Race, Discrimination, and Hedge funds

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Abstract

Minority operated hedge funds deliver higher alphas, Sharpe ratios, and information ratios relative to non-minority operated hedge funds. Moreover, minority managers eschew downside risk, are more trustworthy, attended more prestigious colleges, and received more specialized education. Yet, investors allocate lower start-up capital and flows to minority managers. Racial homophily and a belief in the superior ability of non-minority managers drive investors' preference for non-minority funds. To address endogeneity, we leverage on an event study of minority manager fund transitions and an instrumental variable analysis that exploits racial imprinting during childhood. Our results extend to actively managed mutual funds and reveal that minorities face significant taste-based discrimination in asset management.

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1. Introduction

Anecdotal evidence suggests that the asset management industry suffers from an inclusion problem.[1] Racial minorities are severely underrepresented at the senior management teams of investment firms. Media reports allude to discriminatory practices directed towards minorities at large asset managements firms.[2] While some institutional investors have started pressuring asset managers to improve inclusion practices, it is not clear how responsible investors themselves are for perpetuating the underrepresentation of racial minorities.[3] Ostensibly, these developments point to the taste-based discrimination (Becker, 1971) induced barriers to entry that racial minorities face in asset management. Nonetheless, a plausible alternative view is that minorities are discriminated against because they are less productive. Therefore, the underrepresentation could simply reflect a dearth of qualified minority investment professionals. Despite the trillions of dollars managed by asset managers globally and the alleged marginalization of racial minorities in the industry, we know little about the implications of fund manager race for capital flows and investment performance.

In this paper, we fill this gap by analyzing minority operated hedge funds. The hedge fund industry is an interesting laboratory for examining the implications of race in delegated portfolio management. Hedge funds collectively manage a substantial US$4.01 trillion of assets on behalf of important institutional investors such as university endowments, pension funds, charitable foundations, and sovereign wealth funds.[4] The hefty performance fees that hedge funds charge, which help align fund managers' interests with those of their investors, should lead hedge fund management companies to maximize investment performance by hir-

[1] See "Race and finance: asset managers fail to walk the walk," Financial Times, December 28, 2021, and "The asset management industry continues to struggle with diversity," Institutional Investor, December 10, 2021.

[2] For instance, black and latino employees at blackrock report receiving less mentorship than their white colleagues, being labeled as poor team players who are "aggressive and unenthusiastic" about their work, and receiving poor performance evaluations despite positive feedback from their managers. See "At Blackrock, new accusations of discrimination and harassment are met with contrition," Institutional Investor, March 22, 2021.

[3] See "Hedge funds face mounting pressure with diversity questionnaire," Bloomberg, November 10, 2020.

[4] According to Hedge Fund Research, hedge funds collectively manage US$4.01 trillion at the end of 2021. See https://www.hfr.com/sites/default/files/articles/Q421_HFR_GIR.pdf.

ing, retaining, and promoting staff based on objective assessments of ability. Yet, because hedge fund management firms tend to be small, founder-led businesses, they may be more susceptible to homophily, which could engender racial biases. Moreover, since hedge funds typically have flat and flexible organizational structures, to facilitate information flow and exploit dynamic market conditions, they may not have policies in place to mitigate discriminatory practices should they occur. In contrast, mutual funds tend to be managed by large, well-established fund management firms that are more likely to have systems in place to combat prejudices. Insofar as hedge fund investors are themselves prone to homophily, it may create further barriers to entry for aspiring minority hedge fund managers. Finally, unlike venture capital or private equity funds, hedge funds report returns on a monthly basis, which will be critical for identification as it allows us to evaluate the performance implications of minority manager transitions in a timely fashion.

We first test whether investors discriminate against minority hedge fund managers by analyzing investor flows and fund start-up capital. We define minority operated hedge funds as hedge funds where all fund managers are racial minorities (asians, blacks, and latinos).[5] Non-minority operated hedge funds are hedge funds where none of the fund managers are racial minorities. We show that after controlling for the usual suspects, such as past fund performance and other fund characteristics, that could explain fund flows, minority hedge funds attract a meaningful 3.14% to 3.59% lower flows per annum relative to non-minority hedge funds. Moreover, we find that minority launched hedge funds manage start-up capital that is US$59.13 million (or 33.30%) lower than that managed by non-minority launched hedge funds. These results support the view that minorities face discrimination induced barriers to entry in the hedge fund industry.

Next, we distinguish between taste-based and statistical discrimination. Taste-based discrimination refers to situations where two individuals with identical observable characteristics are accorded differential treatment based on an observable non-productive characteristic (Becker, 1971). Statistical discrimination, on the other hand, occurs when an employer or investor discriminates against a group as she rationally believes that individuals from that

[5]Our results are qualitatively similar when we redefine minorities as comprising only blacks and latinos or when we redesignate minorities as asians only.

group are less productive (Arrow, 1973; Phelps, 1972). Therefore, to differentiate between taste-based and statistical discrimination, we evaluate the performance differential between minority and non-minority operated hedge funds. If minorities contend with taste-based as opposed to statistical-based prejudices, the funds that they manage should outperform, or at least match the performance of, non-minority managed funds.

We find that the portfolio of minority operated hedge funds outperforms the portfolio of non-minority operated hedge funds by 6.00% per annum (t-statistic = 2.89). To adjust for risk, we measure performance relative to the Fung and Hsieh (2004) seven-factor model. After catering for co-variation with the Fung and Hsieh (2004) factors, minority hedge funds outpace non-minority hedge funds by an economically meaningful 5.35% per annum (t-statistic = 5.60). The findings are not driven by the usual suspects that explain fund performance. By conducting all our analyses on fund returns that are reported post fund database listing date, we ensure that backfill bias (Jorion and Schwarz, 2019) does not taint the results. After adjusting for the explanatory power of fund characteristics such as fund fees (Agarwal, Daniel, and Naik, 2009), redemption terms (Aragon, 2007), size (Berk and Green, 2004), and age (Aggarwal and Jorion, 2010), we find that minority funds generate alphas that exceed those of non-minority funds by 4.01% per annum. These results are incompatible with statistical discrimination and support the taste-based discrimination view.

To cater for possible omitted risk factors, we consider a plethora of factors including the Fama and French (1993) value factor and the Carhart (1997) momentum factor, the Fama and French (2015) profitability and investment factors, the Pástor and Stambaugh (2003) traded liquidity factor, the Frazzini and Pedersen (2014) betting-against-beta factor, the Bali, Brown, and Caglayan (2014) macroeconomic uncertainty factor, the Agarwal and Naik (2004) out-of-the-money call option and out-of-the-money put option factors, and an emerging markets factor derived from the MSCI Emerging Markets index. Our results remain qualitatively similar when we evaluate performance relative to the Fung and Hsieh (2004) model augmented with these factors.

Minority operated hedge funds deliver other performance attributes that are beneficial for investors. First, they generate higher Sharpe and information ratios, suggesting that their

superior returns and alphas are not driven by higher fund leverage. Second, they exhibit higher manipulation proof performance measures (Goetzman, Ingersoll, Spiegel, and Welch, 2007), indicating that their performance metrics are not inflated by strategies such as writing deep out-of-the-money put options. Third, as a testament to the value that they generate for their investors, they display higher Berk and van Binsbergen (2015) skill.

To allay endogeneity concerns, we adopt a two-pronged identification strategy. First, we conduct an event study to investigate changes in fund performance for hedge funds that increase the fraction of minorities in their fund management teams. For the event study, we match treatment funds (i.e., those that increase the fraction of minorities in their fund management teams) to control funds that hired a non-minority manager during the event month based on (i) the fraction of minorities at the hedge fund management team and (ii) fund performance in the pre-event period. The difference-in-differences estimates from the event study address endogeneity concerns stemming from time-invariant and observable time-varying differences between minority and non-minority hedge funds. We find that relative to comparable hedge funds and to the prior 36-month period, hedge funds that hire additional minority fund managers outperform hedge funds that do not hire additional minority fund managers by a risk-adjusted 6.29% per annum in the 36-month period following the new hires. Our event study results are robust to several alternative specifications, including (i) varying the length of the event window (ii) matching treatment funds to control funds based on propensity score matching, where the covariates include a host of fund and team characteristics, and (iii) matching treatment funds to control funds based on team size as well as fund performance.

Next, to tackle endogeneity concerns emanating from time-varying unobservable differences between minority and non-minority hedge funds, we conduct an instrumental variable analysis. To instrument for the fraction of minority fund managers at a hedge fund, we use the fraction of minorities residing at the hedge fund firm founder's hometown. We argue that hedge fund firm founders who grew up in cities with more racial minorities are more likely to set up hedge fund management companies that hire racial minorities several years later due to the effects of childhood imprinting. Consistent with the relevance condition of

our instrument, we find that the fraction of racial minorities at the hedge fund firm founder's hometown is a positive and statistically significant predictor of the proportion of racial minorities at the hedge fund management team. In support of the conceptual underpinnings of our instrumental variable approach, we find that the racial compositions of the founders' hometowns (i.e., the percentage of whites, asians, blacks, and latinos residing in the city) mirror the racial compositions of their hedge fund management teams. After instrumenting for the fraction of minorities at the hedge fund management team with the proportion of racial minorities at the hedge fund founder's hometown, we find that minority hedge funds still outperform non-minority hedge funds.

We distinguish our findings from the effects of fund management team racial diversity and from the effects of diversity in general. A minority operated fund can be either racially homogeneous (e.g., staffed by only asian managers) or racially diverse (e.g., staffed by an asian manager, a black manager, and a latino manager), although a non-minority operated fund is by definition racially homogeneous.[6] We control for diversity in three ways. First, we control for the Lu, Naik, and Teo (2022) measure of racial diversity in our baseline performance regressions. Second, we adjust for the explanatory power of an aggregate measure of fund management team diversity that takes into account diversity based on fund manager college education, work experience, nationality, race, and gender. Third, we reestimate our baseline regressions on the sample of single-manager hedge funds, which are by definition fully homogeneous across all possible dimensions. We show that the fraction of minorities has incremental explanatory power on fund performance even after accounting for diversity.

What drives the superior performance of minority operated hedge funds? The taste-based discrimination story could imply that only highly qualified minority fund managers are able to launch hedge funds. Consistent with this view, we find that minority managers are better trained than are non-minority managers. First, fund managers at minority hedge funds attended more selective schools that require higher SAT scores for admissions. Moreover, they are 8.1% more likely to be alumni of Ivy League colleges and 7.3% more likely to have graduated from universities that are ranked in the top ten by U.S. News. Second, they

[6]This follows from the fact that only whites are classified as non-minorities in our study.

receive more specialized education. They are 7.4% more likely to hold post-graduate degrees than are fund managers at non-minority operated funds. They are also 5.3% more likely to hold PhDs.

The taste-based discrimination story could also imply that only minority fund managers with superior risk management skills are able to enter the industry. In line with this view, we show that minority managers are more savvy at sidestepping idiosyncratic risk, avoiding downside risk, minimizing monthly losses, and curtailing maximum drawdowns. In addition to managing risk more prudently, minority fund managers may be able to overcome racial prejudices by being more trustworthy (Gennaioli, Shleifer, and Vishny, 2015). We show that consistent with this view they exhibit lower operational risk. They are less likely to terminate their funds early, exhibit lower ω scores – a barometer of operational risk proposed by Brown, Goetzmann, Liang, and Schwarz (2009), and are less likely to trigger the performance flags that Bollen and Pool (2009; 2012) show are suggestive of fraud.

Why do fund investors shun minority hedge funds? We test whether the taste-based prejudices against minorities are driven by an in-group bias or an irrational belief in the superior ability of non-minority managers. The in-group bias view postulates that due to racial homophily, investors prefer investing in hedge funds operated by managers who belong to the same race as them. Using data on fund of funds (FOFs), which are funds that invest in hedge funds, we find evidence that supports both explanations. On one hand, FOF managers are more likely to allocate capital to a hedge fund if they share the same race as the hedge fund manager. On the other hand, minority operated FOFs are also more likely to gravitate towards hedge funds managed by non-minorities, albeit not with the same intensity as do non-minority operated FOFs. These findings suggest that racial homophily only partly explains the taste-based prejudices directed towards minorities in hedge funds.

To gauge external validity, we conduct an out-of-sample test on actively managed equity mutual funds. We find that after controlling for the usual suspects, minority-operated mutual funds garner 0.461% to 0.514% per annum lower flows than do non-minority operated mutual funds. Moreover, the portfolio of minority managed mutual funds outperforms the portfolio of non-minority managed mutual funds by 3.73% per annum after adjusting for co-variation

with the Carhart (1997) four factors. After accounting for the explanatory power of mutual fund characteristics, such as expense ratio, load, and total net assets, we find that minority led mutual funds deliver Carhart (1997) alphas that are 49.2 to 52.8 basis points per annum higher than those of non-minority led mutual funds. These results while statistically reliable are substantially more modest than those for hedge funds, thereby highlighting the advantage of studying the implications of race for the hedge fund industry.

Our results shed light on the barriers to entry that racial minorities face in the hedge fund industry. By doing so, we contribute to the nascent literature on taste-based discrimination in asset management. Kumar, Niessen-Ruenzi, and Spalt (2015) show that mutual fund investors are less likely to invest in mutual funds run by managers with foreign-sounding names. Niessen-Ruenzi and Ruenzi (2019) and Aggarwal and Boyson (2015) find that female-managed mutual funds and hedge funds garner substantially lower flows than do male-managed mutual funds and hedge funds, respectively. Similarly, Han et al. (2022) provide evidence that minority-managed mutual funds are rewarded with lower flows following good performance than are non-minority managed mutual funds. However, none of these studies uncover meaningful performance differences between fund managers that are discriminated against (i.e., foreign-sounding, female, or minority managers) and those that are not. By showing that hedge funds operated by racial minorities deliver superior risk-adjusted performance relative to those operated by non-minorities, we provide much stronger evidence of taste-based discrimination with respect to race and hedge funds. Moreover, we show that discrimination not only affects fund flows but also has implications for fund start-up capital, manager quality, and risk management.

Our work also resonates with the economics literature on racial discrimination, which has focused on the treatment of blacks and latinos by the labor market and criminal justice system. For example, Bertrand and Mullainathan (2004) find that resumes to help wanted ads with white-sounding names are more likely to receive callbacks for interviews than resumes with black-sounding names. Alesina and La Ferrara (2014) uncover higher reversal rates in capital sentencing cases against black and latino defendants who killed whites. Arnold, Dobbie, and Yang (2018) provide evidence that bail judges are racially biased against black

defendants. Similarly, Goncalves and Mello (2021) show that blacks and latinos are less likely to receive discounts on their speeding tickets than are white drivers. Unlike these papers, we also study discrimination against asians. As the largest group of minorities in our sample, asians comprise a sizeable fraction, i.e., 16.44%, of hedge fund managers. Anecdotal evidence allude to is a long history of discrimination against asian americans that precedes the Covid-19 pandemic.[7] We provide evidence consistent with this view and document taste-based prejudices against asian fund managers that are as strong as those against black and latino fund managers.

2. Data and methodology

2.1. Hedge fund data

We study the relation between race and hedge fund performance using monthly net-of-fee returns and assets under management (henceforth AUM) data of live and dead hedge funds reported in the Lipper TASS, Morningstar, Hedge Fund Research (henceforth HFR), and BarclayHedge commercial databases from January 1994 to June 2016. We focus on data from January 1994 onward as the hedge fund commercial databases do not track dead funds prior to January 1994 and therefore contain survivorship bias.

In our fund universe, we have a total of 43,083 hedge funds comprising 17,368 live funds and 25,715 dead funds. In view of concerns that funds with multiple share classes could cloud the analysis, we exclude duplicate share classes from the sample. This leaves a total of 27,751 hedge funds, of which 10,228 are live funds and 17,523 are dead funds. While 6,996 funds appear in multiple databases, many funds belong to only one database. Specifically, there are 7,085, 3,336, 5,512, and 4,822 funds that appear only in the Lipper TASS, Morningstar, HFR, and BarclayHedge databases, respectively, highlighting the advantage of collecting hedge fund data from multiple databases. In addition to fund returns and AUM, the hedge

[7] See "The scapegoating of Asian Americans," Harvard Gazette, March 24, 2021, and "Ellen Pao: Meritocracy in tech is a myth," CNN Business, April 21, 2021.

fund databases contain information on fund manager names, fund fees, redemption terms, inception dates, investment strategies, and other fund characteristics.

As per Agarwal, Daniel, and Naik (2009), we classify funds into four broad investment styles: Security Selection, Multi-process, Directional Trader, and Relative Value. Security Selection funds take long and short positions in undervalued and overvalued securities, respectively. They typically take positions in equity markets. Multi-process funds employ multiple strategies that take advantage of significant events, such as spin-offs, mergers and acquisitions, bankruptcy reorganizations, recapitalizations, and share buybacks. Directional Trader funds wager on the direction of market prices of currencies, commodities, equities, and bonds in the futures and cash markets. Relative Value funds bet on spread relations between prices of financial assets while aiming to minimize market exposure.

As listing on commercial databases is not mandatory for hedge funds, hedge fund data are susceptible to self-selection biases. For example, hedge funds often include returns prior to fund listing dates onto the databases. Because funds that have good track records tend to go on to list on databases so as to attract investment capital, the backfilled returns tend to be higher than non-backfilled returns, which leads to a backfill bias (Liang, 2000; Fung and Hsieh, 2009; Bhardwaj, Gorton, and Rouwenhorst, 2014). To alleviate concerns about backfill bias, throughout this paper, we analyze hedge fund returns reported post fund database listing date. For funds from databases that do not provide listing date information, we rely on the Jorion and Schwarz (2019) algorithm to back out fund database listing dates.

We estimate hedge fund performance relative to the Fung and Hsieh (2004) seven factors. These factors are S&P 500 return minus the risk-free rate (SNPMRF), Russell 2000 return minus the S&P 500 return (SCMLC), change in the constant maturity yield of the 10-year U.S. Treasury bond appropriately adjusted for the duration (BD10RET), change in the spread of Moody's BAA bond over 10-year Treasury bond appropriately adjusted for duration (BAAMTSY), bond PTFS (PTFSBD), currency PTFS (PTFSFX), and commodity PTFS (PTFSCOM), where PTFS is primitive trend following strategy. Fung and Hsieh (2004) show that their model captures up to 84% of the variation in hedge fund index returns.

