KNIGHT DIVERSITY OF ASSET MANAGERS RESEARCH SERIES: INDUSTRY

A study of ownership diversity and performance in the asset management industry

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Bella Private Markets

KNIGHT FOUNDATION

BELLA PRIVATE MARKETS

Abstract

In this update to our 2019 report, we study the representation and performance of minority- and women-owned funds in the hedge fund, mutual fund, private equity and real estate industries. Among our key findings are:

1. Representation of diverse-owned firms across asset classes still lags that of non-diverse-owned firms.
2. There have, however, been improvements in representation over time, as well as in data collection that cover these trends.
3. The differences in representation do not appear to be driven by performance differentials: we find no statistically significant differences in performance between diverse- and non-diverse-owned funds across asset classes.

We hope that our research continues to shed light on this important topic, encourages further progress in diverse representation in the asset management industry and leads to additional improvements in data reporting.

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Executive Summary

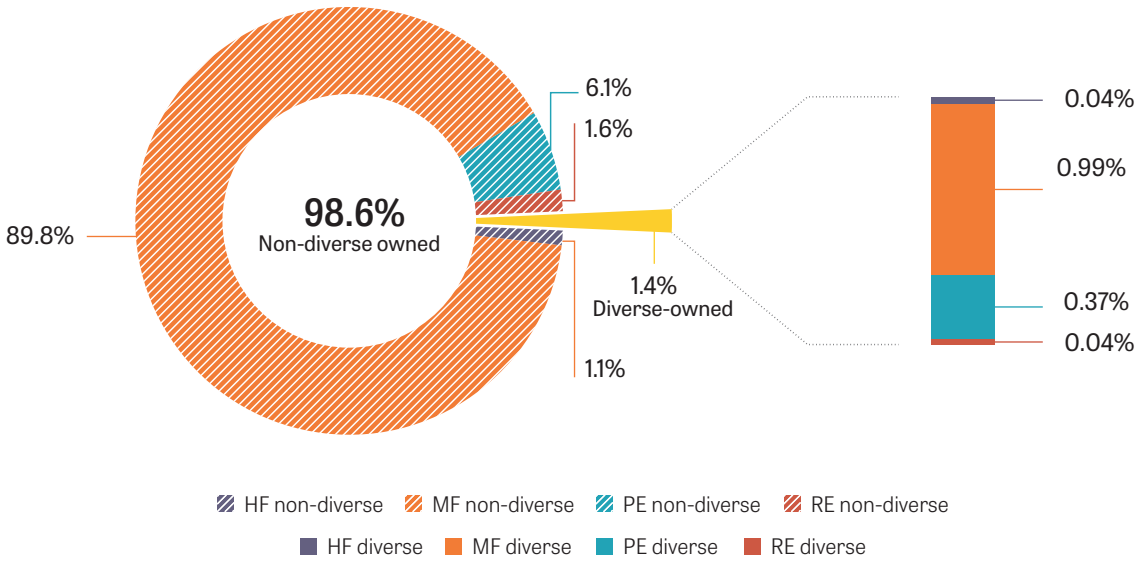
Introduction

The asset management industry is a cornerstone of the economy, facilitating the movement of capital from investors to entrepreneurs, growing ventures and restructuring enterprises. The present report studies diversity in the U.S.-based asset management industry, using a sample representing $82.24 trillion USD in assets under management (AUM)[1]. Our analysis finds that only 1.4% of total U.S.-based AUM in our sample is managed by diverse-owned firms as of September 2021. Despite the size and importance of the industry, many observers have pointed to its lack of diversity[2]. To address this concern, the John S. and James L. Knight Foundation commissioned Bella Private Markets to study diversity within the ownership ranks of U.S. asset managers in previous reports published in 2017 and 2019. These previous two studies concluded that women and minorities were dramatically underrepresented[3] in the mutual fund, hedge fund, private equity and real estate industries.

In this report, the Knight Foundation, along with Professor Josh Lerner of Harvard Business School and Bella Private Markets, builds on these previous studies by using up-to-date data and refined methodologies.

As in our prior studies, we focus on the U.S. market and study four major asset classes: mutual funds, hedge funds, private equity and real estate. A breakdown of our sample by asset class in terms of total firm assets under management (AUM) is provided in Figure 1.

Figure 1. **Breakdown of study sample firm AUM by asset class.**



1 Note that the purpose of this study was not to size the U.S. asset management industry, and we merely quote here the total value of assets under management (AUM) by active funds in our collective sample comprising mutual funds, hedge funds, private equity funds and real estate funds. In particular, given the large size of the mutual fund industry, it is worth noting that the total AUM represented by mutual funds in our sample may be somewhat overstated given the nature of the data. See the Data sections in the full report and the Appendix for more details on this and our data gathering procedures.

2 See, for example, Daisy Maxey, "Where Are the Female Fund Managers?," *Wall Street Journal*, July 6, 2015; and Joseph De Avila, "NYC Seeks Diversity Among Its Asset Managers," *Wall Street Journal*, April 30, 2015.

3 We use the term "underrepresented" throughout this report to indicate representation that is lower than the proportion of a given group in the overall U.S. population. As of the 2020 United States census, 38.4% of the population were minorities (which corresponds to those not identifying as "White alone, not Hispanic or Latino" in the census), and 50.8% of the population was female. We use these numbers as our benchmarks for defining "underrepresentation." See "U.S. Census Bureau QuickFacts: United States," https://www.census.gov/quickfacts/fact/table/US/PST045219.

The study has two primary objectives:

1. **Representation**
   To better understand the representation of ownership diversity among U.S. asset managers and the AUM levels of minority-owned, women-owned and other asset managers.
2. **Performance**
   To examine the impact of diverse ownership on financial performance.

Representation

We find that across asset classes, minority- and women-owned firms are underrepresented relative to other firms. Note that this report uses a definition of "minority" that includes racial/ethnic minorities (i.e., Hispanic, Black, and Asian), but does not include other underrepresented groups such as veterans or disabled persons. Occasionally, we use the term "diverse-owned" to refer to the broader group of women-owned and minority-owned firms. Note that firms may be classified as both women-owned and minority-owned.

First, when looking at the number of U.S.-based minority-owned firms within each asset class, we find the highest representation among hedge funds and mutual funds, in which 9.3% and 9.2% of **firms** are minority-owned, respectively. For women-owned firms, we see the highest representation among private equity and mutual funds at 7.2% and 6.7%, respectively. In real estate, we see the lowest representation of both minority- and women-owned firms. Viewing the data holistically, we find that the overall percentage of U.S.-based **firms** owned by minorities is 6.1%, while women ownership at the firm level is also at 6.1%.

Figure 2. **Percent (%) of U.S.-based firms owned by minorities and women.**

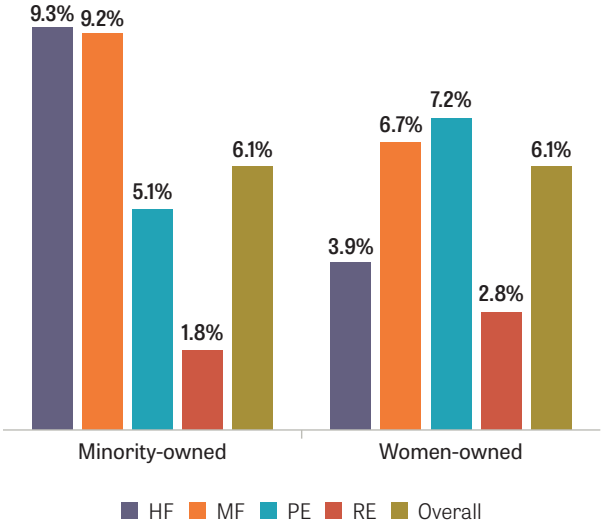
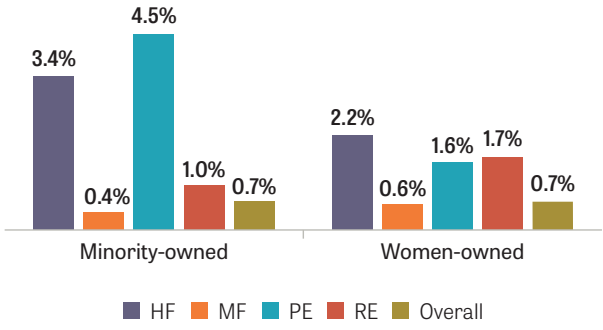


Figure 3. **Percent (%) of U.S.-based AUM managed by minorities and women.**



Moreover, we find that there is even greater underrepresentation in the amount of capital controlled by these groups. For instance, despite representation of minority-owned firms being relatively high in the mutual fund industry, at 9.2%, when we instead consider **AUM**, we see much lower minority representation in mutual funds—only 0.4%. This would suggest that although there may be a relatively large number of minority-owned firms, the *size* of these firms (as measured by AUM) is much smaller than their non-diverse-owned peers. In fact, we see the same trend across all asset classes: the amount of capital managed by diverse-owned firms is

not proportional to the *number* of diverse-owned firms. Overall, the percentage of AUM managed by minority-owned firms across the asset classes in our sample is 0.7%, while the percentage for women-owned firms is also 0.7%. The overall percentage of **AUM** managed by **diverse-owned** firms (i.e., firms that are minority-owned, women-owned or both) in our sample is **1.4%**.[4]

We also examine the trends of these ownership metrics over time. In short, although representation still lags across these four asset classes, diverse representation in terms of AUM has increased over time, particularly for private equity and hedge funds.

Figure 4. **Percent (%) of U.S.-based AUM managed by minority-owned firms.**

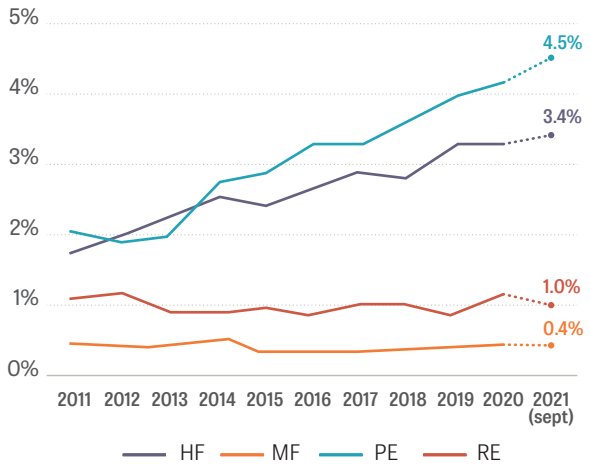
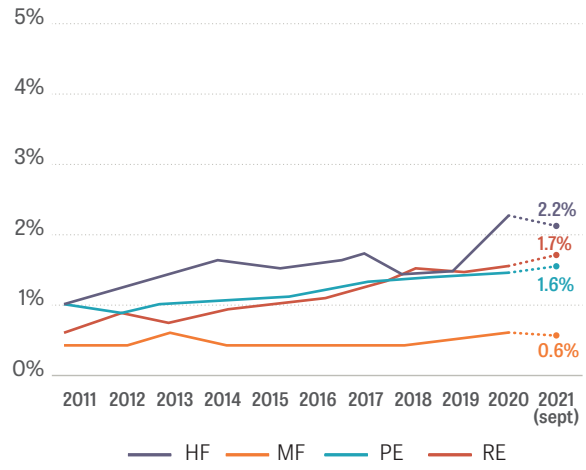
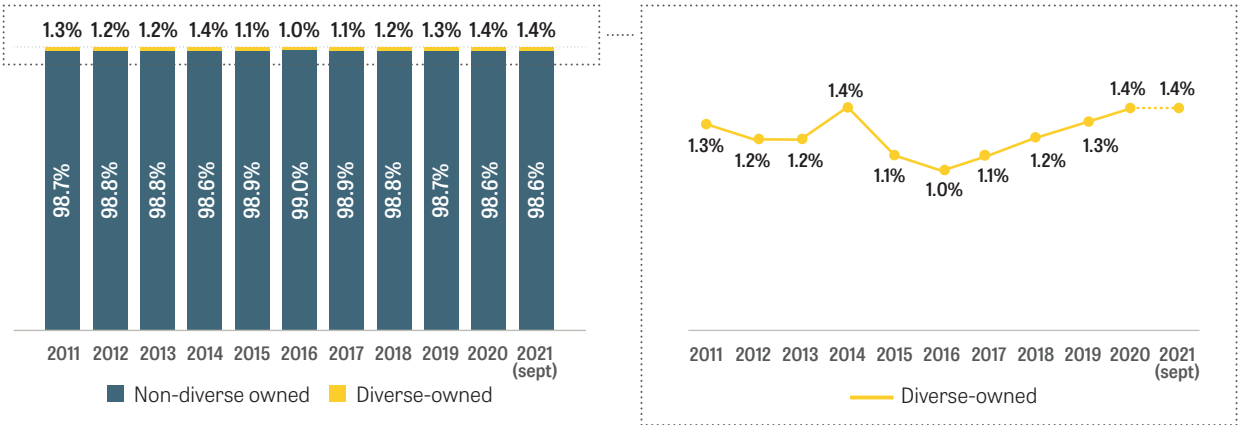


