

Research summary

June 2022

Telltale signs of higher returns? Gender mix could be one

Introduction

Individual ability and diversity of thought are often seen as key differentiators of fund investment teams. An ingredient that could be added: gender balance.

Certainly, diversification is key to asset allocation in portfolios in order to reduce uncompensated risk exposure. And it's been well established by researchers that teams of individuals who have diverse backgrounds, education, and experiences tend to outperform teams that are more homogenous.

Yet among investment teams, women are significantly underrepresented considering that they account for roughly half of the population.

Recent Vanguard research finds that the investment industry may be missing out as a result of this underrepresentation. According to the study, U.S. active equity funds with gender-balanced investment teams tend to outperform those that have all-male or all-female teams.¹

"We started looking at this question because our experience suggested greater gender diversity on investment teams could lead to better fund performance," said Stephen Lawrence, the study's author. "But systematic research backing that up has been sparse."

¹ Vanguard, Diversity Matters: The Role of Gender Diversity on US Active Equity Fund Performance, available at SSRN: <https://ssrn.com/abstract=4081494>.

Looking beyond named portfolio managers

The study set out to explore what role the diversity of an investment team plays in terms of fund performance. One challenge in such research is that asset managers often report only selective diversity information, resulting in data gaps and systemic biases.

To address this challenge, we analyzed biographical data submitted by individual investment team members to eVestment, LLC, a third-party provider of fund information used for manager selection and screening purposes. More than 90% of investment professionals associated with actively managed funds provide a biography with details of their employment history, education, and other credentials.

Recognizing that all members of an investment team—not just a fund's named portfolio managers—can likely impact performance results, we also looked at the biographies of other investment professionals involved in decision-making, such as research analysts, traders, and assistant portfolio managers.

To determine the gender mix, we used natural language processing (NLP), a form of machine learning applied to the analysis of text. This approach allowed us to comb team members' biographies for their preferred pronouns rather than relying on first names, which would have been open to potential misidentification.²

The NLP algorithms also enabled us to look at other dimensions of diversity including education level, university (which in turn helped us identify individuals educated in other countries), professional designations, and subject matter expertise.

How performance varied by gender mix

Our research looked at the investment teams of 2,669 U.S. active equity funds from 2008 through 2021. Of 33,600 individuals on those teams, only about 1 in 7 was a woman.³ That figure, though low, correlates with other recent research indicating that, among named portfolio managers, only about 1 of every 10 is a woman.⁴

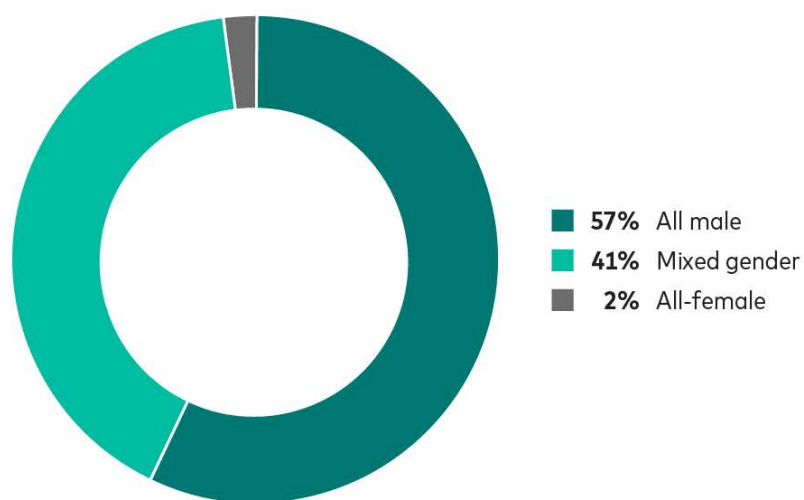
More than half of all the investment teams in our analysis were all-male while only 2% were all-female. The remaining teams, about 41%, were mixed gender.

² While the possibility of nonbinary gender was considered, there were no instances in the data where pronouns other than he/him/his or she/her/hers were used.

³ Based on investment team data for U.S. active equity funds from January 2008 through September 2021, as compiled by eVestment, LLC, a third-party provider of fund information used for manager selection and screening purposes.

