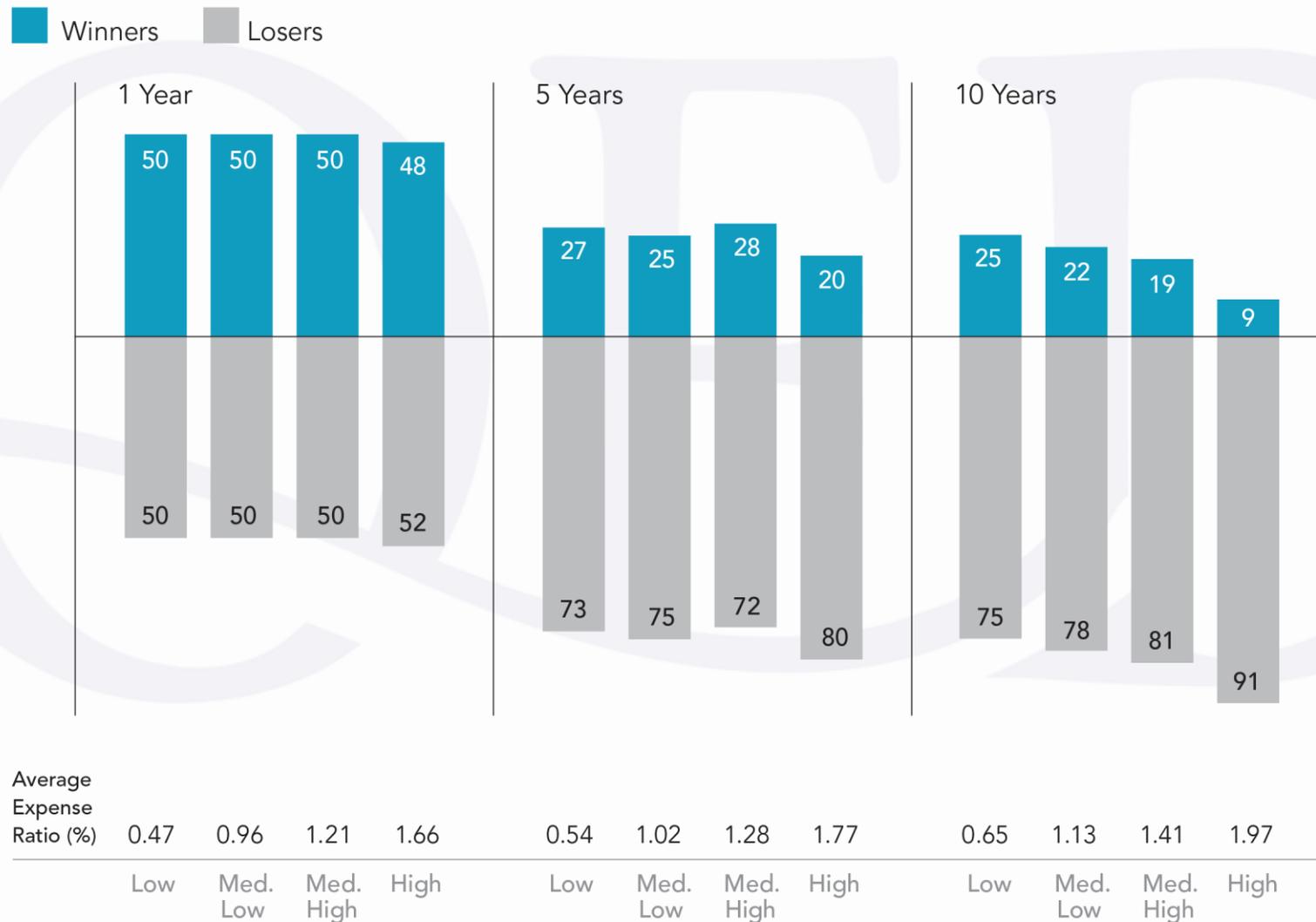


# High Costs Make Outperformance Difficult

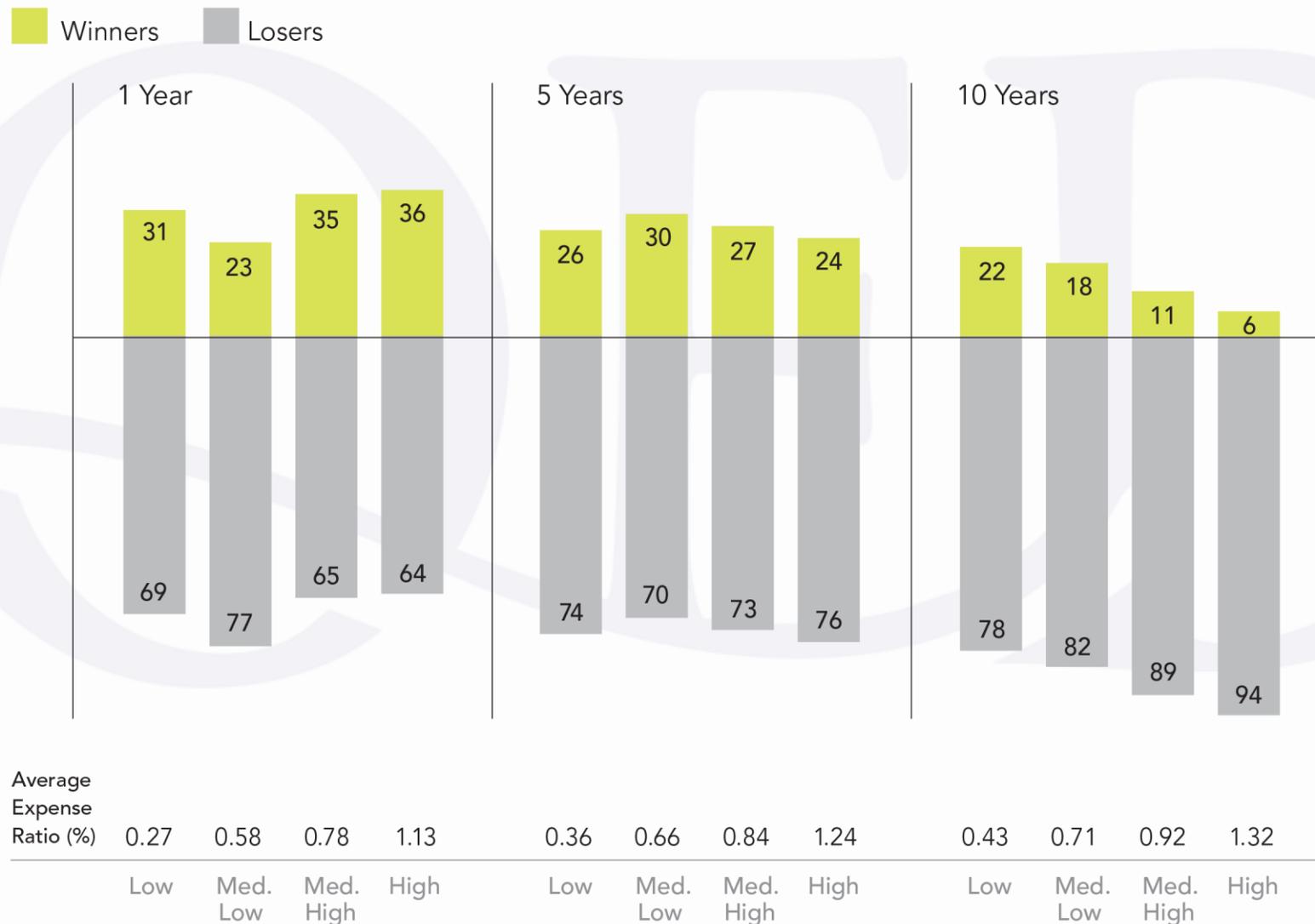
Winners and losers based on expense ratios (%)—Equity Funds



The sample includes funds at the beginning of the one-, five-, and 10-year periods ending in 2013. 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 proportion 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

