



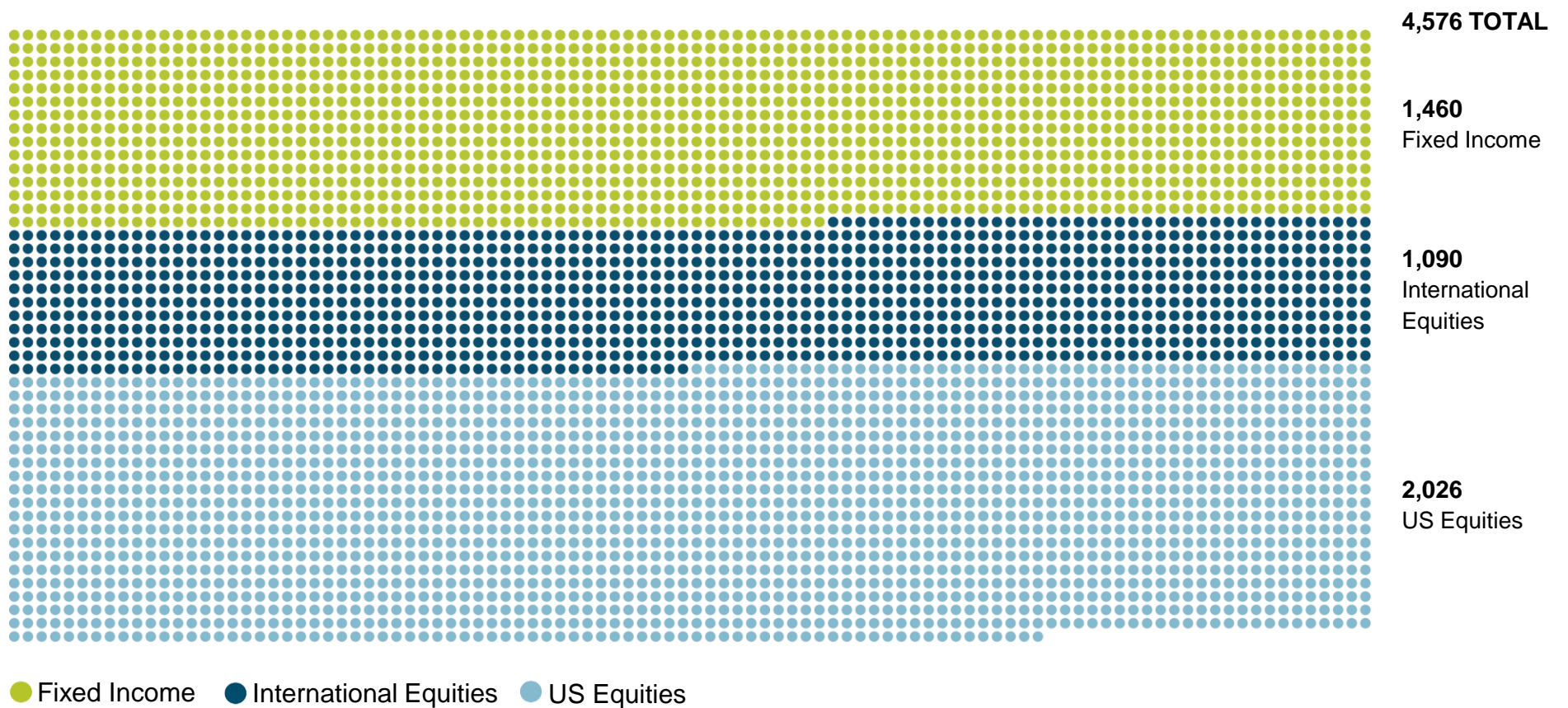
# COMMENCEMENT FINANCIAL PLANNING LLC

The US Mutual Fund Landscape

2019 Report

# US-Based Mutual Funds, 2018

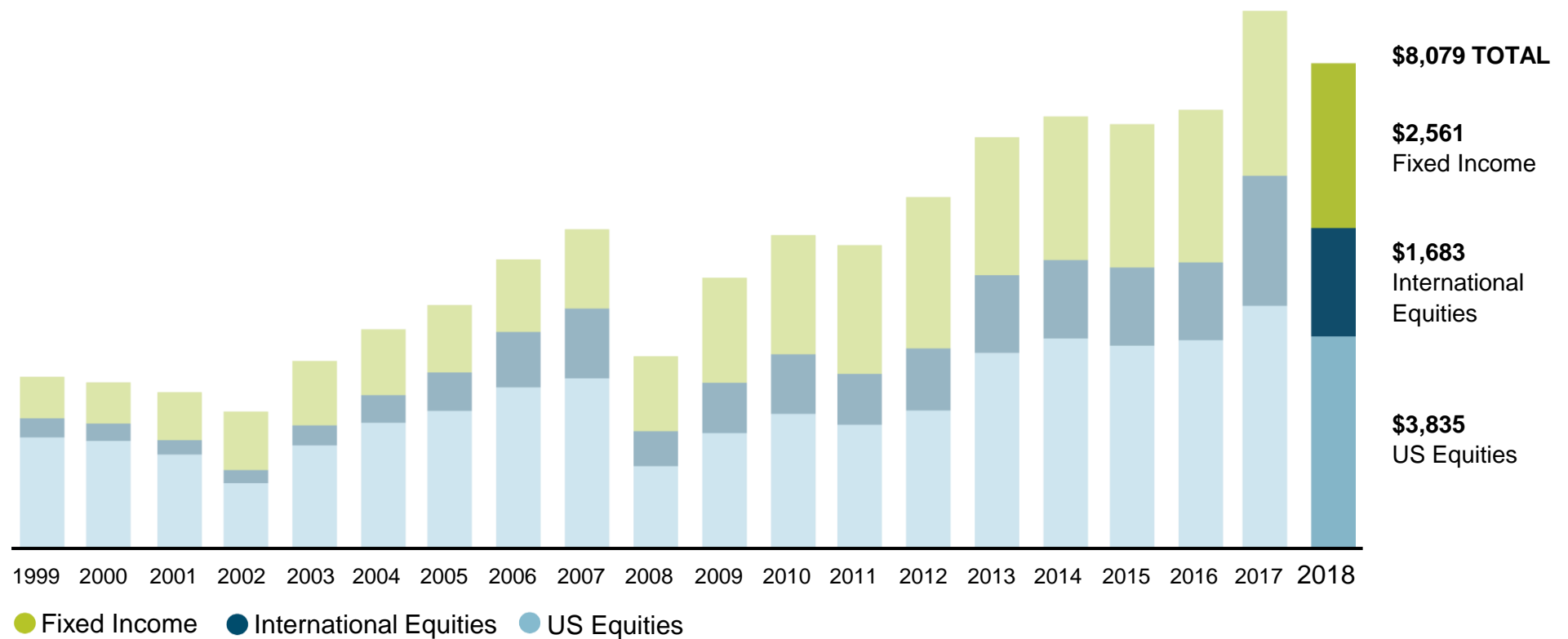
Number of equity and fixed income funds as of December 31, 2018



Number of US-domiciled funds in the representative industry sample as of December 31, 2018. International equities include non-US developed and emerging markets funds. US-domiciled open-end mutual fund data is from Morningstar. See Data Appendix for more information.