2.2. Measuring race

To determine manager and race, we rely on the NamSor application programming interface for predicting race from name.[8] We obtain manager race information for 13,578 managers running 18,696 funds, respectively. For robustness, we employ two alternative racial classifications, one based on the *NamePrism* algorithm of Ye et al. (2017) and another based on the methodology of Imai and Khanna (2016). In addition, for 2,845 managers operating 4,454 funds, we hand collect LinkedIn data on manager education and past employment. The data from LinkedIn include the dates for which the fund manager joined and/or exited from the fund management company. This information allows us to analyze the implications of changes in the racial compositions of hedge fund management teams over time, which will be critical for identification.

Panel A of Table 1 reports the distribution of fund manager races. It reveals, unsurprisingly, that hedge fund management companies are dominated by non-minorities. In the overall hedge fund sample, 64.69% of the hedge fund managers are white. The remaining 35.31% of hedge fund managers are minorities. The largest group of minorities are asians, who comprise 16.44% of hedge fund managers. They are followed by blacks and latinos, who constitute 11.39% and 7.49% of hedge fund managers, respectively. Panel A also reveals that amongst U.S. based fund managers we observe even fewer minorities. Specifically, 75.50% of U.S. based hedge fund managers are white while 24.50% of them are minorities, of which 10.45% are asians, 9.65% are blacks, and 4.40% are latinos.[9] Panel A also shows that funds of hedge funds, which are funds that invest in hedge funds, are likewise dominated by non-minorities.

[Insert Table 1 here]

Panel B of Table 1 reports the summary of the key variables used in the study. It

[8] See https://www.namsor.com.

[9] According to the U.S. census, in 2021, whites comprise 60.1% of the U.S. population, while asians, blacks, and latinos comprise 5.9%, 13.4%, and 18.5% of the population, respectively. See https://www.census.gov/quickfacts/fact/table/US/PST045221. Therefore, minorities in general are underrepresented in the hedge fund industry, although we do observe a greater proportion of asians in the industry than in the population.

indicates that for the average hedge fund, minorities comprise 34.5% of the fund managers operating the fund. The distribution of the fraction of minorities at hedge fund management teams is positively skewed with a median (i.e., 0.200) that falls below the mean (i.e., 0.345). In addition, we find that minorities dominate or account for more than half of the fund management team for only 22.5% of hedge funds. In our study, we define as minority operated hedge funds those where all fund managers are racial minorities (asian, black, and latino). We define as non-minority operated hedge funds those where none of the fund managers are racial minorities. There are 3,767 minority operated hedge funds and 12,916 non-minority operated hedge funds in the sample.

Panel C of Table 1 reports the distribution of the key race variables by investment strategy. We find modest differences in the distribution of the the fraction of minority hedge fund managers across the four broad investment strategies. Security selection funds feature the highest proportion of minority fund managers at 39.0% while multiprocess funds feature the lowest proportion of minority fund managers at 22.6%. Similarly, we find that the likelihood that minorities account for more than half of the hedge fund management team is highest for security selection funds at 25.0% and is lowest for multiprocess funds at 13.2%.

Panel D of Table 1 showcases the correlation between the key race variables and various hedge fund characteristics. We find that the fraction of minority fund managers at the hedge fund positively correlates with fund performance, performance fee, and age, and negatively correlates with fund management fee. These results suggest that minority managed hedge funds may outperform and survive longer than non-minority managed hedge funds. The negative relation with management fee and positive relation with performance fee suggest that only minority operated funds with strong incentive alignment (i.e., lower management fee to performance fee ratios) are able to raise start-up capital.

Panel E of Table 1 presents summary statistics for the fund characteristics of minority versus non-minority operated funds. The findings from Panel E echo those from Panel D. They indicate that minority hedge funds tend to outperform and survive longer than non-minority hedge funds. They also charge lower management fees while setting higher performance fees. In our analysis, we will carefully control for the explanatory power of fund

characteristics in a multivariate regression setting when analyzing the relation between the fraction of minorities at a hedge fund management team and fund investment performance.

3. Empirical results

3.1. Fund flows

Do fund investors discriminate against minority hedge fund managers? To test, we estimate the following multivariate regression on hedge fund flow:

$$\begin{aligned} FLOW_{iy} = \alpha &+ \beta_1 MINORITY_{iy-1} + \beta_2 RANK_i + \beta_3 MGTFEE_i + \beta_4 PERFFEE_i \\ &+ \beta_5 HWM_i + \beta_6 LOCKUP_i + \beta_7 LEVERAGE_i + \beta_8 AGE_{iy-1} \\ &+ \beta_9 REDEMPTION_i + \beta_{10} log(FUNDSIZE_{iy-1}) + \sum_k \beta_{11}^k YEARDUM_y^k \\ &+ \sum_l \beta_{12}^l STRATEGYDUM_i^l + \sum_o \beta_{13}^o TEAMSIZEDUM_i^o + \epsilon_{iy}, \end{aligned} \tag{1}$$

where $FLOW$ is annual fund flow, $MINORITY$ is the fraction of minorities in the fund management team, $RANK$ is fund past one-year return rank, $MGTFEE$ is management fee, $PERFFEE$ is performance fee, HWM is the high-water mark indicator, $LOCKUP$ is lock-up period, $LEVERAGE$ is the leverage indicator, AGE is fund age since inception, $REDEMPTION$ is redemption period, $FUNDSIZE$ is fund AUM, $YEARDUM$ is the year dummy, $STRATEGYDUM$ is the fund strategy dummy, and $TEAMSIZEDUM$ is the team size dummy. We control for $RANK$ to cater for return chasing behavior by hedge fund investors in the spirit of Siri and Tufano (1998). Since hedge fund investors may also chase fund alpha (Agarwal, Green, and Ren, 2018), we also estimate regressions with $RANK\_CAPM$ and $RANK\_FH$ in lieu of $RANK$, where $RANK\_CAPM$ is past one-year CAPM alpha rank and $RANK\_FH$ is past one-year Fung and Hsieh (2004) alpha rank. For robustness, we estimate analogous regressions with $MINORITY\_DUMMY$ in place of $MINORITY$, where $MINORITY\_DUMMY$ is an indicator variable that takes a value of one if more than 50% of the team members at a hedge fund are racial minorities. Statistical

inferences are based on White (1980) robust standard errors clustered by fund and year.

[Insert Table 2 here]

The results reported in columns 1 to 6 of Table 2 indicate that investors gravitate away from minority managed hedge funds. The coefficient estimate on $MINORITY$ reported in column 1 indicate that after controlling for past fund returns and other fund characteristics, investors allocate 3.59% lower flows per annum (t-statistic = 2.34) to minority operated hedge funds relative to non-minority operated hedge funds. We obtain qualitatively similar results when we control for $RANK\_CAPM$ and $RANK\_FH$ in lieu of $RANK$. The results reported in columns 3 and 5 reveal that after controlling for past one-year CAPM alpha rank and Fung and Hsieh alpha rank, minority controlled hedge funds attract 3.30% per annum and 3.13% per annum lower flows, respectively, than do non-minority controlled hedge funds. These results are economically meaningful given that the average fund flow in any given year is 11.81%. The results showcased in columns 2, 4, and 6 indicate that we obtain qualitatively comparable results with $MINORITY\_DUMMY$ as the independent variable of interest.[10]

If investors discriminate against minority fund managers, we should observe that minority fund managers will struggle to raise start-up capital. Therefore, we estimate analogous regressions on the log of fund size at inception. These regressions include all the fund controls from the regressions on fund flow except fund age, the log of fund size, and the performance rank variables. The results reported in columns 7 and 8 of Table 2 reveal that minority fund managers raise less capital at fund launch. Given the average fund inception size of US$177.56 million, the coefficient estimate on $MINORITY$ reported in column 7 implies that minority hedge funds manage starting capital that is US$59.13 million or 33.30% lower than that managed by non-minority hedge funds. The findings in Table 2 are robust to including strategy by year fixed effects to accommodate for possible time varying investor flows at the strategy level.

[10] In Table IA1 of the Internet Appendix, we report flow regressions with race specific variables, i.e., the fraction of asians, the fraction of blacks, and the fraction of latinos in hedge fund management teams. The coefficient estimates on these race specific variables are negative and economically meaningful, although they are only statistically significant at the 5% level for fraction of asians in the hedge fund management team, perhaps due to the smaller number of fund flow observations with black and latino fund managers in the sample.

In results that are available upon request, we find no evidence that fund investors reduce their prejudices against minority managers over time. When we include the interaction of fund age with either *MINORITY* or *MINORITY_DUMMY* as an additional independent variable in the regressions, we find that the coefficient estimates on that variable while positive are statistically indistinguishable from zero at the 10% level. We also find no evidence that the sensitivity of fund flows to past fund performance varies between minority and non-minority led funds. Collectively, these results suggest that fund investors discriminate against hedge funds operated by racial minorities. Such discrimination in turn creates obstacles when minority fund managers conceive funds and raise capital.

3.2. Fund investment performance

To test whether the discrimination against minorities is rational, we investigate the relation between fund manager race and investment performance. In that effort, we conduct portfolio sorts on hedge fund manager race. Every January 1, we sort hedge funds into five groups based on the fraction of racial minorities in hedge fund management teams. Portfolio 1 comprises hedge funds where all the fund managers at the fund management team are racial minorities. Portfolio 5 comprises hedge funds where none of the fund managers at the fund management team are racial minorities. The other hedge funds are distributed evenly into the remaining three groups.[11] The post-formation returns of the five portfolios over the next 12 months are linked across years to form a single return series for each portfolio. Portfolio returns are the equal-weighted returns of the hedge funds in each portfolio. Next, we evaluate performance relative to the Fung and Hsieh (2004) model and base statistical inference on White (1980) heteroscedasticity-consistent standard errors.

The results reported in Panel A of Table 3 indicate that minority hedge funds outperform non-minority hedge funds. The return of the spread between the minority hedge fund portfolio and the non-minority hedge fund portfolio is 6.00% per annum (t-statistic = 2.89).

[11]Note that because the fraction of minorities at hedge fund management teams takes discrete values, the number of hedge funds in these three portfolios are similar but not exactly the same. In addition, as discussed, our sample includes hedge funds managed by a single fund manager. These hedge funds are included in either Portfolio 1 or Portfolio 5.

The Fung and Hsieh (2004) model explains only about one-tenth of the minority minus non-minority spread. After adjusting for co-variation with the Fung and Hsieh (2004) factors, the minority hedge fund portfolio outpaces the non-minority hedge fund portfolio by an economically meaningful 5.35% per annum (t-statistic = 5.60).

To ensure that our results are not driven by small hedge funds, which are less relevant for large institutional investors who allocate significant capital to hedge funds, we redo the portfolio sorts on the sample of hedge funds with at least US$50 million in AUM. We also redo the portfolio sorts on the full sample of hedge funds but with value-weighted portfolios. The results reported in Panels B and C of Table 3 reveals that our findings are not driven by small hedge funds. We also run analogous portfolio sorts on hedge fund firm performance. Hedge fund firm returns are the AUM-weighted returns of the hedge funds managed by the hedge fund firm. The results showcased in Panel D of Table 3 indicate that our performance results are not driven by measurement error when estimating manager race via the NamSor API. We manually determine manager race via a visual inspection for the managers with LinkedIn photos. We find that for this subset of managers, the risk-adjusted spread between minority and non-minority led funds is still economically and statistically significant at 6.36% per annum (t-statistic = 3.64).

[Insert Table 3 and Figure 1 here]

Figure 1 illustrates the cumulative abnormal returns from Portfolios 1 and 5 in Panel A of Table 3. Abnormal return is the difference between a portfolio's excess return and its factor loadings multiplied by the Fung and Hsieh (2004) risk factors, where factor loadings are estimated over the entire sample period. Figure 1 reveals that the portfolio of hedge funds that are managed by minorities consistently outperforms the portfolio of hedge funds that are managed by non-minorities over the entire sample period.

To assuage concerns that the loadings on the Fung and Hsieh (2004) may vary over time, we estimate the monthly alphas dynamically using factor loadings estimated over the prior 24 months and current month factor realizations. Next, in lieu of estimating rolling betas, we allow for two structural breaks in the estimation of the factor loadings: March 2000 (the

height of the technology bubble) and September 2008 (the collapse of Lehman Brothers). To allay concerns that our findings could be driven by minority hedge funds loading up on some omitted risk factor, we separately augment the Fung and Hsieh (2004) model with a plethora of factors. These include (i) the Fama and French (1993) value factor (HML) and the Carhart (1997) momentum factor (UMD), (ii) the Fama and French (2015) profitability and investment factors (RMW and CMA), (iii) the Pástor and Stambaugh (2003) traded liquidity factor (PS), (iv) the Frazzini and Pedersen (2014) betting-against-beta factor (BAB), (v) the Bali, Brown, and Caglayan (2014) macroeconomic uncertainty factor (MACRO), (vi) the Agarwal and Naik (2004) out-of-the-money call option and out-of-the-money put option factors (CALL and PUT), and (vii) an emerging markets factor derived from the MSCI Emerging Markets index (EM). The results reported in Table 4 confirm that our findings are robust to all these adjustments.

[Insert Table 4 here]

To ensure that our results are not driven by something specific about minority versus non-minority managed funds, we estimate the following pooled OLS regression:

$$\begin{aligned} ALPHA_{im} = {} & \alpha + \beta_1 MINORITY_{im-1} + \beta_2 MGTFEE_i + \beta_3 PERFFEE_i + \beta_4 HWM_i \\ & + \beta_5 LOCKUP_i + \beta_6 LEVERAGE_i + \beta_7 AGE_{im-1} + \beta_8 REDEMPTION_i \\ & + \beta_9 log(FUNDSIZE_{im-1}) + \sum_k \beta_{10}^k YEARMTHDUM_m^k \\ & + \sum_l \beta_{11}^l STRATEGYDUM_i^l + \sum_o \beta_{12}^o TEAMSIZEDUM_i^o + \epsilon_{im}, \end{aligned} \tag{2}$$

where $ALPHA$ is fund alpha, $YEARMTHDUM$ is the year-month dummy, and the rest of the variables are as per Eq. (1). Fund alpha is the monthly abnormal return from the Fung and Hsieh (2004) model, where the factor loadings are estimated over the prior 24 months.[12] We also estimate the analogous regressions on monthly fund returns to ensure that our results are not artifacts of the risk-adjustment methodology. Statistical inferences are based on White (1980) robust standard errors clustered by fund and month.

[12]Inferences do not change when we use factor loadings estimated over the past 36 months instead.

The regression results reported in Table 5 corroborate the findings from the portfolio sorts. The coefficient estimates from columns 1 and 2 reveal that after controlling for various hedge fund characteristics, minority hedge funds outperform non-minority hedge funds by 3.13% per year (t-statistic = 6.65) before adjusting for risk and by 4.01% per year (t-statistic = 8.20) after adjusting for risk. In columns 3 and 4, we report results when we estimate analogous regressions with $MINORITY\_DUMMY$ in place of $MINORITY$. In columns 5 to 8, we report results from Fama and MacBeth (1973) regressions which address possible cross-correlation in residuals across funds within the same month. One limitation of the Fama and MacBeth approach is that in the presence of the fund effect, i.e., residuals are correlated across time for the same fund, the standard errors may be biased (Petersen, 2009). Therefore, for the Fama and MacBeth regressions, we base statistical inferences on Newey and West (1987) standard errors with lag length as per Greene (2018). The findings are robust to these alternative specifications.[13]

[Insert Table 5 here]

Next, we conduct a myriad of robustness tests to verify the strength of our regression results. First, to adjust for incubation bias, we drop the first 24 months of returns for each fund and reestimate the baseline regressions on fund alpha derived from those return observations. Second, to ensure that our results are not driven by illiquidity induced serial correlation in reported fund returns, we unsmooth fund returns using the methodology of Getmansky, Lo, and Makarov (2004) and redo the baseline regressions on fund alpha generated from those unsmoothed returns. Third, to assuage concerns that our findings could be driven by minority hedge funds charging lower fees and thereby engendering the higher post fee returns that we observe, we reestimate the baseline regressions on fund alpha derived from gross fund returns. To back out fund fees, we calculate high-water marks and performance fees by matching each capital outflow to the relevant capital inflow, assuming as per Agarwal, Daniel, and Naik (2009) that capital leaves the fund on a first-in, first-out

[13]The coefficient estimates from the performance regressions reported in Table IA2 in the Internet Appendix indicate that the outperformance of minority operated hedge funds is driven more by hedge funds managed by asians and blacks than by hedge funds managed by latinos.

basis. Fourth, in response to concerns that the fraction of racial minorities at a hedge fund could be an indirect proxy for the racial diversity of a fund, we include racial diversity as an additional independent variable in the fund alpha regressions. We define racial diversity as one minus the maximum number of hedge fund managers at a team that share the same race scaled by the total number of members in the team as per Lu, Naik, and Teo (2022). Fifth, we include fund family fixed effects to abstract from the view that the outperformance of minority operated funds could be driven by minorities selecting into higher quality fund management firms. The results reported in Panel A of Table 6 indicate that our findings are robust to these adjustments.

[Insert Table 6 here]

In addition, to ensure that our findings are not driven by cross-sectional differences in fund leverage, we estimate analogous regressions on fund Sharpe ratio and information ratio. Sharpe ratio is the mean fund excess return divided by standard deviation of fund returns while information ratio is mean fund abnormal return divided by standard deviation of fund residuals from the Fung and Hsieh (2004) regression. To allay concerns that our findings could be driven by minority fund managers taking advantage of strategies such as writing deep out-of-the-money put options to inflate their Sharpe ratios, we run analogous regressions on fund manipulation-proof performance measures (MPPM), which are constructed as per Goetzmann et al. (2007).[14] Finally, to test whether minority operated hedge funds extract more value for their investors, we estimate analogous regressions on Berk and van Binsbergen (2015) skill, which is the monthly gross fund excess return multiplied by fund size. The results reported in Panel B of Table 6 indicate that minority operated hedge funds deliver superior Sharpe ratios, information ratios, MPPMs, and skill measures relative to non-minority operated hedge funds.