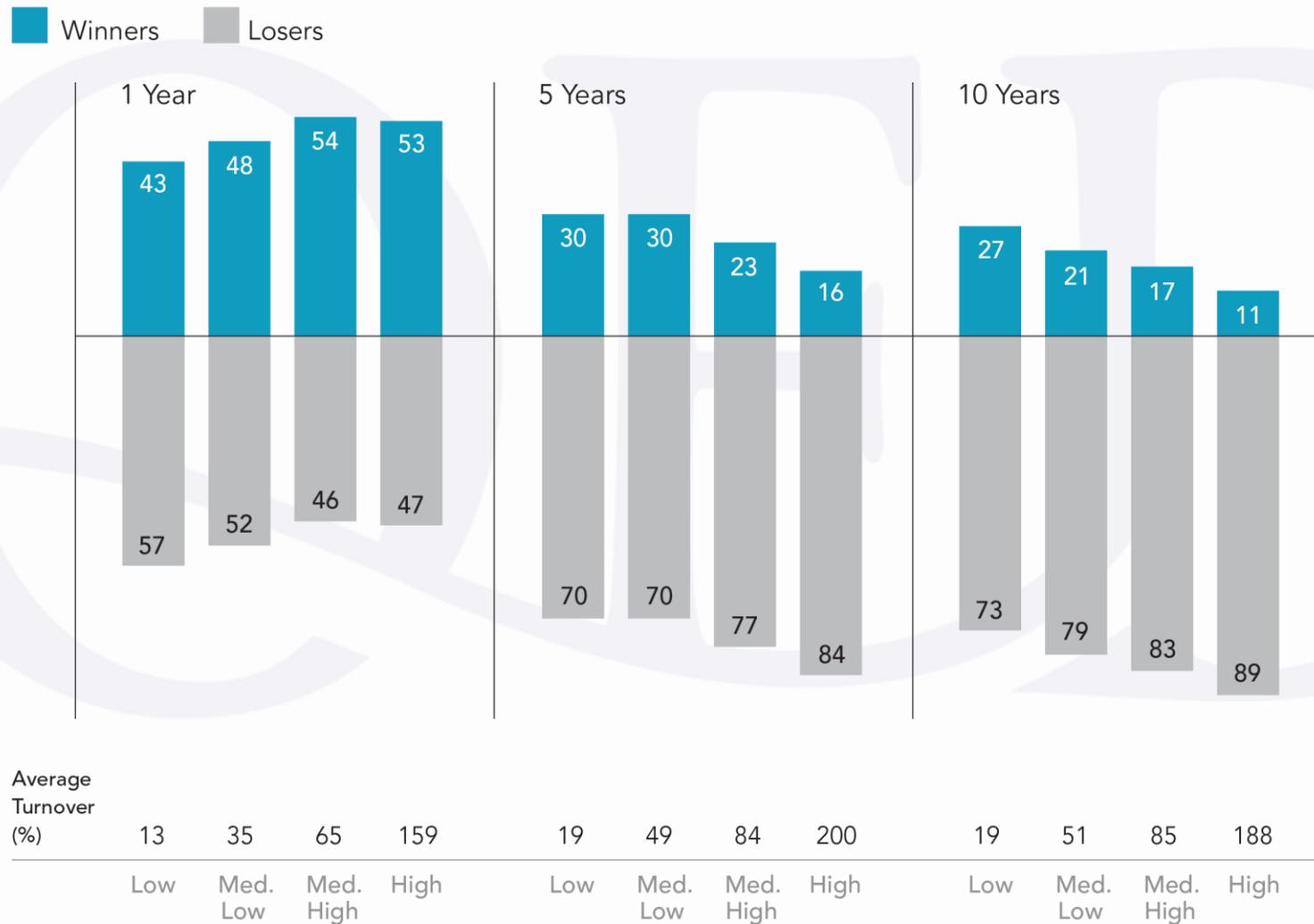
Winners and losers based on expense ratios (%)—Fixed Income Funds



The sample includes funds at the beginning of the one-, five-, and 10-year periods ending in 2013. 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 proportion 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 Trading Costs Make Outperformance Difficult

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



The sample includes equity funds at the beginning of the one-, five, and 10-year periods ending in 2013. 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 proportion of winner and loser funds within each turnover quartile. Fixed income funds are excluded from the analysis because turnover is not a good proxy for fixed income trading costs. **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.