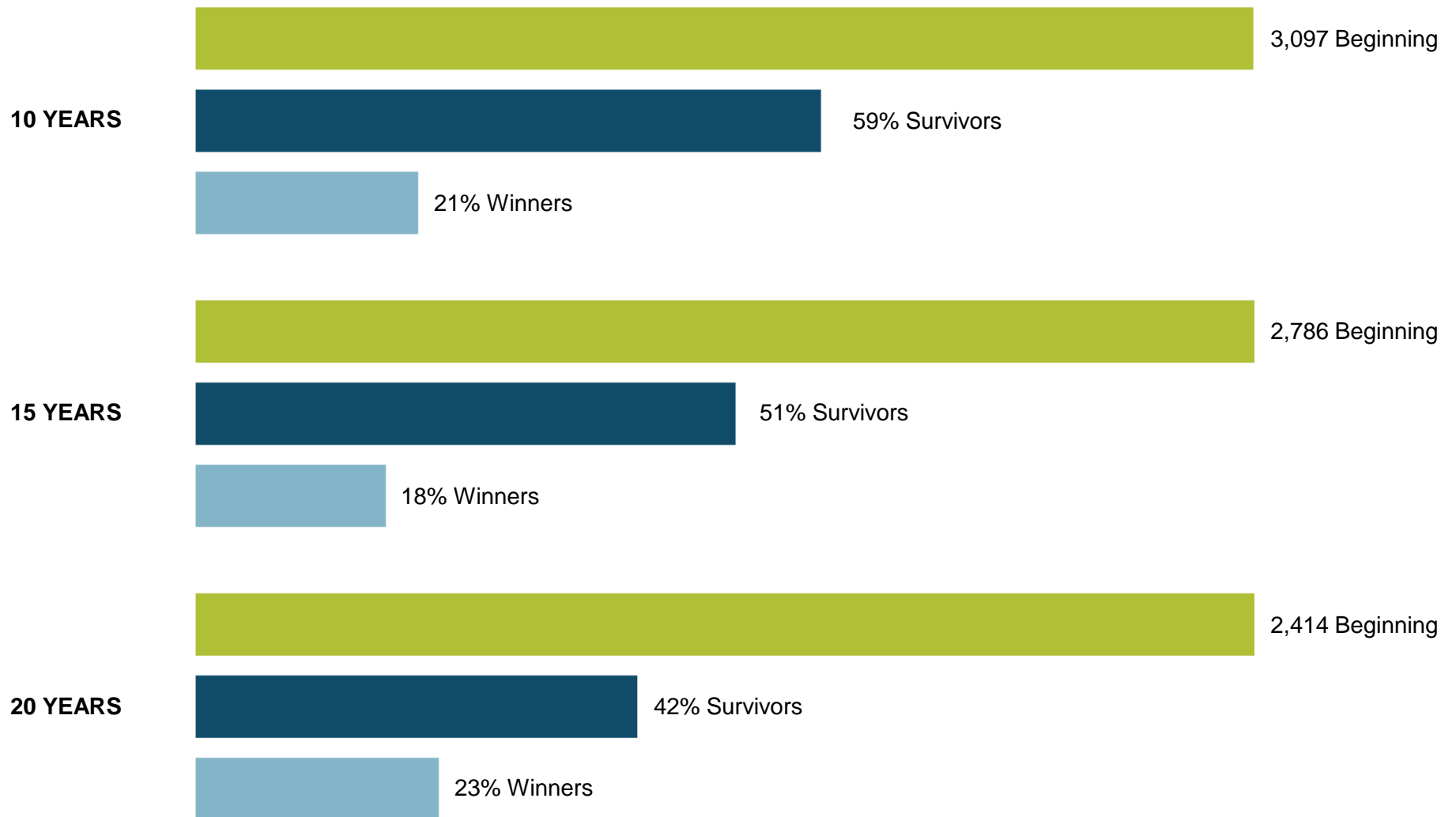
# Assets under Management

In USD (billions), 1999–2018



# Few Equity Funds Have Survived and Outperformed

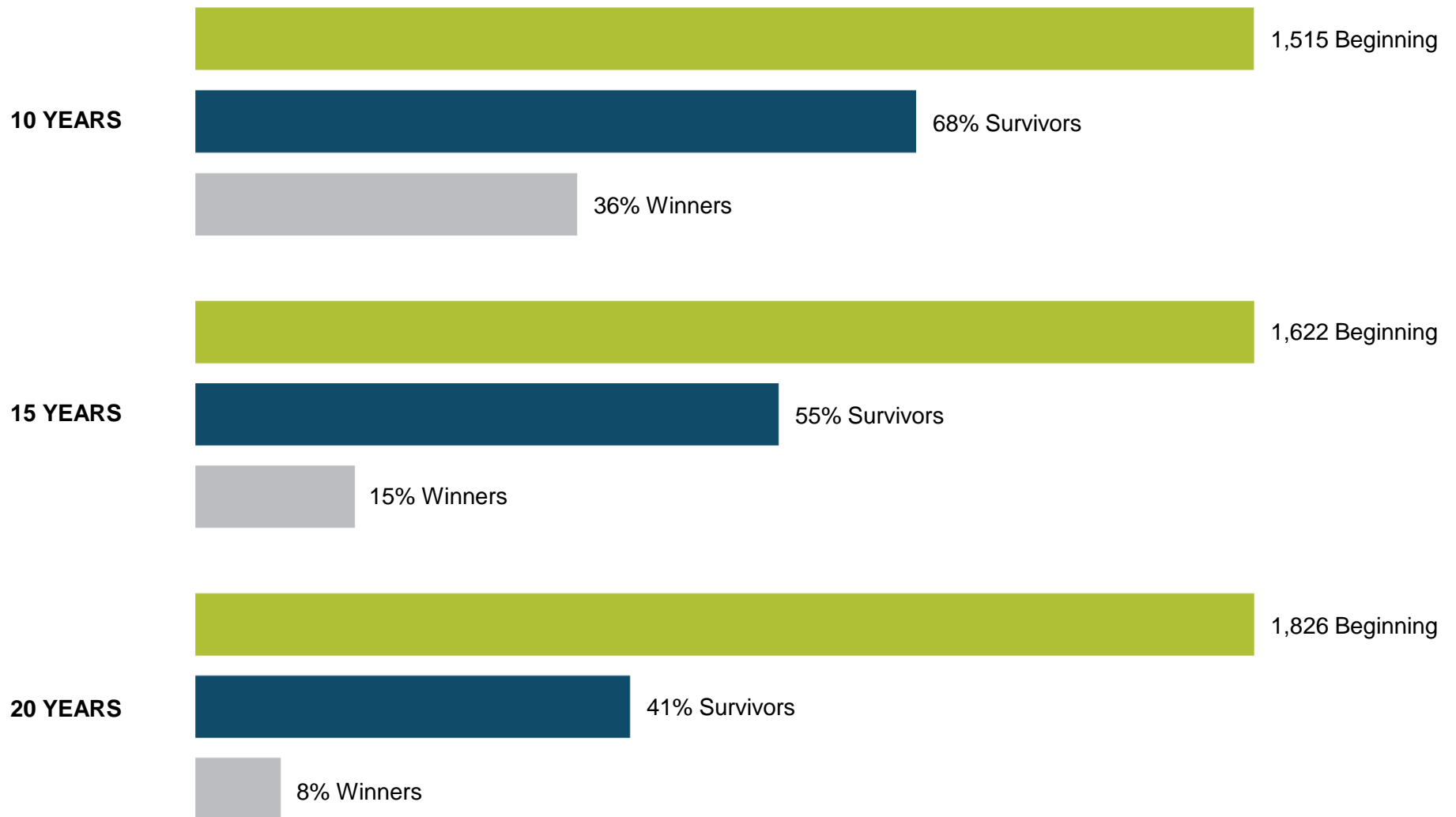
Equity fund performance periods ending December 31, 2018



The sample includes funds at the beginning of the 10-, 15-, and 20-year periods ending December 31, 2018. Survivors are funds that had returns for every month in the sample period. Winners are funds that survived and outperformed their benchmark over the period. US-domiciled open-end mutual fund data is from Morningstar. Past performance is no guarantee of future results. See Data Appendix for more information.