⁴ See Carr, Ellen, and Katrina Dudley, *Undiversified: The Big Gender Short in Investment Management* (New York: Columbia Business School Publishing, 2021). The authors cite multiple sources, including a 2015 Morningstar report, which estimated 9.41% of portfolio managers were female, and a 2019 Citywire report, which estimated 10.8%.

Gender composition of investment teams



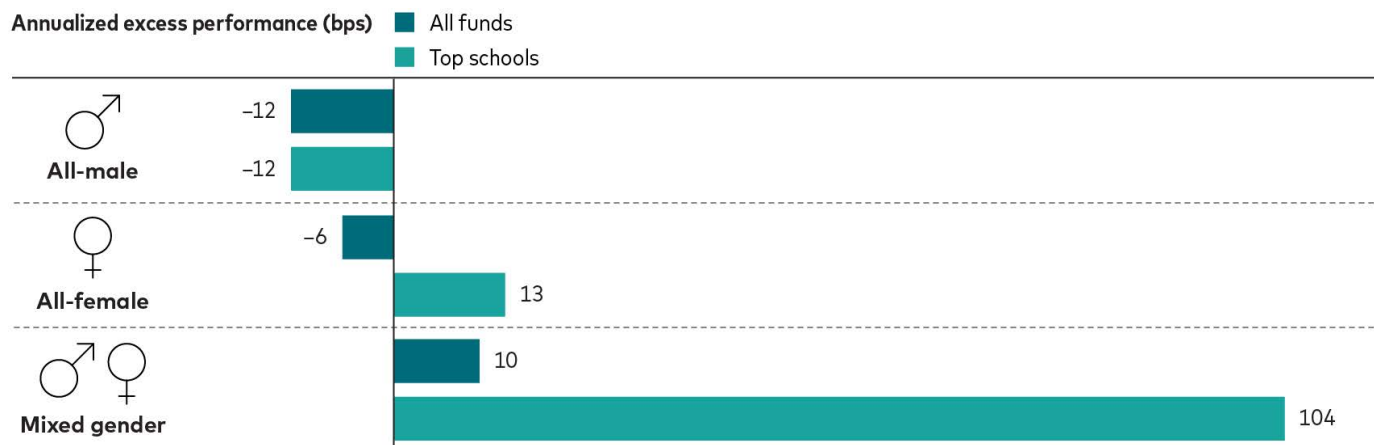
Source: Vanguard calculation, based on eVestment data from 2008 through 2021.

We took monthly snapshots of the characteristics of each fund team, then observed the fund's subsequent 12-month returns, cross-referenced by gender diversity and other characteristics such as education and international experience.

Funds with gender-diverse teams tended to shine. Funds managed by single-gender teams underperformed their benchmarks by 12 basis points (bps) on average, while funds managed by mixed-gender teams outperformed their benchmarks by an average of 10 bps. (A basis point is one-hundredth of a percentage point.)

Performance was strongest for mixed-gender teams where at least half of the team were graduates of Ivy League institutions, which we used as a proxy for quality of education.

Mixed-gender teams outperform



Notes: Top schools are defined as teams with a majority of members graduating from Ivy League universities. Mixed-gender teams are any that include at least one male and one female.

Source: Vanguard.

Through regression analysis, we calculated that investment teams that were 50% women and 50% men were associated with an average net increase of 23.5 bps in excess returns over all-male investment teams, after controlling for fund and investment characteristics.

Our regression analysis controlled for other factors including fund size, firm size, number of holdings, team size, and manager turnover. When we also considered other dimensions of diversity and education quality, the improvement in performance for funds with mixed-gender teams was even more pronounced, at 38.9 bps.

Findings underscore potential opportunities

An investment team's gender diversity has the potential to meaningfully affect fund performance. In essence, maximizing gender diversity may add to the team's overall strengths.

"While we also see professional qualifications and diversity of education as strong indicators of fund outperformance, they alone cannot explain the unique benefit that gender diversity brings to a team," Lawrence said.

"Our results encourage anyone involved in investment management to approach team diversity with the same rigor we do portfolio diversification, recognizing the meaningful impact both have on fund performance," Lawrence added. "Gender diversity can be seen as an important added attribute of a well-qualified, well-trained, diversely experienced team of investment professionals."

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