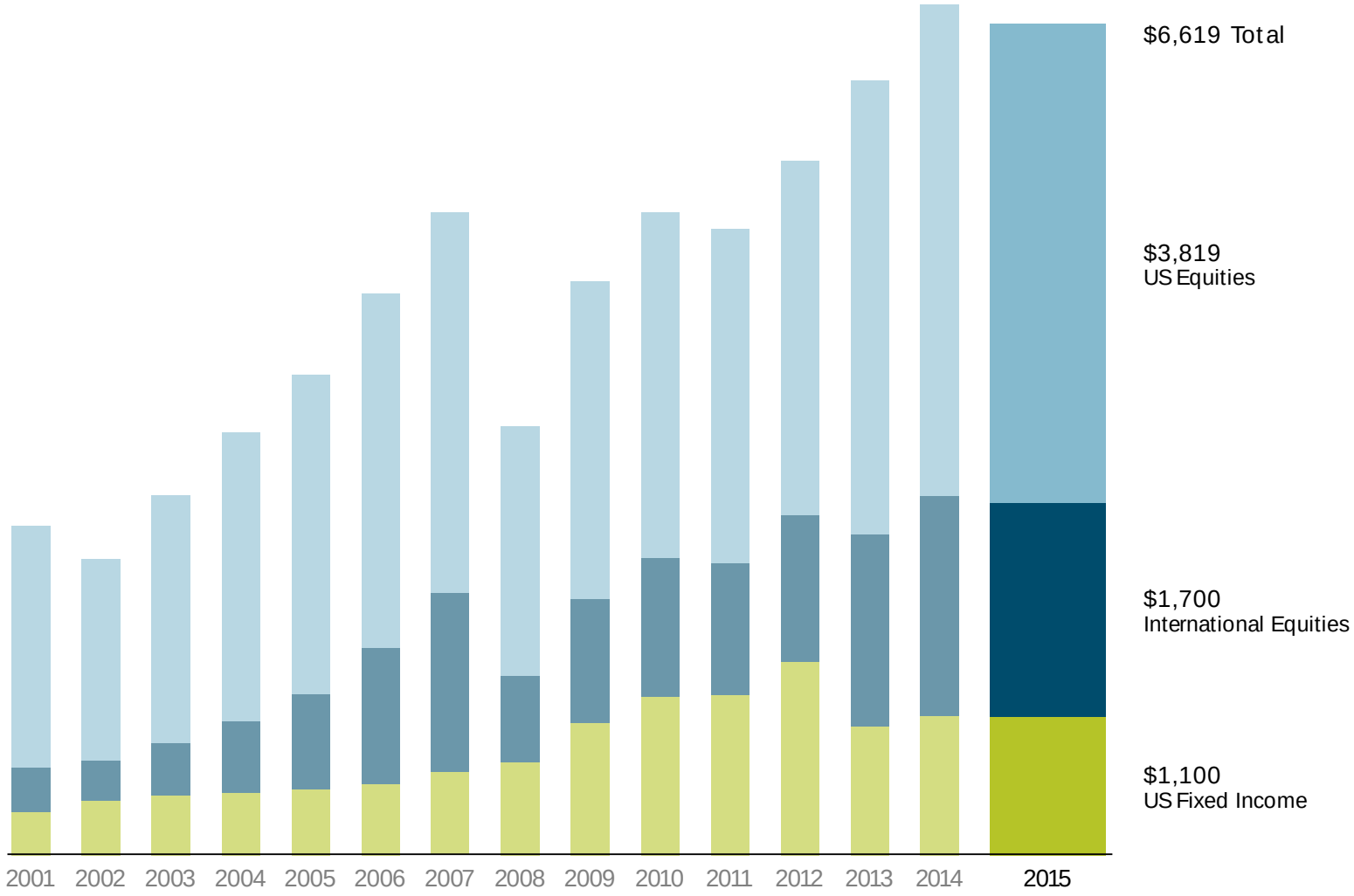
Assets under Management

In USD (billions), 2001–2015



In US dollars. Number of US-domiciled funds in the sample as of December 31, 2015. International equities include non-US developed and emerging markets funds. Sample excludes index funds. **See Data appendix for more information.**
US-domiciled mutual fund data is from the CRSP Survivor-Bias-Free US Mutual Fund Database, provided by the Center for Research in Security Prices, University of Chicago.