# Few Fixed Income Funds Have Survived and Outperformed

Fixed income fund performance periods ending December 31, 2018

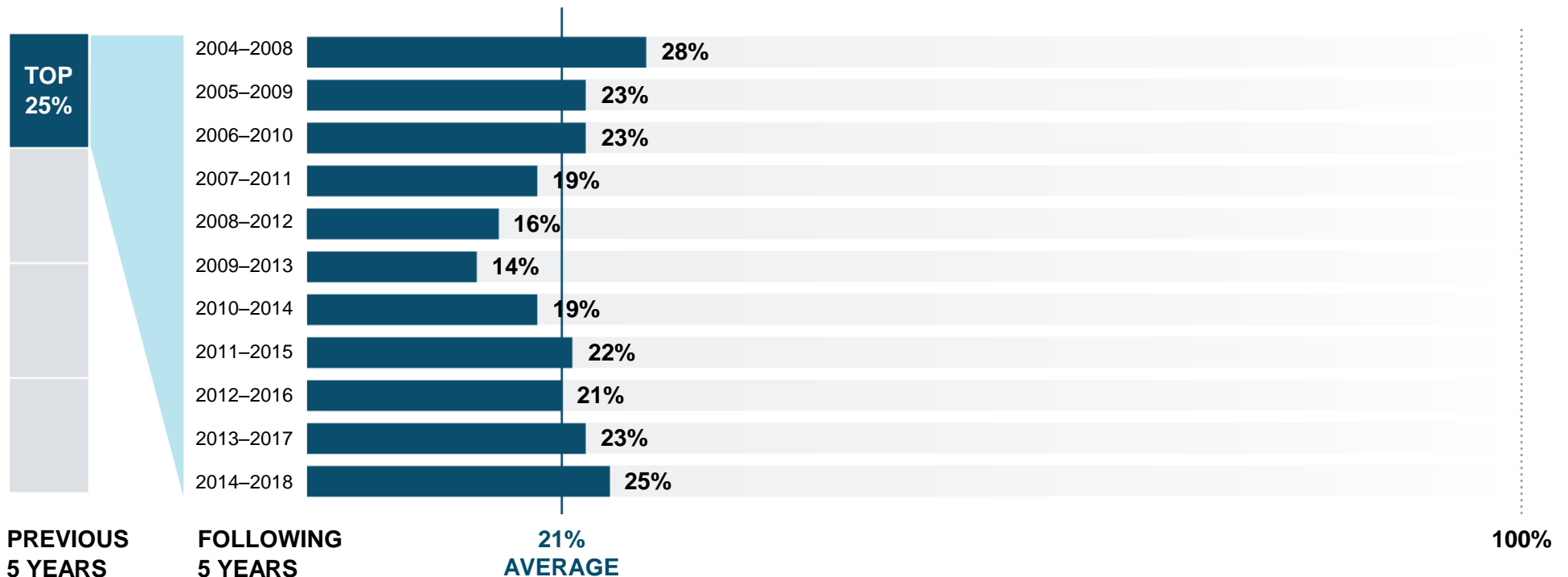


The sample includes funds at the beginning of the 10-, 15-, and 20-year periods ending December 31, 2018. Survivors are funds that had returns for every month in the sample period. Winners are funds that survived and outperformed their benchmark over the period. US-domiciled open-end mutual fund data is from Morningstar. Past performance is no guarantee of future results. See Data Appendix for more information.

# Past Performance Is Not Enough to Predict Future Results

Percentage of funds that were top-quartile performers in consecutive five-year periods