[14]We compute *MPPM* with a risk aversion parameter ρ equals to three. Our results are robust when we compute *MPPM* with ρ equals to two or four.

3.3. Endogeneity

To address endogeneity concerns stemming from *time-invariant* differences between minority and non-minority hedge funds, we conduct an event study where we investigate changes to fund performance when a fund management team hires a minority fund manager. In our baseline specification, the event window is the period that starts 36 months prior to and ends 36 months after the inclusion of the new manager. To be included in the sample, a fund must have monthly return and alpha information during the event window. There are 656 and 461 funds with sufficient monthly return and alpha information, respectively, for us to conduct the event study.

To allay endogeneity concerns emanating from *observable time-varying* differences in fund characteristics between minority and non-minority hedge funds, we match treatment hedge funds to control hedge funds based (i) the fraction of racial minorities in the fund management team and (ii) on fund performance in the 36-month pre-event period and conduct a difference-in-differences analysis. Our sample of control funds consists of funds that hired a non-minority fund manager during the event month. For example, in the fund alpha analysis, treatment funds are matched to racially comparable control funds that hired a non-minority fund manager during the event month by minimizing the sum of the absolute differences in monthly fund alpha in the 36-month pre-event period.

[Insert Table 7 here]

The results reported in columns 1 to 4 of Panel A of Table 7 indicate that relative to other funds with the same initial fraction of minority fund managers and to the prior 36-month period, funds that hire minority fund managers subsequently increase their returns by 6.31% per annum and enhance their alphas by 6.29% per annum in the 36-month period following the new hires. These difference-in-differences estimates are economically meaningful and statistically significant at the 1% level. Columns 1 to 4 of Panels B and C of Table 7 reveal that our findings are qualitatively unchanged when we vary the length of the event window.

Columns 5 to 8 of Table 7 reveal that we obtain qualitatively similar results when we

match control funds to treatment funds based on the fraction of racial minorities and propensity score in the pre-event period, where the covariates used for the propensity score match are the fund and team characteristics from Equation (2) as well as past 36-month fund performance. Columns 9 and 12 of Table 7 show that inferences also do not change when we match control funds to treatment funds based on the fraction of racial minorities, team size, and fund performance in the pre-event period.

One concern with the event study analysis is that because hedge fund firms choose to hire minority managers, the treatment funds and control funds may differ in some *unobservable time-varying* fund characteristic that correlates with performance. Therefore, to complement the event study and cater for endogeneity concerns driven by unobservable time-varying differences between minority and non-minority hedge funds, we conduct an instrumental variable analysis. The instrument that we use is the fraction of racial minorities residing in the hedge fund founding partner's hometown. We argue that due to racial imprinting during childhood (Marquis and Tilcsik, 2013; Simsek, Fox, and Heavey, 2015), hedge fund founders who grew up in cities where racial minorities comprise a larger proportion of the population are also more likely to set up hedge fund management teams that feature more racial minorities or that are dominated by racial minorities.

We compute the fraction of racial minorities at a founder's hometown using U.S. city level racial composition data from the U.S. census.[15] We are able to obtain hometown information for 240 hedge fund founding partners who manage 897 funds by searching for founder wikipedia pages, online media reports, and online articles that mention the founder's high school, etc.

The first-stage results in columns 1 to 2 of Table 8 are strongly consistent with the relevance condition for our instrument. The fraction of racial minorities residing in a hedge fund founder's hometown is a positive and significant predictor of both the fraction of racial

[15]The city level racial composition data are obtained from the 2014 American Community Survey, which is the earliest year for which the information is available. See https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2014/. Note that the fraction of racial minorities of U.S. cities does not vary much over time. For the U.S. cities in our hometown sample, the correlation between the fraction of racial minorities in 2014 and that in 2019 (the latest year for which American Community Survey information is available) is 0.977.

minorities operating the fund and the likelihood that the fund is managed by a predominantly minority team, with F-statistics that comfortably exceed the threshold of ten prescribed by Stock, Wright, and Yogo (2002).

Moreover, in support of the conceptual underpinnings of our instrumental variable approach, we find in Table IA3 of the Internet Appendix that the racial compositions of hedge fund firm founders' hometowns (i.e., the percentage of whites, asians, blacks, and latinos residing in the city) mirror those of their hedge fund management teams at fund inception.

The exclusion restriction is that conditional on covariates, the proportion of racial minorities residing in the founder's hometown affects fund investment performance only through its impact on the fraction of racial minorities at the fund management team. We leverage on the separation of time to motivate the exclusion requirement as per Acemoglu, Johnson, and Robinson (2001) and Glaeser, Kerr, and Kerr (2015). One concern is that hometowns with more racial minorities may be more affluent. This may explain why these founders who grew up in those cities outperform later in life. However, the correlation between the fraction of racial minorities at the founder's hometown and average hometown income is negative at -0.160, suggesting that founders who grew up in hometowns with a greater proportion of racial minorities had more limited access to resources during childhood.

[Insert Table 8 here]

Columns 3 to 6 of Table 8 report the second-stage results for the fund return and alpha equations. After instrumenting for the fraction of racial minorities in the fund management team, funds managed by minority managers continue to outperform those managed by non-minority managers. Similarly, after instrumenting for the likelihood that the fund management team is dominated by racial minorities, funds managed by a predominantly minority team still outpace those not managed by predominantly minority team. A comparison with the equivalent naïve OLS estimates in columns 7 to 10 of Table 8 shows that the coefficient estimates on *MINORITY* are larger after instrumenting for the fraction of racial minorities in the fund management team, although those on *MINORITY_DUMMY* are not always greater after instrumenting for the likelihood that the fund is operated by a predom-

inantly minority team. Collectively, the findings in this section suggest that endogeneity is unlikely to drive our results.

3.4. Underlying mechanisms

What drives the superior performance of minority operated hedge funds? The taste-based discrimination story suggests that only highly qualified minority fund managers enter the industry. Therefore, minority fund managers could outperform because they are simply better trained than are non-minority fund managers. To test this view, we evaluate the managerial characteristics of the hedge funds that are sorted into portfolios based on the fraction of minorities in the fund management team as per the analysis for Table 3. We report the median SAT college score averaged across the fund managers in the team as well as the likelihood that the fund managers attended Ivy League colleges, graduated from U.S. News Top-10 U.S. colleges, hold post-graduate degrees, and received PhD degrees.

Panel A of Table 9 reveals that minority hedge fund managers are indeed better trained than are non-minority hedge fund managers. First, they attended more selective schools. The undergraduate colleges attended by fund managers at minority hedge funds feature SAT scores that exceed those attended by fund managers at non-minority hedge funds by 23.15 points. In addition, fund managers at minority hedge funds are 8.1% and 7.3% more likely to have graduated from an Ivy League school or a top ten U.S. university than are fund managers at non-minority hedge funds.[16] Second, minority hedge fund managers are more likely to have received specialized education. In particular, fund managers working at minority hedge funds are 7.4% more likely to hold post-graduate degrees and 4.3% more likely to hold PhDs than are fund managers working at non-minority hedge funds. Panel B of Table 9 shows that we obtain qualitatively similar results when we sort fund managers (as opposed to hedge funds) by race. Table IA4 of the Internet Appendix indicate that hedge funds operated by fund managers who attended universities with higher SAT scores, graduated from Ivy League schools, studied at top ten U.S. colleges, hold post graduate degrees, or

[16]To determine whether a university is a top ten university, we leverage on rankings data from U.S. News. See https://www.usnews.com/best-colleges/rankings/national-universities.

received PhD degrees tend to outperform, which is broadly consistent with Chevalier and Ellison (1999) and Chaudhuri, Ivković, Pollet, and Trzcinka (2020).

[Insert Table 9]

Next, the taste-based discrimination story could also predict that only minority fund managers with superior risk management skills will be able to successfully launch hedge funds. The ability to manage risk well could translate into superior returns by allowing minority operated funds to avoid painful drawdowns. Since bearers of idiosyncratic risk forgo risk premia and bearers of tail risks could suffer significant drawdowns (Duarte, Longstaff, and Yu, 2007), we posit that the fraction of minorities operating a fund should negatively relate to fund idiosyncratic and downside risk.

To test, we estimate multivariate regressions on hedge fund investment risk with the set of fund control variables used in the Equation (2) regressions. The dependent variables that we study include fund idiosyncratic risk (*IDIORISK*), downside beta (*DOWNSIDEBETA*), maximum monthly loss (*MAXLOSS*), and maximum drawdown (*MAXDRAWDOWN*). *IDIORISK* is the standard deviation of monthly hedge fund residuals from the Fung and Hsieh (2004) model. *DOWNSIDEBETA* is the downside beta relative to the S&P 500. *MAXLOSS* is the maximum monthly loss. *MAXDRAWDOWN* is the maximum cumulative loss. The investment risk metrics are estimated over each non-overlapping 24-month period after fund inception. To maximize the number of observations, the computation of downside beta leverages on observations derived from non-contiguous 24-month periods.

[Insert Table 10 here]

The results reported in Panel A of Table 10 reveal that minority fund managers manage risk more prudently. The coefficient estimates on *MINORITY* and *MINORITY_DUMMY* are all negative and statistically significant at the 5% level in the regressions on *IDIORISK*, *DOWNSIDEBETA*, *MAXLOSS*, and *MAXDRAWDOWN*. Therefore, minority operated hedge funds bear lower idiosyncratic risk relative to non-minority operated hedge

funds. They also better at avoiding downside risk, minimizing severe monthly losses, and curtailing maximum drawdowns.

Minority hedge fund managers may also be able to overcome racial prejudices by being more trustworthy (Gennaioli, Shleifer, and Vishny, 2015). To check, we estimate multivariate regressions on fund operational risk variables such as the fund termination indicator ($TERMINATION$), the Form ADV violation indicator ($VIOLATION$), and ω-Score ($OMEGA$). $TERMINATION$ takes a value of one after a hedge fund stops reporting returns to the database and states that it has liquidated that month. $VIOLATION$ takes a value of one when the hedge fund manager reports on Item 11 of Form ADV that the manager has been associated with a regulatory, civil, or criminal violation. $OMEGA$ is an operational risk instrument derived from various fund characteristics as per Brown et al. (2009).

We analyze fund termination, since Brown et al. (2009) find that operational risk is more important than financial risk for explaining fund failure. Our analysis of fund termination is limited to TASS and HFR funds since only TASS and HFR provide the reason for why a fund stopped reporting returns. In addition to the controls from Eq. (6), the regression on fund termination includes past 24-month fund returns to control for past fund performance. Item 11 disclosures on Form ADV provide insights into unethical behavior that precipitate regulatory action and lawsuits, as well as civil and even criminal violations. The ω-Score is based on a canonical correlation analysis that relates a vector of responses from Form ADV to a vector of fund characteristics in the TASS database, across all hedge funds that registered as advisors in the first quarter of 2006. Since only TASS provides data on manager personal capital – one of the characteristics used to compute the ω-Score – we only compute the ω-Score for TASS funds, as per Brown et al. (2009).

The results in Panel B of Table 10 show that minority fund managers are less likely to terminate their funds and more likely to exhibit lower ω-Scores. For example, the marginal effect reported in column 1 reveals that relative to hedge funds operated by non-minority managers, hedge funds operated by minority managers have a 2.37% lower probability of

terminating in any given year.[17] Given that the unconditional probability of fund termination in any given year is 7.31%, these results are economically meaningful. We note that the coefficient estimates on the minority variables in the $VIOLATION$ regressions while negative are statistically indistinguishable from zero at the 5% level. Nonetheless, the coefficient estimate on $MINORITY\_DUMMY$ is statistically significant at the 10% level suggesting that minority fund managers may also be less likely to report violations to the SEC.

To further test whether minority fund managers are indeed more trustworthy, we estimate analogous probit regressions on the probability that hedge funds trigger the four performance flags that are most often linked to funds with reporting violations as per Panel B of Table 5 in Bollen and Pool (2012): %Negative, Kink, Maxrsq, and %Repeat. %Negative is triggered by a low number of negative returns. Kink is triggered by a discontinuity at zero in the hedge fund return distribution. Maxrsq is triggered by an adjusted R^2 that is not significantly different from zero. %Repeat is triggered by a high number of repeated returns. The results in Panel C of Table 10 show that minority managed funds are less likely to trigger these performance flags, which Bollen and Pool (2009; 2012) show may be emblematic of fraud.[18]

3.5. Discussion

Why do minority operated hedge funds garner lower flows from fund investors despite outperforming non-minority operated hedge funds? The in-group bias view postulates that, fund investors, who tend to be non-minorities (Panel A of Table 1), prefer investing in hedge fund operated by managers that share the same race as the investor due to racial homophily. Alternatively, the superior non-minority view argues that both minority and non-minority investors harbor an irrational belief in the superior ability of non-minority hedge fund managers. To test, we study the behavior of fund of funds (FOFs), which are funds that allocate capital to hedge funds.

To understand the racial preferences of FOF managers, we sort single-race FOFs into

[17] Specifically, the marginal effect indicates that the difference in probability of fund termination between minority managed funds versus non-minority managed funds equals $100 * (1 - (1 - 0.002)^{12}) = 2.37\%$.

[18] One caveat is that, as shown by Jorion and Schwarz (2014), a return discontinuity around zero may instead be a by-product of the imputation of incentive fees.

four groups based on race. FOFWHITE is the portfolio of FOFs that are managed by white fund managers. FOFASIAN is the portfolio of FOFs that are managed by asian fund managers. FOFBLACK is the portfolio of FOFs that are managed by black fund managers. FOFLATINO is the portfolio of FOFs that are managed by latino fund managers. FOFALL is the portfolio of all single-race FOFs. Next, we evaluate the performance of the FOF portfolios relative to a four-factor model comprising the following hedge fund factors (which are constructed analogous to the FOF factors): HFWHITE, HFASIAN, HFBLACK, and HFLATINO.

[Insert Table 11 here]

The results reported in Table 11 provide evidence in support of both explanations. Consistent with the in-group bias view, we find that FOF managers gravitate more towards hedge fund operated by managers that belong to same race as the FOF manager. FOFWHITE loads more on HFWHITE than do FOFASIAN, FOFBLACK, and FOFLATINO. Similarly, FOFASIAN loads more on HFASIAN than do FOFWHITE, FOFBLACK, and FOFLATINO. In line with the superior non-minority view, we find that minority FOF managers are also more likely to allocate capital to non-minority operated hedge funds albeit not with the same intensity as do non-minority FOF managers. FOFASIAN, FOFBLACK, FOFLATINO all load positively and significantly on HFWHITE. These results hold regardless of whether we study equal-weighted or value-weighted portfolios and suggest that racial homophily only partly explains the taste-based prejudices directed against minority hedge funds.[19]

4. Robustness tests

We conduct a plethora of robustness tests to verify the strength of our baseline performance regression results. First, we redo our baseline regressions after employing an alternative racial classification based on the *NamePrism* algorithm of Ye et al. (2017), which classifies

[19] In results that are available upon request, we find that minority operated FOFs also outperform non-minority operated FOFs, and some of the outperformance is driven by minority managed FOFs' greater exposure to minority managed hedge funds.

fund managers into those with celtic english, european, hispanic, east asian, and south asian origins. We also consider another alternative racial classification based on the methodology of Imai and Khanna (2016), which categorizes fund managers into white, asian, black, and hispanic.[20] To further ameliorate measurement error concerns, we collect manager facial photos from manager LinkedIn profiles. Next, we determine manager race via a visual inspection of each manager's photo and redo the analysis on this alternative measure of race for the subset of managers with LinkedIn photos. Second, we partition the sample period into two and reestimate the baseline regressions on each subsample period. Third, we decompose the fund sample into two groups: single-manager funds and team-managed funds. Next, we rerun the baseline regressions for each group. Since all single-manager funds are by definition fully homogeneous, the analysis of single-manager funds cleanly distinguishes our findings from the effects of team diversity. Fourth, to further control for team diversity, we redo the baseline regressions after controlling for fund aggregate diversity, which is the average of the education-, experience-, nationality-, gender-, and race-based diversity measures of the hedge fund team as per Lu, Naik, and Teo (2022). Fifth, to allay concerns that the Agarwal, Daniel, and Naik (2009) broad investment style classification may not be granular enough to capture individual investment strategy performance, we classify hedge funds into the following 12 investment strategies: CTA, Emerging Markets, Event-Driven, Global Macro, Equity Long/Short, Equity Long Only, Market-Neutral, Multi-Strategy, Relative Value, Short Bias, Sector, and Others, and rerun our regressions after accounting for strategy fixed effects based on this classification. Sixth, to ensure that our findings are not driven by gender, we control for the fraction of female managers in the hedge fund team in our baseline regressions.[21] Seventh, we redefine minorities as comprising blacks and latinos only and reestimate the baseline performance regressions. Lastly, since blacks, latinos, and asians are not always considered minorities outside of the U.S., we redo all the analyses on

[20] See https://cran.r-project.org/web/packages/wru/wru.pdf. The R package generates a probability distribution of race for each manager which we use to determine the fraction of managers in the fund that belong to a certain race. We are grateful to Shenje Hshieh for kindly helping us collate the data.

[21] To determine gender, we use manager first names and the genderize.io application programming interface. See https://genderize.io

U.S.-based hedge funds.[22] The results reported in Table 12 indicate that our results are robust to these adjustments.

[Insert Table 12 here]

5. Out-of-sample test: Mutual funds

To gauge external validity, we conduct an out-of-sample test on actively managed U.S. equity mutual funds using data from the CRSP survivorship-free mutual fund database. We obtain manager race information from mutual fund manager name for 24,370 actively managed equity mutual funds managed by 2,214 fund management companies in the CRSP sample during our sample period.

First, we estimate multivariate OLS regressions on mutual fund flows that are analogous to Equation (1). In lieu of hedge fund characteristics, we control for mutual fund characteristics such as fund expense ratio (*EXPENSE*), maximum load (*LOAD*), and the log of fund total net assets (log(*TNA*)). Also, instead of controlling for one-year Fung and Hsieh (2004) alpha rank, we control for one-year Carhart (1997) alpha rank. The coefficient estimates on *MINORITY* reported in Table IA5 of the Internet Appendix reveal that, after controlling for the usual suspects, minority operated mutual funds attract 0.461% to 0.541% lower flows per annum than do non-minority operated mutual funds.

Second, we sort mutual funds into five portfolios every January 1st based on the fraction of racial minorities in the fund management team. We then evaluate the post-formation returns on these five portfolios relative to the Carhart (1997) four-factor model. The results reported in Panel A of Table IA6 of the Internet Appendix indicate that the minority mutual fund portfolio outperforms the non-minority mutual fund portfolio by 2.88% per annum (t-statistic = 3.07). After adjusting for co-variation with the Carhart (1997) four factors, the

[22] In results that are available upon request, we find that after controlling for past one year performance rank and other fund characteristics, U.S.-based minority hedge funds attract 6.10% to 6.30% lower flows per annum than do U.S.-based non-minority hedge funds. Moreover, U.S.-based minority hedge funds manage starting capital that is US$64.53 million or 42.54% lower than that managed by U.S. based non-minority hedge funds.

minority minus non-minority spread increases to 3.73% per annum (t-statistic = 5.52).

Lastly, we estimate multivariate OLS and Fama-MacBeth regressions on mutual fund performance that are analogous to Equation (2). As per the mutual fund flow regressions, we control for mutual fund characteristics such as fund expense ratio ($EXPENSE$), maximum load ($LOAD$), and the log of fund total net assets ($\log(TNA)$). Mutual fund alpha is monthly abnormal return from the Carhart (1997) model, where the factor loadings are estimated over the prior 24 months. The coefficient estimates on $MINORITY$ reported in Panel B of Table IA6 indicate that after adjusting for the explanatory power of mutual fund characteristics, minority managed mutual funds outperform non-minority managed mutual funds by 49.2 basis points to 52.8 basis points per annum. These results are statistically significant at the 5% level, albeit economically more modest than those for hedge funds (see Table 5).

6. Conclusion

The results in this paper provide strong and novel evidence of racial prejudices in the hedge fund industry. We show that fund investors discriminate against hedge funds operated by racial minorities. Minority operated hedge funds raise less start-up capital and attract lower investor flows.

The discriminatory practices directed at minorities do not emanate from a statistical model of discrimination. Minority managed hedge funds generate higher alphas, Sharpe ratios, information ratios, manipulation proof performance measures, and skill metrics than do their non-minority managed competitors. Minority hedge fund managers also manage investment risk more judiciously. They eschew idiosyncratic risk and are more effective at minimizing downside risk, curbing severe monthly losses, and limiting maximum drawdowns. They also appear more trustworthy and exhibit lower operational risk. They are less likely to terminate their funds, showcase lower ω scores, and are less likely to report suspicious returns. Minority fund managers are also ex-ante more qualified, having attended more selective schools and received more specialized education.

Our findings are not driven by endogeneity concerns. Hedge funds that increase the fraction of racial minorities in their fund management teams subsequently outperform comparable hedge funds that do not. After instrumenting for the fraction of racial minorities at the hedge fund management team with the proportion of racial minorities residing at the fund founder's hometown, we still find that the percentage of minority fund managers at the fund management team positively relates to future fund risk-adjusted performance.

Racial homophily partly explains the racial bias against minority hedge fund managers. Fund of funds managers are more likely to gravitate towards hedge funds operated by managers who belong to the same race as them. However, minority funds of fund managers are also more likely to allocate capital to non-minority hedge fund managers suggesting that investors may also be driven by a belief in the superior ability of non-minority managers.

Consistent with the view that racial prejudices are pervasive in asset management, we find that minority operated mutual funds also outperform non-minority operated mutual funds and attract lower flows. Our results suggest that efforts by industry associations and institutional investors to improve the representation of racial minorities in asset management are not only justifiable for equity reasons but, on the margin, are also sensible from an alpha generation, risk management, and operational risk standpoint.

References

Acemoglu, D., Johnson, S., Robinson, J., 2001. The colonial origins of comparative development: an empirical investigation. American Economic Review 91, 1369–1401.

Agarwal, V., Daniel, N., Naik, N. Y., 2009. Role of managerial incentives and discretion in hedge fund performance. Journal of Finance 64, 2221–2256.

Agarwal, V., Green, T.C., Ren, H., 2018. Alpha or beta in the eye of the beholder: what drives hedge fund flows? Journal of Financial Economics 127, 417–434.

Agarwal, V., Naik, N. Y., 2004. Risk and portfolio decisions involving hedge funds. The Review of Financial Studies 17, 63–98.

Aggarwal, R. K., Boyson, N.M., 2015. The performance of female hedge fund managers. Review of Financial Economics 29, 23–36.

Aggarwal, R. K., Jorion, P., 2010. The performance of emerging hedge funds and managers.

Journal of Financial Economics 96, 238–256.

Alesina, A., La Ferrara, E., 2014. A test of racial bias in capital sentencing. American Economic Review 104, 3397–3433.

Aragon, G. 2007. Share restrictions and asset pricing: evidence from the hedge fund industry. Journal of Financial Economics 83, 33–58.

Arnold, D., Dobbie, W., Yang, C.S., 2018. Racial bias in bail decisions. Quarterly Journal of Economics 133, 1885–1932.

Arrow, K.J., 1973. The theory of discrimination. Discrimination in Labor Markets 3, 3–33.

Bali, T., Brown, S., Caglayan, O., 2014. Macroeconomic risk and hedge fund returns. Journal of Financial Economics 114, 1–19.

Becker, G., 1971. The Economics of Discrimination. University of Chicago Press.

Berk, J., van Binsbergen, J.H., 2015. Measuring skill in the mutual fund industry. Journal of Financial Economics 118, 1–20.

Bertrand, M., Mullainathan, S., 2004. Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. American Economic Review 94, 991–1013.

Bhardwaj, G., Gorton, G., Rouwenhorst K.G., 2014. Fooling some of the people all of the time: the inefficient performance and persistence of commodity trading advisors. The Review of Financial Studies 27, 3099–3132.

Bollen, N., Pool, V., 2009. Do hedge fund managers misreport returns? Evidence from the pooled distribution. Journal of Finance 64, 2257–2288.

Bollen, N., Pool, V., 2012. Suspicious patterns in hedge fund returns and the risk of fraud. The Review of Financial Studies 25, 2673–2702.

Brown, S., Goetzmann, W., Liang, B., Schwarz, C., 2009. Estimating operational risk for hedge funds: The ω-score. Financial Analysts Journal 65, 43–53.

Carhart, M., 1997. On persistence in mutual fund performance. Journal of Finance 52, 57–82.

Chaudhuri, R., Ivković, Z., Pollet, J, Trzcinka, C., 2020. A tangled tale of training and talent: PhDs in institutional asset management. Management Science 66, 5485–6064. Chevalier, J., Ellison, G., 1999. Are some mutual fund managers better than others? Cross-sectional patterns in behavior and performance. Journal of Finance 54, 875–899.

Chuprinin, O., Soysura, D., 2018. Family descent as a signal of managerial quality: evidence from mutual funds. Review of Financial Studies 31, 3756–3820.

Duarte, J., Longstaff, F., Yu, F., 2007. Risk and return in fixed income arbitrage: nickels in front of a steamroller? The Review of Financial Studies 20, 769–811.

Fama, E., MacBeth, J., 1973. Risks, return, and equilibrium: empirical tests. Journal of Political Economy 81, 607–636.

Fama, E., French, K., 1993. Common risk factors in the returns on stocks and bonds. Journal of Financial Economics 33, 3–56.

Fama, E., French, K., 2015. A five-factor asset pricing model. Journal of Financial Economics 116, 1–22.

Frazzini, A., Pedersen, L.H., 2014. Betting against beta. Journal of Financial Economics 111, 1–25.

Fung, W., Hsieh, D., 2004. Hedge fund benchmarks: a risk based approach. Financial Analysts Journal 60, 65–80.

Fung, W., Hsieh, D., 2009. Measurement biases in hedge fund performance data: an update. Financial Analysts Journal 65, 36–38.

Gennaioli, N., Shleifer, A., Vishny, R., Money doctors. Journal of Finance 70, 91–114.

Getmansky, M., Lo, A., Makarov, I., 2004. An econometric model of serial correlation and illiquidity of hedge fund returns. Journal of Financial Economics 74, 529–610.

Glaeser, E., Kerr, S., Kerr, W., 2015. Entrepreneurship and urban growth: an empirical assessment with historical mines. Review of Economics and Statistics 97, 498–520. Goetzmann, W., Ingersoll, J., Spiegel, M., Welch, I., 2007. Portfolio performance manipulation and manipulation-proof performance measures. The Review of Financial Studies 20, 1503–1546.

Goncalves F., Mello, S., A few bad apples? Racial bias in policing. American Economic Review 111, 1406–1441.

Greene, W.H., 2018. Econometric Analysis. Pearson. New York.

Han, L., Huang, X., Kadan, O., Wu, J., 2022. The true colors of money: racial diversity and asset management. Unpublished working paper. Washington University at St Louis.

Imai, K., Khanna, K., 2016. Improving ecological inference by predicting individual ethnicity from voter registration records. Political Analysis 24, 263–272.

Jorion, P., Schwarz, C., 2014. Are hedge fund managers misreporting? Or not? Journal of Financial Economics 111, 311–327.

Jorion, P., Schwarz, C., 2019. The fix is in: properly backing out backfill bias. The Review of Financial Studies 32, 5048–5099.

Kumar, A., Niessen-Ruenzi, A., Spalt, O.G., 2015. What is in a name? Mutual fund flows when managers have foreign sounding names. Review of Financial Studies 28, 2281–2321.

Liang, B., 2000. Hedge funds: the living and the dead. Journal of Financial and Quantitative Analysis 35, 309–326.

Lu, Y., Naik, N., Teo, M., 2022. Diverse hedge funds. Unpublished working paper, London Business School.

Marquis, C., Tilcsik, A., 2013. Imprinting: towards a multilevel theory. Academy of Management Annals 7, 195–245.

Neilson, W., Ying, S., 2016. From taste-based to statistical discrimination. Journal of Economic Behavior & Organization 129, 116–128.

Niessen-Ruenzi, A., Ruenzi, S., 2019. Sex matters: gender bias in the mutual fund industry. Management Science 65, 3001–3025.

Pástor, L., Stambaugh, R.F., 2003. Liquidity risk and expected stock returns. Journal of Political Economy 111, 642–685.

Petersen, M.A., 2009. Estimating standard errors in finance panel data sets: comparing approaches. Review of Financial Studies 22, 435–480.

Phelps, E.S., 1972. The statistical theory of racism and sexism. American Economic Review 62, 659–661.

Simsek, Z., Fox, B.C., Heavey, C. 2015. "What's past is prologue": a framework, review, and future directions for organizational research on imprinting. Journal of Management 41, 288–317.

Siri, E.R., Tufano, P., 1998. Costly search and mutual fund flows. Journal of Finance 53, 1589–1622.

Stock, J.H., Wright, J.H., Yogo, M., 2002. A survey of weak instruments and weak identification in Generalized Method of Moments. Journal of Business and Economic Statistics 20, 518–529.

White, H., 1980. A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. Econometrica 48, 817–838.

Ye, J., Han, S., Hu, Y., Coskun, B., Liu, M., Qin, H., Skiena, S., 2017. National classification using name embeddings. Proceedings of the 2017 ACM on Conference on Information and Knowledge Management, 1897–1906.

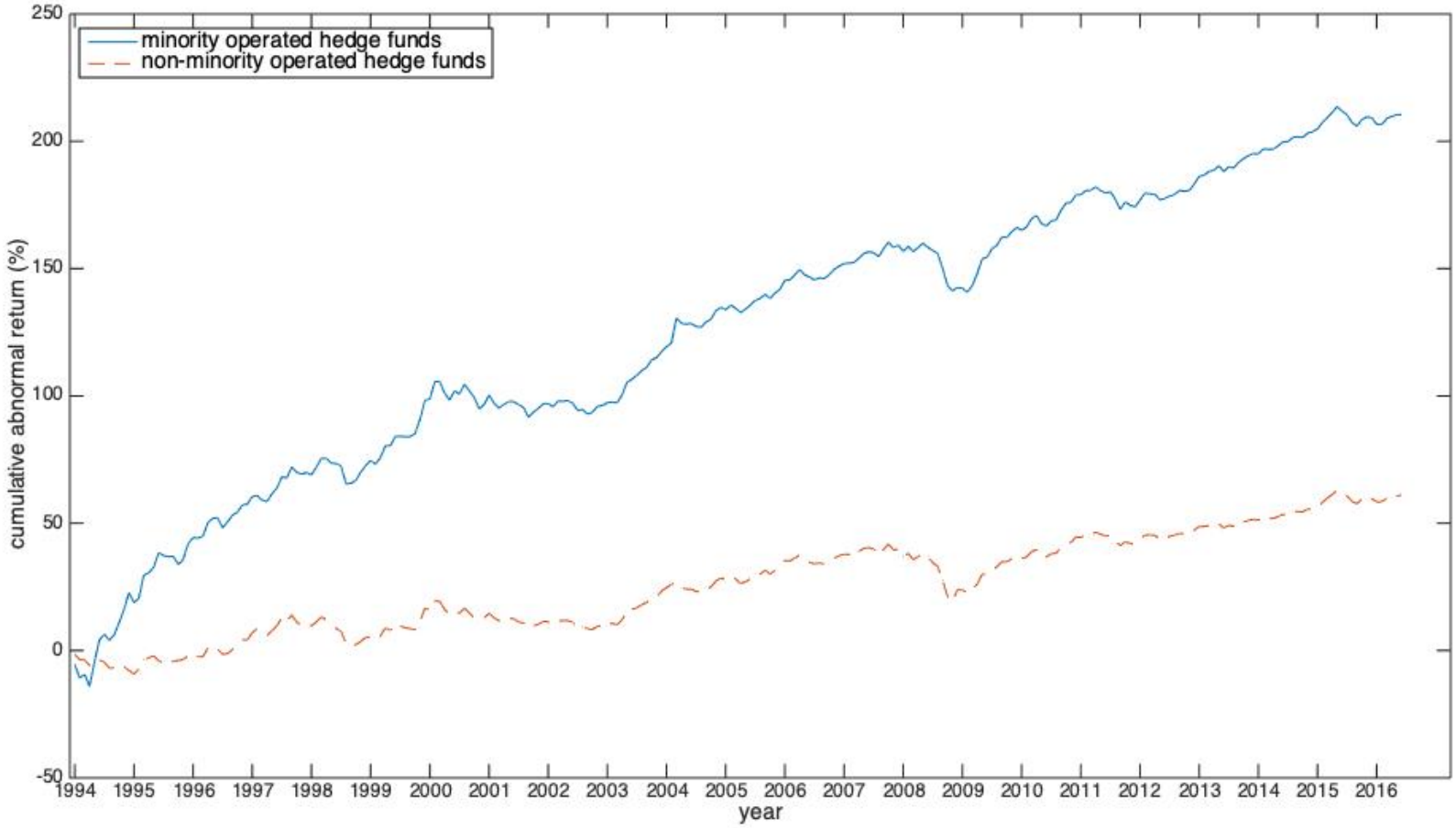

Figure 1: Cumulative abnormal returns of hedge funds sorted on hedge fund manager race. Every January 1st, hedge funds are sorted into two portfolios based on whether their management companies are fully operated by minority or non-minority fund managers. The solid line denotes the portfolio of hedge funds managed by minorities. The dashed line denotes the portfolio of hedge funds managed by non-minorities. Abnormal return is the difference between a portfolio's excess return and its factor loadings multiplied by the Fung and Hsieh (2004) risk factors, where factor loadings are estimated over the entire sample period. The sample period is from January 1994 to June 2016.

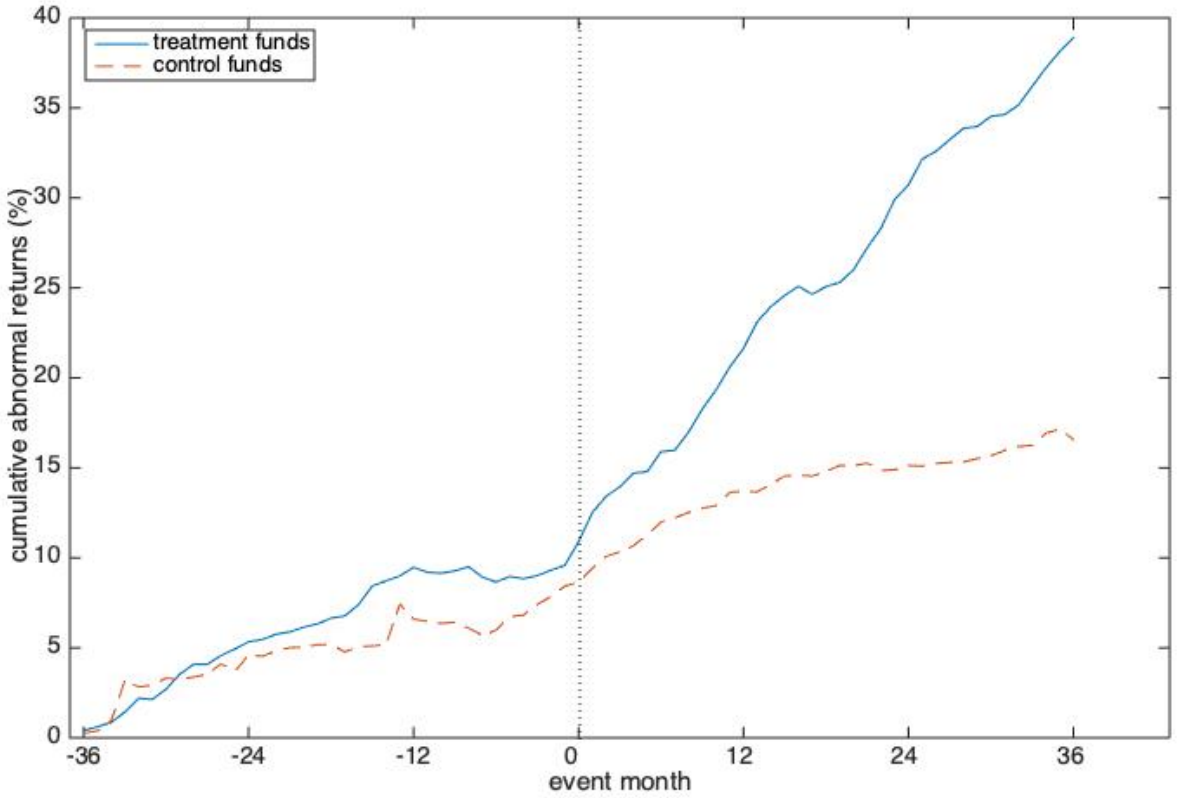

Figure 2: Event study analysis of minority fund manager additions to hedge fund management teams. Fund abnormal return is Fung and Hsieh (2004) seven-factor monthly alpha with factor loadings estimated over the last 24 months. The event month is the month that a hedge fund management team hires a new minority fund manager. To be included in the analysis, a hedge fund must survive at least 36 months before and after the event month. Control funds are funds that hired a non-minority fund manager in the event month. Funds in the control group are matched to funds in the treatment group based on (i) the fraction of minority fund managers in the hedge fund team before the event and (ii) minimizing the sum of the absolute differences in monthly fund alpha in the 36-month pre-event period.

Table 1: **Summary statistics**
This table reports summary statistics of the key variables used in the study. *MINORITY* is the fraction of racial minorities in the hedge fund team. *MINORITY_DUMMY* is an indicator variable that takes a value of one if more than 50% of the team members operating the hedge fund are racial minorities. *RETURN* is the monthly hedge fund net-of-fee return. *ALPHA* is the Fung and Hsieh (2004) seven-factor monthly alpha where factor loadings are estimated over the last 24 months. *MGTFEE* is fund management fee in percentage. *PERFFEE* is fund performance fee in percentage. *HWM* is fund high-water mark indicator, *LOCKUP* is lock-up period in years. *LEVERAGE*is fund leverage indicator. *AGE* is fund age in years. *REDEMPTION* is fund redemption period in months. *FUNDSIZE* is fund AUM in US$ millions. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

Panel A: Distribution of fund manager race

	All hedge funds		U.S.-based hedge funds		Fund of funds	
Race	Number of managers	Percentage of managers	Number of managers	Percentage of managers	Number of managers	Percentage of managers
White	8783	64.69%	5303	75.50%	1701	70.43%
Asian	2232	16.44%	734	10.45%	242	10.02%
Black	1546	11.39%	678	9.65%	319	13.21%
Latino	1017	7.49%	309	4.40%	153	6.34%

Panel B: Distribution of key variables

Variable	Mean	10%	25%	Median	75%	90%	Std dev
MINORITY	0.345	0.000	0.000	0.200	0.500	1.000	0.398
MINORITY_DUMMY	0.225	0.000	0.000	0.000	0.000	1.000	0.418
RETURN	0.630	-3.640	-0.900	0.580	2.006	4.660	6.104
ALPHA	0.406	-2.669	-0.773	0.438	1.500	3.351	1.013
MGTFEE	1.451	0.640	1.000	1.500	2.000	2.000	0.712
PERFFEE	16.521	0.000	15.000	20.000	20.000	20.000	7.611
HWM	0.635	0.000	0.000	1.000	1.000	1.000	0.481
LOCKUP	0.589	0.000	0.000	1.000	1.000	1.000	0.492
LEVERAGE	0.586	0.000	0.000	1.000	1.000	1.000	0.492
AGE	5.758	1.083	2.250	4.500	7.917	12.250	4.826
REDEMPTION	1.547	0.000	0.033	1.000	3.000	3.000	2.337
FUNDSIZE	315.72	2.600	9.820	35.758	132.330	440.946	2297.780

Panel C: Distribution of race variables by investment strategy

Investment strategy	No. of funds	Mean	10%	25%	Median	75%	90%	Std dev
Subpanel A: *MINORITY*								
Directional Trader	4812	0.339	0.000	0.000	0.167	0.500	1.000	0.340
Relative Value	2021	0.315	0.000	0.000	0.167	0.500	1.000	0.377
Security Selection	8549	0.390	0.000	0.000	0.333	1.000	1.000	0.399
Multiprocess	4183	0.226	0.000	0.000	0.000	0.500	1.000	0.350
Subpanel B: *MINORITY_DUMMY*								
Directional Trader	4812	0.225	0.000	0.000	0.000	0.000	1.000	0.417
Relative Value	2021	0.188	0.000	0.000	0.000	0.000	1.000	0.391
Security Selection	8549	0.250	0.000	0.000	0.000	1.000	1.000	0.433
Multiprocess	4183	0.132	0.000	0.000	0.000	0.000	1.000	0.339

Panel D: Correlations with race variables

Variable	*MINORITY*	*MINORITY_DUMMY*
MINORITY	1.000	
MINORITY_DUMMY	0.875	1.000
RETURN	0.016	0.013
ALPHA	0.008	0.008
MGTFEE	-0.024	-0.028
PERFFEE	0.089	0.012
HWM	0.095	0.008
LOCKUP	0.042	0.026
LEVERAGE	0.008	-0.002
AGE	0.114	0.063
REDEMPTION	0.064	0.022
log(*FUNDSIZE*)	0.004	-0.035

Panel E: Fund characteristics of minority versus non-minority managed hedge funds

Variable	Minority managed funds	Non-minority managed funds	Difference
RETURN	0.897	0.524	0.373**
ALPHA	0.619	0.341	0.278**
MGTFEE	1.419	1.461	-0.042**
PERFFEE	16.714	16.462	0.252**
HWM	0.673	0.482	0.191**
LOCKUP	0.493	0.415	0.078**
LEVERAGE	0.567	0.491	0.076**
AGE	6.229	4.765	1.464**
REDEMPTION	1.612	1.528	0.084**
FUNDSIZE	390.65	294.830	95.820**

Table 2: **Multivariate regressions on hedge fund flow and inception size**
This table reports results from multivariate regressions on hedge fund annual flow in percentage (*FLOW*) and the log of fund inception size in US$m (log(*INCEPTIONSIZE*)). The independent variables of interest are the fraction of racial minorities in the hedge fund team (*MINORITY*) and an indicator variable that takes a value of one if more than 50% of the team members operating the hedge fund are racial minorities (*MINORITY_DUMMY*). The other independent variables in the flow regressions include fund characteristics such as management fee (*MGTFEE*), performance fee (*PERFFEE*), high-water mark indicator (*HWM*), lock-up period in years (*LOCKUP*), leverage indicator (*LEVERAGE*), fund age in years (*AGE*), redemption period in months (*REDEMPTION*), and log of fund size in US$m (log(*FUNDSIZE*)), as well as team SAT score scaled by 100 (*SAT/100*) and dummy variables for year, fund investment strategy, and team size. The flow regressions also include controls for past-year fund return rank (*RANK_RETURN*), CAPM alpha rank (*RANK_CAPM*), or Fung and Hsieh (2004) alpha rank (*RANK_FH*). The regressions on the log of fund inception size include the fund control variables from the flow regression except fund performance rank, fund age and log of fund size. The *t*-statistics, in parentheses, are derived from robust standard errors clustered by fund and year for the regressions on fund flow and by year for the regressions on the log of fund inception size. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

	FLOW						log(*INCEPTIONSIZE*)	
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
MINORITY	-3.590*		-3.298*		-3.135*		-0.405**	
	(-2.34)		(-2.56)		(-2.46)		(-10.10)	
MINORITY_DUMMY		-3.614*		-3.301*		-3.130*		-0.413**
		(-2.32)		(-2.51)		(-2.40)		(-10.05)
RANK_RETURN	5.290**	5.306**						
	(5.62)	(5.63)						
RANK_CAPM			2.556*	2.572*				
			(2.40)	(2.41)				
RANK_FH					3.283**	3.297**		
					(2.90)	(2.90)		
MGTFEE	-0.510	-0.502	-0.201	-0.194	-0.203	-0.196	-0.021	-0.021
	(-0.88)	(-0.87)	(-0.33)	(-0.32)	(-0.34)	(-0.33)	(-1.02)	(-1.01)
PERFFEE	0.040	0.040	0.009	0.009	0.012	0.011	-0.017**	-0.017**
	(0.73)	(0.72)	(0.18)	(0.18)	(0.22)	(0.22)	(-7.28)	(-7.28)
HWM	2.140	2.135	2.085	2.080	2.114	2.109	0.116**	0.116**
	(1.94)	(1.94)	(1.85)	(1.85)	(1.87)	(1.87)	(2.91)	(2.91)
LOCKUP	-2.246**	-2.246**	-2.115**	-2.115**	-2.098**	-2.098**	-0.123**	-0.122**
	(-3.69)	(-3.69)	(-3.06)	(-3.06)	(-3.02)	(-3.03)	(-2.97)	(-2.94)
LEVERAGE	0.317	0.327	0.517	0.526	0.499	0.508	-0.162**	-0.162**
	(0.40)	(0.41)	(0.71)	(0.72)	(0.69)	(0.70)	(-5.71)	(-5.70)
AGE	-0.510**	-0.511**	-0.412**	-0.413**	-0.412**	-0.413**		
	(-7.58)	(-7.59)	(-6.27)	(-6.26)	(-6.24)	(-6.23)		
REDEMPTION	0.078	0.079	0.111	0.112	0.113	0.114	0.024**	0.024**
	(0.51)	(0.52)	(0.78)	(0.78)	(0.79)	(0.80)	(3.74)	(3.74)
log(*FUNDSIZE*)	-0.965**	-0.960**	-1.061**	-1.057**	-1.059**	-1.055**		
	(-3.80)	(-3.79)	(-4.53)	(-4.52)	(-4.54)	(-4.53)		
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strategy fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Team size fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.012	0.012	0.010	0.010	0.010	0.010	0.067	0.067
N	40158	40158	39622	39622	39622	39622	16667	16667

Table 3: **Portfolio sorts on hedge fund manager race**

Every January 1st, hedge funds are sorted into five portfolios based on the fraction of racial minorities in the hedge fund team. Portfolio 1 comprises hedge funds where all fund managers are minorities. Portfolio 5 comprises hedge funds where all fund managers are non-minorities. The other hedge funds are sorted into the remaining three portfolios based on the fraction of the managers that are minorities. Portfolio performance is estimated relative to the Fung and Hsieh (2004) factors, which are S&P 500 return minus risk free rate (SNPMRF), Russell 2000 return minus S&P 500 return (SCMLC), change in the constant maturity yield of the U.S. 10-year Treasury bond appropriately adjusted for the duration (BD10RET), change in the spread of Moody's BAA bond over 10-year Treasury bond appropriately adjusted for duration (BAAMTSY), bond PTFS (PTFSBD), currency PTFS (PTFSFX), and commodity PTFS (PTFSCOM), where PTFS is primitive trend following strategy. Panels A reports results for equal-weighted hedge fund portfolios. Panel B reports results after excluding hedge funds with AUM lower than US$50 million. Panel C reports results for value-weighted hedge fund portfolios. Panel D reports results for hedge fund firms, where a hedge fund firm's returns are the value-weighted returns of the hedge funds that it manages. The t-statistics are derived from White (1980) standard errors. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

Hedge fund/firm portfolio	Number of funds/firms	Excess return (annualized)	t-statistic of excess return	Alpha (annualized)	t-statistic of alpha	SNPMRF	SCMLC	BD10RET	BAAMTSY	PTFSBD	PTFSFX	PTFSCOM	Adj. R^2
Panel A: Equal-weighted portfolios													
Portfolio 1 (all minorities)	4,332	6.36**	3.63	4.32**	3.26	0.31**	0.19**	-0.78	-2.24**	-0.00	0.01	0.01	0.508
Portfolio 2	1,776	5.52**	4.26	4.08**	3.02	0.27**	0.15**	-0.65	-2.60**	0.00	0.02*	0.01	0.457
Portfolio 3	1,862	5.04**	2.67	3.72**	3.19	0.25**	0.18**	-1.14**	-3.06**	-0.01	0.01*	0.00	0.682
Portfolio 4	1,649	5.16**	3.66	3.60**	3.18	0.23**	0.11**	-0.94	-2.77**	0.00	0.01	0.01	0.451
Portfolio 5 (no minorities)	10,946	0.36	0.28	-1.03	-1.36	0.20**	0.11**	-1.40**	-2.79**	-0.00	0.01**	0.01	0.585
Spread (1-5)		6.00**	2.89	5.35**	5.60	0.11**	0.08**	0.62	0.55	0.00	0.00	0.00	0.180
Panel B: Excluding hedge funds with AUM < US$50 million													
Portfolio 1 (all minorities)	1,653	6.00**	3.67	3.48**	2.64	0.26**	0.16**	-0.58	-2.26**	0.00	0.01*	0.00	0.434
Portfolio 2	802	3.48	1.46	2.88	1.32	0.21**	0.20**	-0.50	-2.93**	0.03*	0.02	0.01	0.249
Portfolio 3	790	1.44	0.57	1.80	0.68	0.18**	0.10*	-0.91	-2.80**	-0.01	-0.01	0.03	0.178
Portfolio 4	815	2.52	1.10	3.24	1.70	0.19**	0.16**	-1.54	-3.99**	0.02	0.01	0.02	0.278
Portfolio 5 (no minorities)	3,870	1.07	0.74	-0.58	-0.49	0.17**	0.14**	-1.19*	-3.43**	-0.01	0.01*	0.01	0.478
Spread (1-5)		4.93*	2.15	4.06**	2.60	0.09**	0.02*	0.23	0.27	0.00	-0.00	-0.00	0.137
Panel C: Value-weighted portfolios													
Portfolio 1 (all minorities)	4,332	6.84**	3.57	5.76**	3.43	0.22**	0.11	-1.94**	-2.66**	0.00	0.01	0.01	0.234
Portfolio 2	1,776	5.76**	2.79	5.52**	2.89	0.16**	0.18**	-0.04	-1.46	0.02	0.01	0.02	0.201
Portfolio 3	1,862	4.56**	2.66	3.36*	2.38	0.20**	0.14**	-0.64	-0.88	-0.01	0.00	0.00	0.498
Portfolio 4	1,649	4.08*	2.26	3.24	1.84	0.18**	0.08*	-0.35	-2.57**	0.01	-0.00	0.02*	0.207
Portfolio 5 (no minorities)	10,946	1.32	1.02	-0.11	-0.09	0.21**	0.03	-0.85	-1.92**	-0.01*	0.02*	0.01	0.349
Spread (1-5)		5.52*	2.37	5.87**	4.68	0.01	0.08	-1.09	-0.74	0.01	-0.01	0.00	0.032
Panel D: Race estimated via manager LinkedIn photos													
Portfolio 1 (all minorities)	139	6.48**	3.24	5.04*	2.57	0.34**	0.14**	-0.75	-0.99	-0.01	0.01	-0.00	0.423
Portfolio 2	59	2.88	0.20	-1.32	-0.28	0.21	0.38	-0.47	-5.69	0.01	-0.07	0.15	0.908
Portfolio 3	61	1.56	0.41	-1.03	-0.28	0.17	0.12	-1.01	-5.66**	-0.04	0.03	0.00	0.274
Portfolio 4	58	-0.23	-0.02	-3.48	-1.18	-0.32	0.14	1.05	0.03	-0.15	0.27	-0.19	0.874
Portfolio 5 (no minorities)	2,350	0.66	0.43	-1.32	-1.46	0.31**	0.20**	-0.58	-2.31**	-0.01	0.01**	-0.00	0.690
Spread (1-5)		5.82*	2.34	6.36**	3.64	0.03	-0.06	-0.17	1.32*	0.00	0.00	0.00	0.04

Table 4: **Portfolio sorts on hedge fund manager race, robustness tests**
This table reports the alphas and factor loadings for the high-minus-low diversity spread portfolio from the sort on fund manager race. Every January 1st, hedge funds are sorted into five portfolios based on the fraction of racial minorities in the hedge fund team. Rows 1 to 2 in each panel report the performance of the spread portfolio estimated relative to the Fung and Hsieh (2004) model (FH). For row 1, the monthly alphas are estimated dynamically using factor loadings estimated over the prior 24 months and current month factor realizations. The adjusted R^2s reported in row 1 are the average adjusted R^2s of the 24-month rolling regressions used to estimate the factor loadings. For row 2, the estimation of the FH factor loadings allows for structural breaks in March 2000 (the height of the tech bubble) and Sept 2008 (the collapse of Lehman Brothers). The other rows report spread portfolio performance estimated relative to an augmented Fung and Hsieh (2004) model. HML is the Fama and French (1993) value factor. UMD is the Carhart (1997) momentum factor. RMW and CMA are the Fama and French (2015) profitability and investment factors, respectively. PS is the Pástor and Stambaugh (2003) traded liquidity factor. BAB is the Frazzini and Pedesen (2014) betting-against-beta factor. MACRO is the Bali, Brown, and Caglayan (2014) macroeconomic uncertainty factor. CALL and PUT are the Agarwal and Naik (2004) out-of-the-money call and put option based factors. EM is the emerging markets factor derived from the MSCI Emerging Markets index. The loadings on the Fung and Hsieh factors are omitted for brevity. Panels A reports results for equal-weighted hedge fund portfolios. Panel B reports results after excluding hedge funds with AUM lower than US$50 million. Panel C reports results for value-weighted hedge fund portfolios. Panel D reports results for hedge fund firms, where a hedge fund firm's returns are the value-weighted returns of the hedge funds that it manages. The *t*-statistics are derived from White (1980) standard errors. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

Risk model	Portfolio	Alpha	*t*-statistic of alpha	HML	UMD	RMW	CMA	PS	BAB	MACRO	CALL	PUT	EM	Adj R^2
Panel A: Equal-weighted portfolios														
FH (24-month rolling betas)	Spread (1-5)	4.332**	3.04											0.289
FH (with structural breaks)	Spread (1-5)	5.820**	5.16											0.191
FH + HML + UMD	Spread (1-5)	6.284**	5.56	-0.080**	-0.007									0.168
FH + RMW + CMA	Spread (1-5)	6.852**	6.11			-0.001**	-0.001*							0.175
FH + PS	Spread (1-5)	6.203**	5.37					0.009						0.145
FH + BAB	Spread (1-5)	6.585**	5.59						-0.045					0.151
FH + MACRO	Spread (1-5)	6.209**	5.20							-0.038				0.148
FH + CALL + PUT	Spread (1-5)	5.714**	5.31								-0.142	-0.128		0.149
FH + EM	Spread (1-5)	6.097**	5.40										1.630	0.147
Panel B: Excluding hedge funds with AUM < US$50 million														
FH (24-month rolling betas)	Spread (1-5)	3.144*	2.48											0.307
FH (with structural breaks)	Spread (1-5)	3.660**	4.99											0.281
FH + HML + UMD	Spread (1-5)	4.432**	6.09	-0.032	-0.002									0.191
FH + RMW + CMA	Spread (1-5)	4.739**	6.22			-0.001*	-0.000							0.199
FH + PS	Spread (1-5)	4.489**	6.01					0.002						0.177
FH + BAB	Spread (1-5)	4.905**	6.21						-0.048*					0.198
FH + MACRO	Spread (1-5)	4.151**	5.44							0.051*				0.192
FH + CALL + PUT	Spread (1-5)	3.987**	4.88								-0.217	-0.073		0.199
FH + EM	Spread (1-5)	4.497**	6.52										7.068**	0.260

Table 4: Continued

Risk model	Portfolio	Alpha	t-statistic of alpha	HML	UMD	RMW	CMA	PS	BAB	MACRO	CALL	PUT	EM	Adj R^2
Panel C: Value-weighted portfolios														
FH (24-month rolling betas)	Spread (1-5)	4.368**	4.53											0.186
FH (with structural breaks)	Spread (1-5)	5.484**	4.6											0.166
FH + HML + UMD	Spread (1-5)	5.477**	4.44	0.045	0.020									0.049
FH + RMW + CMA	Spread (1-5)	5.770**	4.65			-0.000	0.000							0.045
FH + PS	Spread (1-5)	5.885**	4.66					-0.009						0.043
FH + BAB	Spread (1-5)	5.759**	4.75						-0.005					0.041
FH + MACRO	Spread (1-5)	5.464**	4.26							0.061				0.047
FH + CALL + PUT	Spread (1-5)	5.936**	4.48								-0.057	0.217		0.052
FH + EM	Spread (1-5)	5.708**	4.60										0.475	0.042
Panel D: Hedge fund firms														
FH (24-month rolling betas)	Spread (1-5)	4.680**	3.61											0.284
FH (with structural breaks)	Spread (1-5)	6.468**	5.72											0.174
FH + HML + UMD	Spread (1-5)	6.875**	5.99	-0.075**	-0.008									0.150
FH + RMW + CMA	Spread (1-5)	7.371**	6.47			-0.001*	-0.001*							0.155
FH + PS	Spread (1-5)	6.781**	5.76					0.010						0.131
FH + BAB	Spread (1-5)	7.055**	5.90						-0.034					0.134
FH + MACRO	Spread (1-5)	6.807**	5.60							-0.038				0.133
FH + CALL + PUT	Spread (1-5)	6.331**	5.77								-0.131	-0.123		0.134
FH + EM	Spread (1-5)	6.697**	5.84										1.736	0.133

Table 5: **Multivariate regressions on hedge fund performance**
This table reports results from multivariate OLS and Fama-MacBeth regressions on hedge fund return (*RETURN*) and alpha (*ALPHA*). *RETURN* is the monthly hedge fund net-of-fee return. *ALPHA* is the Fung and Hsieh (2004) seven-factor monthly alpha where factor loadings are estimated over the last 24 months. The independent variables of interest are the fraction of racial minorities in the hedge fund team (*MINORITY*) and an indicator variable that takes a value of one if more than 50% of the team members operating the hedge fund are racial minorities (*MINORITY_DUMMY*). The other independent variables include fund management fee (*MGTFEE*), performance fee (*PERFFEE*), high-water mark indicator (*HWM*), lock-up period in years (*LOCKUP*), leverage indicator (*LEVERAGE*), fund age in years (*AGE*), redemption period in months (*REDEMPTION*), and log of fund size (log(*FUNDSIZE*)) as well as dummy variables for fund investment strategy and team size. The OLS regressions also include dummy variables for year-month. The *t*-statistics, in parentheses, are derived from robust standard errors clustered by fund and month for the OLS regressions and from Newey and West (1987) standard errors with lag length as per Greene (2018) for the Fama and MacBeth (1973) regressions. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

	OLS regressions				Fama-Macbeth regressions			
	RETURN	*ALPHA*	*RETURN*	*ALPHA*	*RETURN*	*ALPHA*	*RETURN*	*ALPHA*
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
MINORITY	0.261**	0.334**			0.314**	0.356**		
	(6.65)	(8.20)			(3.74)	(4.79)		
MINORITY_DUMMY			0.274**	0.289**			0.324**	0.297**
			(7.35)	(7.81)			(3.71)	(4.23)
MGTFEE	-0.002	-0.011	-0.002	-0.012	0.047	0.031	0.046	0.029
	(-0.07)	(-0.54)	(-0.09)	(-0.58)	(1.17)	(0.96)	(1.15)	(0.90)
PERFFEE	-0.005*	-0.003	-0.005*	-0.002	-0.001	-0.003	-0.001	-0.003
	(-1.98)	(-1.10)	(-2.00)	(-0.80)	(-0.41)	(-0.62)	(-0.42)	(-0.52)
HWM	-0.019	-0.093**	-0.019	-0.077**	-0.006	-0.028	-0.007	-0.003
	(-0.46)	(-3.34)	(-0.46)	(-2.78)	(-0.12)	(-0.62)	(-0.14)	(-0.07)
LOCKUP	-0.018	-0.028	-0.018	-0.029	0.104	0.438	0.094	0.303
	(-0.55)	(-0.76)	(-0.55)	(-0.79)	(0.06)	(0.24)	(0.06)	(0.17)
LEVERAGE	0.052	0.085**	0.052	0.086**	0.038	0.035	0.038	0.038
	(1.90)	(3.64)	(1.89)	(3.67)	(0.95)	(0.98)	(0.94)	(1.08)
AGE	-0.001	-0.010**	-0.001	-0.009**	0.003	-0.014	0.003	-0.012
	(-0.35)	(-4.40)	(-0.36)	(-4.00)	(0.52)	(-1.64)	(0.55)	(-1.49)
REDEMPTION	0.002	-0.000	0.002	0.001	0.018	0.006	0.018	0.006
	(0.24)	(-0.10)	(0.22)	(0.22)	(1.23)	(0.89)	(1.23)	(0.91)
log(*FUNDSIZE*)	0.001	0.032**	0.001	0.034**	0.010	0.040**	0.010	0.041**
	(0.17)	(4.42)	(0.12)	(4.62)	(0.55)	(3.83)	(0.54)	(3.91)
Year-month fixed effects	Yes	Yes	Yes	Yes	No	No	No	No
Strategy fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Team size fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.019	0.001	0.019	0.001	0.063	0.039	0.063	0.039
N	495173	495173	495173	495173	495173	495173	495173	495173

Table 6: **Additional multivariate regressions on hedge fund performance**

This table reports results from multivariate OLS regressions on hedge fund performance and performance measures. *ALPHA* is the Fung and Hsieh (2004) seven-factor monthly alpha where factor loadings are estimated over the last 24 months. *POSTINCUBATION_ALPHA* is incubation bias-adjusted alpha. *UNSMOOTHED_ALPHA* is alpha from unsmoothed fund returns as per Getmansky, Lo, and Makarov (2004). *PREFEE_ALPHA* is alpha from prefee returns. *SHARPE* is mean fund excess return divided by standard deviation of fund returns. *INFORMATION* is mean fund abnormal return divided by standard deviation of fund residuals from the Fung and Hsieh (2004) regression. *MPPM* is fund manipulation-proof performance measure with risk aversion parameter $\rho = 3$ (Goetzmann, Ingersoll, Spiegel, and Ross, 2007). *SKILL* is the monthly gross fund excess return multiplied by fund size (in millions of US$) as per Berk and van Binsbergen (2015). *SHARPE*, *INFORMATION*, and *MPPM* are measured over non-overlapping 24-month periods. The independent variables of interest are the fraction of racial minorities in the hedge fund team (*MINORITY*) and an indicator variable that takes a value of one if more than 50% of the team members operating the hedge fund are racial minorities (*MINORITY_DUMMY*). The other independent variables include fund management fee (*MGTFEE*), performance fee (*PERFFEE*), high-water mark indicator (*HWM*), lock-up period in years (*LOCKUP*), leverage indicator (*LEVERAGE*), fund age in years (*AGE*), redemption period in months (*REDEMPTION*), log of fund size (log(*FUNDSIZE*)), racial diversity (*RACIAL_DIVERSITY*) as well as dummy variables for fund investment strategy, team size, and fund family. *RACIAL_DIVERSITY* is one minus the maximum number of team members that belong to the same race scaled by the total number of team members. The *SHARPE*, *INFORMATION*, and *MPPM* regressions include dummy variables for year while the *SKILL* regressions include dummy variables for year-month. The t-statistics, in parentheses, are derived from robust standard errors clustered by fund and month for the regressions on *ALPHA*, *POSTINCUBATION_ALPHA*, *UNSMOOTHED_ALPHA*, *PREFEE_ALPHA*, and *SKILL*, and from robust standard errors clustered by fund and year for the regressions on *SHARPE*, *INFORMATION*, and *MPPM*. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

Panel A: Multivariate regressions on hedge fund performance, robustness

	POSTINCUBATION_ALPHA		*UNSMOOTHED_ALPHA*		*PREFEE_ALPHA*		*ALPHA*			
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
MINORITY	0.309**		0.338**		0.172**		0.206**		0.332**	
	(11.31)		(7.30)		(3.96)		(4.45)		(7.11)	
MINORITY_DUMMY		0.267**		0.293**		0.104**		0.198**		0.285**
		(10.45)		(6.98)		(2.62)		(5.79)		(7.03)
RACIAL_DIVERSITY							0.204**	0.169**		
							(6.93)	(5.78)		
Other fund controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strategy, year-month, and team size fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund family fixed effects	No	No	No	No	No	No	No	No	Yes	Yes
R^2	0.001	0.001	0.001	0.001	0.005	0.005	0.001	0.001	0.001	0.001
N	487656	487656	440233	440233	495149	495149	309136	309136	495173	495173

Panel B: Multivariate regressions on hedge fund performance measures

	SHARPE		*INFORMATION*		*MPPM*		*SKILL*	
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
MINORITY	0.444*		0.216**		0.121*		3.237*	
	(2.35)		(3.14)		(2.03)		(2.44)	
MINORITY_DUMMY		0.468*		0.236**		0.123*		2.861*
		(2.36)		(3.29)		(1.99)		(2.33)
Fund controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year or year-month fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strategy and team size fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.005	0.005	0.024	0.025	0.046	0.046	0.016	0.016
N	18395	18395	18458	18458	18844	18844	368406	368406

Table 7: **Event study with difference-in-differences analysis**

This table reports results from an event study analysis of hedge fund performance around a change in the fraction of racial minorities in the fund management team. Alpha is Fung and Hsieh (2004) seven-factor monthly alpha with factor loadings estimated over the last 24 months. For the baseline analysis reported in Panel A, the period "before" is the 36-month period before the event month and the period "after" is the 36-month period after the event month. To be included in the analysis, a hedge fund must survive at least 36 months before and after the event month. Treatment funds are funds that hired a minority fund manager in the event month. Control funds are funds that hired a non-minority fund manager in the event month. For columns 1 to 4, funds in the control group are matched to funds in the treatment group based on the fraction of racial minorities in the team and fund performance in the 36-month pre-event period. For example, in the fund alpha analysis, funds in the control group are matched to funds in the treatment group based on the fraction of racial minorities in the team and by minimizing the sum of the absolute differences in monthly fund alpha in the 36-month pre-event period. For columns 5 to 8, funds in the control group are matched to funds in the treatment group based on the fraction of racial minorities in the team and propensity score in the 36-month pre-event period. For columns 9 to 12, funds in the control group are matched to funds in the treatment group based on the fraction of racial minorities in the team, team size, and fund performance in the 36-month pre-event period. Panels B and C report results for which the event window is the 24-month period and 48-month period before and after the event month, respectively. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

	Control funds matched to treatment funds based on fraction of minorities and fund performance				Control funds matched to treatment funds based on fraction of minorities and propensity score				Control funds matched to treatment funds based on fraction of minorities, team size, and fund performance			
Fund performance attribute	Before (1)	After (2)	After - before (3)	t-statistic (4)	Before (5)	After (6)	After - before (7)	t-statistic (8)	Before (9)	After (10)	After - before (11)	t-statistic (12)
Panel A: Event window = 36 months												
Fund return (percent/month), treatment group	0.398	0.809	0.411	8.67	0.398	0.809	0.411	8.67	0.398	0.809	0.411	8.67
Fund return (percent/month), control group	0.344	0.229	-0.115	-1.79	0.532	0.276	-0.256	-1.34	0.567	0.245	-0.322	-1.34
Difference in return (percent/month)			0.526**	6.61			0.667**	3.53			0.733**	2.99
Fund alpha (percent/month), treatment group	0.266	0.777	0.511	3.5	0.266	0.777	0.511	3.5	0.266	0.777	0.511	3.5
Fund alpha (percent/month), control group	0.233	0.220	-0.013	-0.34	0.200	0.341	0.141	0.35	0.345	0.356	0.011	0.35
Difference in alpha (percent/month)			0.524**	3.44			0.370**	2.86			0.500**	3.35
Panel B: Event window = 24 months												
Fund return (percent/month), treatment group	0.401	0.826	0.425	10.27	0.401	0.826	0.425	10.27	0.401	0.826	0.425	10.27
Fund return (percent/month), control group	0.297	0.324	0.027	-0.45	0.431	0.354	-0.077	-0.39	0.456	0.376	-0.080	-0.45
Difference in return (percent/month)			0.398**	2.98			0.502*	2.49			0.505**	2.77
Fund alpha (percent/month), treatment group	0.269	0.678	0.409	4.30	0.269	0.678	0.409	4.30	0.269	0.678	0.409	4.30
Fund alpha (percent/month), control group	0.233	0.224	-0.009	-0.05	0.177	0.344	0.167	1.09	0.196	0.345	0.149	1.78
Difference in alpha (percent/month)			0.418**	3.10			0.242*	2.49			0.260*	2.16
Panel C: Event window = 48 months												
Fund return (percent/month), treatment group	0.408	0.820	0.412	8.23	0.408	0.820	0.412	8.23	0.408	0.820	0.412	8.23
Fund return (percent/month), control group	0.366	0.311	-0.055	-1.45	0.433	0.215	-0.218	-1.56	0.467	0.237	-0.230	-1.19
Difference in return (percent/month)			0.467**	7.32			0.630**	4.42			0.642**	3.22
Fund alpha (percent/month), treatment group	0.267	0.779	0.512	3.49	0.267	0.779	0.512	3.49	0.267	0.779	0.512	3.49
Fund alpha (percent/month), control group	0.231	0.259	0.028	0.14	0.176	0.341	0.165	0.56	0.478	0.343	-0.135	-1.05
Difference in alpha (percent/month)			0.484*	2.32			0.347*	2.14			0.647**	3.32

Table 8: **Instrumental variable analysis**

This table reports results from using an instrumental variable (IV) approach to examine whether the observed differences in fund performance between hedge funds with different proportions of minority fund managers reflect unobserved differences that endogenously determine fund management team racial composition. Our instrument for racial composition exploits the propensity of hedge fund founding partners who were raised in cities with more racial minorities to set up hedge funds managed by racial minorities. *HOMETOWN_MINORITY* is the proportion of racial minorities in the hedge fund founder's U.S. hometown. The independent variables of interest are the fraction of racial minorities in the hedge fund team (*MINORITY*) and an indicator variable that takes a value of one if more than 50% of the team members operating the hedge fund are racial minorities (*MINORITY_DUMMY*). Columns 1 to 2 show the first stage regressions of *MINORITY* and *MINORITY_DUMMY* on *HOMETOWN_MINORITY* and the control variables used in Table 5. The other independent variables include fund management fee (*MGTFEE*), performance fee (*PERFFEE*), high water mark indicator (*HWM*), lock-up period in years (*LOCKUP*), leverage indicator (*LEVERAGE*), fund age in years (*AGE*), redemption period in months (*REDEMPTION*), and log of fund size (log(*FUNDSIZE*)) as well as dummy variables for year, fund investment strategy, and team size. Columns 3 to 6 show the second stage results where the dependent variable is either hedge fund monthly return or alpha. Alpha is the Fung and Hsieh (2004) seven-factor monthly alpha where factor loadings are estimated over the last 24 months. For comparison, columns 7 to 10 report results from regressions analogous to those reported in columns 3 to 6 but without instrumenting for hedge fund team racial composition. The *t*-statistics, in parentheses, are derived from robust standard errors that are clustered by fund and month. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

	IV first stage		IV second stage				OLS regressions			
	MINORITY	*MINORITY_DUMMY*	*RETURN*	*ALPHA*	*RETURN*	*ALPHA*	*RETURN*	*ALPHA*	*RETURN*	*ALPHA*
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
MINORITY			1.248*	1.145**			0.418**	0.762**		
			(2.35)	(4.65)			(5.47)	(9.24)		
MINORITY_DUMMY					1.205*	0.419*			0.449**	0.627**
					(2.35)	(2.50)			(5.62)	(7.59)
MGTFEE	-0.009	0.002	0.089	0.032	0.075	0.033	0.088	0.041	0.083	0.020
	(-0.38)	(0.08)	(1.18)	(0.48)	(1.02)	(0.47)	(1.18)	(0.66)	(1.12)	(0.30)
PERFFEE	0.002	0.003	0.003	0.022**	0.001	0.023**	0.005	0.022**	0.004	0.023**
	(0.78)	(1.33)	(0.38)	(3.92)	(0.21)	(3.96)	(0.65)	(4.14)	(0.57)	(4.24)
HWM	0.030	0.008	0.022	-0.005	0.050	0.026	0.036	0.002	0.046	0.031
	(0.77)	(0.24)	(0.25)	(-0.06)	(0.60)	(0.30)	(0.43)	(0.02)	(0.55)	(0.37)
LOCKUP	0.058	0.032	-0.016	-0.124	0.018	-0.097	0.017	-0.111	0.028	-0.102
	(1.34)	(0.78)	(-0.14)	(-1.01)	(0.17)	(-0.80)	(0.17)	(-0.99)	(0.28)	(-0.90)
LEVERAGE	-0.016	-0.009	0.024	-0.036	0.016	-0.038	0.014	-0.040	0.012	-0.034
	(-0.54)	(-0.34)	(0.30)	(-0.45)	(0.19)	(-0.47)	(0.18)	(-0.50)	(0.14)	(-0.42)
AGE	-0.003	-0.003	-0.020	-0.017*	-0.020	-0.018*	-0.022	-0.018*	-0.022	-0.017*
	(-0.94)	(-1.08)	(-1.57)	(-2.02)	(-1.56)	(-2.05)	(-1.70)	(-2.21)	(-1.69)	(-2.00)
REDEMPTION	-0.001	0.005	0.005	-0.008	-0.002	-0.005	0.008	-0.007	0.005	-0.005
	(-0.08)	(0.72)	(0.32)	(-0.61)	(-0.11)	(-0.39)	(0.55)	(-0.62)	(0.37)	(-0.44)
log(*FUNDSIZE*)	0.000	0.004	-0.039	0.002	-0.043	0.003	-0.033	0.003	-0.035	0.003
	(0.06)	(0.54)	(-1.37)	(0.13)	(-1.47)	(0.19)	(-1.22)	(0.15)	(-1.30)	(0.19)
HOMETOWN_MINORITY	1.849**	1.916**								
	(4.94)	(5.49)								
F-test: *HOMETOWN_MINORITY* = 0	24.40	30.14								
Year-month fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strategy fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Team size fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.157	0.401	0.014	0.006	0.014	0.006	0.014	0.008	0.014	0.007
N	41192	41192	41192	41192	41192	41192	41192	41192	41192	41192

Table 9: **Manager characteristics of portfolios sorted by fund manager race**
In Panel A, hedge funds are sorted into five portfolios every January 1st based on the fraction of racial minorities in the hedge fund team. Portfolio 1 comprises hedge funds where all fund managers are minorities. Portfolio 5 comprises hedge funds where all fund managers are non-minorities. The other hedge funds are sorted into the remaining three portfolios based on the fraction of the managers that are minorities. For each portfolio, we report (i) the median SAT scores of the colleges attended by the fund managers operating the fund, (ii) the fraction of the fund managers who attended Ivy League colleges, (iii) the fraction of the fund managers who graduated from U.S. News Top Ten U.S. colleges, (iv) the fraction of fund managers with post graduate degrees, and (v) the fraction of fund managers with PhDs. In Panel B, hedge fund managers are sorted based on race into minority and non-minority portfolios. The t-statistics are derived from White (1980) standard errors. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

Hedge fund/fund manager portfolio	College median SAT score	Fraction with Ivy League degrees	Fraction with degrees from top ten U.S. colleges	Fraction with post-graduate degrees	Fraction with PhDs
Panel A: Hedge funds sorted by manager race					
Portfolio 1 (all minorities)	1422.39	0.154	0.151	0.140	0.069
Portfolio 2	1390.63	0.080	0.076	0.074	0.029
Portfolio 3	1408.12	0.058	0.055	0.071	0.021
Portfolio 4	1382.82	0.062	0.040	0.065	0.015
Portfolio 5 (no minorities)	1398.24	0.073	0.078	0.066	0.016
Spread (1-5)	23.15*	0.081**	0.073**	0.074**	0.053**
Panel B: Fund managers sorted by manager race					
Portfolio A (minorities)	1429.36	0.234	0.224	0.225	0.067
Portfolio B (non-minorities)	1380.45	0.070	0.068	0.087	0.022
Spread (A-B)	48.91**	0.164**	0.156**	0.138**	0.045**

Table 10: **Multivariate regressions on hedge fund investment risk, operational risk, and performance flags**

This table reports results from multivariate regressions on hedge fund investment risk, operational risk, and performance flags. The dependent variables include investment risk metrics, such as idiosyncratic risk (*IDIORISK*), downside beta (*DOWNSIDEBETA*), maximum monthly loss (*MAXLOSS*), and maximum drawdown (*MAXDRAWDOWN*), operational risk metrics, such as fund termination indicator (*TERMINATION*), Form ADV violation indicator (*VIOLATION*), and ω-Score (*OMEGA*), and performance flags, such as *%NEGATIVE*, *KINK*, *MAXRSQ*, and *%REPEAT*. *IDIORISK* is the standard deviation of monthly hedge fund residuals from the Fung and Hsieh (2004) model. *DOWNSIDEBETA* is the downside beta relative to the S&P 500. *MAXLOSS* is the maximum monthly loss. *MAXDRAWDOWN* is the maximum cumulative loss. *TERMINATION* takes a value of one after a hedge fund stops reporting returns to the database and states that it has liquidated that month. *VIOLATION* takes a value of one when the hedge fund manager reports on Item 11 of Form ADV that the manager has been associated with a regulatory, civil, or criminal violation. *OMEGA* is an operational risk instrument as per Brown, Goetzmann, Liang, and Schwarz (2009). *KINK* takes a value of one when any of the funds managed by a firm exhibits a discontinuity at zero in its return distribution. *%NEGATIVE* takes a value of one when any of the funds managed by a firm reports a low number of negative returns. *MAXRSQ* takes a value of one when any of the funds managed by a firm features an adjusted R^2 that is not significantly different from zero. *%REPEAT* takes a value of one when any of the funds managed by a firm reports a high number of repeated returns. The independent variables of interest are the fraction of racial minorities in the hedge fund team (*MINORITY*) and an indicator variable that takes a value of one if more than 50% of the team members operating the hedge fund are racial minorities (*MINORITY_DUMMY*). The other independent variables include fund characteristics such as management fee (*MGTFEE*), performance fee (*PERFFEE*), high water mark indicator (*HWM*), lock-up period in years (*LOCKUP*), leverage indicator (*LEVERAGE*), fund age in years (*AGE*), redemption period in months (*REDEMPTION*), and log of fund size (log(*FUNDSIZE*)) as well as dummy variables for year, fund investment strategy, and team size. The coefficient estimates for these fund control variables are omitted for brevity. For the investment risk and performance flag regressions, the t-statistics, in parentheses, are derived from robust standard errors that are clustered by fund and year. For the operational risk regressions, the t-statistics or z-statistics (in the case of the Cox regression) in parentheses are derived from robust standard errors that are clustered by fund. The marginal effects are in brackets. For the Cox regressions, we report the hazard ratios. Panels A, B, and C report regressions on fund investment risk, operational risk, and performance flags, respectively. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

Panel A: OLS regressions on hedge fund investment risk

	IDIORISK		*DOWNSIDEBETA*		*MAXLOSS*		*MAXDRAWDOWN*	
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
MINORITY	-0.381**		-0.244**		-0.406*		-0.883**	
	(-3.94)		(-6.11)		(-2.06)		(-2.88)	
MINORITY_DUMMY		-0.416**		-0.274**		-0.484*		-1.078**
		(-4.12)		(-6.70)		(-2.38)		(-3.42)

Panel B: OLS, Cox, and logit regressions on hedge fund operational risk

	Logit regressions *TERMINATION*		Cox regressions *TERMINATION*		Logit regressions *VIOLATION*		OLS regressions *OMEGA*	
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
MINORITY	-0.139**		-0.121**		-0.128		-0.114**	
	(-5.76)		(-5.11)		(-1.54)		(-7.51)	
	[-0.002]				[-0.028]			
MINORITY_DUMMY		-0.150**		-0.133**		-0.143		-0.053**
		(-6.05)		(-5.40)		(-1.68)		(-3.36)
		[-0.002]				[-0.030]		

Panel C: Logit regressions on hedge fund performance flags

	%NEGATIVE		*KINK*		*MAXRSQ*		*%REPEAT*	
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
MINORITY	-0.136**		-0.272**		-0.340**		-0.154**	
	(-3.95)		(-8.51)		(-6.80)		(-5.07)	
	[-0.023]		[-0.073]		[-0.028]		[-0.046]	
MINORITY_DUMMY		-0.140**		-0.246**		-0.335**		-0.118**
		(-3.95)		(-7.47)		(-6.71)		(-3.79)
		[-0.023]		[-0.070]		[-0.024]		[-0.036]

Table 11: **Fund of hedge funds loadings on hedge fund race factors**
This table reports fund of hedge funds (FOF) loadings on various hedge fund race factors. Every January 1st, FOFs operated by single-race fund management teams are sorted into four groups based on the race of the fund management team. FOFWHITE is the portfolio of FOFs that are managed by white fund managers. FOFASIAN is the portfolio of FOFs that are managed by asian fund managers. FOFBLACK is the portfolio of FOFs that are managed by black fund managers. FOFLATINO is the portfolio of FOFs that are managed by latino fund managers. FOFALL is the portfolio of all single-race FOFs. Similarly, hedge funds operated by single-race fund management teams are also sorted into four groups based on the race of the fund management team. HFWHITE is the portfolio of hedge funds that are managed by white fund managers. HFASIAN is the portfolio of hedge funds that are managed by asian fund managers. HFBLACK is the portfolio of hedge funds that are managed by black fund managers. HFLATINO is the portfolio of hedge funds that are managed by latino fund managers. The performance of the FOF portfolios is evaluated relative to a four-factor model comprising the four hedge fund portfolios. Panel A reports results for equal-weighted hedge fund and FOF portfolios. Panel B reports results for value-weighted hedge fund and FOF portfolios. The t-statistics, in parentheses, are derived from White (1980) standard errors. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

	FOF portfolio				
Hedge fund portfolio	FOFWHITE	FOFASIAN	FOFBLACK	FOFLATINO	FOFALL
Panel A: Equal-weighted portfolios					
HFWHITE	4.417**	0.129**	0.289**	0.298**	2.752*
	(12.52)	(5.38)	(4.58)	(3.36)	(2.36)
HFASIAN	-0.234**	0.029**	-0.009	-0.002	-0.219
	(-4.14)	(7.60)	(-0.85)	(-0.16)	(-1.18)
HFBLACK	0.139	0.116**	0.148**	-0.015	0.058
	(0.67)	(8.19)	(3.97)	(-0.29)	(0.08)
HFLATINO	2.040	0.440	-1.153	5.372**	3.740
	(0.30)	(0.95)	(-0.94)	(3.13)	(0.17)
Adj R^2	0.737	0.874	0.576	0.220	0.136
N	258	258	258	258	258
Panel B: Value-weighted portfolios					
HFWHITE	4.460**	0.140**	0.290**	0.341**	3.979**
	(12.76)	(5.62)	(7.03)	(4.16)	(3.82)
HFASIAN	-0.208**	0.038**	-0.005	-0.002	-0.047
	(-3.28)	(8.34)	(-0.68)	(-0.12)	(-0.25)
HFBLACK	0.026	0.099**	0.140**	-0.057	0.006
	(0.12)	(6.54)	(5.57)	(-1.15)	(0.01)
HFLATINO	0.579	0.575	-0.170	5.275**	1.042
	(0.08)	(1.16)	(-0.21)	(3.23)	(0.05)
Adj R^2	0.740	0.874	0.768	0.239	0.238
N	258	258	258	258	258

Table 12: **Robustness tests**

This table reports results from multivariate OLS regressions on hedge fund return (*RETURN*) and alpha (*ALPHA*). *RETURN* is the monthly hedge fund net-of-fee return. *ALPHA* is the Fung and Hsieh (2004) seven-factor monthly alpha where factor loadings are estimated over the last 24 months. The independent variables of interest are the fraction of racial minorities in the hedge fund team (*MINORITY*) and an indicator variable that takes a value of one if more than 50% of the team members operating the hedge fund are racial minorities (*MINORITY_DUMMY*). The other independent variables include fund management fee (*MGTFEE*), performance fee (*PERFFEE*), high-water mark indicator (*HWM*), lock-up period in years (*LOCKUP*), leverage indicator (*LEVERAGE*), fund age in years (*AGE*), redemption period in months (*REDEMPTION*), and log of fund size (log(*FUNDSIZE*)) as well as dummy variables for fund investment strategy, team size, and year-month. The coefficient estimates on the fund control variables are omitted for brevity. The *t*-statistics, in parentheses, are derived from robust standard errors clustered by fund and month. Columns 1 to 4 report results for all hedge funds. Columns 5 to 8 report results for U.S. based hedge funds. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

All hedge funds				U.S. based hedge funds			
Independent variable							
MINORITY		*MINORITY_DUMMY*		*MINORITY*		*MINORITY_DUMMY*	
Dependent variable							
RETURN	*ALPHA*	*RETURN*	*ALPHA*	*RETURN*	*ALPHA*	*RETURN*	*ALPHA*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Alternative racial classification based on the Ye at al. (2017) *NamePrism* algorithm							
0.349**	0.432**	0.385**	0.437**	0.269**	0.259**	0.331**	0.284**
(7.88)	(10.17)	(8.89)	(9.94)	(4.50)	(3.09)	(5.32)	(3.09)
Panel B: Alternative racial classification based on Imai and Khanna (2016)							
0.377**	0.471**	0.384**	0.375**	0.280**	0.349**	0.281**	0.263**
(10.14)	(13.67)	(10.26)	(12.71)	(4.75)	(6.24)	(4.70)	(5.62)
Panel C: Race determined using manager LinkedIn photos							
0.449**	0.318*	0.455**	0.325*	0.640**	0.506	0.675**	0.527
(3.90)	(2.32)	(3.90)	(2.36)	(3.11)	(1.73)	(3.33)	(1.80)
Panel D: Subsample period (1994 - 2004)							
0.195	0.285**	0.204	0.224**	0.319*	0.349**	0.334*	0.316*
(1.88)	(3.46)	(1.89)	(2.66)	(2.09)	(2.82)	(2.03)	(2.54)
Panel E: Subsample period (2005 - 2016)							
0.274**	0.330**	0.289**	0.292**	0.292**	0.345**	0.322**	0.294**
(6.68)	(7.47)	(7.30)	(7.36)	(5.22)	(6.80)	(5.65)	(6.56)
Panel F: Single manager hedge funds							
0.422**	0.609**	0.422**	0.605**	0.451**	0.568**	0.452**	0.562**
(6.56)	(5.63)	(6.50)	(5.55)	(4.60)	(6.81)	(4.59)	(6.75)
Panel G: Team managed hedge funds							
0.151**	0.180**	0.165**	0.168**	0.231**	0.312**	0.280**	0.316**
(4.32)	(6.22)	(5.07)	(6.39)	(4.77)	(4.86)	(5.24)	(5.86)
Panel H: Controlling for aggregate diversity							
0.293**	0.278**	0.379**	0.224**	0.249*	0.218	0.260*	0.234*
(2.70)	(4.37)	(3.05)	(4.33)	(2.11)	(1.89)	(2.21)	(2.33)
Panel I: Alternative investment strategy classification							
0.258**	0.340**	0.273**	0.290**	0.373**	0.466**	0.402**	0.394**
(6.81)	(7.79)	(7.58)	(7.37)	(8.38)	(11.65)	(8.74)	(11.02)
Panel J: Controlling for the fraction of female managers							
0.199**	0.269**	0.212**	0.248**	0.462*	0.552*	0.504*	0.590*
(5.82)	(7.04)	(6.66)	(7.15)	(2.21)	(2.04)	(2.14)	(2.30)
Panel K: Minorities comprise blacks and latinos only							
0.106*	0.412**	0.152**	0.508**	0.164*	0.286**	0.259**	0.401**
(2.42)	(3.63)	(3.52)	(3.79)	(1.98)	(3.79)	(2.80)	(4.92)

Internet Appendix: Race, Discrimination, and Hedge Funds

Table IA1: **Multivariate regressions on hedge fund flow with race specific variables**
This table reports results from multivariate regressions on hedge fund annual flow in percentage (*FLOW*). The independent variables of interest are race specific variables such as the fraction of asians (*ASIAN*), the fraction of blacks (*BLACK*), and the fraction of latinos (*LATINO*) in the hedge fund team. The other independent variables in the flow regressions include fund characteristics such as management fee (*MGTFEE*), performance fee (*PERFFEE*), high-water mark indicator (*HWM*), lock-up period in years (*LOCKUP*), leverage indicator (*LEVERAGE*), fund age in years (*AGE*), redemption period in months (*REDEMPTION*), and log of fund size in US$m (log(*FUNDSIZE*)), as well as team SAT score scaled by 100 (*SAT/100*) and dummy variables for year, fund investment strategy, and team size. The flow regressions also include controls for past-year fund return rank (*RANK_RETURN*), CAPM alpha rank (*RANK_CAPM*), or Fung and Hsieh (2004) alpha rank (*RANK_FH*). The *t*-statistics, in parentheses, are derived from robust standard errors clustered by fund and year. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

					FLOW				
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ASIAN	-6.314**	-5.987**	-5.928**						
	(-4.71)	(-4.53)	(-4.48)						
BLACK				-4.829	-4.346	-4.265			
				(-1.77)	(-1.54)	(-1.52)			
LATINO							-8.988	-8.313	-8.267
							(-1.89)	(-1.73)	(-1.72)
RANK_RETURN	3.786**			3.748**			3.716**		
	(6.00)			(6.02)			(5.92)		
RANK_CAPM		2.106**			2.086**			2.048**	
		(2.74)			(2.72)			(2.65)	
RANK_FH			3.204**			3.201**			3.190**
			(4.11)			(4.15)			(4.12)
MGTFEE	0.029	0.251	0.254	0.003	0.226	0.229	0.019	0.241	0.244
	(0.07)	(0.67)	(0.67)	(0.01)	(0.60)	(0.61)	(0.05)	(0.64)	(0.64)
PERFFEE	0.041	0.005	0.009	0.040	0.004	0.008	0.043	0.007	0.011
	(0.81)	(0.11)	(0.18)	(0.78)	(0.09)	(0.16)	(0.84)	(0.14)	(0.21)
HWM	1.539	1.483	1.529	1.489	1.438	1.485	1.483	1.429	1.476
	(1.67)	(1.72)	(1.78)	(1.62)	(1.67)	(1.73)	(1.60)	(1.64)	(1.70)
LOCKUP	-1.989**	-1.911**	-1.893**	-2.056**	-1.970**	-1.951**	-2.025**	-1.943**	-1.925**
	(-4.40)	(-3.90)	(-3.87)	(-4.58)	(-4.04)	(-4.00)	(-4.59)	(-4.04)	(-4.01)
LEVERAGE	0.425	0.545	0.516	0.421	0.539	0.510	0.464	0.584	0.554
	(0.52)	(0.72)	(0.68)	(0.52)	(0.71)	(0.68)	(0.58)	(0.78)	(0.74)
AGE	-0.536**	-0.446**	-0.444**	-0.530**	-0.440**	-0.438**	-0.532**	-0.443**	-0.440**
	(-8.57)	(-7.89)	(-7.86)	(-8.57)	(-7.90)	(-7.86)	(-8.37)	(-7.70)	(-7.66)
REDEMPTION	0.118	0.147	0.150	0.096	0.127	0.130	0.092	0.122	0.126
	(0.67)	(0.88)	(0.90)	(0.54)	(0.76)	(0.77)	(0.53)	(0.74)	(0.76)
log(*FUNDSIZE*)	-1.232**	-1.337**	-1.339**	-1.222**	-1.329**	-1.331**	-1.249**	-1.353**	-1.355**
	(-6.20)	(-6.67)	(-6.67)	(-6.05)	(-6.52)	(-6.53)	(-6.21)	(-6.68)	(-6.68)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strategy fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Team size fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
N	40151	39629	39629	40151	39629	39629	40151	39629	39629

Table IA2: **Multivariate regressions on hedge fund performance with race specific variables**
This table reports results from multivariate OLS regressions on hedge fund return (*RETURN*) and alpha (*ALPHA*). *RETURN* is the monthly hedge fund net-of-fee return. *ALPHA* is the Fung and Hsieh (2004) seven-factor monthly alpha where factor loadings are estimated over the last 24 months. The independent variables of interest are race specific variables such as the fraction of asians (*ASIAN*), the fraction of blacks (*BLACK*), and the fraction of latinos (*LATINO*) in the hedge fund team. The other independent variables include fund management fee (*MGTFEE*), performance fee (*PERFFEE*), high-water mark indicator (*HWM*), lock-up period in years (*LOCKUP*), leverage indicator (*LEVERAGE*), fund age in years (*AGE*), redemption period in months (*REDEMPTION*), and log of fund size (log(*FUNDSIZE*)) as well as dummy variables for fund investment strategy, team size, and year-month. The *t*-statistics, in parentheses, are derived from robust standard errors clustered by fund and month. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

		RETURN			*ALPHA*		*RETURN*	*ALPHA*
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ASIAN	0.239**			0.210**			0.253**	0.236**
	(2.80)			(2.91)			(2.85)	(5.15)
BLACK		0.135**			0.130**		0.159**	0.159**
		(3.50)			(3.14)		(3.12)	(3.79)
LATINO			0.075			0.332	0.103	0.359
			(1.28)			(1.12)	(1.08)	(1.21)
MGTFEE	-0.005	-0.004	-0.004	-0.015	-0.014	-0.014	-0.004	-0.014
	(-0.19)	(-0.28)	(-0.32)	(-0.63)	(-0.65)	(-0.71)	(-0.18)	(-0.70)
PERFFEE	-0.004	-0.004**	-0.004**	-0.001	-0.001	-0.002	-0.004	-0.002
	(-1.60)	(-2.73)	(-2.72)	(-0.48)	(-0.59)	(-0.61)	(-1.62)	(-0.65)
HWM	-0.007	0.004	0.005	-0.080*	-0.079**	-0.079**	-0.009	-0.083**
	(-0.17)	(0.18)	(0.22)	(-2.57)	(-2.81)	(-2.79)	(-0.22)	(-2.94)
LOCKUP	-0.014	-0.013	-0.015	-0.021	-0.021	-0.021	-0.010	-0.018
	(-0.39)	(-0.39)	(-0.45)	(-0.43)	(-0.54)	(-0.54)	(-0.29)	(-0.46)
LEVERAGE	0.051	0.052**	0.050**	0.084**	0.083**	0.081**	0.051	0.083**
	(1.85)	(2.90)	(2.83)	(2.86)	(3.48)	(3.31)	(1.86)	(3.40)
AGE	0.001	0.002	0.002	-0.008**	-0.008**	-0.008**	0.001	-0.008**
	(0.48)	(0.95)	(0.97)	(-3.28)	(-3.57)	(-3.56)	(0.46)	(-3.52)
REDEMPTION	0.003	0.004	0.004	0.002	0.003	0.003	0.004	0.003
	(0.47)	(1.27)	(1.25)	(0.37)	(0.72)	(0.78)	(0.50)	(0.70)
log(*FUNDSIZE*)	0.001	0.002	0.003	0.032**	0.031**	0.032**	0.000	0.031**
	(0.12)	(0.30)	(0.38)	(4.23)	(4.17)	(4.22)	(0.04)	(4.14)
Year-month fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strategy fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Team size fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.019	0.019	0.019	0.001	0.001	0.001	0.019	0.019
N	495173	495173	495173	495173	495173	495173	495173	495173

Table IA3: **Racial composition of hedge fund management teams**
This table reports results from multivariate regressions on the racial compositions of hedge fund management teams. The dependent variables are the percentages of white (*WHITE*), black (*BLACK*), asian (*ASIAN*), and latino (*LATINO*) members in the team at fund inception. The primary independent variables of interest are the percentages of white (*HOMETOWN_WHITE*), black (*HOMETOWN_BLACK*), asian (*HOMETOWN_ASIAN*), and latino (*HOMETOWN_LATINO*) residents in the hedge fund firm founder's hometown. The other independent variables include dummy variables for team size. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

	Dependent variables							
	WHITE	*BLACK*	*ASIAN*	*LATINO*	*WHITE*	*BLACK*	*ASIAN*	*LATINO*
Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Team racial percentages computed after including hedge fund firm founder								
HOMETOWN_WHITE	5.079**				5.476**			
	(4.43)				(4.54)			
HOMETOWN_BLACK		3.216*				3.890*		
		(2.04)				(2.45)		
HOMETOWN_ASIAN			10.249**				11.191**	
			(3.71)				(3.96)	
HOMETOWN_LATINO				52.075**				58.387**
				(9.29)				(8.90)
Team size fixed effects	No	No	No	No	Yes	Yes	Yes	Yes
R^2	0.225	0.074	0.082	0.414	0.290	0.155	0.132	0.475
N	1729	1729	1729	1729	1729	1729	1729	1729
Panel B: Team racial percentages computed after excluding hedge fund firm founder								
HOMETOWN_WHITE	3.876**				3.782**			
	(5.16)				(5.09)			
HOMETOWN_BLACK		3.216*				3.890*		
		(2.04)				(2.45)		
HOMETOWN_ASIAN			10.249**				11.191**	
			(3.71)				(3.96)	
HOMETOWN_LATINO				21.703**				23.144**
				(3.25)				(3.68)
Team size fixed effects	No	No	No	No	Yes	Yes	Yes	Yes
R^2	0.225	0.074	0.082	0.167	0.290	0.155	0.132	0.253
N	1729	1729	1729	1729	1729	1729	1729	1729

Table IA4: **Multivariate regressions on hedge fund performance with education variables**
This table reports results from multivariate OLS regressions on hedge fund return (*RETURN*) and alpha (*ALPHA*). *RETURN* is the monthly hedge fund net-of-fee return. *ALPHA* is the Fung and Hsieh (2004) seven-factor monthly alpha where factor loadings are estimated over the last 24 months. The independent variables of interest are fund manager education variables such as the median SAT score of the fund manager's undergraduate institution (*SAT*) as well as indicator variables for whether the fund manager attended an Ivy League school (*IVY_LEAGUE*), graduated from a top ten U.S. News college (*TOP10_COLLEGE*), holds a post-graduate degree (*POSTGRADUATE*), and holds a PhD (*PHD*). The other independent variables include fund management fee (*MGTFEE*), performance fee (*PERFFEE*), high-water mark indicator (*HWM*), lock-up period in years (*LOCKUP*), leverage indicator (*LEVERAGE*), fund age in years (*AGE*), redemption period in months (*REDEMPTION*), and log of fund size (log(*FUNDSIZE*)) as well as dummy variables for fund investment strategy, team size, and year-month. The *t*-statistics, in parentheses, are derived from robust standard errors clustered by fund and month. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

Independent variable	*RETURN* (1)	*ALPHA* (2)	*RETURN* (3)	*ALPHA* (4)	*RETURN* (5)	*ALPHA* (6)	*RETURN* (7)	*ALPHA* (8)	*RETURN* (9)	*ALPHA* (10)
SAT	0.000**	0.000**								
	(5.62)	(5.55)								
IVY_LEAGUE			0.144**	0.114						
			(2.74)	(1.45)						
TOP10_COLLEGE					0.142*	0.178*				
					(2.40)	(2.06)				
POSTGRADUATE							0.317**	0.361**		
							(4.08)	(4.69)		
PHD									0.458**	0.467**
									(4.08)	(5.44)
MGTFEE	0.157	-0.013	-0.005	-0.014	0.100	0.087	-0.003	-0.012	-0.004	-0.013
	(0.90)	(-0.63)	(-0.21)	(-0.69)	(1.44)	(1.17)	(-0.15)	(-0.59)	(-0.16)	(-0.64)
PERFFEE	-0.023	-0.002	-0.005	-0.002	0.005	-0.012	-0.005	-0.002	-0.005	-0.002
	(-0.93)	(-0.72)	(-1.72)	(-0.67)	(1.27)	(-1.05)	(-1.77)	(-0.81)	(-1.85)	(-0.92)
HWM	-0.076	-0.079**	-0.009	-0.075**	0.040	0.163	-0.011	-0.081**	-0.018	-0.091**
	(-0.85)	(-2.85)	(-0.21)	(-2.70)	(0.69)	(1.61)	(-0.26)	(-2.93)	(-0.43)	(-3.24)
LOCKUP	0.076	-0.028	-0.014	-0.026	0.057	-0.021	-0.017	-0.030	-0.018	-0.030
	(1.03)	(-0.76)	(-0.40)	(-0.68)	(1.00)	(-0.13)	(-0.51)	(-0.79)	(-0.54)	(-0.79)
LEVERAGE	-0.151	0.085**	0.050	0.084**	-0.029	-0.045	0.051	0.085**	0.052	0.086**
	(-0.84)	(3.58)	(1.83)	(3.57)	(-0.62)	(-0.60)	(1.85)	(3.58)	(1.90)	(3.64)
AGE	-0.026	-0.009**	0.001	-0.008**	-0.005	-0.006	0.000	-0.009**	-0.001	-0.010**
	(-1.71)	(-4.00)	(0.32)	(-3.66)	(-1.09)	(-1.16)	(0.04)	(-4.01)	(-0.22)	(-4.16)
REDEMPTION	0.002	0.001	0.004	0.002	0.015	0.007	0.003	0.002	0.002	0.001
	(0.34)	(0.17)	(0.53)	(0.62)	(1.40)	(0.72)	(0.48)	(0.44)	(0.34)	(0.20)
log(*FUNDSIZE*)	0.037	0.033**	0.001	0.034**	-0.029*	-0.028	0.001	0.033**	0.001	0.033**
	(1.24)	(4.56)	(0.15)	(4.58)	(-2.20)	(-1.15)	(0.15)	(4.50)	(0.20)	(4.51)
Year-month fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strategy fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Team size fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.000	0.001	0.019	0.001	0.028	0.010	0.019	0.001	0.019	0.001
N	495173	495173	495173	495173	495173	495173	495173	495173	495145	495145

Table IA5: **Race and mutual fund flow**
This table reports results from multivariate regressions on mutual fund annual flow in percentage (*FLOW*). The independent variables of interest are the fraction of racial minorities in the mutual fund management team (*MINORITY*) and an indicator variable that takes a value of one if more than 50% of the team members operating the mutual fund are racial minorities (*MINORITY_DUMMY*). The other independent variables include fund expense ratio in percentage (*EXPENSE*), maximum load (*LOAD*), and log of fund total net assets (log(*TNA*)), as well as dummy variables for year, fund investment strategy, and team size. The regressions also include controls for past-year fund return rank (*RANK_RETURN*), CAPM alpha rank (*RANK_CAPM*), or Carhart (1997) alpha rank (*RANK_FH*). The *t*-statistics, in parentheses, are derived from robust standard errors clustered by fund and year. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

	FLOW					
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)
MINORITY	-0.461**		-0.486**		-0.541**	
	(-4.93)		(-4.41)		(-5.04)	
MINORITY_DUMMY		-0.567**		-0.565**		-0.589**
		(-8.03)		(-9.82)		(-10.01)
RANK_RETURN	2.981**	2.980**				
	(7.95)	(7.88)				
RANK_CAPM			2.221**	2.219**		
			(31.05)	(31.11)		
RANK_CARHART					2.046**	2.045**
					(23.44)	(23.60)
EXPENSE	-0.353**	-0.372**	-0.322**	-0.340**	-0.349**	-0.365**
	(-9.74)	(-11.03)	(-7.62)	(-8.99)	(-8.23)	(-9.61)
LOAD	-0.025*	-0.022	0.005	0.008	0.005	0.009
	(-2.01)	(-1.72)	(0.28)	(0.47)	(0.33)	(0.55)
log(*TNA*)	-0.324**	-0.325**	-0.332**	-0.333**	-0.339**	-0.340**
	(-4.32)	(-4.30)	(-4.30)	(-4.28)	(-4.33)	(-4.32)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Strategy fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Team size fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.082	0.083	0.080	0.081	0.079	0.080
N	47037	47037	45970	45970	45970	45970

Table IA6: **Race and mutual fund performance**
Every January 1st, mutual funds are sorted into five portfolios based on the fraction of racial minorities in the mutual fund management team. Portfolio 1 comprises mutual funds where all fund managers are minorities. Portfolio 5 comprises mutual funds where all fund managers are non-minorities. The other mutual funds are sorted into the remaining three portfolios based on the fraction of the managers that are minorities. Portfolio performance is estimated relative to the Carhart (1997) four factors, which are the excess return on the market (RMRF), the size factor (SMB), the value factor (HML), and the momentum factor (UMD). Panel B reports results from multivariate OLS and Fama-MacBeth regressions on hedge fund return (*RETURN*) and alpha (*ALPHA*). *RETURN* is the monthly mutual fund net-of-fee return. *ALPHA* is the Carhart (1997) four-factor monthly alpha where factor loadings are estimated over the last 24 months. The independent variables of interest are the fraction of racial minorities in the mutual fund team (*MINORITY*) and an indicator variable that takes a value of one if more than 50% of the team members operating the mutual fund are racial minorities (*MINORITY_DUMMY*). The other independent variables include fund expense ratio in percentage (*EXPENSE*), maximum load (*LOAD*), and log of fund total net assets (log(*TNA*)) as well as dummy variables for fund investment strategy and team size. The OLS regressions also include dummy variables for year-month. The *t*-statistics, in parentheses, are derived from robust standard errors clustered by fund and month for the OLS regressions and from Newey and West (1987) standard errors with lag length as per Greene (2018) for the Fama and MacBeth (1973) regressions. The *t*-statistics are derived from White (1980) standard errors. The sample period is from January 1994 to June 2016. *, ** denote significance at the 5% and 1% levels, respectively.

Panel A: Portfolio sorts on mutual fund manager race

Mutual fund portfolio	Number of funds	Excess return (annual-ized)	t-stat of excess return	Alpha (annual-ized)	t-stat of alpha	RMRF	SMB	HML	UMD	Adj. R^2
Portfolio 1 (all minorities)	705	7.56	10.49	1.11	1.78	0.94**	0.28**	-0.07**	0.01	0.962
Portfolio 2	2,504	6.72	8.28	-0.11	-0.17	0.97**	0.33**	-0.01	0.01	0.965
Portfolio 3	2,998	8.76	11.96	-0.27	-0.41	0.94**	0.30**	0.00	0.00	0.961
Portfolio 4	3,913	4.32	4.72	-1.43	-2.44	0.96**	0.35**	-0.02	0.02	0.967
Portfolio 5 (no minorities)	16,180	4.68	8.07	-2.61	-6.45	0.94**	0.34**	-0.02	0.02	0.965
Spread (1-5)		2.88	3.07	3.73	5.52	0.00	-0.06**	-0.05**	-0.01	0.138

Panel B: Multivariate regressions on mutual fund performance

	OLS regressions				Fama-Macbeth regressions			
	RETURN	*ALPHA*	*RETURN*	*ALPHA*	*RETURN*	*ALPHA*	*RETURN*	*ALPHA*
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
MINORITY	0.056**	0.041**			0.111	0.044*		
	(3.67)	(3.10)			(1.93)	(2.40)		
MINORITY_DUMMY			0.026**	0.026**			0.038	0.030*
			(3.79)	(2.81)			(0.84)	(2.59)
EXPENSE	-0.094**	-0.072**	-0.095**	-0.072**	-0.011	-0.065**	-0.005	-0.065**
	(-4.88)	(-3.98)	(-4.93)	(-3.98)	(-0.19)	(-7.07)	(-0.08)	(-7.11)
LOAD	0.002	0.001	0.002	0.001	-0.185	-0.221	-0.196	-0.235
	(0.98)	(0.81)	(0.87)	(0.71)	(-0.15)	(-1.62)	(-0.16)	(-1.74)
log(*TNA*)	-0.026**	0.006	-0.025**	0.006	-0.010	0.009**	-0.016	0.009**
	(-3.24)	(1.08)	(-3.19)	(1.10)	(-0.44)	(4.80)	(-0.67)	(4.72)
Year-month fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strategy fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Team size fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.068	0.020	0.068	0.020	0.439	0.360	0.442	0.360
N	514587	514587	514587	514587	514587	514587	514587	514587