# Racial Diversity in Private Capital Fundraising

Johan Cassel, Josh Lerner, and Emmanuel Yimfor

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## Abstract

Black- and Hispanic-owned funds control a very modest share of assets in the private capital industry. We find that the sensitivity of follow-on fundraising to fund performance is greater for minority-owned groups, particularly for underperforming groups. We find little support for a number of explanations for these patterns: that minority fund valuations are overstated, that minority funds encounter difficulties in hiring personnel, or that deploying capital is more difficult for these funds. We do find that the ability of minority groups to raise capital increases during periods of high racial awareness and when the chief investment officer of local public pension plans and endowments are minorities. Together, the results support the hypothesis that the modest representation of Black- and Hispanic-owned firms in private capital stems at least partially from the nature of investor demand, rather than the supply of fund managers.

JEL: G32, G34
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# I. Introduction

U.S. asset management groups are predominantly owned by whites. For example, a compilation by Lerner et al. (2021) suggest that the total share of assets under management (AUM) by groups owned by all minorities in the United States in 2021 was about 1.4%, even though minorities represented over 40% of the population at the time.[1] This disparity was even starker for Blacks and Hispanics.

This imbalance is concerning for two reasons. First, the ownership of financial institutions, particularly private capital groups, has been an important driver of wealth creation. This pattern is suggested by the disproportionate representation of financial institutions in the compilation of "millionaire-owned pass-through entities" by Smith et al. (2019). (This relationship is also apparent in less formal sources, such as Forbes billionaire lists.) The well-documented disparities of wealth by race in the United States (Chetty et al., 2019) are likely to be exacerbated by the uneven ownership of asset management groups. Second, academic researchers have demonstrated the presence of homophily in private capital markets: the tendency for investors to fund people that share characteristics with themselves (see, e.g., Ewens and Townsend, 2020; Gompers et al., 2017). The disparities in the racial composition of the ownership of private capital groups may thus have substantial effects on what types of entrepreneurs get funded, raising barriers to other critical avenues of wealth and job creation. Consistent with this suggestion, Fairlie et al. (2020) and Cook et al. (2022) document that Black-owned startups face more difficulty in raising external debt and equity capital, stunting their growth.

While the lack of diversity in the asset management industry is well documented, much less is known about its underlying causes. In this study, we examine potential reasons for the industry's low levels of minority ownership, focusing on venture capital (VC), buyout,

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[1] See https://www.census.gov/quickfacts/fact/table/US/PST045221.

and growth investment groups. The well-documented nature of these funds' activities make them particularly well suited for empirical study, and they have been important both as sources of wealth for their owners and as catalysts for economic growth.

To better understand the lack of diversity in private capital, we build what we believe to be the most comprehensive database of minority ownership of private capital groups developed to date. We combine information from Burgiss, PitchBook, and Form D filings with the U.S. Securities and Exchange Commission (SEC), with our own extensive research using public sources such as LinkedIn, news articles, commercial data-sets, and private communications from limited partners and consultants.[2]

We initially present three stylized facts. First, we underscore the second motivating rationale delineated above. We show that minority-owned funds active in the United States are more likely to fund minority entrepreneurs. Depending on the metric used, minority funds are three-to-four times more likely to fund minority entrepreneurs. Second, the representation of minority funds is modest. The three data sources, while differing in the extent of their coverage, paint a consistent picture. Black- and Hispanic-owned funds represent a very modest share of the capital raised by private capital funds, relative to plausible benchmarks. Third, and in keeping with the prior observation, minorities find it more difficult to enter the market by raising their first fund. Using Form D filings, which provide a broad depiction of attempted U.S. private equity fundraising, we show that Black and Hispanic-owned groups are less likely to meet their fundraising goals when attempting to raise first-time funds.[3]

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[2] As we discuss in Section II, we manually verify the ethnicity of each private capital group's founders and senior partners, which we use to define minority-owned groups. We define a group as minority-owned if at least 50% of founders or senior partners are Black or Hispanic.

[3] Throughout this analysis, we will focus on Black- and Hispanic-owned funds, and refer to them as minority- or diversely-owned. It should be noted that Asian-Americans are also substantially under-represented in the ownership of asset management groups (Association of Asian American Investment Managers and Bella Private Markets, 2020).

These initial results can be interpreted in a variety of ways, consistent with the voluminous literature on the economics of discrimination. One possibility is that the effects are driven by differences in the supply of high-quality managers, consistent with models of statistical discrimination. The share of diversely-owned managers who can deliver a high expected return may be very low. If there were many more minority-owned groups with low expected returns, even after controlling for observable characteristics, we would also observe that the success rate in first-time fundraising is lower for minority-owned groups. Alternatively, the differences may be driven by preferences on the part of the limited partners (taste-based discrimination).

Our first analysis focuses on the sensitivity of inflows to performance for diversely- and non-diversely owned funds. In a world of persistent performance, such as has characterized private capital historically (Kaplan and Schoar, 2005) and continues to in at least some segments of the market (Harris et al., 2020), past performance should proxy for expected returns. The inflow-performance relationship has been extensively scrutinized in a variety of asset classes, from mutual funds (Chevalier and Ellison, 1997) to private equity (Kaplan and Schoar, 2005).

In our analyses, we find a striking result. The ability of Black- and Hispanic-owned funds to raise follow-on funds is more sensitive to past performance than those of other funds. Using the Burgiss data, we show that higher PMEs are associated with a greater ability to raise a follow-on fund for all groups, but the sensitivity of fundraising to performance is almost three times higher for minority-owned groups.

We then look in more depth at this result. We divide the observations into those where the PME was above and below the median. In general, higher PMEs are associated with a greater probability of raising a fund, as before. But the effects differ sharply for minority-owned funds. For performance above the median, the relationship for minority funds are indistinguishable from the others. When performance is poor, however, the

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elasticity of fundraising to performance is greater for minority funds. Put another way, poor performance by minority funds is punished more harshly.

There are a number of potential explanations for this pattern. First, it may be that LPs are skeptical about the reported performance of private equity groups. Private equity groups have a fair amount of discretion over reported performance, and less established groups have been known to overstate the performance of unexited companies in their portfolios (Jenkinson et al., 2013; Brown et al., 2019; Barber and Yasuda, 2017). If LPs suspect that some underperforming groups are disproportionately inflating their interim performance, we might see a discounting phenomenon, where relatively poor performance is interpreted as indicative of much more severe underperformance. If diversely owned groups are more frequently suspected (rightly or incorrectly) of such behavior, this discounting effect might be stronger for them. As a result, the fundraising-performance elasticity might be greater for underperforming diverse groups.

When we look at the performance of private equity groups, however, we do not see evidence consistent with the inflation of interim performance by minority-owned groups. The performance of exited transactions by diversely owned firms is very close to that of other groups, while the reported valuations of unexited deals (where presumably this kind of performance manipulation would occur) are actually lower. Minority firms are actually somewhat more likely to hold investments at cost. These analyses are not definitive: minority groups could be marking transactions more conservatively, but if they hold severely underperforming transactions, these marks may still be too high. This explanation, however, is hard to square with the evidence regarding exited deals.

Another possibility for the lower elasticity of fundraising to performance is that investors are skeptical of the ability of diverse groups to grow successfully. In particular, they may anticipate that these groups will be unable to maintain their current level of performance if their fund size increases. In this case, they might be less willing to

provide additional funds to these groups, even when prior performance is good. This suggestion seems inconsistent with the evidence that the stronger elasticity stems from underperforming groups being punished more harshly, rather than successful ones being "under-rewarded." But is still worth exploring as it might shed light on why minority groups have difficulty meeting their fundraising targets when they attempt to raise first-time funds.

We examine two potential manifestations of this hypothesis. One possibility is that minority-owned funds are constrained in growing because they cannot hire trained personnel. The historical underrepresentation of minorities in Silicon Valley and Wall Street (the traditional feeders for venture capital and buyout funds respectively) have been frequently noted (for instance, Franklin (2022)). We find no evidence, however, that the staffing levels of minority funds differ from those of other funds. Another possibility is that these funds cannot make substantial investments due to a limited supply of minority entrepreneurs. We find little evidence that diverse funds make smaller investments, particularly in transactions that they lead.

A third class of explanations is that these patterns may be driven by an implicit or explicit taste function on the part of investors. These tastes may manifest themselves as reluctance to back an aspiring first-time minority manager or an "intolerance of failure" on the part of existing minority firms, who may be less likely than other groups to be given the benefit of the doubt. While we cannot observe tastes of investors, we exploit two quasi-exogenous shifts: events that may change the attitude of limited partners to diversely owned funds while not affecting the prospects of the funds in the long term.

Our first approach is motivated by cases such as that of Harlem Capital. In the aftermath of the George Floyd killing, the group—which had taken over four years to raise its $40 million first fund—rapidly gathered $134 million for an oversubscribed second

fund.[4]

It might be thought that the best approach is to look at the national level, using events that heightened racial awareness, such as the riots in 1992 that followed the beating of Rodney King or the presidential election of 2008. But the national nature of the discussions, as well as the presence of confounding events (e.g., the election of Barack Obama coincided with the Global Financial Crisis), make these shifts difficult to use as sources of exogenous identification.

Instead, we follow the recent sociology literature and use data on fatal encounters between unarmed citizens and the police. As a measure of racial sensitivity, we calculate the news-weighted ratio of fatal encounters between minorities and police in each state and year (Schmidt and Nosek, 2010; Hehman et al., 2018).[5] Hehman et al. (2018) show that a similar measure is associated with the relative attention to racial issues across states over time.

We examine whether the fundraising success of minority groups differs if they are located in areas and time periods with high racial awareness (*HRA*).[6] When we undertake this analysis, we find that during periods of *HRA*, the likelihood that diversely owned funds raise a follow-on fund is greater.

Second, we examine the influence of the race of chief investment officers (CIOs) at nearby public pension funds and endowments, who have traditionally been critical in-

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[4] See https://techcrunch.com/2021/03/31/harlem-capital-fund-ii/.

[5] Specifically, we proxy for racial sensitivity in the primary regressions by defining an indicator for high racial awareness, which equals one if the news-weighted number of fatal encounters between police and blacks or Hispanics (minorities), divided by the total number of all deadly encounters in that state, is in the top quartile of all states in that year. In the numerator, we apply a weight to each event that is the log of one plus the total number of news articles mentioning the event. We explore robustness of the results to modifications of this measure in a variety of follow-on analyses.

[6] It might be objected that we are looking at the location of the funds, not that of the limited partners who invest in the funds. The strong tendency of most groups to raise much of their funds locally (see, for instance, Mollica and Zingales, 2007; Hochberg and Rauh, 2013) alleviates some of this concern, particularly for smaller funds.

vestors in private capital groups. When a minority is appointed as a CIO, the probability that a diversely owned fund in the same state will get an investment from that LP, and the likelihood of raising a larger fund, both increase.

Together, these last two results support the suggestion that the under-representation of Black- and Hispanic-owned groups can at least partially be explained by the demand side. The analysis is similar in spirit to Niessen-Ruenzi and Ruenzi (2019), who find that women-managed mutual funds receive lower capital inflows after controlling for fund performance.[7] This paper is also related to Gompers and Wang (2017), who highlight the low level of minority-owned funds. Supporting a supply-side explanation, they find that African Americans and Hispanics represent a low fraction of new hires into the venture capital industry.

It is worth noting that the debate about the relative importance of supply and demand factors that motivates this paper is not just of theoretical interest. Practitioners have been sharply divided as to whether the emphasis should be on funding more diverse managers today, or encouraging incumbent majority-owned groups to hire and train minority investment professionals, in the hopes of building a pipeline of such managers in future years. For example, the late David Swensen put pressure on existing groups managing money for Yale's endowment to hire more women and minorities in entry-level positions, while Rev. Al Sharpton has encouraged university endowments to put more emphasis on investing into funds owned by diverse fund managers.[8]

The plan for this paper is as follows. Section II describes how we construct the data to test our hypotheses. Section III takes a first look at the data, Section IV presents our

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[7] In a related paper, Kumar et al. (2015) show that mutual fund managers with foreign-sounding names receive about 10% lower annual inflows.

[8] See https://www.wsj.com/articles/yales-david-swensen-puts-money-managers-on-notice-about-diversity-11603450800 and https://yaledailynews.com/blog/2020/04/10/sharpton-calls-for-diversity-in-endowment/

findings on the ability of minorities to raise follow-on funds, and Section V concludes the paper.