Figure 5. **Percent (%) of U.S.-based AUM managed by women-owned firms.**



Figures 4 and 5[5] reveal some promising trends in diverse representation across asset classes. Namely, the representation of minority- and women-owned AUM has generally increased in recent years. This is encouraging, particularly given that the size of these asset classes overall has grown. This suggests that not only is diverse representation improving, but diverse-owned AUM is increasing even *more than* non-diverse-owned AUM across asset classes—a finding we delve into further in the main report.

Figure 6. **Percent (%) of U.S.-based AUM managed by diverse-owned firms across asset classes.**



4 The definition of a "diverse-owned" firm in this study is one that is *either* minority-owned *or* women-owned. For this reason, the total number of diverse-owned firms may not match exactly the sum of women-owned and minority-owned firms.

5 The values in time series figures throughout this report will differ slightly from analogous figures retrieved from the 2019 report, given slight changes in data coverage, sample selection, and methodology. Note, in particular, that in this report we simplify the distinction between "majority" (greater than 50%) and "substantial" (between 25% and 50%) ownership for mutual funds and hedge funds that was employed in the 2019 report, and use a 50% threshold throughout to indicate diverse ownership.

Indeed, taking a bird's-eye view and considering the trajectory of AUM managed by diverse-owned firms across all asset classes for the past five years, we can see from Figure 6 that the picture is one of gradual, short-term growth. The percentage of diverse-owned AUM grew from 1.0% to 1.4% between 2016 and September 2021.[6] However, growth is flatter if we consider the past decade in its entirety, with only a 0.1% increase between 2011 and September 2021. Furthermore, the nominal amount of AUM managed by diverse-owned firms still pales in comparison to that managed by non-diverse-owned firms: as of September 2021, the total AUM of non-diverse-owned firms across these four asset classes amounted to $81.05 trillion, compared to $1.19 trillion of capital managed by diverse-owned firms.

Please note that when comparing these figures to those from the previous study, the value for 2017 (when the last data were gathered for the report published in 2019) will be slightly different due to methodological changes. Namely, in this report, we define a woman- or minority-owned firm to be one that is 50%+ owned by women or minorities, respectively, and we define a diverse-owned firm to be one that is women-owned, minority-owned or both.[7] We use this threshold across all asset classes for consistency. In the previous report, some asset classes used a lower threshold, which made comparisons across asset classes somewhat more difficult. Furthermore, the values in Figure 6 (as well as those throughout the report) were arrived upon using updated databases, and any disparities between the previous and current report will reflect changes to the historical data over time. Such changes may include expanded historical coverage or retroactive updates to the data, a topic we analyze briefly in the **Appendix**.

Performance

One criticism historically raised against minority- and women-owned firms is that there exists a performance differential between these firms and their peers—a potential explanation for the underrepresentation of investing in minority- and women-owned firms. Therefore, this report seeks to identify and quantify any performance differential between minority- and women-owned firms and their peers.

To do this, we employ robust statistical techniques—chiefly, linear regression analysis. Unlike simpler approaches to benchmarking performance (such as comparing simple mean and or median performance metrics), this method allows us to account for a variety of confounding factors—for instance, fund size, market conditions or time period—and thus isolate and quantify the performance difference attributable to a firm being women- or minority-owned specifically.

Using the final specifications of the regression models that we test, we ultimately find no statistically significant differences in performance between diverse- and non-diverse-owned funds across asset classes. While some models will show some differences in performance among groups (with ambiguous directionality) due potentially to random chance or spurious correlation, the central story from these models is that performance is empirically indistinguishable among minority-owned, women-owned and other firms.

6 The values in Figure 6 will differ slightly from analogous figures calculated from the 2019 report, given slight changes in data coverage, sample selection and methodology. Note, in particular, that in this report we simplify the distinction between "majority" (greater than 50%) and "substantial" (between 25% and 50%) ownership for mutual funds and hedge funds that was used in the 2019 report, and use a 50% threshold throughout to indicate diverse ownership. Therefore, aggregate numbers calculated from the 2019 report that used the 25% threshold will appear to be lower than the reported figure for 2017 in this report, for example.

7 Note that the singular exception to the definition of "diverse-owned" is the mutual funds asset class, the more granular data for which allow us to categorize a firm as diverse-owned if the *additive* women and minority ownership percentages are greater than 50%. That is, a firm that is owned 30% by women and 30% by minorities would be classed as diverse under mutual funds, although it is not possible to identify such firms as diverse using the other datasets.

Concluding remarks

Our findings regarding diverse-owned asset managers are broadly consistent with previous research on diverse-owned funds. We find that, for most asset classes, diverse-owned firms have low levels of representation across each asset class; however, they exhibit returns that are not significantly different than non-diverse-owned firms.

Despite lower representation, we do see some encouraging signs of increasing representation across asset classes in terms of number of funds, number of firms and amount of AUM, particularly in the past five years. Moreover, we also find that data quality has improved over time—for example, through more systematic reporting of private equity diversity data—perhaps reflecting a sharper focus being brought to bear upon this important issue.

2021 Knight Diversity of Asset Management Research Series: Industry study

Introduction: Why are diverse managers important?

Much of the focus with regards to racial and gender equality in the finance sector has been on increasing the diversity of asset managers in particular. For instance, the late Chief Investment Officer of Yale University's endowment, David Swensen, sent a letter to the endowment's fund managers in October 2020 that implemented diversity reporting requirements among its fund managers. This letter signified an indication of the increasing scrutiny being paid to diversity in the industry.[8]

Previous scholarship and commentary have focused on the motivations for increasing diversity in the asset management industry, considering, for instance, wealth creation, the role of homophily,[9] and the benefits of diversity in investment performance[10] and revenue growth.[11] However, relatively little work has been done to quantify the level of diversity or identify potential differences in the level of performance. This motivated our first study of diversity in the asset management industry, published in 2017. Recognizing the importance of creating a regularly published benchmark, the study was updated and published in 2019.

Since the 2019 report, there have been significant developments around attitudes toward social justice and racial equality, perhaps best illustrated by the growth of the Black Lives Matter movement. As such, increased attention has been paid to diversity in the asset management industry, and interest in this topic has reached the top policy makers in the country. In June 2019, for example, the U.S. House Committee on Financial Services' Subcommittee on Diversity and Inclusion held a hearing titled Diverse Asset Managers: Challenges, Solutions and Opportunities for Inclusion, which included testimony regarding the 2019 version of this report.[12]

However, reports and studies on this topic tend to be more limited in scope, studying a particular asset class. Many of these reports have focused on alternative asset classes, such as the 2020 study by Preqin, which focused on gender diversity in the private capital and hedge fund industries.[13] Those reports that have considered a large range of asset classes have also tended to focus on specific groups. For example, a 2020 study commissioned by the Association of Asian American Investment Managers (AAAIM) quantified the representation and performance of funds owned by Asian Americans and Pacific Islanders.[14] Given the constraints of these studies, we hope this report serves as a helpful addition to the literature.

Before proceeding, it is important to note that this report uses a definition of "minority" that includes racial/ethnic minorities (i.e., Hispanic, Black, and Asian), but does not include other underrepresented groups such as veterans or disabled persons. Occasionally, we use the term "diverse-owned" to refer to the broader group of women-owned and minority-owned firms. Note that firms may be classified as both women-owned and minority-owned.

8 David Swensen, "Diversity and Inclusion Letter," *Yale Investments Office*, October 2, 2020.

9 Michael Ewens and Richard R. Townsend, "Are Early Stage Investors Biased against Women?," *Journal of Financial Economics* 135, no. 3 (2020): 653–77.

10 Paul Gompers and Silpa Kovvali, "The Other Diversity Dividend," *Harvard Business Review* (July–August 2018): 72–77.

11 Rajalakshmi Subramanian, "Lessons from the Pandemic: Board Diversity and Performance," BoardReady, July 13, 2021.

12 Diverse Asset Managers: Challenges, Solutions and Opportunities for Inclusion, US House Committee on Financial Services, Subcommittee on Diversity and Inclusion (2019), https://financialservices.house.gov/calendar/eventsingle.aspx?EventID=403836.

13 Marissa Lee, Kainoa Blaisdell, Cat Hall, Charlotte Mullen, Milly Rochow, Logan Scales, Tim Short, et al., "Preqin Impact Report: Women in Alternative Assets," Preqin (March 2021).

14 "Representation of AAPIs in Asset Management: Analysis and Strategic Response," AAAIM, Bella Private Markets (November 2020).

The remainder of this report is organized as follows: We first discuss the data sources used in this report as well as the steps taken to create the datasets we ultimately use in this analysis. Next, we describe our methodology and present more detailed results of the representation and performance of funds across each asset class. More detailed descriptive statistics, model specifications and other details are in the **Appendix**.

Data

This study considers four asset classes in the context of the U.S. market:

- **Hedge funds**
  Hedge funds use active portfolio management in an attempt to achieve above market returns. As a result, they may adopt aggressive strategies and use financial derivatives or leverage to "hedge" against the rise and fall of the public equity market. Hedge fund investors in the U.S. also generally must be accredited.

- **Mutual funds**
  Mutual funds are professionally managed investment vehicles that typically invest in publicly traded securities. In the U.S., many relatively small investors use mutual funds as a means of preserving capital, growing wealth or saving for retirement. Our final mutual fund sample includes vehicles categorized as mutual funds, separately managed accounts (SMAs) and comingled trust funds.

- **Private equity (PE)**
  PE firms manage stakes in privately held companies for several years. They raise funds from investors, known as limited partners (LPs), to supply the capital necessary for building young companies and for transforming ailing giants. A typical PE fund has a lifespan of ten years with optional extensions of up to two years. The illiquid nature of PE investments and their long holding periods differentiate PE from other asset classes. PE investors in the U.S. generally must be accredited, meaning that they must meet a minimum threshold for income or assets.[15]

- **Real estate**
  Real estate is an essential feature of the U.S. economy—consumers and firms rely on real estate properties for housing and production. As such, real estate assets can offer attractive investment opportunities. Unlike PE, however, real estate investing involves a unique set of challenges. Namely, because portfolio properties are durable, investment returns hinge on decisions of location and scale. Consequently, real estate managers require skills specific to their industry.