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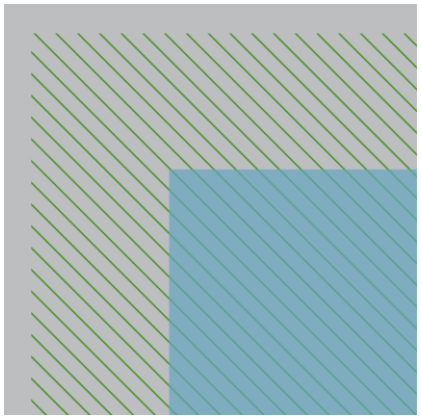
Survivorship and Outperformance

Performance periods ending December 31, 2015—Equity Funds

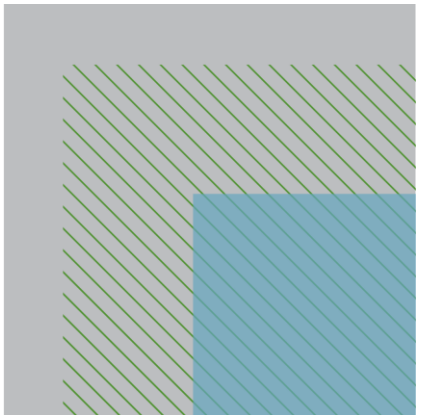
Beginners Survivors Outperformers

3 YEARS
3,550 funds at beginning



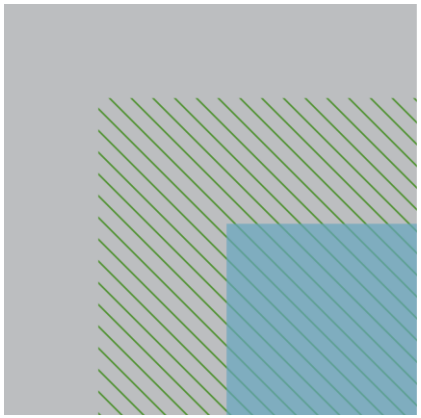
87% Survive **36%** Outperform

5 YEARS
3,711 funds at beginning



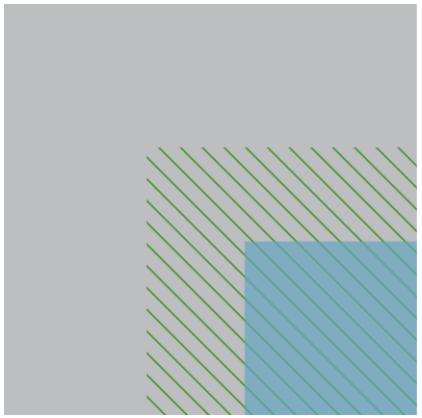
76% Survive **29%** Outperform

10 YEARS
2,730 funds at beginning



59% Survive **21%** Outperform

15 YEARS
2,758 funds at beginning



43% Survive **17%** Outperform

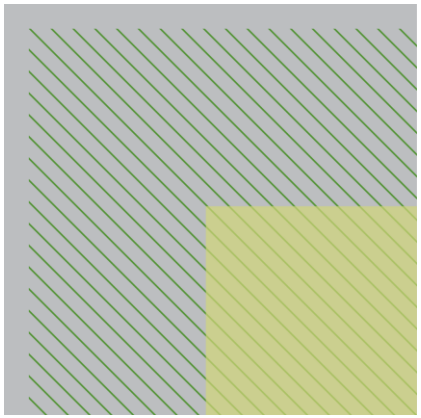
Beginning sample includes funds as of the beginning of the three-, five-, 10-, and 15-year periods ending December 31, 2015. The number of beginners is indicated below the period label. Survivors are funds that were still in existence as of December 31, 2015. Non-survivors include funds that were either liquidated or merged. Outperformers (winners) are funds that survived and beat their respective benchmarks over the period. **Past performance is no guarantee of future results. See Data appendix for more information.** US-domiciled mutual fund data is from the CRSP Survivor-Bias-Free US Mutual Fund Database, provided by the Center for Research in Security Prices, University of Chicago.

Survivorship and Outperformance

Performance periods ending December 31, 2015—Fixed Income Funds

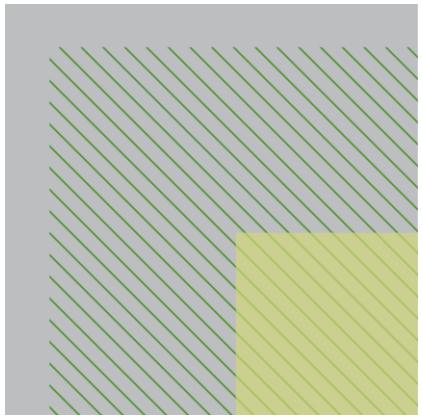
Beginners Survivors Outperformers

3 YEARS
811 funds at beginning



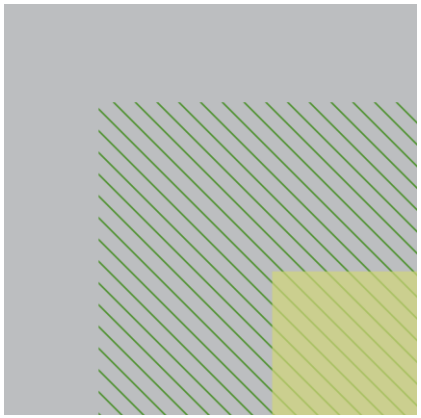
88% Survive **26%** Outperform

5 YEARS
833 funds at beginning



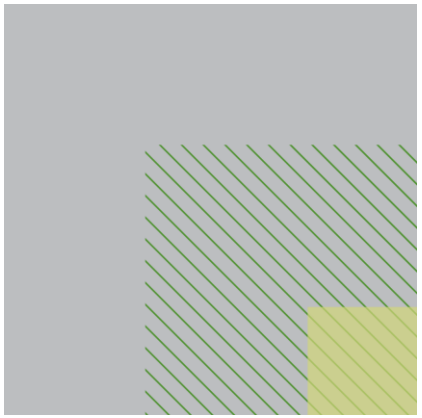
80% Survive **18%** Outperform

10 YEARS
642 funds at beginning



60% Survive **12%** Outperform

15 YEARS
709 funds at beginning

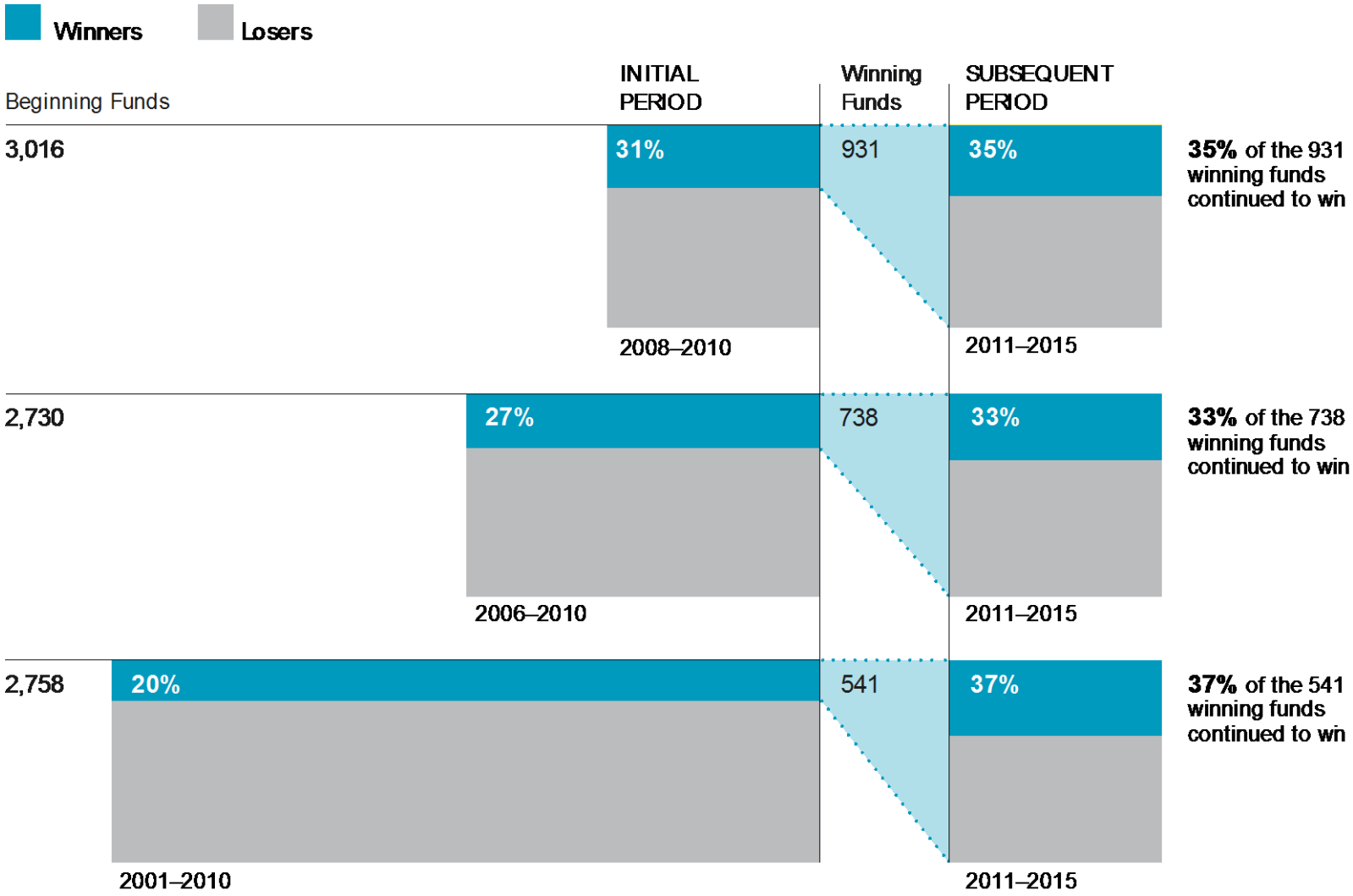


43% Survive **7%** Outperform

Beginning sample includes funds as of the beginning of the three-, five-, 10-, and 15-year periods ending December 31, 2015. The number of beginners is indicated below the period label. Survivors are funds that were still in existence as of December 31, 2015. Non-survivors include funds that were either liquidated or merged. Outperformers (winners) are funds that survived and beat their respective benchmarks over the period. **Past performance is no guarantee of future results. See Data appendix for more information.** US-domiciled mutual fund data is from the CRSP Survivor-Bias-Free US Mutual Fund Database, provided by the Center for Research in Security Prices, University of Chicago.

Do Winners Keep Winning?

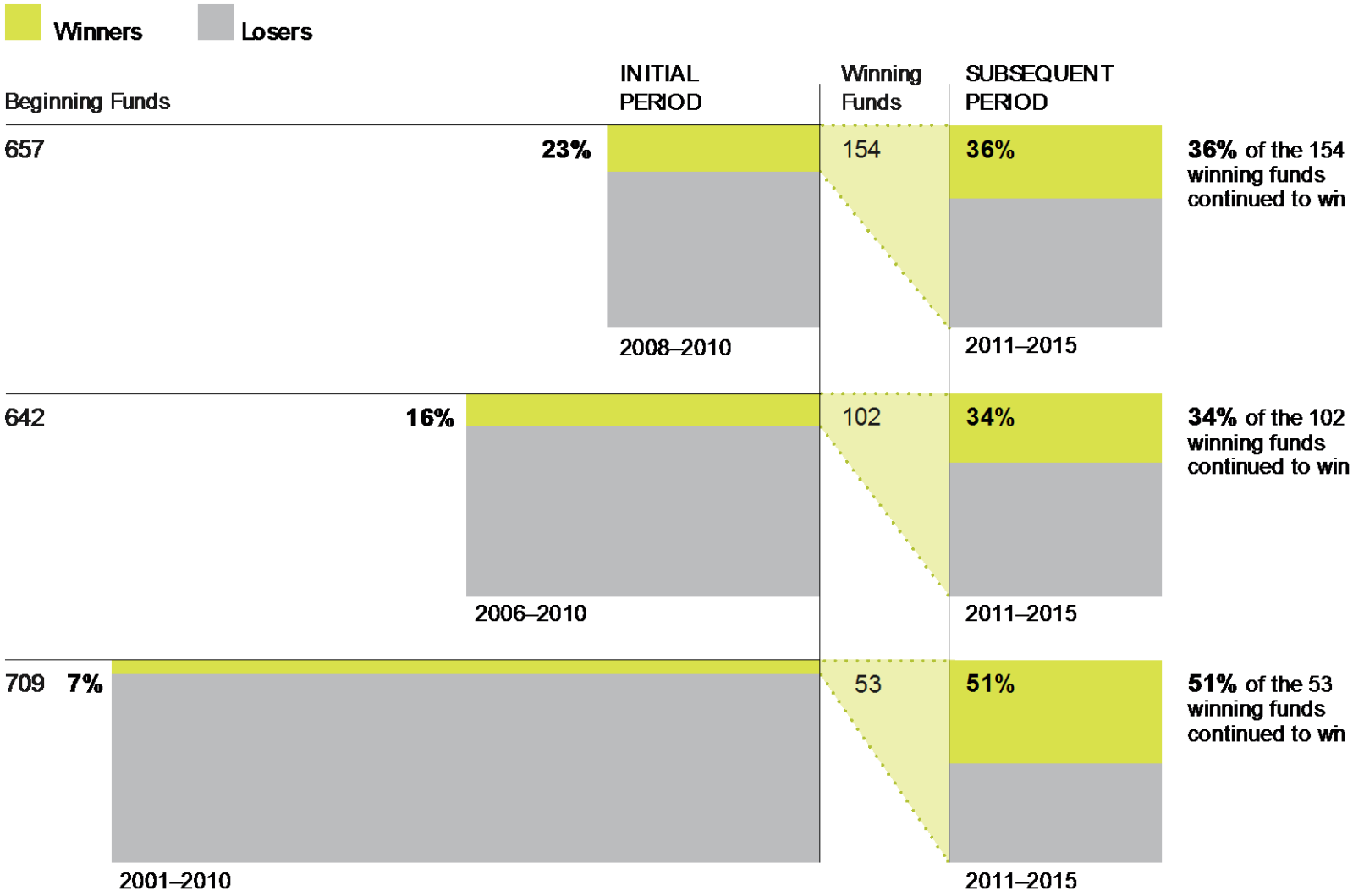
Past performance vs. subsequent performance—Equity Funds



The sample includes funds at the beginning of the three-, five-, and 10-year periods, ending in December 2010. The graph shows the proportion of funds that outperformed and underperformed their respective benchmarks (i.e., winners and losers) during the initial periods. Winning funds were re-evaluated in the subsequent period from 2011 through 2015, with the graph showing the proportion of outperformance and underperformance among past winners. (Fund counts and percentages may not correspond due to rounding.) **Past performance is no guarantee of future results. See Data appendix for more information.** US-domiciled mutual fund data is from the CRSP Survivor-Bias-Free US Mutual Fund Database, provided by the Center for Research in Security Prices, University of Chicago.

Do Winners Keep Winning?

Past performance vs. subsequent performance—Fixed Income Funds



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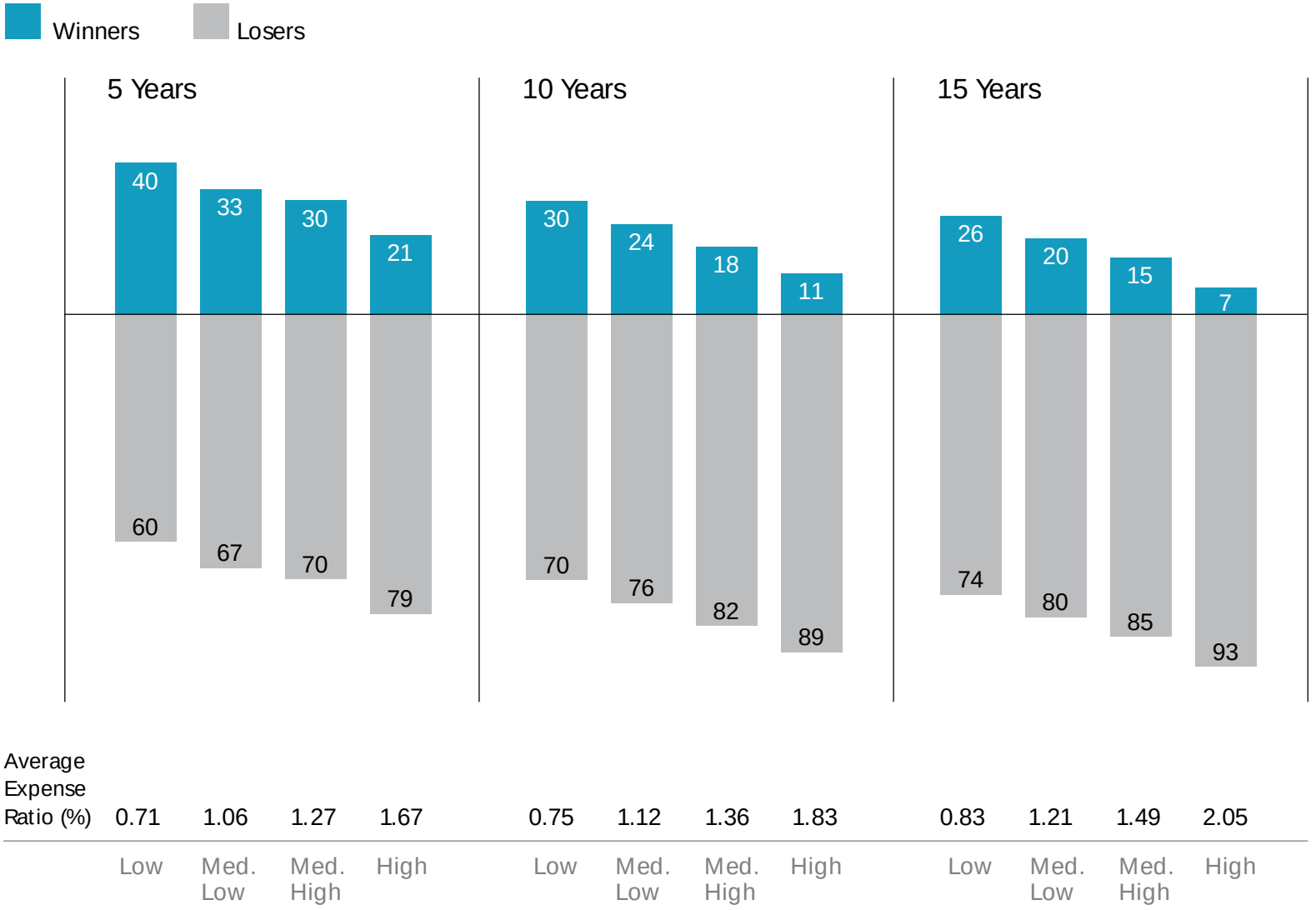
High Costs Make Outperformance Difficult

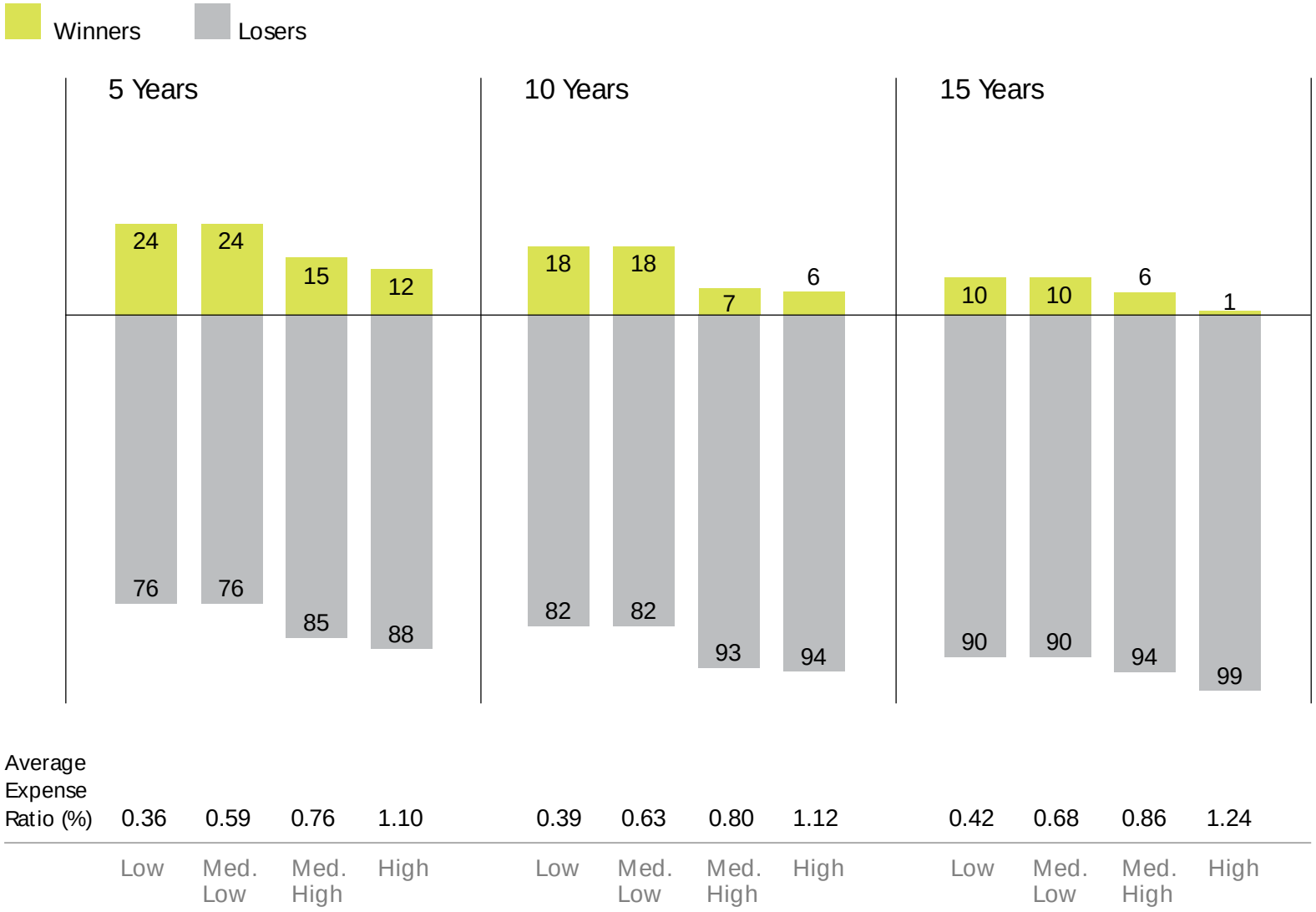
Winners and losers based on expense ratios (%)—Equity Funds



The sample includes funds at the beginning of the five-, 10-, and 15-year periods ending December 31, 2015. Funds are ranked by quartiles based on average expense ratio over the sample period, and performance is compared to their respective benchmarks. The chart shows the percentage of winner and loser funds within each expense ratio quartile. **Past performance is no guarantee of future results. See Data appendix for more information.**
US-domiciled mutual fund data is from the CRSP Survivor-Bias-Free US Mutual Fund Database, provided by the Center for Research in Security Prices, University of Chicago.

High Costs Make Outperformance Difficult

Winners and losers based on expense ratios (%)—Fixed Income Funds



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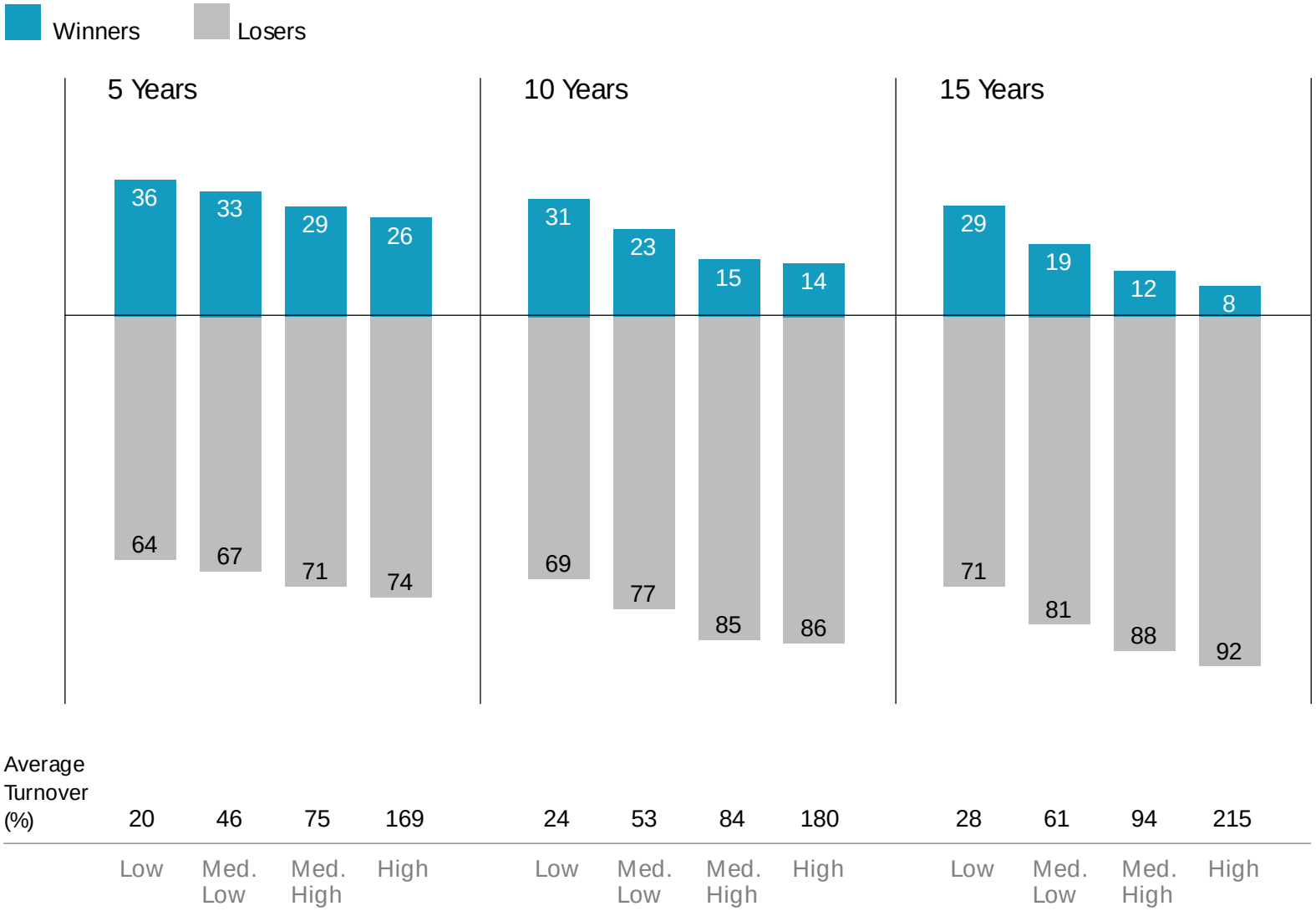
High Trading Costs Make Outperformance Difficult

Winners and losers based on turnover (%)—Equity Funds



The sample includes equity funds at the beginning of the five-, 10-, and 15-year periods ending December 31, 2015. Funds are ranked by quartiles based on average turnover during the sample period, and performance is compared to their respective benchmarks. The chart shows the percentage of winner and loser funds within each turnover quartile. **Past performance is no guarantee of future results. See Data appendix for more information.** US-domiciled mutual fund data is from the CRSP Survivor-Bias-Free US Mutual Fund Database, provided by the Center for Research in Security Prices, University of Chicago.

Report Summary

The mutual fund landscape

Findings

- Most mutual funds underperformed their benchmarks.
- Strong track records failed to persist.
- High costs and excessive turnover may have contributed to underperformance.

Lessons

- The market does a good job of pricing securities, making it difficult for managers to outperform by trying to outguess other participants.
- Managers in search of mispricing face high cost barriers as they try to beat the market.
- Successful fund investing involves more than picking past winners.
- Consider a fund's market philosophy, investment objectives, strategy, trading costs, and other factors.

Data Appendix

US-domiciled mutual fund data is from the CRSP Survivor-Bias-Free US Mutual Fund Database, provided by the Center for Research in Security Prices, University of Chicago.

Certain types of equity and fixed income funds were excluded from the performance study. For equities, index funds, sector funds, and funds with a narrow investment focus, such as real estate and gold, were excluded. Index funds, money market funds, municipal bond funds, and asset-backed security funds were excluded from fixed income.

Funds are identified using Lipper fund classification codes. Correlation coefficients are computed for each fund with respect to diversified benchmark indices using all return data available between January 1, 2001, and December 31, 2015. The index most highly correlated with a fund is assigned as its benchmark. Winner funds are those whose cumulative return over the period exceeded that of their respective benchmark. Loser funds are funds that did not survive the period or whose cumulative return did not exceed their respective benchmark.

Expense ratio ranges: The ranges of expense ratios for equity funds over the five-, 10-, and 15-year periods are 0.01% to 4.90%, 0.01% to 4.72%, and 0.07% to 4.44%, respectively. For fixed income funds, ranges over the same periods are 0.02% to 3.09%, 0.06% to 2.67%, and 0.03% to 3.66%, respectively.

Portfolio turnover ranges: Ranges for equity fund turnover over the five-, 10-, and 15-year periods are 1% to 1,535%, 1% to 1,388%, and 2% to 2,318%, respectively.

Benchmark data provided by Barclays, MSCI, Russell, Citigroup, BofA Merrill Lynch, and S&P. Barclays data provided by Barclays Bank PLC. MSCI data © MSCI 2016, all rights reserved. Russell data © Russell Investment Group 1995–2016, all rights reserved. Citigroup bond indices © 2016 by Citigroup. The BofA Merrill Lynch index is used with permission; © 2016 Merrill Lynch, Pierce, Fenner & Smith Incorporated; all rights reserved. Merrill Lynch, Pierce, Fenner & Smith Incorporated is a wholly owned subsidiary of Bank of America Corporation. The S&P data is provided by Standard & Poor's Index Services Group. Benchmark indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio.

Mutual fund investment values will fluctuate, and shares, when redeemed, may be worth more or less than original cost. Diversification neither assures a profit nor guarantees against a loss in a declining market. There is no guarantee investment strategies will be successful.

Past performance is no guarantee of future results.

Mutual Fund 10-Year Survivorship and Outperformance

Performance Periods Ending December 31, 2015

Fund Category	Benchmark	# Begin	Survive (%)	Outperform (%)
US EQUITIES				
US All Cap Core	Russell 3000 Index	262	61	13
US All Cap Value	Russell 3000 Value Index	105	63	29
US All Cap Growth	Russell 3000 Growth Index	221	54	14
US Large Cap Core	Russell 1000 Index	138	57	14
US Large Cap Value	Russell 1000 Value Index	133	53	15
US Large Cap Growth	Russell 1000 Growth Index	28	21	11
US Small Cap Core	Russell 2000 Index	181	63	26
US Small Cap Value	Russell 2000 Value Index	92	67	55
US Small Cap Growth	Russell 2000 Growth Index	199	52	19
INTERNATIONAL EQUITIES				
Non-US Developed All Cap	MSCI All Country World ex USA IMI Index (net div.)	99	57	31
Non-US Developed Large Cap	MSCI All Country World ex USA Index (net div.)	169	62	30
Non-US Developed Small Cap	MSCI All Country World ex USA Small Cap Index (net div.)	61	64	36
Emerging Markets	MSCI Emerging Markets Index (net div.)	85	76	34
GLOBAL EQUITIES				
Global All Cap	MSCI All Country World IMI Index (net div.)	175	64	27
Global Large Cap	MSCI All Country World Index (net div.)	39	59	33
Global Small Cap	MSCI All Country World Small Cap Index (net div.)	51	67	16
US FIXED INCOME				
US Short Duration	Barclays Treasury Bond Index 1–5 Years	82	56	18
US Market Duration	Barclays US Government Bond Index	340	63	9
Inflation-Protected	Barclays US TIPS Index	33	67	3

Sample includes funds available as of December 31, 2005. Funds are identified using Lipper fund classification codes. Correlation coefficients are computed for each fund with respect to diversified benchmark indices using all return data available between January 1, 2006 and December 31, 2015. Funds are categorized according to the index with which their returns are most highly correlated. Survivors are funds that were still in existence as of December 31, 2015. Non-survivors include funds that were either liquidated or merged. Outperforming funds are those whose cumulative return over the period exceeded that of their respective benchmark. All fund returns are net of fees and expenses. **Past performance is no guarantee of future results.** Benchmark data from Russell, Barclays, and MSCI. US-domiciled mutual fund data is from the CRSP Survivor-Bias-Free US Mutual Fund Database, provided by the Center for Research in Security Prices, University of Chicago. Sample excludes index funds.