# II.   Data

Our goal is to examine the factors that explain the low rate of minority ownership of private capital groups. To that end, we carefully assemble a set of U.S.-based and -focused minority-owned private capital groups, manually processing each to document the level of minority representation among founders and senior partners. We exclude funds based in or focusing on regions outside the United States because defining who would constitute a minority would be considerably more complex.

We match our set of minority-owned groups to Burgiss and PitchBook, which allow us to study the intensive margin: to what extent does minority ownership affect the probability of raising a follow-on fund and the size of a fund if one is raised? And to what extent do minority groups struggle to deploy capital or hire personnel? In an attempt to capture the extensive margin—private capital groups that attempt to raise their first fund—we turn to Form D data.

The next few sections detail how we assemble our set of minority-owned groups, describe the PitchBook and Burgiss samples, and discuss the Form D data. Table 1 provides an overview of our different samples, and references the tables using each sample.

## A.   Minority Ownership Data

Before we turn to the specific data sources, however, we discuss one underlying empirical challenge for our study: many databases do not systematically identify the ethnicity of private capital group owners or partners. Therefore, one important contribution of this study is assembling a comprehensive list of U.S. Black- and Hispanic-owned private

capital groups, which we do using a variety of sources.

We begin by assembling a master list of U.S. private capital groups that fulfil one of four criteria: (a) the group is in PitchBook; (b) the group is in Burgiss; (c) the group aspired to raise a first-time fund and filed a Form D with the SEC between 2009 and 2020; or (d) the group filed a Form ADV with the SEC between 2012 and 2020.[9]

We then seek to ascertain which of the groups on this master list are Black- and Hispanic-owned. No classification system is likely to be perfect, especially at a time when an increasing number of U.S. residents identify as multiracial.[10] While we try our best to mitigate errors, we acknowledge an element of subjectivity in these classifications. This process is a continuing one, and the list of diversely owned groups may change as we get additional information and refine our classifications.

We proceed in five steps. First, we hire UpWorkers to flag groups with Blacks or Hispanics on the team page. To increase the accuracy of classifications, we process each private capital group twice, hiring North Americans to flag Black team members and Latin Americans to flag Hispanics (in the hopes that they would be more sensitive to these respective identities). In all groups where Upworkers flagged at least one minority, one of the authors inspects the information to double-check the ethnicity and title of the key executives. The key criteria that we use in the ethnic assignment of the executives are (a) self-identification as a Black and Hispanic, (b) a last name that is commonly associated with Hispanics,[11] (c) attendance at a Historically Black College and University, (d) affiliation with a relevant affinity group on LinkedIn (e.g., Black Women in Asset

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[9] We discuss Form D filings in depth later in this section. Form ADV is the uniform form used by investment advisers to register with both the SEC and state securities authorities.

[10] This Census press release summarizes recent trends: https://www.census.gov/library/stories/2021/08/improved-race-ethnicity-measures-reveal-united-states-population-much-more-multiracial.html.

[11] To use it for classification purposes, we require that at least 50% of people who have the same last name identify as Hispanic based on the 2010 Census data available at https://www.census.gov/data/developers/data-sets/surnames.html.

Management), and (e) (for Blacks only) skin color.

Second, to ensure that we do not miss any minority-owned groups, we complement our search by having one of the three authors examine all private capital groups that are classified as minority-owned by Preqin or Crunchbase.[12] Additionally, we examine those firms on lists of minority-owned groups that we collected from pension funds and other LPs, consultants, and media accounts.[13]

Third, based on these examinations, we count the total number of minorities and non-minorities holding the following titles: "founders"; partners holding the highest ranking title such as "managing partner," "general partner," "senior partner," or "managing director"[14]; and the respective counts of all other partners above the rank of "junior partner."

Fourth, we identify minority-owned groups. While we do not observe the precise ownership stakes held by individual partners in a group, we rely on the fact that the most senior members of a group typically hold the biggest ownership shares (Ivashina and Lerner, 2019). We define a group as minority-owned if at least 50% of either the founders or the senior partners are Black or Hispanic.[15] In total, we identify a total of

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[12] Preqin collects information on the minority-ownership status of private capital groups using a combination of self-reporting from general partners (GPs) and publicly available information. A discussion of how the diversity data is collected by Crunchbase is provided in Crunchbase.com/organization/velicept-therapeutics, while this article discusses how it is analyzed by Crunchbase: http://about.crunchbase.com/wp-content/uploads/2020/10/2020_crunchbase_diversity_report.pdf.

[13] This effort builds on earlier work by Lerner et al. (2021).

[14] When multiple titles are present, we count the title used for the highest ranking individual. For example, if there is one managing general partner and three general partners, we count only the managing general partner in the category of highest-ranking partner.

[15] A concern is that our classification is as of the date at which we collect this information: February through August of 2021. In the event that minorities have recently been appointed to senior partner roles, we may incorrectly label the group as minority-owned for the period prior to this appointment. As the founders of a group do not change over time, it is appropriate to view the classification based on founders as the most robust. However, most of the groups we identify as minority-owned have been launched in the past decade, greatly limiting the importance of this concern. Additionally, there is a large overlap between groups classified as minority-owned based on founders or based on senior partners. Only 10 percent of groups are classified as minority-owned solely based on the senior partner

168 minority groups. Of these, the groups we can match to Burgiss have 40 funds in that sample, while the groups we can match to PitchBook have 154 funds in that sample. Many of these groups are smaller ones with few if any institutional investors, which explains why the coverage in the commercial databases is not larger.

Finally, we reclassify a small number of groups as minority owned that do not meet our criteria above, but where we learn from a reliable LP or consultant that they are at least 50% minority owned (and understand why they do not meet our other criteria).

Our list of minority-owned groups are matched by group name to the databases used in our analysis. We manually verify each match to ensure accuracy.

## B. Burgiss Sample

We rely on Burgiss data to test the intensive margin: for existing private capital groups, to what extent does minority ownership impact the probability of raising a follow-on fund and the size of the fund, if one is raised?

Our Burgiss sample consists of all U.S.-focused buyout, venture capital and growth funds that are raised by U.S.-based private capital groups between 2000 and 2021. In total, the Burgiss sample contains 2,229 funds. Summary statistics on the funds in the sample are provided in Panel A of Table A1. We have data on the type of fund, the size of the fund, the state in which the GP is headquartered in, and information about the fund sequence number within a given fund family. Having fund sequences within a fund family allows us to cleanly identify when a follow-on fund is raised.[16]

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definition.

[16] This mapping allows us to link the fundraising success of, for example, "Blackstone Capital Partners V" to "Blackstone Capital Partners VI", even if the Blackstone group raised other funds in between. We are grateful to Tim Jenkinson for sharing his work of sequencing Burgiss funds and classifying fund families, which is used in Harris et al. (2020). We complement his sequencing for funds not covered by that project.

Importantly for our purposes, Burgiss maintains a comprehensive database containing timely fund valuations and cash flows, which allows us to measure fund performance at the time of a potential fundraising attempt. This dataset goes until Q2 2021, which is the end of our sample. This data-set is widely regarded as the "gold standard" database for private capital performance research. The importance of using contemporaneous measures of interim performance is highlighted by Harris et al. (2020) in the context of performance persistence.

We measure fund performance as the public market equivalent following Kaplan and Schoar (2005). The PME is defined as the ratio of the present value of distributions to the present value of capital calls, using realized returns on the S&P500 as the discount rate. We measure the intermediate PME at the beginning of every fund-quarter.

For the purpose of evaluating the ability of funds to raise follow-on funds in Section IV, we construct a sample at the fund-quarter level. A fund is included in the analysis up until the earliest of the quarter in which a follow-on fund is raised, ten years has passed since its inception, or the end of our sample. In total, we have 38,779 fund-quarters in this analysis.

Burgiss does not have information on the diversity in ownership of the private capital groups in their database. We add in this information by matching our master list of minority-owned groups to the universe of funds in Burgiss via group names. To preserve the anonymity of the Burgiss data, the universe of funds includes funds that are not in the cash flow database, and we do not know which groups are in the final sample. 40 of the 2,229 funds in the Burgiss sample are run by minority-owned groups.

To examine performance differences between minority and non-minority funds, we use a deal-level dataset maintained by Burgiss. This dataset does not yet contain deal-level cash flows, so we are restricted to using the total value to paid-in capital (TVPI) of these deals. The deal-level sample is summarized in Panel B of Table A1.

One limitation of the Burgiss data is that (like most commercial databases), most of the institutions contributing data tend to invest in larger and more established funds (see the discussion in Brown et al., 2015). As noted above, there are relatively few Black- and Hispanic-owned funds in the sample, which limits the types of analyses we can do. For this reason, we complement the Burgiss sample with one from PitchBook.

## C. PitchBook Sample

PitchBook has a broader set of private capital groups than Burgiss, with considerably greater representation of smaller groups. As many minority-owned groups are small, using PitchBook allows us to expand our sample of minority-owned groups, enabling additional detail in our analysis.

To maintain consistency between our samples, we apply a filter that is comparable to that used in the Burgiss sample. Specifically, we restrict the analysis to U.S.-based private capital groups (venture capital, buyout, and growth equity) that raised at least one fund between 2000 and Q2 2021. (We do not include earlier periods because of concerns about potential "back-fill bias," as PitchBook was founded in 2007.) Our PitchBook sample contains 8,169 funds raised between 2000 and 2021 and is summarized in Table A2.

We will examine this sample at either the fund-level or the private capital group-year level. Whenever we use group-years, we include years between 2000 and 2021. For groups founded after 2000 we include them from the year they are founded. A group-year is included until ten years has passed since the group raised its most recent fund, or until 2021.

We also use PitchBook's data on limited partners investing in private capital funds, portfolio company investments (portfolio company founders, and size of investments), and fund employees. We do not have access to this detail in the Burgiss sample due to

the anonymous nature of the data.

Additional details on the various PitchBook samples, including summary statistics and sample filters, are presented in Appendix C.

## D.  Form D Sample

To study the extensive margin—to what extent do groups owned by minorities struggle to enter the private fund market—we need to observe groups that make an attempt to raise their first fund. As a group may fail to raise their first fund, or only raise a small fund, many aspiring first-time funds will not be covered by Burgiss, PitchBook, or other commercial databases.

Instead, we turn to Form D data. Form D filings are a very common by-product of raising private capital for a U.S. fund, though in some cases groups raise capital for a fund without filing Form D.[17] In Appendix A, we discuss Form D filings, focusing on the legal framework behind these filings, which funds file Form D, and which executives are listed on Form D filings.

To construct our sample of private capital groups that aspire to raise their first-time fund we focus on filings filed between 2009 and 2020, as that is when electronic filings becomes available. To identify first-time funds in these filings, we proceed in several steps sketched here, but detailed in Appendix B. First, we exclude all filings where the fund name indicates that it is not a first-time filer. Second, we exclude intermediaries (e.g., funds-of-funds) raising capital. Third, we search for the private capital groups' websites, which we use to extract the year the groups were formed. Fourth, we ensure that the team page contains pictures that allows us to verify whether any minorities work for

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[17] To highlight the value of using Form D filings to capture attempted fundraising, Appendix A17 provides examples of groups with a Form D filing that failed to raise a first-time fund.

the group. Fifth, we collect information about minority ownership status, as part of the process outlined in Section II.A.

We drop filings for which we are unable to verify the ethnicity of founders, or could not find information about the year of group formation. To ensure that only aspiring first-time fundraisers are included in our analysis, we drop all funds for which the group filed its first Form D more than three years after its founding year.

Finally, as groups raising their first fund do not have a performance record, we collect biographical data on work experience and education for the founders of these groups from their LinkedIn profiles. After requiring that we have at least one LinkedIn URL for each group identifying a founder or senior partner, our final sample comprises 684 aspiring first-time funds, of which 42 are minority-owned. This sample is summarized in Table A3. Given that this sample focuses on groups attempting to raise their first fund, the number of funds corresponds to the number of private capital groups.

# III. A First Look

To set the scene, we initially look at the differences in the representation and fundraising of minority and non-minority owned funds. We highlight the very modest representation of Black- and Hispanic-owned funds and the challenges that minority groups face when attempting to raise a first-time fund.

## A. *Portfolio Composition*

Before we do so, however, we first revisit one of the key motivations of the paper raised in the introduction: that diversely owned private equity funds disproportionately fund minority businesses. Due to the evidence of capital constraints affecting minority businesses (Fairlie et al., 2020; Cook et al., 2022), and the more general evidence of a relationship

between private equity funding and firm success (e.g., Bernstein et al., 2016, 2019), such a pattern would underscore the broader implications of the imbalances documented below.