These analyses rely on a number of public, commercial and hand-compiled datasets focusing on the U.S. market. For mutual funds and hedge funds, we use the commercial databases eVestment and Hedge Fund Research (HFR) to identify women- and minority-owned firms. While these databases do not contain the entire population of mutual funds and hedge funds, they represent the most comprehensive data sources that provide information on diverse ownership. For PE and real estate, we merge commercial datasets from Preqin with hand-compiled lists of diverse managers.

The sample size for each asset class is summarized in the table below. These include active firms and funds as of the time of download, which was September 2021.

15 See, for example, https://www.investor.gov/introduction-investing/basics/investment-products/hedge-funds.

Table 1. **Sample size for each asset class, including all ownership types (i.e., minority-owned, women-owned and non-diverse-owned).** Data as of September 2021.

Asset class	Number of funds	Number of firms	Total firm AUM
Hedge funds	1,968	950	$949.4 billion
Mutual funds	11,147	2,704	$74.6 trillion
Private equity	13,988	4,812	$5.3 trillion
Real estate	4,660	1,542	$1.4 trillion
Total	**31,763**	**10,008**	**$82.2 trillion**

Although definitions of diverse-owned firms vary slightly across data sources, this report defines diversity based on the share of equity held by diverse owners. Specifically, firms are considered women-owned or minority-owned if more than 50% of firm ownership is held by women or minorities, respectively. We then define a diverse-owned firm to be one that is women-owned, minority-owned or both.[16]

As a final note, data availability and reporting on diversity in the asset management space within the U.S. market continue to evolve. In general, the quality and coverage of data is likely to improve over time, particularly in terms of demographic information on asset managers. As a result, one limitation of the analysis in this report is that a portion of the increase in representation year-to-year could be due to better reporting rather than true increases in women- or minority-owned firms and their AUM. However, our analysis of changes in the databases over time suggests that increased reporting is not a primary driver of the results in this report. This analysis is described in the **Appendix**.

Additional information about these databases and how they were used in this analysis can be found in the **Appendix**.

Current state

The first analysis considers the current state of diversity in the asset management industry as of September 2021. For each asset class, we quantify the representation of minority and women ownership. There are three ways in which we quantify representation:

- Number of firms
- Number of funds
- Amount of AUM

These three statistics allow us to gain a comprehensive understanding of the current state of minority and women ownership in the industry.

First, when looking at the representation of firms, we find the highest representation of minority-owned firms among hedge funds and mutual funds, in which 9.3% and 9.2% of firms are minority-owned, respectively. For women-owned firms, we see the highest representation among private equity and mutual funds at 7.2% and 6.7%, respectively. Real estate, however, has the lowest representation of both minority- and women-owned firms.

16 Note that the singular exception to the definition of "diverse-owned" is the mutual funds asset class, the more granular data for which allow us to categorize a firm as diverse-owned if the *additive* women and minority ownership percentages are greater than 50%. That is, a firm that is owned 30% by women and 30% by minorities would be classed as diverse under mutual funds, although it is not possible to identify such firms as diverse using the other datasets.

When we instead consider funds, we see generally similar results overall—diverse-owned funds are less represented than their non-diverse-owned peers. Across the board, diverse ownership in terms of *funds* is lower than that by *firms*. As with firms, representation of both women- and minority-owned funds is lowest in the real estate industry, with only 1.1% of funds owned by minorities and 2.9% of funds owned by women. We find a strong discrepancy also between firm and fund representation among mutual funds. For instance, we see that despite 9.2% of firms being minority-owned, only 4.0% of funds are owned by minorities. Similarly, 6.7% of firms in the mutual fund industry are women-owned, but only 3.2% of funds are owned by women. What might be driving this discrepancy? To answer this question, we next look at the assets under management (AUM) of these groups.

Figure 7. **Percent (%) of U.S.-based firms owned by minorities and women.**

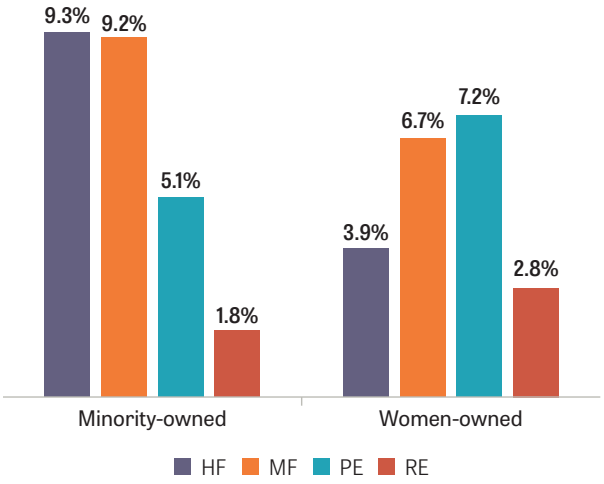
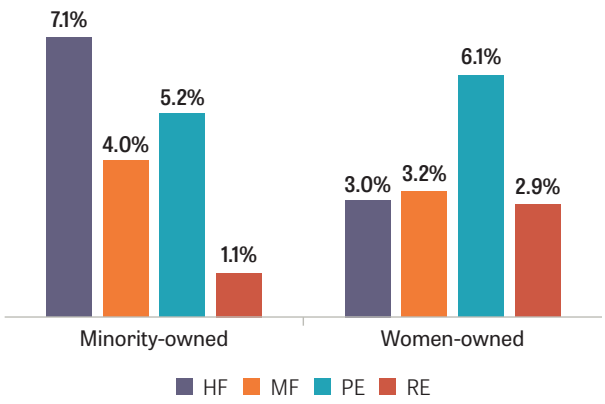
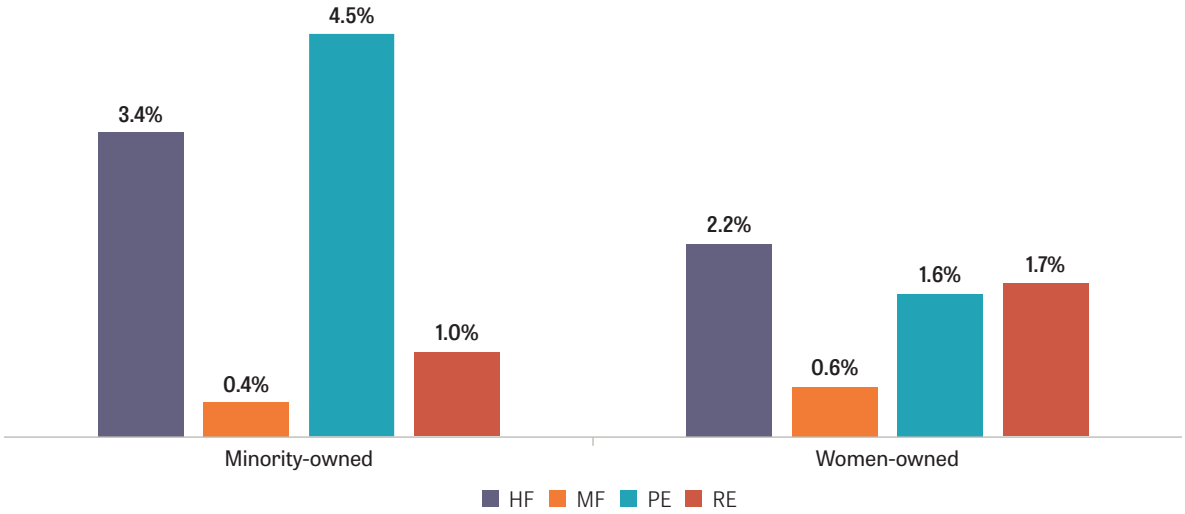


Figure 8. **Percent (%) of U.S.-based funds owned by minorities and women.**



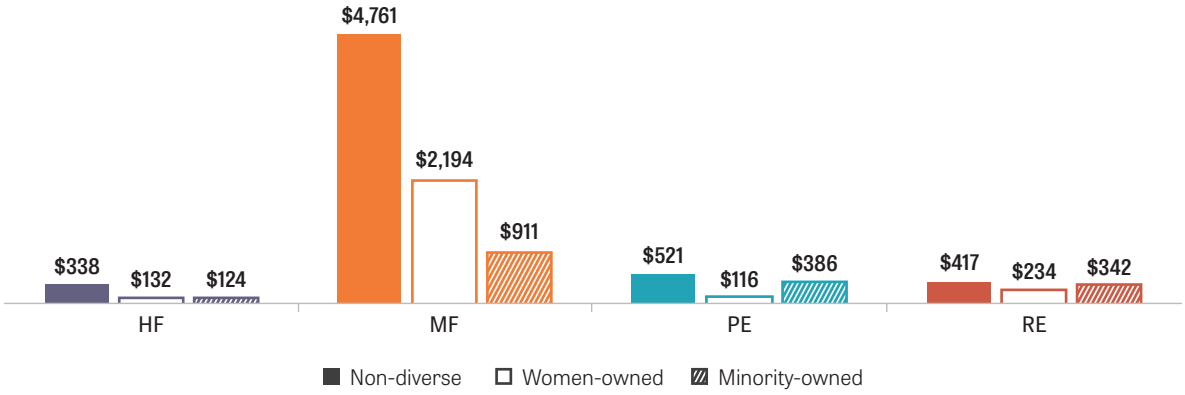
When we consider AUM, minority and women representation both decrease markedly across asset classes. In the case of mutual funds in particular, despite the representation of minority-owned firms being relatively high, at 9.2%, representation when measured by AUM decreases to 0.4%. When we consider this in tandem with our finding above—that the percentage of diverse-owned *funds* is lower than the percentage of diverse-owned *firms*—the story seems to be one in which diverse-owned firms manage fewer, smaller funds than their non-diverse peers. In fact, this is a trend we generally see across each asset class.

Figure 9. **Percent (%) of U.S.-based AUM managed by minority- and women-owned firms.**



We can examine this directly by considering the typical size (as measured by AUM) of diverse-owned funds compared to non-diverse-owned funds. Here, we do in fact see that the mean size of diverse-owned funds is generally much smaller than their non-diverse-owned peers—a finding that is consistent across each of the four asset classes.

Figure 10. **Average fund size (mn USD), by asset class and ownership type.**

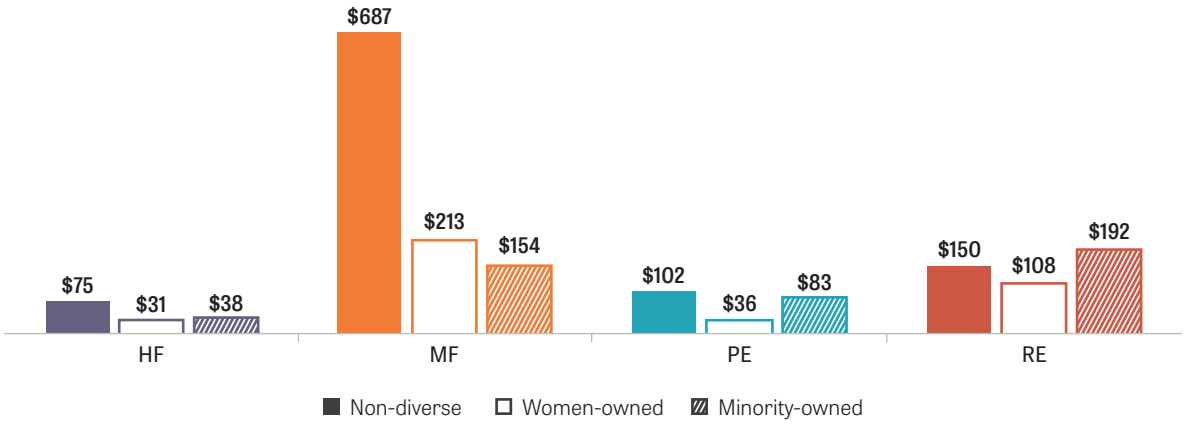


For instance, when considering mutual funds, we see directly what the firms and funds analysis above suggested: non-diverse-owned funds are significantly larger—in fact, more than double the size—of diverse-owned funds. The same is true in the hedge fund industry.

When looking at private equity and real estate, the results are slightly more encouraging, particularly in the case of minority-owned funds. Here we see that the average fund size appears to be nearly as large as that of non-minority-owned funds. However, women-owned funds are on average smaller in these asset classes, particularly in private equity.

One might wonder when considering these results whether they are driven in part by large funds "pulling up" or small funds "dragging down" average fund sizes. To this end, it is worth also examining *median* fund sizes to check whether this effect is simply driven by extreme outliers. However, as shown in Figure 11, this does not appear to be the case.

Figure 11. **Median fund size (mn USD), by asset class and ownership typ**



For the most part, we see nearly identical patterns in median fund size compared to mean fund sizes across asset classes. The one exception is minority-owned real estate funds; here, we see that the median size is larger than the median size of non-diverse-owned real estate funds.

To summarize, the current state of the asset management industry appears to be one in which diverse-owned firms manage far fewer, markedly smaller funds than non-diverse-owned firms. While this finding in and of itself may not be particularly inspiring, it is however important to also consider how the state of the industry has evolved, ultimately arriving at where it is today. Namely, we ask the question: Has progress been made in terms of diverse representation over time? We explore this in depth in the following section.

Trends

Having covered the *current state* of diverse ownership in the asset management industry, we next consider *trends in diverse ownership over time*. The aim of this analysis is to uncover whether there is a general trajectory of more diverse representation in the industry. To this end, we consider three key metrics for each asset class over time:

- AUM of diverse-owned firms as a percentage of total AUM
- AUM of diverse-owned firms in absolute dollar terms
- Fundraising of diverse-owned firms as a percentage of total fundraising

When looking at these three metrics in tandem, we gain important insights into not only how the *relative* representation of diverse-owned firms has changed over time, but how much capital *in total* is being managed and raised by these firms.

We begin by first exploring how the total amount of AUM managed by diverse-owned firms has evolved over time across asset classes. We look at the period between 2011 and September 2021. In short, diverse-owned firm AUM has generally increased over the last decade. For minority-owned firms in the PE and hedge fund space, AUM has been steadily increasing as a percentage of overall AUM since 2012. For minority-owned firms in mutual funds and real estate, the results are less striking; still, there has been some progress, particularly in the last several years. For women-owned firms, relative AUM has been increasing more slowly across these asset classes but is nevertheless on an upward trend on the whole.

Figure 12. **Percent (%) of U.S.-based AUM managed by minority-owned firms.**

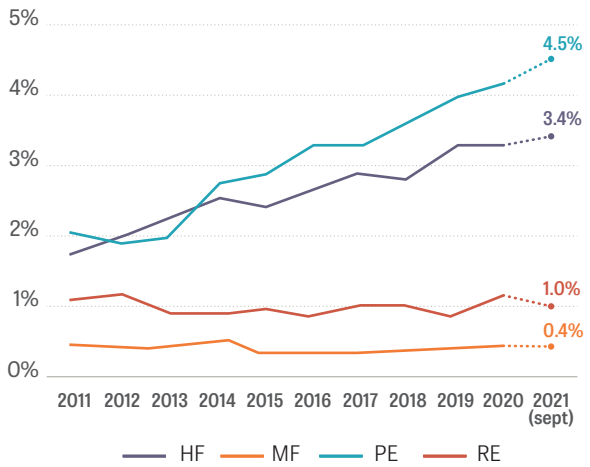
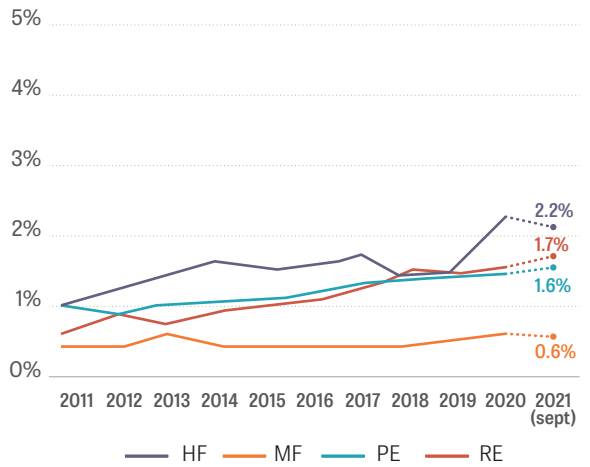


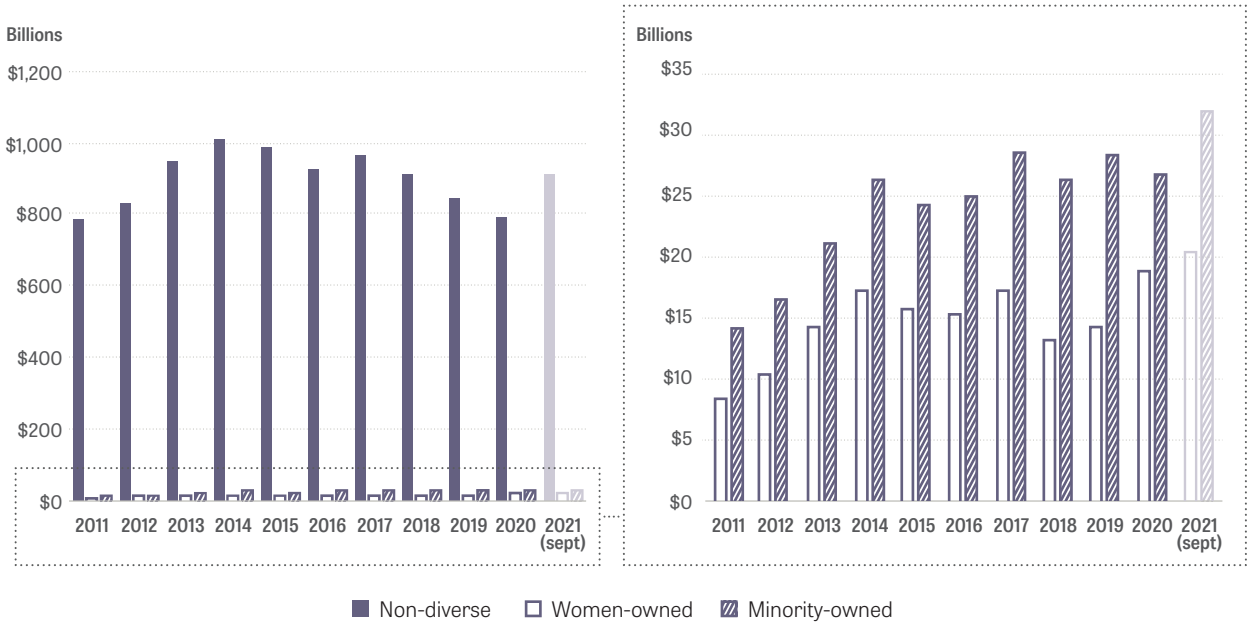
Figure 13. **Percent (%) of U.S.-based AUM managed by women-owned firms.**



These findings are encouraging because they suggest not only that diverse-owned firm AUM itself is increasing, but also that it is increasing *even as these asset classes continue to grow*. Put another way, diverse-owned AUM is generally increasing *faster* than non-diverse-owned AUM in these four industries. Additionally, it might be noted that—given our finding that diverse-owned firms are much smaller than their non-diverse counterparts—the amount and proportion of diverse-owned *firms* are generally increasing at faster rates than the amount of diverse-owned AUM.

To look more explicitly into this point, we can look at the *absolute amount* of AUM managed by these firms, instead of just the proportion of AUM (as shown above).

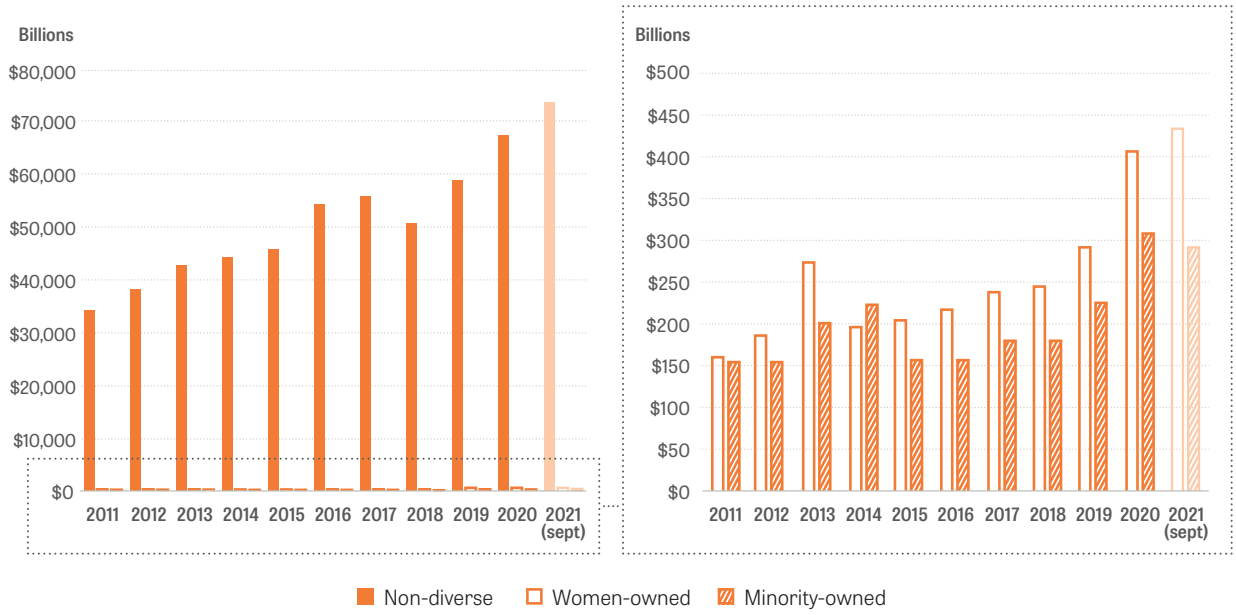
Figure 14. **Non-diverse, women-owned and minority-owned U.S.-based hedge fund AUM.**



For instance, we see in Figure 14 that although diverse hedge fund managers control substantially less AUM than their non-diverse counterparts, the *rate* at which AUM is increasing for diverse managers appears to be greater than that for non-diverse managers. To quantify this, we can compare the compound annual growth rate (CAGR) of women-owned, minority-owned and non-diverse-owned AUM over the past ten years, from 2011 through 2020. As we can see from Figure 18, while the CAGR for women-owned and minority-owned hedge fund AUM was 8.5% and 6.6% respectively, the CAGR for non-diverse firms was only 0.1%.

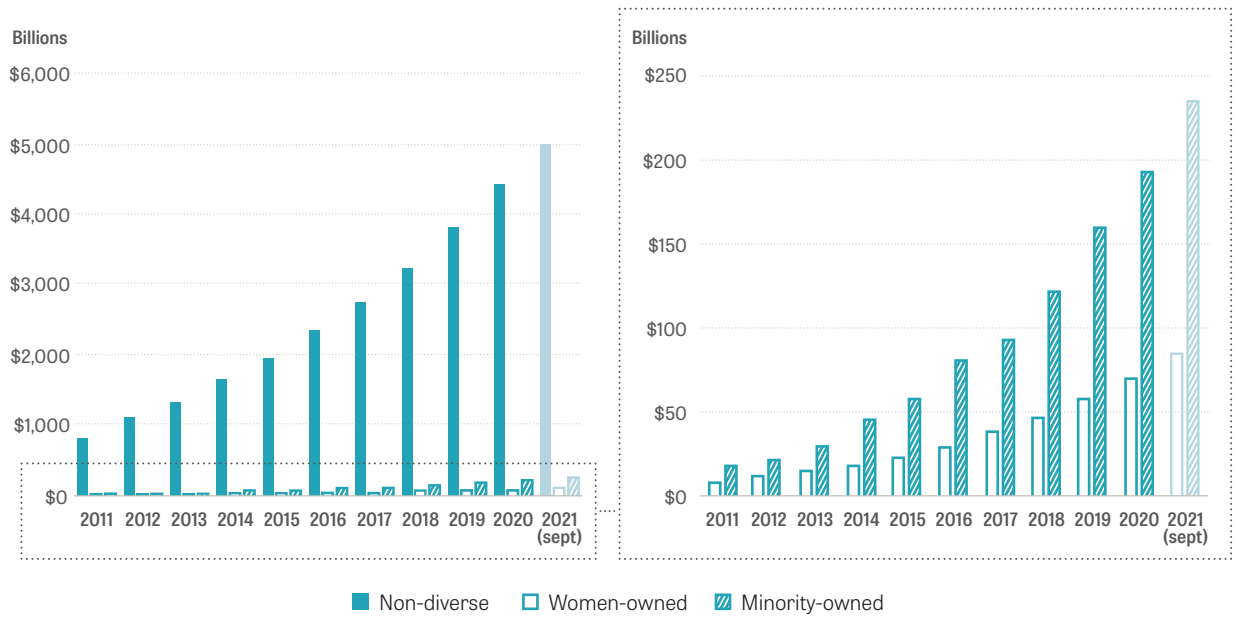
We see generally similar trends across other asset classes. For mutual funds, the trend is less pronounced, but we still see diverse manager AUM—particularly minority-owned AUM—increasing, most notably in the last five years (shown in the following figures).

Figure 15. **Non-diverse, women-owned and minority-owned U.S.-based mutual fund AUM.**



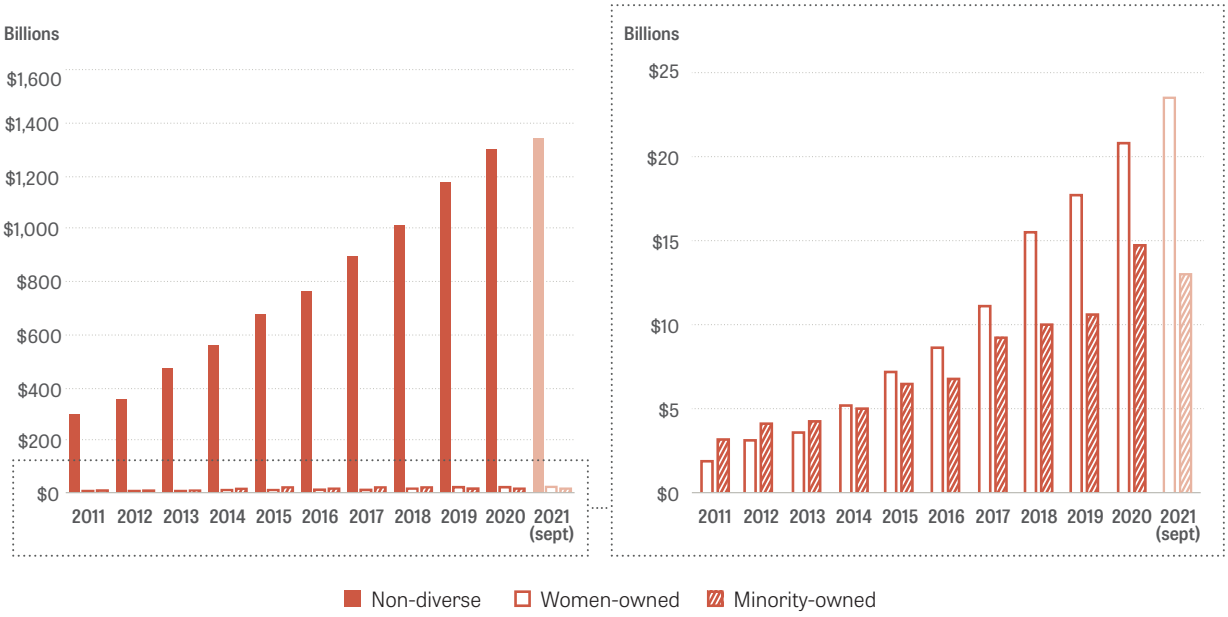
The same is true for private equity, as shown in Figure 16. Despite rapidly increasingly overall AUM over the last decade, the *rate* of diverse AUM growth has more than kept pace with the overall industry. Minority-owned funds in particular experienced rapid growth, with a CAGR of 27.4%, far outpacing the growth of non-diverse-owned AUM, as we see in Figure 18.

Figure 16. **Non-diverse, women-owned and minority-owned U.S.-based private equity AUM.**



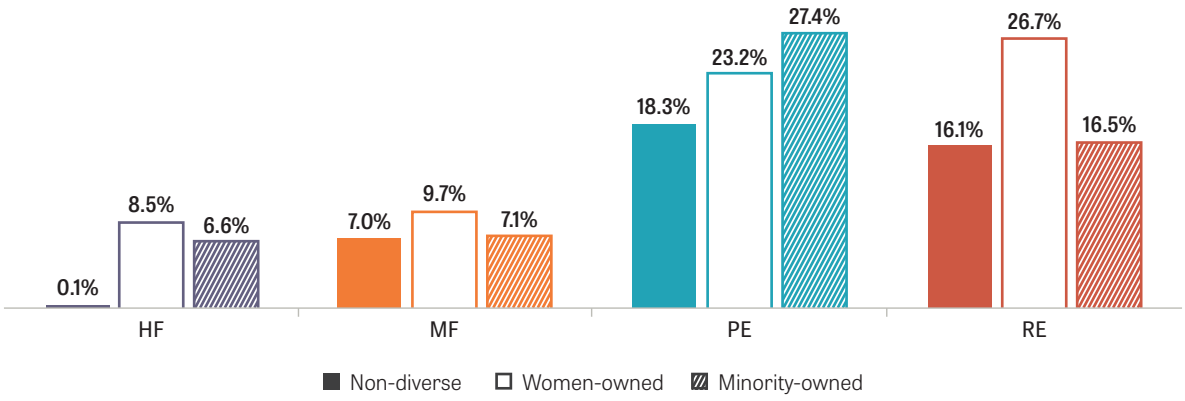
Finally, when looking at the real estate industry, most prominent is the growth in AUM of women-owned firms. Women-owned firm AUM has increased more rapidly than non-diverse real estate AUM, while minority-owned firm AUM has generally kept pace with overall industry growth.

Figure 17. **Non-diverse, women-owned and minority-owned U.S.-based real estate AUM.**



These relative growth trends are shown in Figure 18 below. Across each asset class, we see directly what earlier findings hinted at—women- and minority-owned firms are growing faster than their peers in terms of AUM. Although the overall trajectory appears to be heading in a promising direction—particularly in the last several years—diverse-owned firms still manage proportionally *much less* than their non-diverse-owned peers.

Figure 18. **Comparison of 10-year growth (CAGR) in U.S.-based AUM by asset class and ownership type, 2011–2020.**[17]



Although it is impossible to state with certainty where these industries may be headed in terms of diverse representation, one way to get a better sense of their trajectories is to examine fundraising activity—namely, to which types of funds is capital being directed? In this way, fundraising activity may be thought of as a "leading indicator" for the evolution of these asset classes.

17 Note that this analysis only considers years in which we have data for the entire year. Thus, the data used were from 2011 through to the end of 2020, and data from 2021 were not included.

Below, we look at fundraising activity for diverse-owned firms as a percentage of overall fundraising activity within each industry. Here, we see much higher diverse representation than for AUM. For instance, in 2020, minority-owned hedge funds accounted for 14% of total fundraising. We see similar—though less striking—results in other asset classes, as well, in which minority-owned firm fundraising activity has been proportionally larger than minority-owned AUM.

When looking at women-owned firm fundraising activity, the results are somewhat more muted. Although there have been periods of greater fundraising activity (for instance, in hedge funds in 2019 and mutual funds in 2011), women-owned firm fundraising as a proportion of total fundraising has generally remained less than 5% over the last decade.

Figure 19. **Fundraising by U.S.-based minority-owned firms as a percentage (%) of total fundraising.**

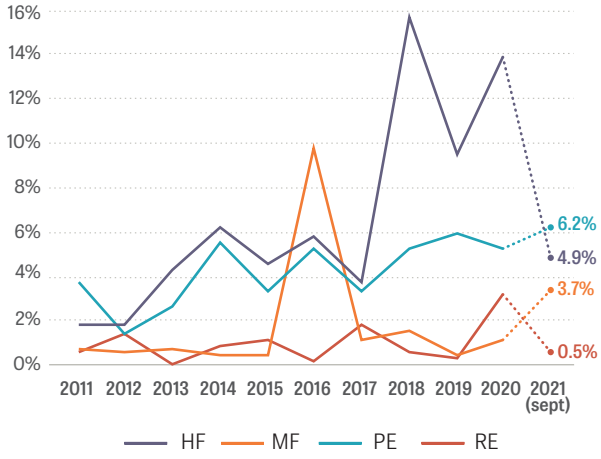
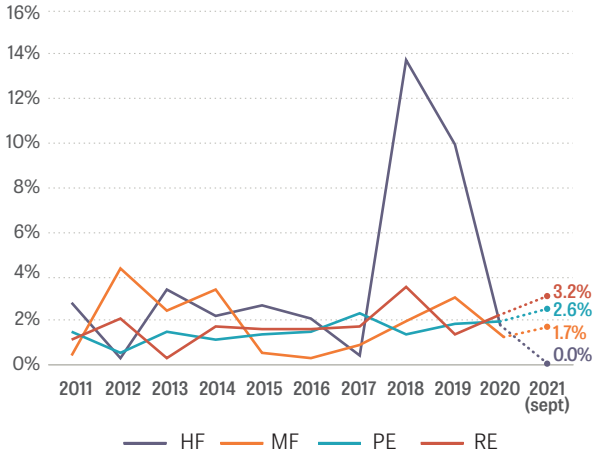


Figure 20. **Fundraising by U.S.-based women-owned firms as a percentage (%) of total fundraising.**



In summary, the asset management industry has continued to grow dramatically in recent years. Though there are some signs that diverse-owned firms are managing and attracting more capital, they still lag behind their non-diverse peers, whether measured in terms of AUM or fundraising activity.

Performance

From the discussion and results above, it is clear that diverse-owned firms are underrepresented relative to non-diverse firms on both relative and absolute bases. There are many theories as to why this might be the case, but one hypothesis commonly offered is that performance might differ across these groups, resulting in capital being allocated away from diverse managers.

In this section, we explore this hypothesis directly, seeking to identify and quantify any performance differentials between minority- and women-owned firms and their peers. To do this, we employ a number of statistical models.

The simplest of these is a straightforward comparison of mean performance among groups: How does the performance of the average diverse-owned fund compare to that of the average non-diverse-owned fund?

However, simple analyses like this fail to adequately account for many relevant factors, and one may be led to conclude that the difference in mean performance is due to diverse ownership status rather than a host of other factors that may be driving observed differences.

As such, we employ more robust statistical models—chiefly, linear regression analysis—to arrive at more well-founded conclusions. This method allows us to control for a variety of confounding factors—for instance, fund size, market conditions or time period—and thus quantify the true performance difference attributable to a firm being women- or minority-owned.

We do not find any consistent statistically significant differences in performance among diverse- and non-diverse-owned groups across asset classes.

We can also explore the results of various regression analyses in more detail, beyond simply assessing whether or not there is a statistically significant impact of minority- or women-ownership status on investment performance. To do this, we look more closely at the output from our various regressions. Generally speaking, the output of regression analyses consists of a series of "coefficients," or numeric values that indicate the strength and direction of a relationship between a set of explanatory variables (namely, factors that may reasonably be thought to have an impact on an outcome) and a single outcome variable (for instance, investment performance). To illustrate, if a regression model yields a coefficient of -0.3 for one of the explanatory variables included in the model, one would interpret this finding to mean that there is a negative relationship between the explanatory variable and the outcome variable.

However, regression models are highly dependent upon the data used in an analysis. If there are fewer data points underlying a regression model, there is typically more uncertainty present in the model—one cannot know for certain that results obtained are representative findings, or if the results are simply attributable to idiosyncrasies of the sample used for the analysis.

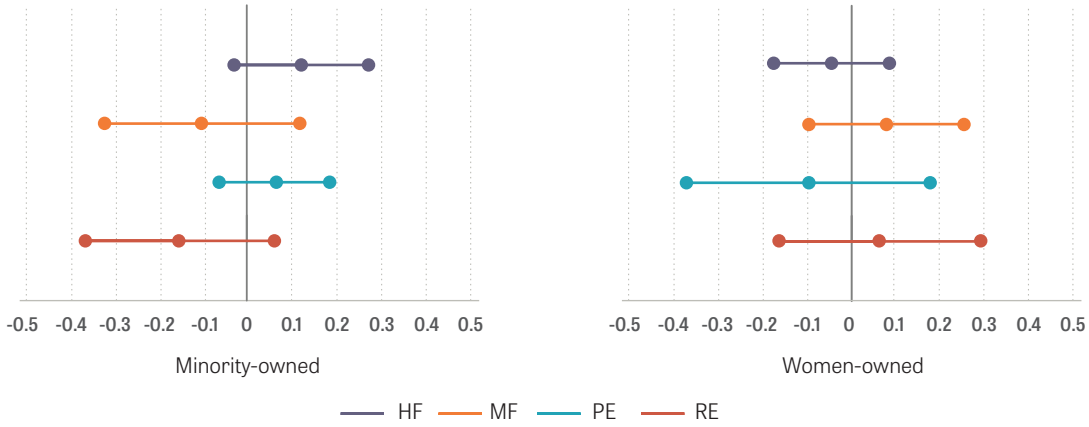
To account for this, regressions model the coefficients as "ranges" (technically, as distributions), which provide an indication of the degree of precision of these coefficients. The models can provide us with *confidence intervals* to give us a sense of the "spread" of the estimate. So, it might be that a coefficient is estimated to be -0.3, but the confidence interval around that estimate may reveal that, within a given degree of certainty, the true coefficient might lie anywhere between 0.1 and -0.7.

By looking at both coefficient estimates and confidence intervals in tandem, one can thus get a better sense of not only how confident one may be in estimated coefficients (**statistical significance**), but also a sense of the strength of the relationship (**economic significance**).

To this end, we plot below the coefficient estimates from our final regression model specifications for each asset class, as well as the 95% confidence intervals[18] calculated around these estimates. These confidence intervals indicate that with 95% confidence (under the assumptions of the given model), the true coefficient lies within the limits shown. The estimates for the effects of minority ownership are displayed on the left half of the chart, and those for women-ownership on the right. The asset classes are arranged along the vertical axis.

18 These are 95% confidence intervals. To calculate these intervals for each of the asset classes, we first take our selected regression specification from the corresponding regression table and retrieve the point estimate for the "women-owned" and "minority-owned" coefficient, as well as the standard errors for the coefficient underneath (in brackets). The middle point for each band in the charts corresponds to the point estimate. The lower bound corresponds to the point estimate minus 1.96 (the approximate value of the 97.5 percentile point of the standard normal distribution) multiplied by the standard error. The upper bound corresponds to the point estimate plus 1.96 multiplied by the standard error.

Figure 21. **Coefficient estimates and 95% confidence intervals from our final regression model specifications.**
The confidence intervals for each overlap with 0.0, indicating that there is no statistically significant difference between minority- or women-owned funds and non-diverse-owned funds, across each asset class. The bounds of the confidence interval are calculated by multiplying the standard error by 1.96, and adding (subtracting) this value from the estimate.



When analyzing the chart above, we notice that the confidence intervals all overlap with 0.0. We thus see no statistical evidence for a meaningful relationship between diverse-ownership status and performance. **We therefore cannot conclude with a reasonable degree of certainty that the effect of diverse ownership on performance is different from zero.**

Conclusions

The asset management industry continues to be a pillar of the modern global economy, growing ever larger each year. Yet as the industry has grown and matured, many have pointed to the lack of diverse representation in this critical space.

As a first step toward quantifying the landscape of diversity and representation in the asset management industry, Bella Private Markets has worked with John S. and James L. Knight Foundation over the last several years to develop a series of reports tracking diverse representation in four key industries within the asset management space: private equity, real estate, mutual funds and hedge funds. In this update to our 2019 report, we find that the representation of diverse-owned groups across asset classes as measured by total AUM still lags behind that of non-diverse-owned groups. However, there have been improvements over time in the amount of AUM managed by diverse-owned groups and—perhaps due in part to increased attention paid to this space—improvements in data collection that cover these trends (see the **Appendix** for more detail).

As to *why* diverse representation still lags in the asset management industry, our analyses reveal that the differences in representation do not appear to be driven by performance differentials. We find no consistent, statistically significant differences in performance between diverse- and non-diverse-owned funds across asset classes. This may indicate that the true drivers of the lack of representation of diverse groups in asset management lie elsewhere, and that further research to determine these causes and the impact of the level of diversity in the asset management industry is required. This research may serve as a foundation for such further research.

We hope that our research continues to shed light on this crucial topic, spurs further discussion, research and understanding of diverse representation in the asset management industry, and leads to ongoing improvements in data reporting.

Appendix

Data

Our study relies on several data sources. Three commercial databases—Hedge Fund Research (HFR), eVestment (mutual funds) and Preqin (private equity and real estate)—allow us to identify the diverse ownership status of asset managers. Our hedge fund and mutual fund data provide information on the share of equity held by diverse owners. Private equity (PE) and real estate data are less detailed, but still indicate whether at least 50% of a firm's equity is held by women or minorities. We should note, however, that data collection on PE and real estate diversity is still in its infancy and may not include every diverse manager. Therefore, for PE and real estate, we combine commercially available datasets with hand-compiled lists of diverse-owned firms to improve data reliability.

Throughout the report we characterize differences between diverse and non-diverse asset managers using a number of firm- and fund-specific variables. Some of our datasets include historical, performance and investor information, which we utilize to study diversity trends, the financial performance of diverse managers and the composition of institutional investors supplying capital to diverse asset managers. In this section, we briefly summarize each major data source.

Hedge Funds

For hedge funds, we use Hedge Fund Research (HFR) data, a leading provider of hedge fund data. Our final dataset comprises 950 firms and 1,968 funds in the *active* category, and 3,556 firms and 9,133 funds reporting *historical* between January 2005 to September 2021. These data include variables such as strategy, geographic location and fund size.

The standard commercial database also includes a diversity variable to indicate whether the fund is substantially owned by women or minorities. HFR has provided supplemental proprietary data for this project that include diverse ownership type (women vs. minority) and level of ownership (substantial vs. majority). The HFR range for substantial ownership is 25–50% ownership, and the threshold for majority ownership is 50%+ ownership. Unlike our mutual fund data, firm-level diversity indicators for hedge fund managers do not change over time. For this analysis, we assume that any firm identified as diverse in the HFR database has always been diverse. While this may appear to be a strong assumption, it seems unlikely that diverse ownership of a given firm would change frequently over time.

HFR has good coverage of hedge funds relative to other commercial databases and is frequently used for academic research on the hedge fund industry.[19] It does not, however, capture the total universe of hedge funds.[20] Hence, we almost surely do not capture the entire population of diverse-owned hedge funds in our study. Although it would be preferable to combine multiple hedge fund databases for this analysis, we use the HFR database exclusively because it provides identifiers for diverse-owned firms. To our knowledge, no other hedge fund database provides similar data on diverse ownership.

19 See, for example, Juha Joenväärä, Robert Kosowski, and Pekka Tolonen, "Hedge Fund Performance: What Do We Know?," *SSRN* working paper (March 2016).

20 See, for example, Andrew J. Patton, Tarun Ramadorai, and Michael Streatfield, "Change You Can Believe In?: Hedge Fund Data Revisions," *SSRN* working paper (March 2013).

We make several adjustments to prepare the HFR data for analysis:

- HFR separates fund characteristics, performance and assets into active and dead databases, with funds grouped by their reporting status. We utilize data for both **active and dead** funds when examining trends and evaluating fund performance.
- When analyzing the current state of hedge fund diversity, we only include **active funds** and exclude any funds that are no longer reporting.
- We restrict our sample to U.S.-based firms (including U.S. territories).
- While all firms are U.S.-based, some report assets denominated in foreign currencies. Assets denominated in foreign currencies are converted to USD based on monthly exchange rates provided by S&P Capital IQ.
- HFR distinguishes between majority-diverse-owned (i.e., 50%+) and substantially-diverse-owned (i.e., 25–50%) for women- and minority-ownership. Because most diverse firms are classified as majority-diverse-owned and few firms are classified as substantially-diverse-owned, and also for the sake of consistency across asset classes, **we consider only the "majority" categories to constitute women- or minority-ownership**. This stands in contrast with our 2019 report, in which, for some analyses, we broke out the two categories, and for others, we used the 25%+ threshold to indicate diverse ownership. The "timeline" analysis in the 2019 report, therefore, will not align exactly with the "trends" analysis in the current one.
- The fund characteristics and diversity data are merged with the monthly asset data. For a fund to be included in the trends analysis, it must have data available on its characteristics (e.g., industry focus, manager location, AUM, etc.), the diversity of its ownership and its assets in a given month.
- Similarly, for a fund to be included in the performance analysis, it must have data available on its characteristics and monthly performance. For this analysis, we rely on self-reported monthly returns data.

In addition to analyzing the data by diverse group, the HFR database allows us control for other important factors in the performance analysis. These variables include regional investment focus, manager location and fund strategy:

- Regional investment focus has three categories—North American, global, and other—based on where the manager targets investments.[21]
- We group firms into four U.S. regions by manager location using the same definitions as for mutual funds: Northeast, South, Midwest and West.
- Fund strategies include equity hedge, event driven, macro, relative value, and other.[22]

In this analysis, we do not consider funds of hedge funds since they typically have a distinct structure, size, fee arrangement and performance profile compared to direct investments. In addition, any AUM with fund of funds (FoF) will be double counted if the sub-fund investments are also in the dataset. This could overstate the amount of capital in the industry and skew the results, misrepresenting the AUM allocated to diverse versus non-diverse firms. For these reasons, we drop any observations that list FoF as the strategy type.

For the current state analysis, we use all hedge funds tagged as active as of September 2021. For the trends analyses, we use data from January 2011 through to September 2021. Finally, for the performance analysis, we use data from January 2005 (the earliest extent of diversity data for this asset class) to December 2020, so as to capture full-year returns.

21 "Other" focus category includes funds targeting Latin America, Asia, Europe, the Middle East, emerging markets or Pan-American investments.

22 "Other" strategy category includes blockchain and risk-parity funds.

Mutual Funds

For mutual funds, we use the Traditional Database from eVestment, a leading commercial data provider for institutional investors frequently used in academic research.[23] The database covers investment vehicles including mutual funds, separately managed accounts (SMAs), comingled trust funds and exchange-traded funds (ETFs); together, mutual funds and SMAs comprise the vast majority of database observations. eVestment collects quarterly data on firms and funds, including AUM, fund performance, fund strategy and firm location. Starting in Q1 2011, eVestment provides firm-reported data on the share of firm ownership held by women and the following minority groups: African American, Asian and Hispanic.

We use eVestment data through September 2021 and restrict our sample to U.S.-based asset managers.[24] We make several other sample restrictions:

- To examine the current state of diversity, we are interested in the level of diverse ownership among *current* asset managers. Therefore, we restrict the data to *active* funds for the current state of diversity section.
- We consider products whose asset class is listed as equity, fixed income or balanced/multi-asset.
- We drop the small number of vehicles tagged as exchange-traded funds (ETFs) and life policies.

After these restrictions, our sample of active U.S.-based asset managers for mutual funds includes approximately 1,223 firms and over 11,000 funds. Note that the total AUM represented by this sample, $74.6 trillion, may be somewhat overstated, as the data for total assets a firm in the database manages may include non-mutual fund vehicles. The eVestment platform provides data on various indicators for diverse ownership reported on a *quarterly* basis—this allows us to identify subsets of women- and minority-owned firms with majority ownership (50%+) across time.

For the current state analysis, we use all firms tagged as active as of September 2021 (the date of our receipt of the data).

For the trends analysis, we use quarterly data starting in Q1 2011, the first quarter that diverse ownership is reported, through September 2021. For each quarter, we identify all active funds and firms. Among the active funds and firms each quarter, we identify funds and firms with women ownership (50%+) or minority ownership (50%+). Again, in any given quarter, there may be some overlap between the categories of women-owned and minority-owned firms, as these are not mutually exclusive definitions.

For the performance analysis, we use the same dataset to analyze the effect of diverse ownership on quarterly returns. In order to make full use of the data available, we also include the numeric percentages of women and minority ownership in the regressions. We estimate a number of regression models to evaluate performance, controlling for ownership type as well as other relevant variables that may be correlated with performance. We use complete case analysis, and only include fund-quarter observations with non-missing data for performance, firm and fund characteristics, and ownership type.

23 See, for example, Jennifer Bender, P. Brett Hammond, and William Mok, "Can Alpha Be Captured by Risk Premia?," *Journal of Portfolio Management* 40, no. 2: 18–29 (Winter 2014).

24 Throughout our study we use a broad definition of the term "mutual fund" for ease of exposition. Our mutual fund sample consists of all funds in the eVestment Traditional Database. While many eVestment observations are institutional mutual funds, the sample also includes some SMAs, trusts and ETFs.

Private Equity and Real Estate

Our research on PE and real estate managers relies on data from Preqin, a commercial data provider for the alternative asset industry. Preqin is among the top sources of data for the alternative assets industry and is one of the two databases most often used in PE research.[25] We downloaded the data from Preqin in September 2021.

Preqin's databases provide access to a number of variables of interest and boast coverage over a relatively long time period, with particularly strong coverage from 2000 onward.

In addition, Preqin identifies diverse ownership for PE and real estate firms listed in its databases. It should be noted, however, that data collection on diversity is a relatively recent development. As a result, we cannot guarantee that our study has identified every diverse-owned PE or real estate manager. Nevertheless, we supplement Preqin's diversity identifiers with our own hand-compiled lists of diverse asset managers. These lists were gathered by searching through publicly available records from pension funds, government agencies and nonprofit organizations. These sources include:

- Illinois Municipal Retirement Fund 2019 Diversity Report
- New York State Common Retirement Fund MWBE Report 2018–2019
- Maryland Governor's Office of Minority Affairs 2013 and 2014 Report
- ABFE Directory of Minority and Women-Owned Investment 2016
- 2013 and 2015 NYS Office of the Comptroller Report on MWBE
- Shoppe Black
- Kevin T. Payne
- Shop Katika
- Bauce
- Black Enterprise's List of Private Equity Firms

The lists of diverse PE and real estate firms from the sources above were matched to demographic and fundraising data from Preqin based on firm name. We made a number of adjustments to both the PE and real estate databases from Preqin before merging them with our list of diverse-owned firms:

- Funds of funds are dropped from our datasets, for the reasons discussed in previous sections.
- Managers based outside the U.S. are dropped.
- For the PE database, Preqin classifies fund types into a number of different categories. For the performance analysis, we regroup these funds into two broad groups: PE and VC.[26]

For the PE performance analysis, we use net multiples and net IRRs, sourced from Preqin's database, as our outcome variables. It should be noted that more funds report net multiples than net IRRs, which was one motivation for using net multiples in our final specification. Similarly, for real estate funds, we use net multiples and net IRRs from Preqin's database.

25 Gregory W. Brown, Robert S. Harris, Tim Jenkinson, Steven N. Kaplan, and David Robinson, "What Do Different Commercial Data Sets Tell Us About Private Equity Performance?," *SSRN* 2706556 (December 2015).

26 PE includes buyout, growth, mezzanine, co-investment multi-manager, co-investment, balanced, direct secondaries, distressed debt, hybrid, PIPE, natural resources, timber, special situations, turnaround, secondaries, infrastructure and infrastructure secondaries. VC includes early stage, early stage: seed, early stage: start-up, expansion/late state, venture (general) and venture debt. Real Estate includes real asset, real estate, real estate co-investment, real estate fund of funds and real estate secondaries.

General Data Limitations

At this point, it is worth mentioning several of the data limitations and potential biases that may be present in our databases. The first, backfill bias occurs when a fund starts contributing to a database and reports its past performance.[27] Only funds with strong historical performance have incentives to report retroactive data. Sometimes, a firm will have multiple funds and will selectively report only the funds with strong returns. Therefore, "backfilling" will overstate the overall level of performance in the database and will make it look as though most funds perform very well in their early years. Survivorship bias is another well-documented bias in commercial databases and occurs when lower performing funds are abandoned by the asset management firm, leaving only high performing funds.[28] As a result, the overall level of performance is biased upward by the "survivors" that remain in the database.

Furthermore, data providers rely, at least in part, on voluntary reporting by the funds, and there are a number of factors that may influence a fund's decision to contribute data to a provider. For example, funds that underperform have less incentive to make their performance data public, which biases the overall level of performance upward in most databases. Similarly, funds that are accepting new capital or firms that are raising a new fund may report data as a way of advertising, particularly if recent performance has been strong. Further, anecdotal evidence suggests that some of the top hedge funds that are closed to new assets will not bother reporting to databases.

Finally, biases can result from the burden of reporting. There are a number of commercial databases for each asset class, and many small firms may not have the resources to report to all of them. Most databases therefore do not represent the full universe of funds, and they may be biased toward larger firms.

While these data limitations are areas of potential weakness, it must be noted that there are no immediately identifiable systematic biases that would result from these *general* data limitations. Recall that the three primary objectives of this analysis are (1) quantifying the current level of diverse ownership in the asset management industry, (2) identifying relative trends over time in diverse ownership and (3) assessing whether there is any statistical evidence for differences in performance between diverse-owned and non-diverse-owned funds.

Given that our report is concerned with the level of diverse representation *relative* to non-diverse representation, or performance of diverse-owned funds *relative* to non-diverse-owned funds, there is no immediate cause for concern unless there is evidence for *relative* differences (between diverse- and non-diverse-owned firms) in propensity to report or backfill data (in particular, AUM or performance data for a given fund or firm, or the existence of the fund or firm itself).

However, there may be some cause for concern if the data indicating whether or not a firm is diverse-owned are themselves systematically flawed or changing over time. In particular, we identify two particular avenues through which our results may be biased:

1. **Retroactive backfilling of *diversity* data**
   If backfilling of whether or not a firm is women- or minority-owned were to occur, this may be a cause for concern for a few reasons. First, this would make it difficult to make accurate statements about trends in representation, as the data on whether or not a firm is diverse-owned would be retroactively updated. Generally, were this to happen, we would expect a firm tagged as non-diverse to be retroactively re-tagged as diverse, as firms are assumed (across asset classes) to be non-diverse unless tagged otherwise. There would be greater cause for concern if this backfilling was contingent in some way upon the performance of the firm, as this would have the potential to bias our performance analysis.

27 Mila Getmansky, Peter A. Lee, and Andrew W. Lo, "Hedge Funds: A Dynamic Industry in Transition," working paper, July 28, 2015.

28 Rajesh K. Aggarwal and Philippe Jorion, "Hidden Survivorship in Hedge Fund Returns," *Financial Analysts Journal* 66, no. 2 (March 2010): 69–74.

2. **Increasing propensity to report *diversity* data *over time***
   If firms are increasingly likely to report their diversity status over time *relative* to their propensity to report their existence, AUM and performance, this may weaken the conclusions from our analysis on trends. For example, our finding that the level of diverse-ownership in the asset management industry is increasing over time may instead be chiefly driven by the increasing likelihood that a diverse firm in fact *reports* its diverse status.

While a thorough analysis of (2) is beyond the scope of the current report, it may be an interesting avenue for future research. We do, however, carry out an analysis to assess the relevance of (1)—that is, whether there is evidence for significant retroactive backfilling of diversity data.

To perform this analysis, we make use of the raw datasets used in the 2019 report and compare them to the data we use in the current report. We take firms that overlap between the two samples and assess to what degree the reported diversity variable for each firm has changed between the 2019 and 2021 sample. The results are reported below.

Percent (%) of Diversity Data Backfilled by Asset Class			
HF	**MF**	**PE**	**RE**
0.4%	0.4%	5.8%	0.0%

The results indicate that the overall level of backfilling of diversity data is low—particularly for hedge funds, mutual funds and real estate. For private equity, the level of backfilling is higher, at 5.8%, but still within a range that would not deter us from drawing conclusions from our analyses for this asset class. Still, to mitigate the issue in private equity, we use several other data sources to corroborate or supplement Preqin's classifications, as described earlier in the **Appendix**.

Regression tables

Hedge Funds

Table 2. **Performance regressions for U.S.-based hedge funds (excluding FoFs).**
The sample includes fund-month observations from January 2005 through December 2020. Each regression controls for region, strategy, month and strategy-month fixed effects. Reported standard errors are clustered by firm. Model used in the main report is highlighted and in bold.

	Dependent variable									
	Monthly Returns		Market Adjusted Monthly Returns	Three-Factor Risk-Adjusted Monthly-Returns	Five-Factor Risk-Adjusted Monthly-Returns	Monthly Returns		Market Adjusted Monthly Returns	Three-Factor Risk-Adjusted Monthly-Returns	**Five-Factor Risk-Adjusted Monthly-Returns**[29]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	**(10)**
25–50% Women-Owned	-0.006	0.053	0.083	0.096	0.151	0.012	0.054	0.051	0.051	**0.108**
	(0.129)	(0.078)	(0.074)	(0.082)	(0.095)	(0.131)	(0.086)	(0.084)	(0.083)	**(0.098)**
Women-Owned	-0.034	-0.015	0.010	0.045	0.031	-0.039	-0.057	-0.058	-0.022	**-0.041**
	(0.056)	(0.053)	(0.055)	(0.057)	(0.059)	(0.058)	(0.047)	(0.056)	(0.056)	**(0.058)**
25–50% Minority-Owned	0.428**	0.365*	0.351	0.356	0.364	0.365*	0.287	0.252	0.246	**0.235**
	(0.215)	(0.212)	(0.271)	(0.289)	(0.340)	(0.206)	(0.203)	(0.246)	(0.272)	**(0.318)**
Minority-Owned	0.224***	0.189***	0.143*	0.141*	0.116	0.213***	0.156***	0.142**	0.135*	**0.120**
	(0.058)	(0.059)	(0.073)	(0.075)	(0.076)	(0.061)	(0.052)	(0.070)	(0.074)	**(0.076)**
Fund Assets (mn USD), Lagged	0.051***	0.056***	0.058***	0.060***	0.062***					
	(0.007)	(0.007)	(0.007)	(0.008)	(0.008)					
Active		0.263***	0.235***	0.260***	0.262***		0.294***	0.280***	0.305***	**0.311*** **
		(0.023)	(0.024)	(0.026)	(0.027)		(0.023)	(0.026)	(0.028)	**(0.028)**
Beta		0.280***					0.372***			
		(0.057)					(0.074)			
Constant	0.986	0.107	0.214	0.162	0.15	1.23	0.486	0.63	0.588	**0.661**
Weighted	No	No	No	No	No	Yes	Yes	Yes	Yes	**Yes**
Observations	497,360	290,782	290,782	290,782	290,782	497,360	290,782	290,782	290,782	**290,782**
R^2	0.190	0.235	0.093	0.114	0.107	0.212	0.257	0.105	0.128	**0.123**
Adjusted R^2	0.188	0.232	0.090	0.111	0.104	0.210	0.255	0.102	0.125	**0.120**
Residual Std. Error	4.625 (df = 496144)	4.265 (df = 289774)	3.737 (df = 289775)	4.537 (df = 289775)	5.033 (df = 289775)	8.527 (df = 496145)	8.046 (df = 289775)	7.078 (df = 289776)	8.632 (df = 289776)	**9.577 (df = 289776)**
Note:	*p<0.1; **p<0.05; ***p<0.01									

29 The 10th model in this regression table was the one selected and referred to in the main report. The key reasons for doing so included the use of a weighted regression and the use of the full 5-factor risk-adjusted returns as the outcome variable.

Mutual Funds

Table 3. **Performance regressions using for mutual funds.**

The sample includes fund-month observations for U.S.-based asset managers from the eVestment Traditional Database for Q1 2011 through Q4 2020 (excluding FoFs). We control for month, region and asset class fixed effects. Reported standard errors are clustered by firm. Model used in the main report is highlighted and in bold.

	Dependent variable									
	Monthly Returns		Market Adjusted Monthly Returns	Three-Factor Risk-Adjusted Monthly-Returns	Five-Factor Risk-Adjusted Monthly-Returns	Monthly Returns		Market Adjusted Monthly Returns	Three-Factor Risk-Adjusted Monthly-Returns	**Five-Factor Risk-Adjusted Monthly-Returns**[30]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	**(10)**
% Women-Owned	0.048	0.049	0.014	0.046	0.025	0.099	0.087	0.041	0.070	**0.053**
	(0.090)	(0.086)	(0.082)	(0.107)	(0.104)	(0.099)	(0.096)	(0.091)	(0.119)	**(0.115)**
% Minority-Owned	0.023	0.055	0.037	0.028	0.030	0.021	0.055	0.066	0.065	**0.065**
	(0.104)	(0.104)	(0.099)	(0.140)	(0.139)	(0.108)	(0.108)	(0.110)	(0.149)	**(0.146)**
Women-Owned	0.016	0.036	0.070	0.080	0.091	-0.015	0.010	0.047	0.063	**0.070**
	(0.063)	(0.061)	(0.057)	(0.074)	(0.072)	(0.070)	(0.068)	(0.062)	(0.081)	**(0.079)**
Minority-Owned	-0.057	-0.078	-0.067	-0.078	-0.082	-0.054	-0.078	-0.086	-0.098	**-0.099**
	(0.082)	(0.080)	(0.079)	(0.107)	(0.106)	(0.083)	(0.082)	(0.087)	(0.112)	**(0.110)**
Log Firm Assets (mn USD), Lagged	-0.005**	-0.004*	-0.005**	-0.009***	-0.009***	-0.001	-0.001	-0.002	-0.003	**-0.004**
	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.003)	**(0.003)**
Log Fund Assets (mn USD), Lagged	0.007***	0.006***	0.006***	0.008***	0.007**					
	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)					
Beta		0.374***					0.365***			
		(0.027)					(0.029)			
Active		0.094***	0.093***	0.101***	0.098***		0.083***	0.082***	0.088***	**0.085*** **
		(0.011)	(0.011)	(0.013)	(0.013)		(0.010)	(0.011)	(0.012)	**(0.012)**
Constant	0.961	0.517	-0.296	-0.27	-0.252	0.966	0.541	-0.288	-0.266	**-0.248**
Weighted	No	No	No	No	No	Yes	Yes	Yes	Yes	**Yes**
Observations	1,060,370	946,057	946,057	946,057	946,057	1,060,370	946,057	946,057	946,057	**946,057**
R^2	0.573	0.575	0.138	0.123	0.133	0.557	0.560	0.146	0.125	**0.135**
Adjusted R^2	0.573	0.575	0.138	0.123	0.132	0.557	0.560	0.145	0.125	**0.134**
Residual Std. Error	2.507 (df = 1060238)	2.513 (df = 945923)	1.713 (df = 945924)	2.426 (df = 945924)	2.600 (df = 945924)	6.203 (df = 1060239)	6.312 (df = 945924)	4.224 (df = 945925)	5.953 (df = 945925)	**6.387 (df = 945925)**
Note:	*p<0.1; **p<0.05; ***p<0.01									

30 The 10th model in this regression table was the one selected and referred to in the main report. The key reasons for doing so included the use of a weighted regression and the use of the full 5-factor risk-adjusted returns as the outcome variable.

Table 4. **Performance regressions for U.S.-based PE funds in Preqin with vintage years 2008 through 2019 (excluding FoFs).**

The coefficients for the variable "Fund Type = VC" represent the difference in performance for venture capital funds compared to the subset of non-venture PE funds. Model used in the main report is highlighted and in bold.

	Dependent variable							
	Multiple		Net IRR		Multiple		Net IRR	
	(1)	(2)	(3)	(4)	(5)	**(6)**[31]	(7)	(8)
Minority-Owned	0.205**	0.154*	0.430	-0.167	0.099	**0.061**	2.950	1.296
	(0.087)	(0.089)	(2.614)	(2.747)	(0.065)	**(0.062)**	(2.307)	(2.162)
Women-Owned	-0.181*	-0.184*	-4.504	-1.829	-0.185	**-0.085**	-2.809	-2.099
	(0.109)	(0.111)	(3.242)	(3.359)	(0.133)	**(0.124)**	(4.223)	(3.807)
Log Final Fund Size	-0.048***	-0.034*	-0.787	-0.568	-0.005	**-0.004**	-0.259	-0.219
	(0.017)	(0.017)	(0.486)	(0.526)	(0.012)	**(0.013)**	(0.405)	(0.409)
Fund Type = VC	0.391***	-2.027	2.898*	-26.595	0.351***	**-1.960**	4.734**	-25.798
	(0.057)	(1.293)	(1.692)	(35.814)	(0.057)	**(1.730)**	(2.035)	(50.365)
Constant	1.986***	3.151***	16.126***	23.966	1.670***	**2.880*** **	13.565***	21.171
	(0.135)	(0.924)	(3.901)	(25.639)	(0.113)	**(0.536)**	(3.678)	(15.689)
Vintage FE	Yes	Yes	Yes	Yes	Yes	**Yes**	Yes	Yes
Strategy FE	No	Yes	No	Yes	No	**Yes**	No	Yes
Vintage x Strategy FE	No	Yes	No	Yes	No	**Yes**	No	Yes
Industry FE	No	Yes	No	Yes	No	**Yes**	No	Yes
Weighted	No	No	No	No	Yes	**Yes**	Yes	Yes
Observations	1,861	1,858	1,550	1,547	1,861	**1,858**	1,550	1,547
R^2	0.123	0.272	0.032	0.167	0.144	**0.376**	0.054	0.354
Adjusted R^2	0.115	0.178	0.023	0.050	0.137	**0.296**	0.045	0.264
Residual Std. Error	0.948 (df = 1845)	0.914 (df = 1645)	25.637 (df = 1535)	25.310 (df = 1356)	21.824 (df = 1845)	**19.719 (df = 1645)**	652.983 (df = 1535)	574.020 (df = 1356)
F Statistic	17.187*** (df = 15; 1845)	2.903*** (df = 212; 1645)	3.637*** (df = 14; 1535)	1.427*** (df = 190; 1356)	20.610*** (df = 15; 1845)	**4.678*** (df = 212; 1645)**	6.272*** (df = 14; 1535)	3.916*** (df = 190; 1356)

Note: *p<0.1; **p<0.05; ***p<0.01

31 The 6th model in this regression table was the one selected and referred to in the main report. The key reasons for doing so included the use of return multiple as the outcome variable, the regression being weighted and the use of additional controls compared to other regressions.

Table 5. **Performance regressions for U.S.-based real estate funds in Preqin with vintage years 2008 through 2018 (excluding FoFs).**

The variable "Debt Focused" indicates whether the real estate fund falls into the debt sub-asset class. Model used in the main report is highlighted and in bold.

	Dependent variable							
	Multiple		Net IRR		Multiple		Net IRR	
	(1)	(2)	(3)	(4)	(5)	**(6)**[32]	(7)	(8)
Minority-Owned	-0.295***	-0.287***	-8.889***	-8.128***	-0.134	**-0.150**	-5.442	-4.110
	(0.107)	(0.110)	(2.616)	(2.673)	(0.108)	**(0.107)**	(3.896)	(3.115)
Women-Owned	0.226*	0.229*	7.275***	6.814**	0.069	**0.061**	7.974**	4.891*
	(0.120)	(0.124)	(2.729)	(2.783)	(0.102)	**(0.101)**	(3.623)	(2.835)
Log Final Fund Size	-0.061***	-0.062***	-1.126***	-1.138***	-0.039***	**-0.036*** **	-0.056	0.318
	(0.011)	(0.012)	(0.246)	(0.254)	(0.009)	**(0.011)**	(0.349)	(0.292)
Debt Focused	-0.206***	0.375	-4.362**	9.577	-0.065**	**0.382**	-5.489**	7.086
	(0.080)	(0.480)	(1.820)	(10.588)	(0.029)	**(0.417)**	(2.245)	(11.306)
Constant	1.830***	1.299***	16.660***	5.624	1.514***	**1.222*** **	10.185***	-2.464
	(0.106)	(0.475)	(2.396)	(10.449)	(0.072)	**(0.418)**	(3.316)	(11.302)
Vintage FE	Yes	Yes	Yes	Yes	Yes	**Yes**	Yes	Yes
Strategy FE	Yes	Yes	Yes	Yes	Yes	**Yes**	Yes	Yes
Vintage x Strategy FE	No	Yes	No	Yes	No	**Yes**	No	Yes
Region FE	No	Yes	No	Yes	No	**Yes**	No	Yes
Weighted	No	No	No	No	Yes	**Yes**	Yes	Yes
Observations	963	963	916	916	963	**963**	916	916
R^2	0.188	0.238	0.132	0.219	0.255	**0.387**	0.206	0.575
Adjusted R^2	0.171	0.167	0.114	0.142	0.244	**0.330**	0.189	0.533
Residual Std. Error	0.467 (df = 943)	0.468 (df = 880)	10.471 (df = 896)	10.303 (df = 833)	8.414 (df = 948)	**7.926 (df = 880)**	282.549 (df = 896)	214.522 (df = 833)
F Statistic	11.469*** (df = 19; 943)	3.344*** (df = 82; 880)	7.176*** (df = 19; 896)	2.844*** (df = 82; 833)	23.237*** (df = 14; 948)	**6.771*** (df = 82; 880)**	12.250*** (df = 19; 896)	13.721*** (df = 82; 833)

Note: *p<0.1; **p<0.05; ***p<0.01

32 The 6th model in this regression table was the one selected and referred to in the main report. The key reasons for doing so included the use of return multiple as the outcome variable, the regression being weighted and the use of additional controls compared to other regressions.

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