## EQUITY FUNDS

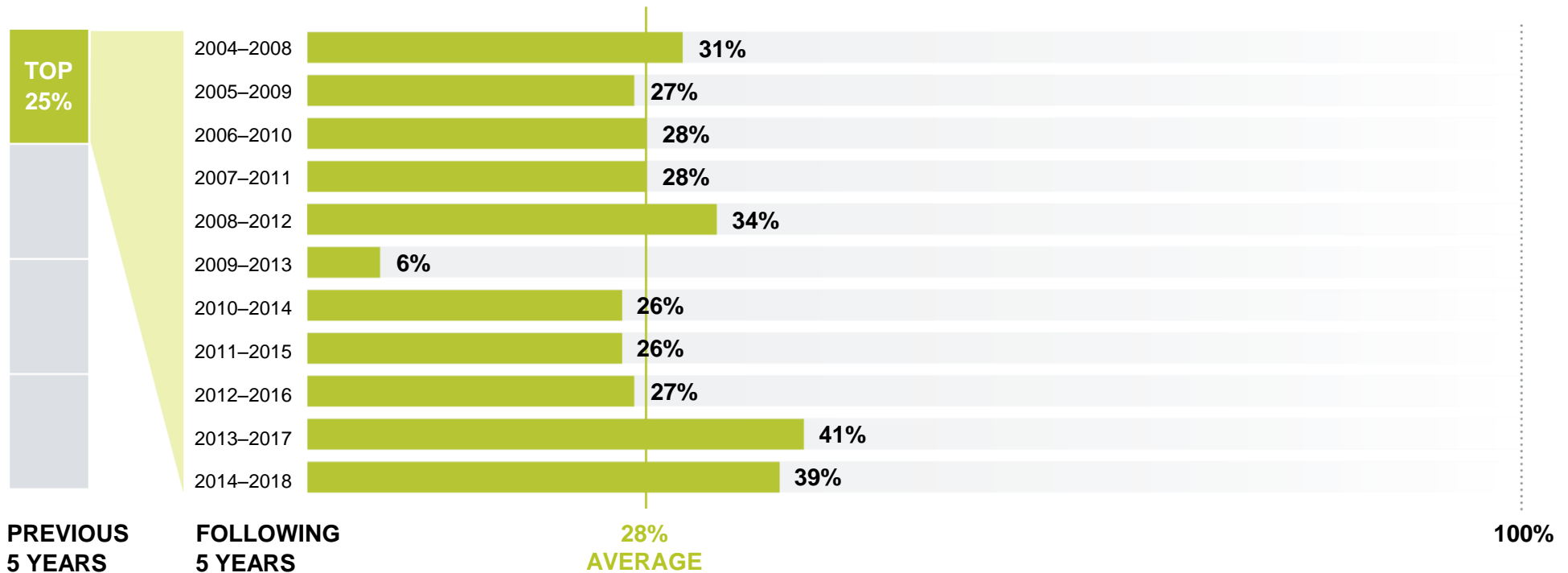


At the end of each year, funds are sorted within their category based on their five-year total return. The tables show the percentage of funds in the top quartile (25%) of five-year performance that ranked in the top quartile of performance over the following five years. Example (2014–2018): For equity funds ranked in the top quartile of performance in their category in the previous period (2009–2013), only 25% also ranked in the top quartile in the subsequent period (2014–2018). US-domiciled open-end mutual fund data is from Morningstar. Past performance is no guarantee of future results. See Data Appendix for more information.

# Past Performance Is Not Enough to Predict Future Results

Percentage of funds that were top-quartile performers in consecutive five-year periods