Table 2 provides a summary of the basic patterns. We run the analysis at two levels: first, using each company founder as a separate observation in Panel A, and then at the company level in Panel B, (conservatively) defining a portfolio company as minority owned if at least one of the company founders is Black or Hispanic. The table makes clear that minority funds are three-to-four times more likely to fund minority businesses, consistent with the homophily documented in the literature (e.g., Gompers et al., 2017).

[INSERT TABLE 2 ABOUT HERE.]

It is possible that a a higher propensity to invest in minority entrepreneurs reflect observable characteristics. For example, minority-owned funds may be located in states with a higher proportion of minority entrepreneurs. To address this concern, the analysis in Table 2 only examines investments made by a matched sample, where we match minority funds with non-minority funds that are similar in observable characteristics (vintage year, fund sequence number, state, and fund size). Appendix C.C.4 provides details on the matching process.

We complement these summary statistics with a regression setting, using each fund in the sample as a separate observation. Table A4 presents this analysis. The dependent variables are whether a fund makes at least one investment in a minority portfolio company in columns (1) through (3), and one hundred times the percentage of investments that are in minority companies in columns (4) through (6). Consistent with the cross-tabulations in Table 2, a minority group is 17–22 percentage points more likely to invest in at least one minority-owned company, and the fraction of investments in minority-owned companies by minority funds is 7–9 percentage points higher, holding fixed various fund-level characteristics.

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## B.    Overall Representation

We next examine the representation of minority-owned private equity groups. The dominant pattern is of infrequency of these organizations.

Figure 1 looks at the time trend in the share of minority funds raised in Burgiss, PitchBook, and aspiring first-time fundraisers in Form D. The results highlight that the paucity of diversely-owned funds is not just a historical phenomenon. Panel A shows that the share of diversely owned funds by number has increased over time, but even in the 2015-2020 period, these represented only 3.2% (2.6%) of the total number of funds raised in Burgiss (PitchBook). When we examine the Form D data, the share is somewhat higher, reaching 6% in the 2015-2020 period.

[INSERT FIGURE 1 ABOUT HERE.]

We see similar patterns when we look at the summary tables. They highlight that the number of diverse-owned funds we have identified is very small. In the Burgiss sample only 1.8% of funds, or 3.3% when size-weighted, are run by minority-owned private capital groups (Table A1). In PitchBook, with about four times as many funds, diverse-owned funds represent 1.9% of funds, or 3.8% when size-weighted (Table A2). These tables also indicate that diversely owned funds tend to be significantly younger.

It is worth highlighting that minority-owned funds are not only modest in number, but also highly concentrated. Panel B of Figure 1 looks at the share of AUM held by the five largest groups in each period in the PitchBook sample. The five largest minority-owned private capital groups represent on average 65% of the capital raised by minority-owned groups. This can be contrasted with 8% for non-minority groups.

## C.  Ability to Raise a First-Time Fund

Our final stylized fact regards the success in attempted first-time fundraising. We examine whether minorities struggle to enter the private capital market by raising a first-time fund. Looking at first-time funds may give a better sense of the relative success of fundraising, as follow-on funds can only be raised by the selected subset of groups that have raised an initial fund.[18]

As discussed above, a group that fails to raise their first fund, or raises only a very small one without institutional investors, may not be included in commercial databases like PitchBook and Burgiss. We therefore turn to Form D filings to study this question. Form D filings provide a fairly comprehensive picture of U.S. private capital fundraising.[19]

Table A3 presents summary statistics for this sample. The table highlights that minorities raise a smaller fraction of the capital sought and raise smaller funds, while seeking to raise similar amounts of capital. These funds also have fewer investors participating and are less likely to use a broker, though these two differences are only significant at the 10% level.

To perform a more systematic test of whether minority ownership affects the fundraising success of aspiring first-time fundraisers, we estimate the following reduced-form model using pooled OLS:

$$Fundraising\ Outcome_i = \quad \beta Minority\ Owned_i + \Gamma Controls_i + \lambda_j + \eta_t + \epsilon_{it}. \quad (1)$$

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[18] We seek to look at the fundraising success of as broad of a set of aspiring first-time fundraisers as possible, including high- and low-quality prospective managers. Of course, some aspiring groups may be discouraged by lawyers or other advisers from initiating the process. To the extent that minority-owned and other funds receive different advice, our interpretation of the results in this section must be nuanced.

[19] To emphasize the coverage of Form D data, we show in Appendix Table A5 that Form D filings captures more than 80% of all private capital groups in PitchBook that are formed between 2010 and 2020.

The unit of observation, $i$, is an initial Form D filing by an aspiring first-time private capital fundraiser from 2009 to 2020. Our main proxy for fundraising difficulty is the *Percent Raised*, which is the fraction of the stated fundraising goal that is ultimately raised.[20]

The key independent variable is *Minority Owned$_i$*, which is an indicator variable that equals one if at least 50% of the founders or senior partners of the group are Black or Hispanic. $\lambda_j$ and $\eta_t$ are state and year (vintage year) fixed effects. Control variables include an indicator that takes the value of 1 for venture capital funds, and 0 for private equity funds (buyout or growth); the natural logarithm of the number of executives listed in the Form D filing; and the log of one plus the number of years between when the group was founded and the Form D filing. We also include measures of the educational background and work experience in the set of controls, using biographical data we collect from the LinkedIn profiles of the founders and senior partners.

If minority-owned funds struggle to raise capital, we expect $\beta$ to be negative. Table 3 presents the results of estimating (1).

[INSERT TABLE 3 ABOUT HERE.]

The results in Table 3 indicate that minority-owned groups raise a smaller percentage of the amount sought, between 19 and 25 percentage points lower, depending on specification. These results are consistent with the notion that minority-owned groups face barriers to enter the market. In Table A6, we repeat the analysis in column (3), using instead as dependent variable the total amount of funds raised and the number of investors recruited. We find consistently poorer fundraising performance for minority groups.

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[20] Some funds report seeking to raise an indefinite amount. If such funds raise any capital we code the fraction raised as 100 percent, while we code it as 0 for those that raised nothing. Our results are not sensitive to excluding these edge cases.

A possible confounding variable is manager quality. As discussed in the introduction, if diverse-owned managers are of poorer quality on average, return-maximizing LPs may shun these funds. While it is difficult to answer this question definitely, we can compare the characteristics of minority and non-minority fund managers, including biographical data that we collect from their LinkedIn profiles.

As Table A3 reveals, there are few significant differences across the groups. The aspiring minority-owned funds are more likely to be venture-focused, perhaps reflecting the (perceived at least) lower barrier to entry here. The only one difference in the characteristics of the founders in Panel B is the lesser experience (by about 1.3 years) of the aspiring general partner as a venture capital and/or private equity investor before raising this fund, significant at the 10% confidence level. While including controls based on biographical data in the last two columns of Table 3 reduces the point estimates, minorities still raise significantly smaller fractions of the capital they seek.

# IV. Fundraising and Performance

There are a number of potential explanations for the low representaito of minority-owned funds in private equity. First, LPs might be skeptical about the ability of minority-owned groups to successfully deploy funds. Such an explanation amounts to LPs statistically discriminating against minority-owned groups. A second explanation is that these patterns may be driven by an implicit or explicit taste function on the part of investors. These tastes may manifest themselves in minority groups being less likely to be given the benefit of the doubt than others.

We investigate each of these explanations in the next four subsections, which focus on follow-on funds. By examining follow-on funds, we are able to control, at least partially, for differences in managerial quality using intermediate measures of fund performance.

As this requires timely fund-level cash flow data, we focus on the Burgiss sample in this section.

## A. Ability to Raise Follow-On Funds

We begin by examining the extent to which minority ownership affects the probability of raising a follow-on fund. We estimate the following model:

$$
\begin{aligned}
\textit{Fundraising Outcome}_{it} = \ & \beta_1 \text{Minority Owned}_i \times \text{Performance}_{it} \quad\quad (2)\\
& + \beta_2 \text{Minority Owned}_i + \beta_3 \text{Performance}_{it}\\
& + \Gamma \text{Controls}_{it} + \lambda_j + \eta_t + \epsilon_{it}.
\end{aligned}
$$

The unit of observation is a private capital fund-quarter. We include all fund-quarters from a fund's inception until the quarter a follow-on fund is raised, ten years has passed since its inception, or the second quarter of 2021.

We examine the probability of raising a follow-on fund, and the size of a fund if one is raised. In the analysis of the probability of raising a fund, the dependent variable takes the value 1 if a fund is raised in a given period, and 0 otherwise. When examining the size of funds that are raised, we replace this indicator with $Ln(New\ Fund\ Size\ +\ 1)_{it}$, the size of the fund raised.

Our empirical focus is on the extent to which fund performance, as computed at the time of the observation, affects the ability to raise follow-on capital. As noted above, it is reasonable to assume that for many funds, past performance will be a proxy for expected future returns (and will be used by many potential investors as such). We use the PME of the most recent fund that the private capital group has raised, measured as of the

quarter of the observation.[21]

A group is defined as minority-owned if at least 50 percent of the founders or senior partners are Black or Hispanic. $\lambda_j$ and $\eta_t$ denote state and year fixed-effects, respectively. As $Controls_{it}$ we include the logarithm of the size of the most recent fund, the logarithm of the most recent fund's number, indicators for whether the group is a venture capital or buyout organization, and whether the current fund is a first-time fund.

We follow Barber and Yasuda (2017) and model the fundraising probability as a Cox proportional hazard rate model. This is an appropriate model for two reasons. First, a fund is included only up until a follow-on fund is raised, and then leaves the sample. A fund may also be included until the end of the sample period. This is much like what happens in medical studies when a patient dies and leaves the sample, or survives until the end of the observation period, a setting for which the model was developed. Specifically, we define the "failure" of a fund as the quarter in which a follow-on fund is raised. A fund is allowed to fail at any point of its life, up until and including its tenth year.

[INSERT TABLE 4 ABOUT HERE.]

Table 4 presents the results of this analysis, with estimates expressed as hazard ratios. The table highlights how more successful funds, measured using contemporaneous PME, are more likely to raise funds and to raise larger follow-on funds, echoing prior results in the literature (Barber and Yasuda, 2017; Brown et al., 2019; Chung et al., 2012; Hochberg et al., 2014). To assess the economic significance we use estimates from column (3), where a one standard deviation increase in PME (0.335 for the fund-quarter sample) is associated with an increase in the hazard rate of 0.185 (0.553∗0.335). That is, that fund has an 18.5% increased probability to raise a follow-on fund in any given quarter if the

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[21] Another possibility would have been to also look at the performance of the fund prior to that one, which would be more mature. Unfortunately, this step would have sharply shrunk the sample size.

PME increases by one standard deviation. Strikingly, the fundraising success of minorities is significantly more sensitive to fund performance. A one standard deviation increase in PME is associated with an increase in the baseline hazard of 0.528 ((0.553+1.024)∗0.335). While not as statistically robust, columns (5) and (6) indicate that the size of follow-on funds is more sensitive to performance for minorities.

We further explore whether this increased sensitivity to performance is driven by high- or low-performing funds. Table 5 presents the results of estimating a piece-wise performance specification, allowing for different performance sensitivity for funds below and above the median performance of funds of the same vintage and type (buy-out/VC/growth). The table highlights that the higher sensitivity of minorities to raise follow-on funds is driven by a higher sensitivity for funds below median performance.

[INSERT TABLE 5 ABOUT HERE.]

## B.   Are Minority Fund Valuations Overstated?

As noted in the introduction, LPs may be skeptical about the reported performance of small and new private equity groups. There is an amount of discretion when GPs report fund valuations, and prior research has shown that reported valuations of unexited deals may at times be inflated, a problem that is particularly acute in funds managed by less established GPs (Jenkinson et al., 2013; Brown et al., 2019; Barber and Yasuda, 2017). As the need to inflate performance is greater for poorly performing funds, LPs may interpret reported underperformance as an indication of much more severe underperformance. Diversely owned groups may be more likely to be suspected of this behavior, explaining the higher fundraising-performance elasticity we observed in the previous section.

To examine whether there is justified scepticism over the reported performance of minority-led funds, we turn to the Burgiss deal-level dataset. This dataset allows us to

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compare performance differences of exited deals, where there is no GP discretion, as well as deals still held by the funds where the GP maintain discretion over the valuation. If minorities are more likely to overstate valuations, we would expect them to report higher performance for non-exited deals, while similar or worse performance for exited deals.

Table 6 presents results from regressing deal-level performance on an indicator for minority ownership and several deal and fund-level controls. Given that Burgiss does not provide access to deal-level cash flows, we measure deal-level performance using total value to paid in capital (TVPI), as of the exit date or the second quarter of 2021. Columns (1) to (3) show the deal-level performance for all deals, columns (4) to (6) present the results for exited deals separately, while columns (7) to (9) focus on non-exited deals.

[INSERT TABLE 6 ABOUT HERE.]

The deal-level performance of minority-group investments is lower when considering all deals, but the difference is entirely driven by deals not yet exited. The performance of investments by exited transactions by diversely owned firms is not distinguishable from that of other groups, while the reported valuations of unexited deals (where valuation manipulation would occur) are actually lower.

This finding begs the question why there is a discrepancy between the exited and non-exited deal-level performance. One possibility is that minorities are more, not less, conservative in the valuation of their non-exited deals. Table 7 provides some evidence supporting this notion, as minority-owned funds are somewhat more likely to hold their non-exited investments at cost. While the point estimate is always positive, it is only significant when including the full set of controls.

These analyses are not definitive: minority groups could be holding transactions at lower valuations, but if these firms are severe underperformers, their marks may still be too high. This explanation, however, is hard to square with the evidence regarding similar

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TVPIs of exited deals.

[INSERT TABLE 7 ABOUT HERE.]

## C. Do Minority Groups Struggle to Attract Personnel or Deploy Capital?

We next look for evidence of whether minority-owned private capital groups may struggle to grow in two important dimensions: attracting staff and deploying capital. In this subsection, we use PitchBook data on fund employees, as well as the amounts deployed in individual deals.

### C.1. Do Minority Groups Struggle to Attract Personnel?

To test whether minority-groups struggle to attract personnel, we examine two aspects: total headcount and the number of senior employees in each fund.[22] Appendix C.C.1 provides additional details on how we construct this sample.

Table 8 presents the results of regressing the log of fund employees on an indicator for minority ownership, an interaction between minority ownership and the number of funds the group has raised, and several fund level controls. In the first three columns, the dependent variable is the log of total employees. In the last three columns we only consider the log of partner-level employees. If minorities struggle to attract personnel, we expect the coefficient on minority ownership to be negative, and the coefficient on minority ownership interacted with fund number to be even more negative: staffing should become increasingly difficult as the group grows.

[INSERT TABLE 8 ABOUT HERE.]

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[22] To identify senior employees we use PitchBook's identification of employees associated with specific funds, and use their titles to classify seniority. We use the record of employees PitchBook associates with each fund as of the second quarter of 2021. The following titles are included in this count: "Partner," "Managing Director," "General Partner," "Managing Partner," "Owner," "Founder," "Senior Partner," "Senior Vice President," and "CEO."

We find no evidence, however, that the staffing levels of minority funds differ from those of other funds. This non-finding is robust to alternative specifications such as scaling the number of employees by fund size (Table A7), examining changes in number of employees within a private capital group as they raise additional funds (Table A8), or repeating these three analyses while only including the first five funds raised by GPs (Tables A9, A10, and A11).

One caveat is that PitchBook may not have all employees in a fund in their dataset. However, to explain our results it would have to be the case that PitchBook's coverage differs systematically for minority-owned funds versus those not owned by minorities.

## C.2. Do Minority Groups Struggle to Deploy Capital?

Another possibility is that, since minority funds are more likely to invest in minority entrepreneurs, these funds cannot scale up investments due to a limited supply of minority entrepreneurs. To investigate this hypothesis, we examine deal-level investment activity by private capital funds, focusing on deals where the private capital group is the lead investor.[23]

Table 9 presents the results. In columns (1) to (3), we test whether minority groups write smaller checks by regressing the log of the average check size for the deals led by a given fund on an indicator for minority ownership of the fund, an interaction between minority ownership and the number of funds the group has raised, and several fund level controls. In columns (4) to (6), we instead change the dependent variable to the average check size divided by the size of the fund. If minority groups struggle to scale, we would expect the coefficient on the interaction of minority ownership and the number of funds the group has raised to be negative, suggesting that as minority groups struggle to deploy

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[23] See Appendix C.C.2 for details on how we construct this sample, including how we identify which deals belong to specific funds as well as which fund is the lead investor in a given deal.

capital as they grow.

[INSERT TABLE 9 ABOUT HERE.]

We find little evidence that diverse funds struggle to deploy capital in transactions that they lead. The relationship remains weak in Table A12, where we include all deals. Even though in many cases the size of the investment offered when a minority group is not a lead investor depends on other investors, including these deals does little to affect the basic conclusion above.

## D. Do Racial Attitudes Matter?

The third class of explanations for the difficulty of minority-groups to raise a first-time fund, and the greater sensitivity of fundraising to performance for low-performing minority groups, is implicit or explicit taste-based bias on the part of investors.

While we cannot observe tastes of investors, we exploit two quasi-exogenous shifts: events that may change the attitude of limited partners to diversely owned funds while not affecting the prospects of the funds in the long term. The first one is based on variation in racial attitudes across states due to high-profile fatal encounters of minorities with the police, and the second is based on the ethnicity of CIOs of local public pension funds and endowments.

### D.1. Racial Awareness, Minority Ownership, and Fundraising

Our first approach is to create an exogenous measure of racial awareness across time and space, and examine whether this affects the willingness of investors to place capital with minority-owned funds. To be sure, there is considerable heterogeneity in awareness of racial issues over time.

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Figure A1 illustrates this point by showing the quarterly time-series of the number of Wall Street Journal (WSJ) articles that are related to racial issues. We use Factiva to count the number of articles in the WSJ that contain keywords indicating that racial issues are discussed.[24] We see numerous spikes over time, which we relate to major events that triggered an increased focus on racial issues.

While there is temporal variation, these shifts would not help us much for identification purposes, since they occur nationally at the same time. Confounding events would be another concern, as noted in the introduction.

Rather, we follow the sociology literature and use crowd-sourced data on fatal encounters between citizens and the police to proxy for the awareness to racial issues. We identify 4600 fatal encounters between police and unarmed Black or Hispanic civilians between 2000 and 2020.[25] We weight these stories by the log of one plus the total number of articles in Lexis-Nexis that mentioned the name of the deceased, together with the either the keywords "police and death" or "police and killed," in the first 30 days following the date of the event. Table A13 shows the 25 cases in the sample involving Blacks and Hispanics that measure highest on this score. As is evident from the table, the distribution of news coverage is highly skewed. A case is mentioned in an average of 13.4 articles, but 66.3% of the events have no coverage at all.

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[24] Specifically, we conduct the search quarter-by-quarter for articles using the following terms: "racism" or "racial inequalities" or "antiracism" or "racial inequality" or "race inequality" or "race inequalities" or "racial bias" or "race bias" or "racial discrimination" or "race discrimination" or "racialism" or "racial equality" or "race equality" or "black discrimination" or "african american discrimination" or "asian discrimination" or "latino discrimination." We conduct the search for articles in any of the following categories: Analyses, Columns, Commentaries/Opinions, Country Profiles, Economic Predictions/Forecasts, Editorials, News Agency Materials, News Digests, Page One Stories, Routine General News, Routine Market/Financial News, Corporate/Industrial News, Economic News, or Political/General News.

[25] We combine and process these data from three main sources: Mapping Police Violence (https://mappingpoliceviolence.org/), The Fatal Encounters Database (https://fatalencounters.org/), and The Washington Post Police Shootings Database (https://www.washingtonpost.com/graphics/investigations/police-shootings-database/).

We aggregate this measure to a state-year level. Specifically, for each state and year, we sum all fatal encounters between police and citizens that involve unarmed Blacks or Hispanics, applying a weight to each event based on how well-covered it is, as described above. As states vary significantly in the amount of fatal encounters between citizens and the police, we normalize this measure by dividing by the total number of all such events. Thus, if in a given year and state, there was one shooting of an unarmed minority, which generated two news stories, and nine other fatal encounters, the measure would be 0.069 ($\ln(2)/10$). The average state-year HRA measure is 0.055, with 53.5% of all state-years having an HRA measure of 0.

We proxy for the sensitivity to racial issues by defining an indicator for high racial awareness (*HRA*), which equals one for states in which this measure is in the top quartile of all states in that year. To ensure that the *HRA* events have already taken place at the time of the fundraising observation, we lag this measure by one year: the *HRA* measure of 2005 is used to predict fundraising in 2006 and so forth. Hehman et al. (2018) show that a similar measure is associated with the racial attitudes of residents in the regions where such fatal encounters occur. Thus, we assume that our measure will capture the relative attention to racial issues across states over time. Given the local nature of fundraising discussed in the introduction, we assume this will affect the fundraising environment for groups based in the state.[26]

To examine whether minorities have greater fundraising success in states and during periods of high racial awareness, we revisit the follow-on fundraising analysis in Table 4 using the Burgiss sample. We augment this specification with the *HRA* indicator and interact it with our indicator for minority-owned private capital groups. Table 10 presents the results.

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[26] Within our sample, Figure 2 illustrates that minority-owned groups rely on local LPs to a larger extent than other groups.

[INSERT TABLE 10 ABOUT HERE.]

The bulk of the results are consistent with Table 4. However, we find that during periods of *HRA*, the likelihood that a diversely owned group raises a follow-on fund is significantly higher. These results are consistent with the anecdotal suggestions that minority-owned private capital groups may find it difficult to succeed on their merits during ordinary periods. There appears to be a different dynamic in fundraising patterns during periods of high racial awareness, with minorities faring better. It is hard to imagine that the underlying ability of minority GPs changes based on newspaper coverage of unrelated incidents.[27]

## D.2. Do Minority CIOs Ameliorate the Funding Gap?

As an alternative approach, we examine the influence of the race of chief investment officers (CIOs) at local public pension funds and endowments, institutions that have traditionally been large backers of private capital groups. Our hypothesis is that if investor taste is an important driver, there should be more funding of minority groups following the appointment of minority CIOs, which could be driven by the homophily documented in the works cited above.

As the Burgiss sample does not contain which data on which LPs are invested in specific funds, we turn to PitchBook data on LP investments in private capital groups. Specifically, we focus on the public pension funds and endowments that have made at least one investment in a private capital group. Our focus on public pension plans and endowments is motivated by the fact that they tend to make greater disclosures of their fund holdings than other LPs. As a consequence, data sources such as PitchBook often

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[27] In future research, we will explore whether these patterns (and the CIO patterns documented in the next section) are being driven by (a) higher-performing minority groups being backed more aggressively, or (b) lower-performing minority groups being given more benefit of doubt.

have good coverage of their investments in private capital funds.[28] For each public pension fund and endowment, we manually collect the history of CIOs since 2000, including the year the CIO started and left her position. We then classify the race of each CIO using images and names, following the procedure we outlined in section II.A to validate any CIO classified as a minority.

To test whether minority CIOs are more likely to invest in minority-owned private capital groups we pair each public pension fund and endowment with all funds in the state where the LP is based. This represents the set of potential local investments for that LP. We then define an indicator variable *I(Investment)* that takes the value 1 if the LP invested in that fund, and 0 if not. We include each pair where we are able to identify the race of the CIO for the year preceding the vintage year of the fund, i.e. the fundraising year. Appendix D provides additional details on the sample construction.

[INSERT TABLE 11 ABOUT HERE.]

Table 11 presents our analysis. The table makes clear that when a minority is appointed as CIO, the probability that a diversely owned fund in the same state will receive an investment from that LP is higher. Specifically, when the CIO of a local public pension fund or endowment is a minority, the likelihood that the LP invests in a fund raised by a minority group is about 16 percentage points higher. This holds true even when we include limited partner and group fixed-effects in the fourth column, which completely absorbs the non-time-varying minority group coefficient. We also show that minority-groups raise larger funds (see Table A14) when a minority CIO is in charge of a local public pension fund or endowment in the year before the group raises its new fund.

As an alternative approach, we focus on newly formed LP-GP relationships and exam-

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[28] Many public pension funds and universities are required by state statutes to disclose fund-level investments, though the extent of disclosure differs across systems.

ine whether the a minority CIO impacts the likelihood that a newly formed partnership is with a minority-owned GP. We define a new LP-GP relationship as the first fund raised by that GP that a particular LP invests in. Table A15 presents the results where we test whether a new LP-GP relationship is more likely to be with a minority-owned GP when a minority CIO is in charge. While there is a four-to-five percentage points higher likelihood that a new partnership is formed with a minority GP when the CIO is a minority, this result disappears once we control for LP fixed effects. This is consistent with an interpretation that LPs that are more willing to appoint minorities as CIOs are also more likely to invest in minority-owned private capital groups.

These results further support the importance of the demand channel as an explanation of why there are few minority-owned private capital funds. While we cannot rule out that managerial quality confounds our results, it would have to be the case that the quality of minorities attempting to raise funds not only changes during periods of high and low racial attention in a pattern consistent with our results, but also changes depending on whether a minority CIO is appointed to a public pension fund or endowment in the state where the fund is located.

# V.   Conclusion

This paper examines the extent and nature of diversity in the private capital industry, a sector that has been a major source of wealth creation and a driver of growth. We explore the racial mixture of founders and senior partners of these groups, drawing information from major private capital databases, our own research, and Form D filings.

We begin by documenting homophily in startup financing, which highlights the importance of diversity in private capital group ownership. We point out the small share of fundraising by diversely owned private capital funds. We then illustrate that minorities

appear to face difficulties in breaking into the market by raising their first fund.

We show that the ability of diversely owned private capital groups to raise follow-on funds is more sensitive to performance than other groups, particularly on the downside. We acknowledge that several explanations can be offered for this pattern and explore three particularly compelling ones. We find little evidence that minority-owned groups are more likely to inflate the valuations of their underlying investments. We also do not find support for the notion that these groups struggle to recruit partners or to deploy capital. We do find that the fundraising success of minority-owned groups sharply increases during periods of high racial awareness, or when a local public pension plan or endowment appoints a minority CIO. Together, the results support the hypothesis that the limited representation of Black- and Hispanic-owned groups in private capital can at least partially be explained by the demand side.

These findings raise many questions which deserve future exploration. While the ways in which behavioral considerations affect the decisions of individual investors have been extensively scrutinized, we know relatively little about the nature of private capital investment decision-making. A deeper exploration of the investment process is certainly needed. A second important area for research concerns the consequences of the paucity of minority-owned private capital funds. To what extent does their under-representation impact the success of minority entrepreneurs and the employment of minorities more generally?

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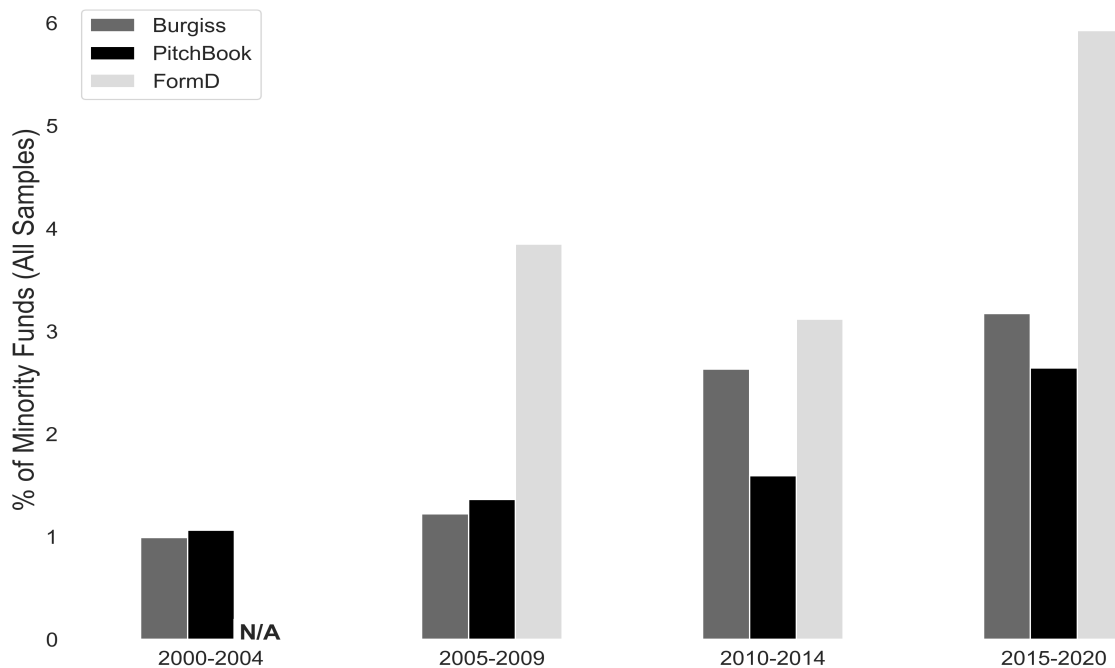
**Panel A:** Fraction of Funds Raised by Minorities (All Samples)
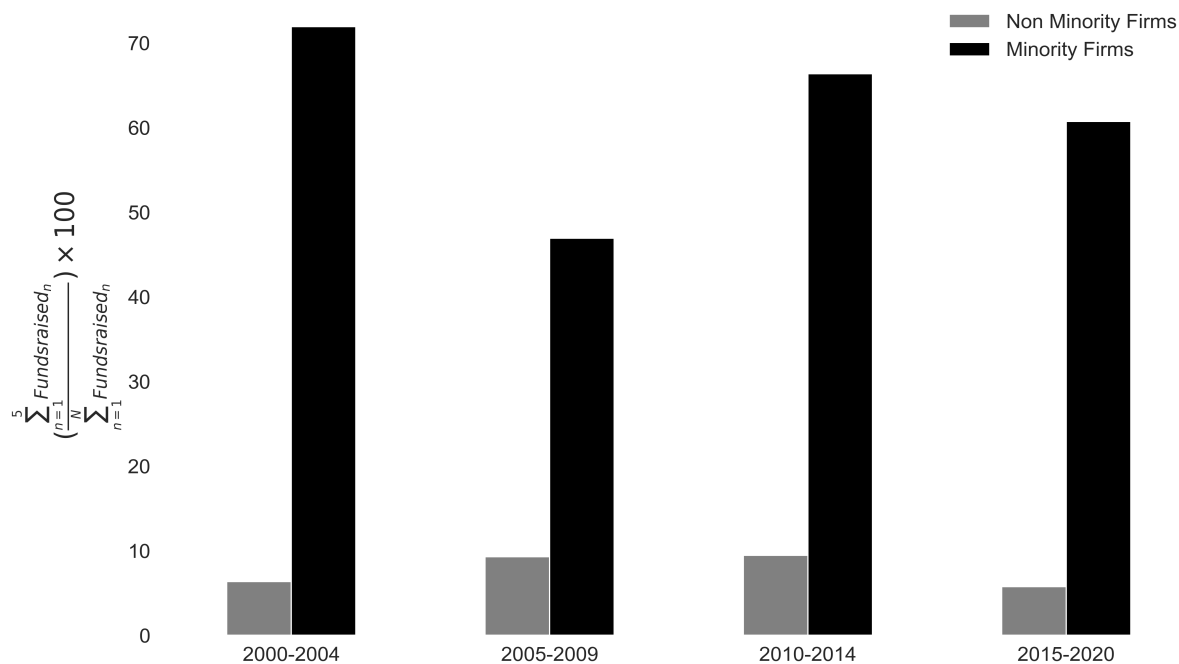


**Panel B:** Fundraising Concentration by Minority and Non-Minority Groups (PitchBook)

**Figure 1: Count and Concentration of Minority and Non-Minority U.S. Private Capital Groups**

Panel A shows the fraction of all U.S.-based and -focused funds raised between 2000 and 2020 by private capital groups owned by minorities for the three samples we use for our analysis: Burgiss, PitchBook, and Form D. The Form D sample only comprises groups aspiring to raise their first-time fund. On a size-weighted basis, minority groups represented 3.34, 3.77, and 2.49 percent of the Burgiss, PitchBook, and Form D samples respectively. *% of Minority Funds* is the number of minority funds raised over a given period divided by the total number of funds. There are no funds in the Form D sample from 2000-2004 because that sample only begins in 2009, when Form D's became machine readable. Panel B plots the fraction of all capital raised by the five largest groups of each type in the PitchBook sample. There are few minority groups and assets managed by minority groups are highly concentrated (the five largest groups manage between 50 to 70 percent of all assets). A group is defined as minority-owned if at least 50 percent of the founders or senior partners are Black or Hispanic.
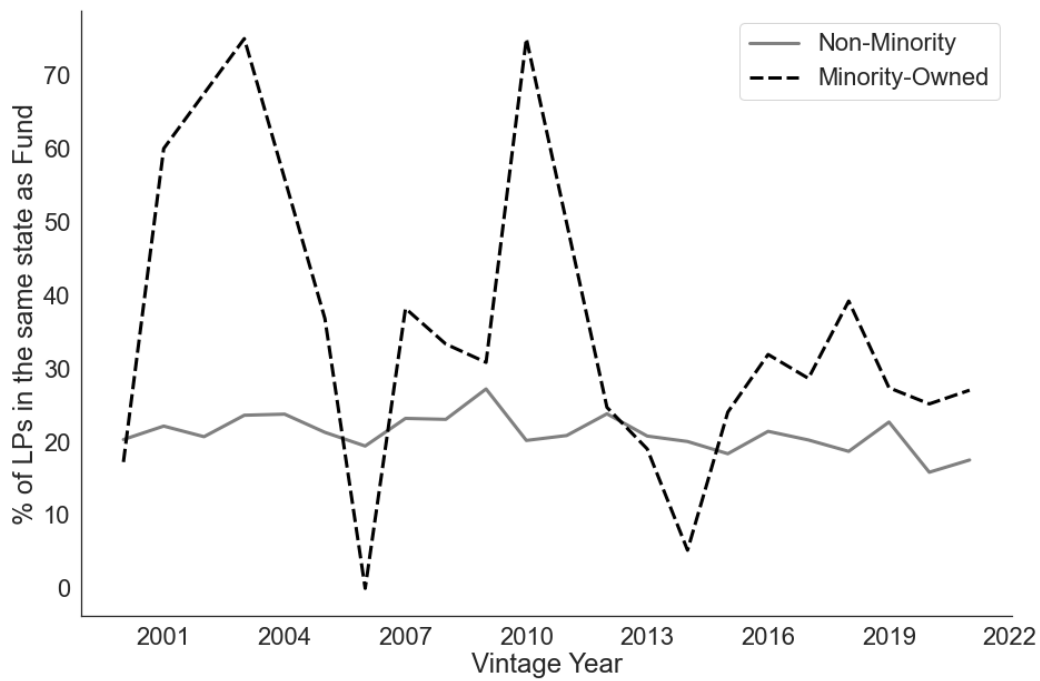
**Figure 2: Proportion of Limited Partners in the Same State as the Funds they Back**

This figure shows the proportion of a fund's limited partners (LPs) that are located in the same state as the fund by vintage year for minority and non-minority owned groups. The sample comprises U.S.-based and -focused private capital groups that raised a fund between 2000 and Q2 2021 according to PitchBook. *Minority* is an indicator that equals one if at least 50 percent of the senior partners or founders are Black or Hispanic. Overall, it appears that minority groups are more likely to have local limited partners.

**Table 1: Samples used for our analysis**

This table summarizes all the samples we use for our analysis.

| Sample | Description | Used in Tables | # Obs |
|---|---|---|---|
| Form D | Sample of fundraising campaigns by aspiring first-time funds filing Form D. We include both successful and failed fundraising campaigns. The data include fundraising outcomes and biographical data for partners at the private capital group. | 3, A3, A5, A6, A17 | 684 |
| Burgiss (Fund Level) | Comprehensive database containing fund characteristics, timely fund valuations, and cash flows. | A1 (Panel A) | 2,229 |
| Burgiss (Fund-Quarter Level) | Fund-quarter observations of the Burgiss fund sample, with quarterly data on fundraising, valuations, and cash flows. We use it to measure intermediate fund performance at the fund level, and to track follow-on funds. | 4, 5, 10 | 38,788 |
| Burgiss (Deal Level) | Deal-level performance (as of second quarter of 2021) of the portfolio-company investments made by funds in the Burgiss sample. | 6, 7, A1 (Panel B) | 22,059 |
| PitchBook (Full Sample) | Comprehensive database of private equity portfolio company investments and senior employees of private equity funds, which we use to analyze the investment behavior of U.S.-based and -focused groups. | 8, 9, A2 (Panel A), A7, A8, A9, A10, A11, A12 | 8,169 |
| PitchBook (Matched Sample) | Sample of minority funds matched to non-minority funds on vintage year, state, fund number, and fund size. We use this matched sample to examine demographic characteristics of the company founders backed by the funds in the matched sample. | 2, A2 (Panel B), A4 | 248 |
| PitchBook (Fund-LP Level) | Sample of PE-Fund LP pairs where we pair each LP (public pension fund or endowment) with each fund located in the same state. The final data comprises PE-Fund LP pairs between 2000 and Q2 2021, where we have data on at least one public pension fund or endowment CIO in the state where the fund is located between 2000 and 2021, and we could find a picture allowing us to classify the CIO by race. | 11, A15 | 70,277 |
| Pitchbook (Group-Year Level) | Full PitchBook sample aggregated to the group-year level. A group first enters the sample in 2000, or when it raises its first fund if later. A group exits the sample in 2021, or when ten years has passed since it raised its last fund if that happens before 2021. | A14 | 28,843 |
| PitchBook-Form D Match (Employee Level) | All employees listed in PitchBook for the groups in the Form D sample that could be matched to PitchBook. Groups are matched on state and group name using fuzzy matching, with manual verification of matches. | A16 | 3,044 |

**Table 2: To What Extent do Minority GPs fund Minority Entrepreneurs? (PitchBook Matched Sample)**

This table presents statistics on the ethnicity of company founders that received funding from funds in our PitchBook matched sample. We match minority funds to non-minority funds on vintage year, state, fund number, and fund size. For details, see Appendix C.C.3. Panel A presents statistics at the company founder-level, while Panel B presents statistics at the company level, where we classify a company as minority-owned if at least one of its founders is Black or Hispanic. A fund is minority-owned if 50 percent of the managing partners or founders of the group are Black or Hispanic. The bottom of each panel reports the test statistic and significance level for a Pearson $\tilde{\chi}^2$-test.

| Panel A: Founder Level | | | |
|---|---|---|---|
| | Minority Founder | Non-minority Founder | Total |
| Minority Fund | 227 (11.61%) | 1729 (88.39%) | 1956 |
| Non-Minority Fund | 104 (3.82%) | 2618 (96.18%) | 2722 |
| Total | 331 | 4347 | 4678 |
| $\tilde{\chi}^2$ | | | 103.71 |
| $p$-value | | | 0.000 |
| Panel B: Company Level | | | |
| | Minority Company | Non-minority Company | Total |
| Minority Fund | 181 (15.10%) | 1018 (84.90%) | 1199 |
| Non-Minority Fund | 96 (6.03%) | 1497 (93.97%) | 1593 |
| Total | 227 | 2515 | 2792 |
| $\tilde{\chi}^2$ | | | 61.95 |
| $p$-value | | | 0.000 |

**Table 3: Association Between Minority Ownership and Fundraising For First-Time Private Capital Funds (Form D)**

This table presents coefficients from OLS regressions run at the fund level, with standard errors reported in parentheses. A unit of observation is a Form D filing, made between 2009 to 2020 by a private capital group attempting to raise their first fund. We identify aspiring first-time fundraisers by restricting the sample to private capital groups that filed their first Form D within three years of group formation, and by removing filings where the fund name indicates that this is not a first-time fund. For details, see Appendix B. The dependent variable, *Percent Raised*, is the amount of funding raised, divided by the fundraising target, times 100. For funds that raised some funding but reported seeking to raise an indefinite amount, this measure is 100 percent. For funds that raised nothing, it is 0. The key independent variable is *Minority Owned*, which is an indicator that equals one if at least 50 percent of the founders or senior partners of the group are Black or Hispanic. Controls include *Venture Capital Fund*, an indicator taking the value 1 if a venture capital fund files the Form D, and 0 if it is a private equity fund (buyout or growth); *Ln(Executives)*, which is the natural logarithm of the number of executives listed in the Form D filing; *Ln(Age)*, which is the log of the number of years since the group was formed; *Frac. Emp Grad*, which is the fraction of the group's partners with graduate degrees; *Frac. Emp Top 50*, which is the fraction of the group's partners that graduated from Top 50 schools (See E.E.2 for the list of top schools); *Frac. Emp Sup*, which is the fraction of the group's partners with startup experience; *Frac. Emp LP*, which is the fraction of the group's partners for whom we could find LinkedIn profiles; *Frac. Emp VC*, which is the fraction of the group's partners with past venture capital experience; *Average Experience SU*, which is the average number of years a group's partners worked as startup founders before starting the private capital group; and *Average Experience VC*, which is the average number of years the group's partners worked at a private equity or venture capital fund. Averages for the biographical measures do not include partners and founders for which we do not have a LinkedIn profile. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes significance at the 5% level, and $^{*}p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable | Percent Raised | | | |
|---|---|---|---|---|
| Minority Owned | -24.738*** | -22.710*** | -20.588*** | -18.703*** |
| | (6.039) | (6.241) | (6.020) | (6.213) |
| Venture Capital Fund | | | -4.651 | -4.554 |
| | | | (3.626) | (3.866) |
| Ln(Executives) | | | -6.689** | -6.779** |
| | | | (3.155) | (3.274) |
| Frac. Emp LP | | | 4.352 | 12.034 |
| | | | (11.877) | (12.163) |
| Frac. Emp Grad | | | 4.165 | 3.063 |
| | | | (5.494) | (5.666) |
| Frac. Emp Top 50 | | | -1.402 | -2.425 |
| | | | (5.885) | (6.126) |
| Average Experience SU (yrs) | | | 0.555 | 0.675 |
| | | | (0.724) | (0.713) |
| Average Experience VC (yrs) | | | 0.157 | 0.214 |
| | | | (0.379) | (0.384) |
| Ln(Age) | | | 18.928*** | 19.052*** |
| | | | (3.355) | (3.524) |
| Observations | 684 | 673 | 684 | 673 |
| Adjusted $R^2$ | 0.017 | 0.034 | 0.057 | 0.075 |
| Year FE? | X | X | X | X |
| State FE? | | X | | X |

**Table 4: Minority Ownership and Fundraising Success (Burgiss Fund-Quarter Level)**

This table presents estimates of the fundraising success of private capital funds, with standard errors reported in parentheses. Columns one to three report estimates from a Cox Proportional Hazard model of the likelihood that a follow-on fund is raised. The fundraising event is the "hazard", and the model is estimated using quarterly fund-level observations, with a fund "dying" when a follow-on fund is raised the next quarter. A fund is included until its $40^{\text{th}}$ quarter, the quarter in which it raises a follow-on fund, or the second quarter of 2021. Estimates represent hazard ratios. A follow-on fund is defined at the fund-family level. Columns four to six are OLS regressions on the size of a follow-on fund, if one is raised in that quarter. The dependent variable in these columns is *Ln(New Fund Size +1)*, the log amount of capital raised by the follow-on fund in fundraising quarters, which is 0 in other quarters.The key independent variables are the indicator for whether the private capital group is minority owned; fund performance expressed as the public market equivalent (PME) of Kaplan and Schoar (2005); and the interaction between the two. *Minority Owned* is an indicator that equals one if at least 50 percent of the founders or senior partners are Black or Hispanic. *Controls* include *Ln(Fund Number)*, which is the log of the fund sequence number; indicators for whether a fund is a venture capital or a buyout fund (growth funds is the omitted category); an indicator for whether it is a first-time fund; and *Ln(Fund Size)*, which is the log of the current fund's size. Continuous variables are winsorized at a 1% level. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes significance at the 5% level, and $^{*}p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable: | I(Raised a follow-on fund) | | | Ln(New Fund Size + 1) | | |
|---|---|---|---|---|---|---|
| PME × Minority Owned | 1.036*** | 1.113*** | 1.024*** | 0.778 | 0.877** | 0.811* |
| | (0.290) | (0.287) | (0.264) | (0.479) | (0.437) | (0.477) |
| | | | | | | |
| PME | 0.524*** | 0.500*** | 0.553*** | 0.835*** | 0.842*** | 0.862*** |
| | (0.058) | (0.061) | (0.059) | (0.087) | (0.090) | (0.092) |
| | | | | | | |
| Minority Owned | 0.419** | 0.454*** | 0.444*** | 0.435 | 0.467* | 0.478* |
| | (0.201) | (0.153) | (0.153) | (0.307) | (0.265) | (0.286) |
| Number of Fund-Quarters | 38,788 | 38,788 | 38,788 | 38,788 | 38,788 | 38,788 |
| Number of Funds | 2,229 | 2,229 | 2,229 | 2,229 | 2,229 | 2,229 |
| Pseudo $R^2$ / Adj. $R^2$ | 0.030 | 0.033 | 0.039 | 0.026 | 0.026 | 0.027 |
| Controls? | | | X | | | X |
| Ln(Fund Size)? | | | X | X | X | X |
| Year FE? | X | X | X | X | X | X |
| State FE? | | X | X | | X | X |

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**Table 5: Minority Ownership and Fundraising Success - Piecewise Performance (Burgiss Fund-Quarter Level)**

This table presents estimates of the fundraising success of private capital funds, with standard errors reported in parentheses. Columns one to three report estimates from a Cox Proportional Hazard model of the likelihood that a follow-on fund is raised. The fundraising event is the "hazard", and the model is estimated using quarterly fund-level observations, with a fund "dying" when a follow-on fund is raised the next quarter. A fund is included until its 40$^{th}$ quarter, the quarter in which it raises a follow-on fund, or the second quarter of 2021. Estimates represent hazard ratios. A follow-on fund is defined at the fund-family level. Columns four to six are OLS regressions on the size of a follow-on fund, if one is raised in that quarter. The dependent variable in these columns is *Ln(New Fund Size +1)*, the log amount of capital raised by the follow-on fund in fundraising quarters, which is 0 in other quarters. The key independent variables are the indicator for whether the private capital group is minority owned and fund performance, expressed as the public market equivalent (PME) of Kaplan and Schoar (2005). The sensitivity of fundraising success to fund performance is estimated piece-wise by splitting funds into "High" and "Low" performers. A fund is a "High" performer if its performance in a quarter is above the median fund of the same vintage year and type (e.g. 2005 Early Stage Venture Capital in Q3 2012). *Minority owned* is an indicator that equals one if at least 50 percent of the founders or senior partners are Black or Hispanic. *Ln(Fund Size)* is the log of the current fund's size. *Controls* include the log of the fund sequence; indicators for whether a fund is a venture capital or a buyout fund, with growth funds being the omitted category; and an indicator for whether it is a first-time fund. Continuous variables are winsorized at a 1% level. ***$p < 0.01$ denotes significance at the 1% level, **$p < 0.05$ denotes significance at the 5% level, and *$p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable: | I(Raised a follow-on fund) | | | Ln(New Fund Size + 1) | | |
|---|---|---|---|---|---|---|
| PME × Minority Owned × High | 0.061 (0.667) | 0.248 (0.521) | 0.130 (0.686) | 0.391 (1.094) | 0.516 (1.038) | 0.415 (1.097) |
| PME × Minority Owned × Low | 2.658*** (0.662) | 2.689*** (0.640) | 2.902*** (0.592) | 0.690 (0.544) | 0.794 (0.520) | 0.764 (0.545) |
| PME × High | 0.071 (0.065) | 0.055 (0.067) | 0.131* (0.067) | 0.502*** (0.119) | 0.516*** (0.122) | 0.542*** (0.126) |
| PME × Low | 1.688*** (0.209) | 1.703*** (0.206) | 1.757*** (0.198) | 0.896*** (0.082) | 0.913*** (0.085) | 0.962*** (0.083) |
| High × Minority Owned | -0.214 (0.355) | -0.264 (0.338) | -0.368 (0.366) | 0.061 (0.517) | 0.036 (0.509) | 0.003 (0.514) |
| Minority Owned | 0.726*** (0.281) | 0.779*** (0.257) | 0.890*** (0.251) | 0.407 (0.354) | 0.448 (0.329) | 0.480 (0.333) |
| High | 0.261*** (0.089) | 0.253*** (0.088) | 0.195** (0.085) | 0.261*** (0.062) | 0.249*** (0.063) | 0.216*** (0.062) |
| Number of Fund-Quarters | 38,788 | 38,788 | 38,788 | 38,788 | 38,788 | 38,788 |
| Number of Funds | 2,229 | 2,229 | 2,229 | 2,229 | 2,229 | 2,229 |
| Pseudo $R^2$ / Adj. $R^2$ | 0.041 | 0.044 | 0.049 | 0.027 | 0.027 | 0.028 |
| Ln(Fund Size)? | | | X | X | X | X |
| Controls? | | | X | | | X |
| Year FE? | X | X | X | X | X | X |
| State FE? | | X | X | | X | X |

**Table 6: Minority Ownership and Deal-Level Performance (Burgiss Deal Level)**

This table presents coefficients from OLS regressions of the performance of deals made by private capital funds, with standard errors reported in parentheses below the estimates. A unit of observation is an investment in a portfolio company made by a private capital fund. The dependent variable is the deal-level *TVPI*. Columns 1-3 includes all deals, columns 4-6 restrict the sample to exited deals, and columns 7-9 restrict the sample to non-exited deals. The key independent variable is the indicator *Minority Owned*, that equals one if at least 50 percent of the founders or senior partners of the private capital group are Black or Hispanic. *Controls* include the log of the fund size; the log of the fund sequence number; indicators for the type of fund (e.g. Buyout, Early-Stage VC, Late-Stage VC); indicators for the industry of the portfolio company; and indicators for the country of the portfolio company. All continuous variables are winsorized at the 1% level. $***p < 0.01$ denotes significance at the 1% level, $**p < 0.05$ denotes significance at the 5% level, and $*p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable: | Deal TVPI | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **All Deals** | | | **Exited Deals** | | | **Non-Exited Deals** | | |
| Minority Owned | -0.371*** | -0.366*** | -0.460*** | 0.027 | 0.155 | -0.154 | -0.543*** | -0.588*** | -0.562*** |
| | (0.083) | (0.085) | (0.098) | (0.290) | (0.315) | (0.311) | (0.189) | (0.166) | (0.110) |
| Observations | 22,059 | 22,059 | 20,954 | 10,815 | 10,815 | 10,576 | 11,244 | 11,244 | 10,378 |
| Adjusted $R^2$ | 0.015 | 0.018 | 0.021 | 0.006 | 0.015 | 0.028 | 0.031 | 0.035 | 0.033 |
| Controls? | | | X | | | X | | | X |
| Deal Year FE? | X | X | X | X | X | X | X | X | X |
| Group State FE? | | X | X | | X | X | | X | X |

**Table 7: Association Between Minority Ownership and Likelihood that Non-Exited Holdings are Held at Cost (Burgiss Deal Level)**

This table presents coefficients from a logit estimation of the likelihood that a non-exited deal is held at cost by a private capital fund, with standard errors reported in parentheses below the estimates. A unit of observation is a portfolio company investment made by a private capital fund. The dependent variable takes the value 1 if a company is held at cost, and 0 otherwise. All valuations are as of Q2 2021. Columns 1-3 control for time since investment by including the log of the number of years since the investment, while columns 4-6 instead includes indicators for the year the investment took place. The key independent variable is the indicator *Minority Owned*, that equals one if at least 50 percent of the founders or senior partners of the private capital group are Black or Hispanic. *Controls* include the log of the fund size, the log of the fund sequence number, indicators for the type of fund (e.g. Buyout, Early-Stage VC, Late-Stage VC), indicators for the industry of the portfolio company, and indicators for the country of the portfolio company. All continuous variables are winsorized at the 1% level. ***$p < 0.01$ denotes significance at the 1% level, **$p < 0.05$ denotes significance at the 5% level, and *$p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable: | **I(Deal TVPI= 1)** | | | | | |
|---|---|---|---|---|---|---|
| | **Non-Exited Deals** | | | | | |
| Minority Owned | 0.351 | 0.240 | 0.382** | 0.344 | 0.247 | 0.393** |
| | (0.508) | (0.453) | (0.187) | (0.479) | (0.425) | (0.182) |
| (log) Time Since Investment | -1.288*** | -1.341*** | -1.363*** | | | |
| | (0.114) | (0.086) | (0.065) | | | |
| Observations | 10,698 | 10,627 | 10,308 | 11,227 | 11,153 | 10,291 |
| Pseudo $R^2$ | 0.243 | 0.284 | 0.330 | 0.298 | 0.335 | 0.332 |
| Controls? | | | X | | | X |
| Deal Year FE? | | | | X | X | X |
| Group State FE? | | X | X | X | | X |

**Table 8: Association Between Minority Ownership and Number of Employees (PitchBook Fund Level)**

This table presents coefficients from OLS regressions run at the fund level, with standard errors reported in parentheses. A unit of observation is a fund. The dependent variable in columns one to three, *Ln(# All Fund Employees)*, is the log number of unique employees that ever worked for the fund. The dependent variable in columns four to six is the log number of employees with at least a partner or founder-level title that ever worked for the fund. The key independent variable is *Minority Owned*, which is an indicator that equals one if at least 50 percent of the founders or senior partners of the group are Black or Hispanic. Controls include the log of the most recent fund number, *Ln(Fund Number)*; the log of the group's age, *Ln(Group Age)*; an indicator for whether the fund is a venture capital group (buyout groups are the omitted category); and *Ln(Fund Size)*, the log of the fund size. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes significance at the 5% level, and $^{*}p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable: | Ln(# All Fund Employees) | | | Ln(# Partner or Higher) | | |
|---|---|---|---|---|---|---|
| Minority Owned | 0.036 | 0.044 | -0.033 | 0.094 | 0.102 | 0.038 |
| × Ln(Fund Number) | (0.094) | (0.085) | (0.051) | (0.099) | (0.089) | (0.060) |
| Minority Owned | -0.018 | -0.015 | 0.091 | -0.080 | -0.080 | 0.007 |
| | (0.074) | (0.076) | (0.069) | (0.073) | (0.075) | (0.069) |
| Ln(Fund Number) | 0.246*** | 0.246*** | 0.048 | 0.197*** | 0.195*** | 0.044 |
| | (0.027) | (0.027) | (0.030) | (0.023) | (0.023) | (0.028) |
| Ln(Fund Size) | | | 0.201*** | | | 0.179*** |
| | | | (0.007) | | | (0.007) |
| Venture Capital Fund | | | 0.311*** | | | 0.289*** |
| | | | (0.027) | | | (0.026) |
| Ln(Group Age) | | | 0.134*** | | | 0.078*** |
| | | | (0.021) | | | (0.020) |
| Observations | 8,169 | 8,169 | 8,169 | 8,169 | 8,169 | 8,169 |
| Adjusted $R^2$ | 0.167 | 0.186 | 0.360 | 0.133 | 0.155 | 0.311 |
| Year FE? | X | X | X | X | X | X |
| State FE? | | X | X | | X | X |

**Table 9: Association Between Minority Ownership and Average Deal Size (Deal Led Only — PitchBook Fund Level)**

This table presents coefficients from OLS regressions run at the fund level, with standard errors reported in parentheses. A unit of observation is a fund. The dependent variable in columns one to three, *Ln(Check Size)*, is the log of the average investment size of all deals that the fund *led*. The dependent variable in columns four to six is the average deal size normalized by the size of the fund. The key independent variable is *Minority Owned*, which is an indicator that equals one if at least 50 percent of the founders or senior partners of the group are Black or Hispanic. Controls include the log of the most recent fund number, *Ln(Fund Number)*; the log of the group's age, *Ln(Group Age)*; an indicator for whether the fund is a venture capital group (buyout groups are the omitted category); and *Ln(Fund Size)*, the log of the fund size. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes significance at the 5% level, and $^{*}p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable: | Ln(Check Size) | | | Check Size/ Fund Size | | |
|---|---|---|---|---|---|---|
| Minority Owned | 0.492 | 0.576 | 0.178 | 0.018 | 0.030 | 0.145 |
| × Ln(Fund Number) | (0.423) | (0.386) | (0.186) | (0.153) | (0.150) | (0.142) |
| | | | | | | |
| Minority Owned | -0.305 | -0.374 | -0.438*** | -0.065 | -0.058 | -0.212* |
| | (0.249) | (0.238) | (0.151) | (0.122) | (0.113) | (0.113) |
| | | | | | | |
| Ln(Fund Number) | 0.617*** | 0.608*** | 0.215*** | 0.028 | 0.033* | 0.240*** |
| | (0.062) | (0.049) | (0.045) | (0.020) | (0.020) | (0.037) |
| | | | | | | |
| Ln(Fund Size) | | | 0.487*** | | | -0.348*** |
| | | | (0.017) | | | (0.021) |
| | | | | | | |
| Venture Capital Fund | | | -1.131*** | | | -0.601*** |
| | | | (0.051) | | | (0.045) |
| | | | | | | |
| Ln(Group Age) | | | -0.013 | | | -0.002 |
| | | | (0.036) | | | (0.027) |
| Observations | 6199 | 6199 | 6199 | 6199 | 6199 | 6199 |
| Adjusted $R^2$ | 0.138 | 0.226 | 0.590 | 0.014 | 0.031 | 0.261 |
| Year FE? | X | X | X | X | X | X |
| State FE? | | X | X | | X | X |

**Table 10: Minority Ownership and Fundraising Success in Periods of High Racial Awareness (Burgiss Fund-Quarter Level)**

This table presents estimates of the fundraising success of private capital funds, with standard errors reported in parentheses. Columns one to three report estimates from a Cox Proportional Hazard model of the likelihood that a follow-on fund is raised. The fundraising event is the "hazard", and the model is estimated using quarterly fund-level observations, with a fund "dying" when a follow-on fund is raised the next quarter. A fund is included until its 40$^{\text{th}}$ quarter, the quarter in which it raises a follow-on fund, or the second quarter of 2021. Estimates represent hazard ratios. A follow-on fund is defined at the fund-family level. Columns four to six are OLS regressions on the size of a follow-on fund, if one is raised in that quarter. The dependent variable in these columns is *Ln(New Fund Size +1)*, the log amount of capital raised by the follow-on fund in fundraising quarters, which is 0 in other quarters. The key independent variables are the indicator for whether the private capital group is minority owned; fund performance expressed as the public market equivalent (PME) of Kaplan and Schoar (2005); an indicator for high racial awareness (HRA); and the interaction between minority ownership and HRA. *Minority Owned* is an indicator that equals one if at least 50 percent of the founders or senior partners are Black or Hispanic. *HRA* (high racial awareness) is an indicator that equals one if the news-weighted number of fatal encounters between police and civilian Blacks or Hispanics (minorities), divided by the total number of all fatal encounters in a state, is in the top quartile of all states in the previous year. The weight applied to a given fatal encounter is the log of 1 plus the total number of articles mentioning the event. See Section IV.D.1 for details. *Ln(Fund Size)* is the log of the current fund's size. *Controls* include the log of the fund sequence; indicators for whether a fund is a venture capital or a buyout fund, with growth funds being the omitted category; and an indicator for whether it is a first-time fund. Continuous variables are winsorized at a 1% level. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes significance at the 5% level, and $^{*}p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable: | I(Raised a follow-on fund) | | | Ln(New Fund Size + 1) | | |
|---|---|---|---|---|---|---|
| Minority Owned × HRA | 0.593** | 0.540** | 0.617*** | 0.800*** | 0.778*** | 0.762*** |
| | (0.288) | (0.233) | (0.220) | (0.276) | (0.261) | (0.266) |
| PME × Minority Owned | 0.995*** | 1.058*** | 0.976*** | 0.773* | 0.873** | 0.807* |
| | (0.297) | (0.304) | (0.269) | (0.457) | (0.420) | (0.468) |
| PME | 0.524*** | 0.501*** | 0.553*** | 0.835*** | 0.842*** | 0.863*** |
| | (0.058) | (0.061) | (0.059) | (0.087) | (0.090) | (0.092) |
| Minority Owned | 0.048 | 0.107 | 0.054 | -0.013 | 0.027 | 0.048 |
| | (0.340) | (0.255) | (0.241) | (0.332) | (0.270) | (0.304) |
| HRA | -0.060 | -0.093 | -0.100 | -0.071 | -0.059 | -0.058 |
| | (0.053) | (0.064) | (0.064) | (0.048) | (0.060) | (0.059) |
| Number of Fund-Quarters | 38,788 | 38,788 | 38,788 | 38,788 | 38,788 | 38,788 |
| Number of Funds | 2,229 | 2,229 | 2,229 | 2,229 | 2,229 | 2,229 |
| Pseudo $R^2$ / Adj. $R^2$ | 0.030 | 0.033 | 0.039 | 0.026 | 0.026 | 0.027 |
| Controls? | | | X | | | X |
| Ln(Fund Size)? | | | X | X | X | X |
| Year FE? | X | X | X | X | X | X |
| State FE? | | X | X | | X | X |

**Table 11: Association Between LP Investment and Race of the Chief Investment Officer (PitchBook Fund-LP Level)**

This table presents coefficients from OLS regressions run at the private equity (PE) fund-limited partner (LP) level, with standard errors reported in parentheses. A unit of observation is a PE fund-LP pair, where we pair each LP will all funds headquartered in the state where the LP is headquartered. We only include public pension funds and endowments in our set of LPs. We also restrict our analysis to LPs for which: PitchBook has data on at least one private capital fund investment by the LP; the LP has had a CIO during our sample period; and we are able to determine the race of the CIO. After pairing each LP with all funds in the same state, we label observations where the limited partner actually backed the fund as *I(Investment)*, our primary dependent variable. The primary independent variables are: *I(Minority Owned)*, which is an indicator that equals one if the limited partner backs a fund where 50 percent of the senior partners or founders of the group are Black or Hispanic; and *Minority CIO*, which is an indicator for whether the CIO is Black or Hispanic. As CIOs change over time, we map a CIO to a specific fund based on the CIO employed in the year prior to the fund's vintage year. Controls include *Venture Capital Fund*, which is an indicator taking the value 1 for venture capital funds and 0 for private equity funds; *Ln(Age)*, which is the log of the number of years since the group was founded; *Ln(Fund Number)*, which is the log of the most recent fund number; and *Ln(Fund Size)*, which is the log of the fund size. The number of observations is changing because of the fixed effects used. For example, the number of observations in Column (4) is lower than Column (3) because we drop limited partners that are only paired with a single PE fund, as there is no variation within the limited partner's portfolio. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes significance at the 5% level, and $^{*}p < 0.10$ denotes significance at the 10% level. We cluster standard errors by limited partner-private capital group pair.

| Dependent Variable | I(Investment) | | | |
|---|---|---|---|---|
| Minority CIO X Minority Owned | 0.161*** | 0.161*** | 0.160*** | 0.156*** |
| | (0.054) | (0.054) | (0.052) | (0.048) |
| Minority owned | 0.022*** | 0.023*** | 0.022*** | |
| | (0.007) | (0.007) | (0.007) | |
| Minority CIO | 0.009*** | 0.009*** | 0.009*** | -0.004 |
| | (0.003) | (0.003) | (0.003) | (0.004) |
| Ln(Fund Number) | | | 0.001 | 0.003 |
| | | | (0.001) | (0.002) |
| Ln(Fund Size) | | | 0.006*** | 0.007*** |
| | | | (0.000) | (0.001) |
| Venture Capital Fund | | | -0.003* | 0.005 |
| | | | (0.002) | (0.004) |
| Ln(Group Age) | | | 0.002** | 0.002 |
| | | | (0.001) | (0.003) |
| Observations | 70,277 | 70,277 | 70,277 | 70,275 |
| Adjusted $R^2$ | 0.013 | 0.018 | 0.032 | 0.063 |
| Has Year FE? | X | X | X | X |
| State FE? | | X | X | X |
| LP FE? | | | | X |
| GP FE? | | | | X |

# Racial Diversity in Private Capital Fundraising

# Internet Appendix

# Appendix A.   Details on Form D Filings

The Securities Act of 1933 requires groups selling securities to register the sales with the SEC or rely on an exemption. Section 4(a)(2) of the Act describes the characteristics that exempt private offerings from registration: investors have enough knowledge to evaluate investment risks or are wealthy enough that they can afford to lose their investment; investors can access information about the issuer that the issuer would have included in a public offering prospectus; the issuer does not publicly advertise the offering; and the number of investors is consistent with a private offering. These requirements are vague in several areas.

In addition to meeting federal guidelines, issuers relying on Section 4(a)(2) must comply with state securities laws. Thus, an issuer may have filing or reporting requirements in each state where it has investors.

Unlike Section 4(a)(2), Regulation D (Reg D) is a bright-line rule (a safe harbor exemption) on when an offering is a private placement. Any offering that follows Reg D requirements is unambiguously exempt from registration. Reg D stipulates that issuers must raise most of their funding from qualified investors (investors that earn \$200,000 or more each year) and file a Form D within 15 days of fundraising.[29] Although the filing is not a condition for the exemption, Reg D allows a court to disqualify issuers from future use of any Reg D exemption if they do not comply with the Form D filing requirement (Rule 507). Nevertheless, it is possible that some groups simply ignore filing Form D, even without relying on other exemptions, because Rule 507 is rarely enforced.[30]

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[29] See SEC guidelines for filing a Form D notice at https://www.sec.gov/smallbusiness/exemptofferings/formd

[30] This article, https://techcrunch.com/2018/11/07/the-disappearing-form-d/, about firms "forgetting" to file Form D focuses on start-ups rather than funds (in the latter case, we might anticipate that the legal and reputational consequences of regulatory non-compliance would be much higher), but is nonetheless something to be aware of.

In addition, Rule 506 of Reg D exempts issuers from state securities laws. Given that Reg D has clear guidelines on when an offering qualifies as a private placement, Form D data likely captures a representative cross-section of private capital groups' fundraising activities.[31]

To check how representative the Form D data are for private capital funds, we collect a list of all private capital groups with at least one fund in the PitchBook data and match the fund names to Form D.[32] Table A5 shows our results. From Panel B, we see that, for 83 percent of groups formed between 2010 and 2020, we match at least one of the group's funds to a Form D filing.[33]

Form D identifies the company, its directors and officers, the type of security sold, the minimum investment amount, the total offering amount, the total amount sold, the number and type of investors participating in the offering, and any intermediaries. Over ninety percent of investors in Reg D are accredited. Accredited investors can be institutional or individual. Institutional investors can be any pooled investment vehicle such as pension funds, hedge funds, or private equity funds. Reg D requires individual accredited investors to have a regular yearly income of at least \$200,000 (\$300,000 if married) or a net worth of over \$1 million, excluding home equity. Firms advertising can only accept investments from accredited investors and must take steps to verify that each investor is

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[31] Issuers can use other, more restrictive offering exemptions to avoid filing Form D, including 1) SEC Rule 701, provided that security sales are to the group's officers, advisers, employees, and consultants, and that the sales are for compensation purposes; 2) SEC Rule 147, Rule 147A, and the 1933 Act Section 3(a)(11), the intra-state exemption, provided that all investors are in the same state as the issuer; 3) SEC Rule 1001, provided that the group is raising less than \$5 million and is located in California, and that a majority of its shareholders are located in California; and 4) SEC Reg S, provided that all investors are non-US residents.

[32] We match all funds by U.S.-focused private capital groups in PitchBook to Form D filings on fund name and geographic location. Note that because name-matching is not exact, we manually verify all matches to improve accuracy. Also note that this exercise uses all Form D filings by private capital funds, not just the set of aspiring first-time fundraisers in the Section III.C analysis.

[33] Note that several private capital data services such as Refinitiv, Preqin, PitchBook, etc. make extensive use of Form D filings to track private capital activity.

accredited. Many types of entities raise capital using Reg D, including public and private non-financial and financial firms and investment companies such as hedge funds, private equity funds, venture capital funds, and other pooled investment vehicles such as real estate investment trusts.

# Appendix B.   First-time Funds

This section details how we construct our sample of aspiring first-time funds from Form D filings submitted between 2009 and 2020. We start in 2009, as that is when electronic Form D filings first become available.

While Form D filings are made for individual funds, they do not necessarily contain information on fund number or the age of the private capital group attempting to raise the fund. It is also common to have multiple filings for the same fund, representing different fundraising vehicles (e.g. a Cayman and a Delaware vehicle raising capital for the same fund would each have their own Form D filing), each with its own identifying number ("CIK"). We take several steps to ensure that we only include groups aspiring to raise their first fund, and to keep at most one filing per group.

1. We exclude all filings where the fund name indicates a follow-on fund, which leaves us with 10,201 filings. To identify follow-on funds, we search the fund name for stand-alone keywords such as "II" or "2". We look for numbers, roman numerals, and ordinal numbers in numeral or string form.

2. We manually inspect all filings where listed executives can be linked to 20 or more unique CIKs. We are able to link 1,075 filings to groups founded before 2005 or that we identify as intermediaries.[34] This process identifies older groups such as

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[34] Executives are any non-promoter natural persons listed on Form D, including in the signature field.

Blackstone and Apollo, as well as several intermediaries doing the administrative work for multiple funds where we are unable to identify the sponsoring private capital group.

3. For each filing, we search for a website of the private capital group responsible for the filing. We hire UpWorkers for this task. Specifically, we provide them with a Google search and ask them to look at the top five results, identifying the team page and verifying that at least two-thirds of executives listed on the Form D filing are present on the team page.[35]

4. We link two separate filings to the same private capital group if either

   a. The two filings have the same identified website linked to them; or

   b. At least two of the following three criteria are fulfilled:

      i. At least 75% of the executives appear on two filings;

      ii. The listed contact street address ("STREET1") and city are the same;

      iii. The fund names have a score of at least 90% match in a fuzzy comparison of the filing names after applying some cleaning.[36]

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We used a keyword search to exclude all non-natural persons listed on Form D. Appendix Table A16 shows that signatories on Form D filings are predominantly founders and senior executives. Promoters appear to largely be corporate sponsors of funds, or external managers of private offerings.

[35] The search we provide to UpWorkers is generated using the names of the executives together with the first two words of the fund name, after applying some cleaning to take out common and uninformative terms such as LLC or LTD. To increase the likelihood of identifying a group's website, we restrict the Google search to exclude results from common websites that aggregate information from these filings. Examples of such websites are https://aum13f.com, https://www.whoisraisingmoney.com, and websites that aggregate information about private capital groups such as https://www.crunchbase.com and https://pitchbook.com/. For additional details on the cleaning and the search process, please contact the authors.

[36] We utilize "fuzz" and "scorer" from the Python package "fuzzywuzzy", using the scorer "fuzz.ratio" to calculate the similarity of names. To clean the fund names we remove punctuation, parentheses, dashes, and any extra spaces. We further remove the fund number as well as the following words to avoid false positives: "lp," "td," "llc," "partnership," "plc," "inc," "fund," "limited," "l p," "lps," "side," "sidecar," "side car," "trust," "capital," "ventures," "venture," "partners," "investment," "growth,"

5. For each URL we ensure that the team page contains pictures that allow us to verify whether any minorities work at the group. For groups with currently defunct website we use https://web.archive.org to find the team page. If we are unable to find a team page we drop that group from the sample.

6. We collect data on the year the private capital group was founded by matching groups based on the website URL to Preqin. For 650 unique group websites we are unable to match them to Preqin. For these groups, we manually collect this information from the group's website, the LinkedIn profile of a founder, or from the group's LinkedIn or Crunchbase page.

7. Finally, we collect information about minority ownership status following the process outlined in Section II.A.

We drop filings for which we are unable to verify the ethnicity of owners, or for which we cannot find information about the year the group was founded, leaving us with 3,917 unique CIKs belonging to 1,988 unique groups.

To ensure that we only include one filing per group in our analysis, we use the first filing by each private capital group. If multiple filings are made at the same time, we keep the one that raised the largest amount of capital.[37] As a further mechanism to validate that we only include aspiring first-time fundraisers, we drop all funds for which the first Form D filing we find from the group is made more than three years after its founding year.

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"opportunity," "coinvestment," "equity," "street," "investors," "holdings," "special," "opportunities," and "private."

[37] We considered alternative approaches such as aggregating the total amount of capital sought and raised over the different vehicles. However, we found that sometimes a single target amount is listed in all filings, representing the aggregate amount sought, while the amount sold is separate for each vehicle. Alternatively, there is a main vehicle that raises the largest amount of capital. Therefore, we opted for our current approach.

As a final step, we wish to control for observable characteristics that may correlate with fundraising success. While past performance data is not available, we collect biographical data about the group's senior partners and founders from LinkedIn, a process detailed in Appendix E. We restrict our sample to only those Form D filings where we are able to gather biographical data for at least one founder, leaving us with a final sample comprising 684 aspiring first-time funds, of which 42 are minority owned.

To validate the value of using Form D for analyzing entry to the market by raising a first-time fund, we obtain a list of failed attempts of raising a first-time fund from a large limited partner. If Form D filings are relevant for examining the fundraising success, we expect to see at least some of these cases appear in Form D filings. We do not expect that all aspiring first-time funds necessarily file a Form D, as potential fund managers may have preliminary discussions with prospective LPs at very early stages.

We find that of the original list of 92 failed funds (four successful groups were erroneously included in the list, which we ignore in the calculations below), we are able to find Form D filings for 23 of them, or 25%. Table A17 provides URL links to the Form D filing for each of these cases. Of the remaining 69 cases, we attempt to find any mentions of the fundraising attempt through Google searches, restricting our search to two years around the year that the fundraising attempt is reported having taken place. We utilize a variety of variations of the name in our search.

In 14 cases we are able to find a mention of the fundraising attempt online, but there appears to be no Form D filing. In the remaining 55 cases we are unable to find any mention of the fundraising attempt. Given the intense interest and coverage in the business press about new funds, we anticipate that many of these correspond to very preliminary inquiries to the limited partner.

# Appendix C.   PitchBook Data

We use PitchBook for our employee and deal-level tests (at the fund level), to investigate the ethnicity of the entrepreneurs whose companies receive funding from funds in our sample (at the portfolio company level), and to investigate how minority CIOs affect the likelihood that a minority group raises a new fund (at the fund-LP pair level).

We begin with the set of all funds in PitchBook as of June 2021, and filter the data to comprise U.S.-based and U.S. focused funds not missing the vintage year that are either venture capital or buyout funds. Venture capital funds are labeled by PitchBook as "Venture - General," "Venture Capital - