

Vanguard Research Insight

Investors are “voting with their feet” on costs

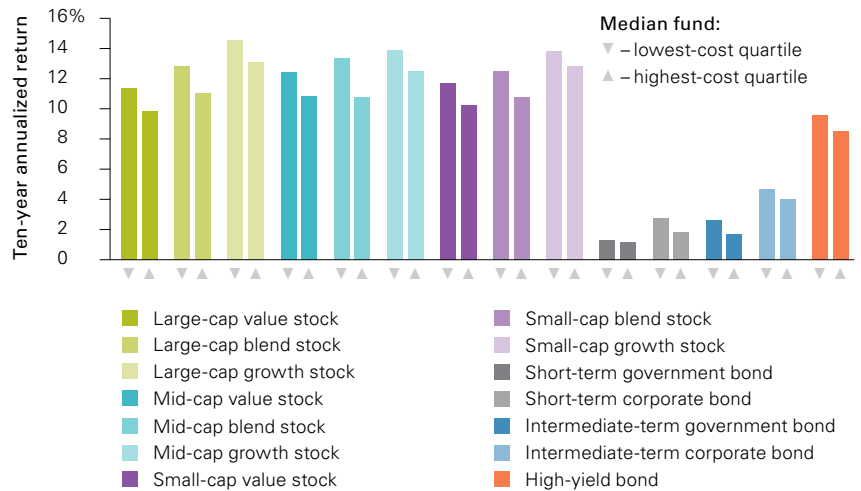
Investors in low-cost funds are keeping more of what they pay for

The message from investment research is clear: Don't assume that you'll get more if you pay more. You can't control the markets, but you can control the amount you pay to invest. Lower costs allow you to keep a greater share of an investment's return.

Over the ten-year period ended December 31, 2018, low-cost funds outperformed high-cost funds. So it's not surprising that investors frequently say that fees are an important consideration when buying a mutual fund.

Note: Data are as of December 31, 2018.
Source: Vanguard.

Difference in ten-year annualized return between median funds in lowest- and highest-cost quartiles

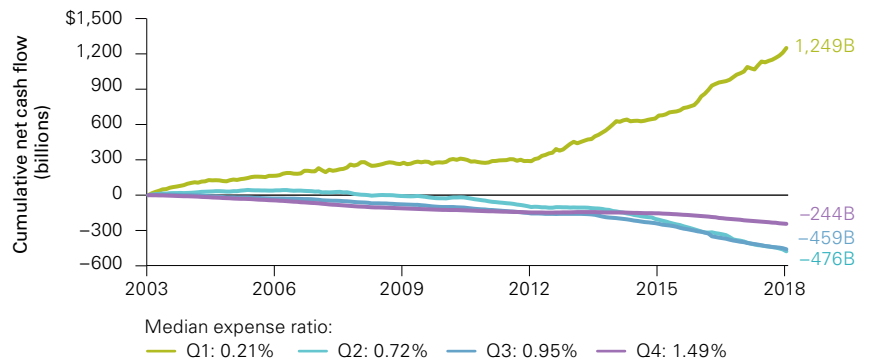


For more than ten years, investors have been favoring low-cost equity funds

Investors are increasingly gravitating toward low-cost options. The equity funds with expense ratios in the lowest quartile attracted \$1.25 trillion over the last 15 years, while funds with higher expense ratios suffered net outflows.

Notes: Expense-ratio quartiles were calculated annually. Equity funds are represented by Morningstar's U.S. equity category. Each quartile represents 2018 asset-weighted average expense ratios, determined by multiplying annual expense ratios by year-end assets under management and dividing by the aggregate assets in each quartile. Data are as of December 31, 2018.
Source: Vanguard.

Relationship between net cash flow and expense-ratio quartile of U.S. equity funds and ETFs



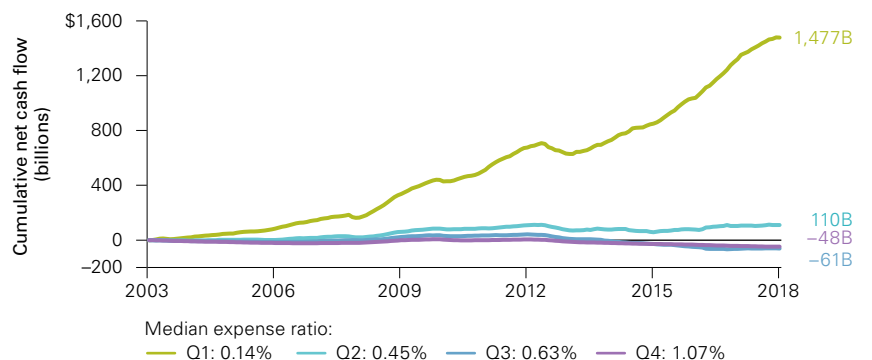
Investors' preference for low-cost bond funds is clear

Nearly 100% of net cash flows into taxable bond funds went to low-cost options.

Clearly, the low-cost message has been received by investors in both equities and bonds.

Notes: Expense-ratio quartiles were calculated annually. Fixed income funds are represented by Morningstar's investment-grade U.S. fixed income categories. Each quartile represents 2018 asset-weighted average expense ratios, determined by multiplying annual expense ratios by year-end assets under management and dividing by the aggregate assets in each quartile. Data are as of December 31, 2018.
Source: Vanguard.

Relationship between net cash flow and expense-ratio quartile of U.S. fixed income funds and ETFs



More about Vanguard's cash flow research.

The focus and efforts of the Vanguard Advisor's Alpha® Research team are centered on the value of advice and advisors, which requires an in-depth knowledge of investor behavior. The team has long tracked industry net cash flows to develop insights into what investors, collectively, are doing with a substantial portion of investable assets.¹ The goal is to provide insight on the actual behavior of investors (individuals, households, committees,

financial advisors, and consultants) that can help improve investor decision-making and outcomes. The findings have been leveraged in our research, beginning with our seminal piece, *Vanguard Advisor's Alpha*, and including *The Evolution of Vanguard Advisor's Alpha: From Portfolios to People* and Vanguard's risk speedometers.

¹ According to data from Morningstar, Inc., assets under management for U.S. open-end mutual funds, money market funds, and ETFs totaled \$20.0 trillion as of December 31, 2018.

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