## FIXED INCOME FUNDS

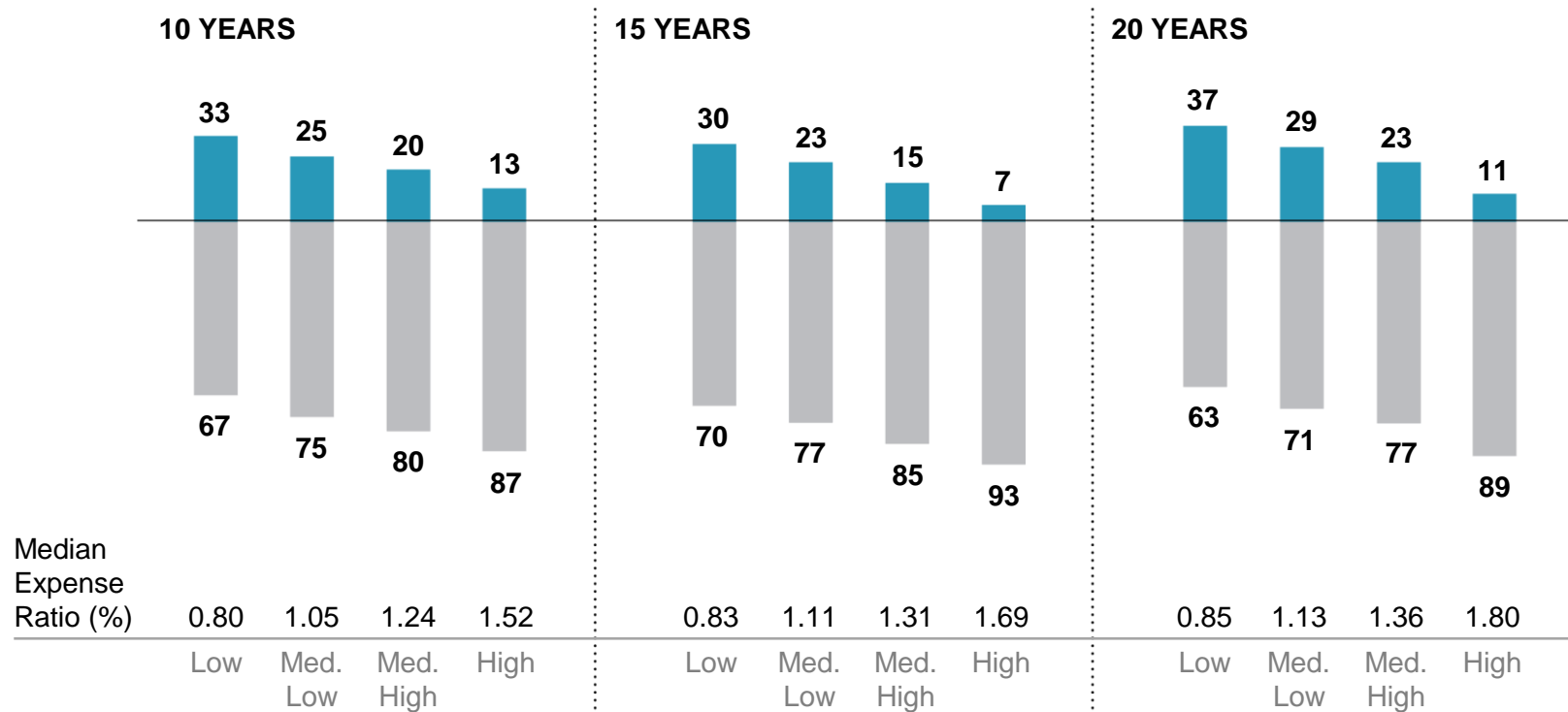


At the end of each year, funds are sorted within their category based on their five-year total return. The tables show the percentage of funds in the top quartile (25%) of five-year performance that ranked in the top quartile of performance over the following five years. Example (2014–2018): For fixed income funds ranked in the top quartile of performance in their category in the previous period (2009–2013), only 39% also ranked in the top quartile in the subsequent period (2014–2018). US-domiciled open-end mutual fund data is from Morningstar. Past performance is no guarantee of future results. See Data Appendix for more information.

# High Costs Can Reduce Performance

Equity fund winners and losers based on expense ratios (%)

■ Winners
 ■ Losers



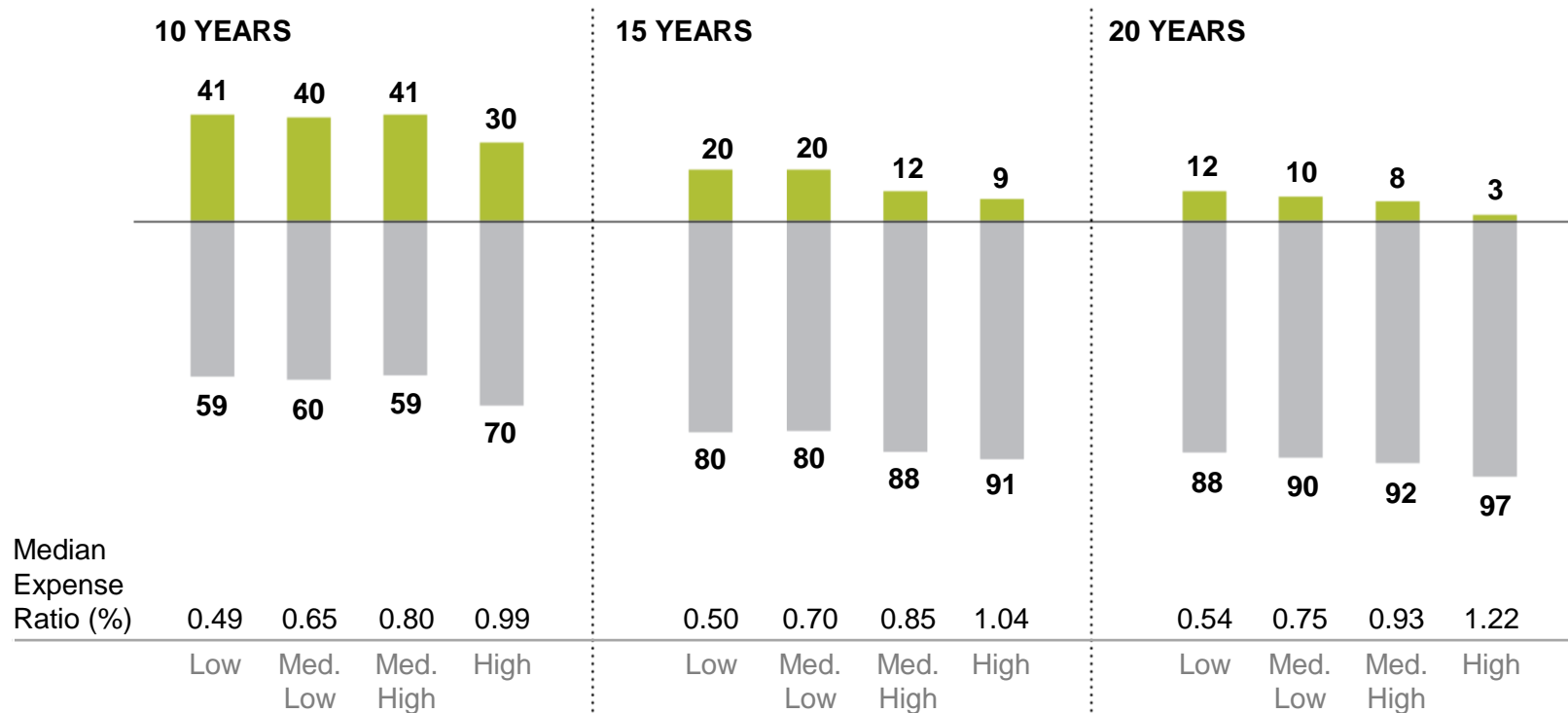
The sample includes funds at the beginning of the 10-, 15-, and 20-year periods ending December 31, 2018. Funds are sorted into quartiles within their category based on average expense ratio during the sample period. The chart shows the percentage of winner and loser funds by expense ratio quartile for each period. Winners are funds that survived and outperformed their benchmark over the period. Losers are funds that either did not survive or did not outperform their respective benchmark. US-domiciled open-end mutual fund data is from Morningstar. Past performance is no guarantee of future results. See Data Appendix for more information.



# High Costs Can Reduce Performance

Fixed income fund winners and losers based on expense ratios (%)

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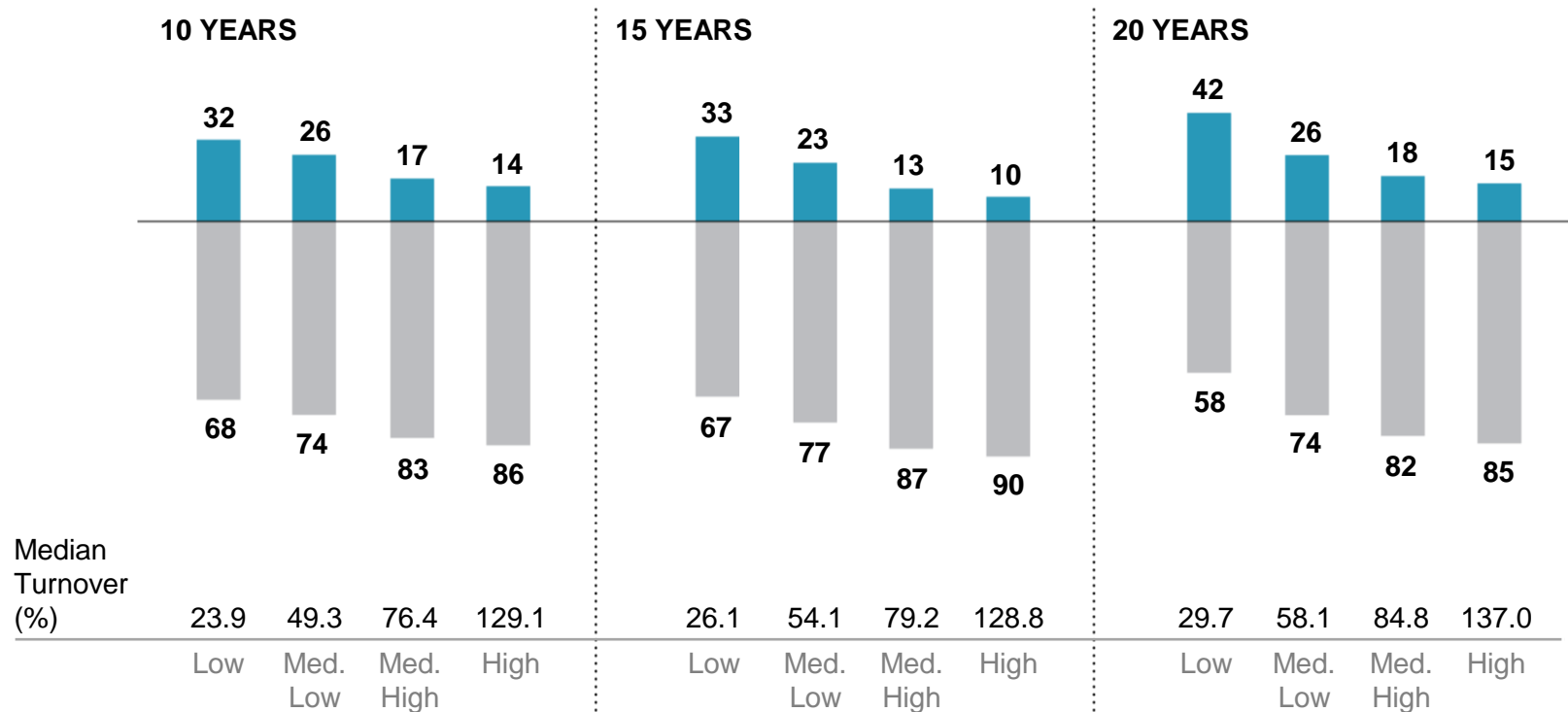


The sample includes funds at the beginning of the 10-, 15-, and 20-year periods ending December 31, 2018. Funds are sorted into quartiles within their category based on average expense ratio during the sample period. The chart shows the percentage of winner and loser funds by expense ratio quartile for each period. Winners are funds that survived and outperformed their benchmark over the period. Losers are funds that either did not survive or did not outperform their respective benchmark. US-domiciled open-end mutual fund data is from Morningstar. Past performance is no guarantee of future results. See Data Appendix for more information.

# High Trading Costs Can Also Impact Returns

Equity fund winners and losers based on turnover (%)

■ Winners
 ■ Losers



The sample includes equity funds at the beginning of the 10-, 15-, and 20-year periods ending December 31, 2018. Funds are sorted into quartiles within their category based on average turnover during the sample period. The chart shows the percentage of winner and loser funds by turnover quartile for each period. Winners are funds that survived and outperformed their benchmark over the period. Losers are funds that either did not survive or did not outperform their respective benchmark. US-domiciled open-end mutual fund data is from Morningstar. Past performance is no guarantee of future results. See Data Appendix for more information.

# Report Summary

The mutual fund landscape

## Findings

- Outperforming funds were in the minority.
- Strong track records failed to persist.
- High costs and excessive turnover may have contributed to underperformance.

## Lessons

- Markets effectively aggregate investor knowledge and expectations into prices that are reliable.
- Managers attempting to outguess market prices may incur high costs that raise the barrier to outperforming an index.
- Successful fund investing involves more than picking a top performing fund from the past.
- Consider a fund's market philosophy, robustness in portfolio design, attention to costs, and other factors.

# Data Appendix

The *Mutual Fund Landscape* study is conducted by Dimensional Fund Advisors LP.

US-domiciled open-end mutual fund data is from Morningstar.

Equity fund sample includes the Morningstar historical categories: Diversified Emerging Markets, Europe Stock, Foreign Large Blend, Foreign Large Growth, Foreign Large Value, Foreign Small/Mid Blend, Foreign Small/Mid Growth, Foreign Small/Mid Value, Global Real Estate, Japan Stock, Large Blend, Large Growth, Large Value, Mid-Cap Blend, Mid-Cap Growth, Mid-Cap Value, Miscellaneous Region, Pacific/Asia ex-Japan Stock, Real Estate, Small Blend, Small Growth, Small Value, World Large Stock, and World Small/Mid Stock.

Fixed income fund sample includes the Morningstar historical categories: Corporate Bond, High Yield Bond, Inflation-Protected Bond, Intermediate Government, Intermediate-Term Bond, Long Government, Muni California Intermediate, Muni California Long, Muni Massachusetts, Muni Minnesota, Muni National Intermediate, Muni National Long, Muni National Short, Muni New Jersey, Muni New York Intermediate, Muni New York Long, Muni Ohio, Muni Pennsylvania, Muni Single State Intermediate, Muni Single State Long, Muni Single State Short, Short Government, Short-Term Bond, Ultrashort Bond, and World Bond.

Additional information regarding Morningstar's historical categories is available from Dimensional upon request.

Index funds and fund-of-funds are excluded from the sample. Net assets for funds with multiple share classes or feeder funds are a sum of the individual share class total net assets. The return, expense ratio, and turnover for funds with multiple share classes are taken as the asset-weighted average of the individual share class observations. Fund share classes are aggregated at the strategy level using Morningstar FundID.

Each fund is evaluated relative to its respective primary prospectus benchmark as of the end of the evaluation period. Surviving funds are those with return observations for every month of the sample period. Winner funds are those that survived and whose cumulative net return over the period exceeded that of their respective primary prospectus benchmark. Loser funds are funds that did not survive the period or whose cumulative net return did not exceed that of their respective primary prospectus benchmark. Where the full series of primary prospectus benchmark returns is unavailable, funds are instead evaluated relative to the Morningstar category index assigned to the fund's category at the start of the evaluation period.

Index data provided by Bloomberg Barclays, MSCI, Russell, FTSE Fixed Income LLC, and S&P Dow Jones Indices LLC. Bloomberg Barclays data provided by Bloomberg. MSCI data © MSCI 2019, all rights reserved. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. FTSE fixed income indices © 2019 FTSE Fixed Income LLC, all rights reserved. S&P and Dow Jones data © 2019 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved.

Indices are not available for direct investment. Their performance does not reflect the expenses associated with 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 20-Year Survivorship and Outperformance

Performance periods ending December 31, 2018

<b>US EQUITIES</b>				<b>FIXED INCOME</b>			
	# Begin	Survive (%)	Outperform (%)		# Begin	Survive (%)	Outperform (%)
US Large Cap	389	32.9%	12.6%	Investment Grade	17	82.4%	29.4%
US Large Cap Growth	246	37.0%	18.7%	High Yield	133	49.6%	6.0%
US Large Cap Value	275	36.0%	13.8%	Inflation Protected	6	50.0%	16.7%
US Mid Cap	165	41.2%	23.6%	Intermediate Term	441	34.9%	12.0%
US Mid Cap Growth	206	45.6%	24.3%	Short Term	233	45.5%	16.7%
US Mid Cap Value	117	50.4%	33.3%	World	116	25.9%	13.8%
US Small Cap	132	53.0%	36.4%	Municipal	854	43.7%	2.0%
US Small Cap Growth	180	42.8%	31.7%				
US Small Cap Value	148	52.7%	35.8%				
<b>NON-US EQUITIES</b>							
	# Begin	Survive (%)	Outperform (%)		# Begin	Survive (%)	Outperform (%)
Developed ex US Large Cap	269	37.9%	21.2%				
Developed ex US Large Cap Growth	57	38.6%	24.6%				
Developed ex US Large Cap Value	38	57.9%	42.1%				
Developed ex US Small Cap	42	64.3%	52.4%				
Emerging Markets	92	44.6%	20.7%				

Categorization determined by Dimensional using Morningstar data. The sample includes funds at the beginning of the 20-year period ending December 31, 2018. Each fund is evaluated relative to its respective primary prospectus benchmark as of the end of the evaluation period. Surviving funds are those with return observations for every month of the sample period. Outperforming funds are those that survived and whose cumulative net return over the period exceeded that of their primary prospectus benchmark. US-domiciled open-end mutual fund data is from Morningstar. Past performance is no guarantee of future results. See Data Appendix for more information.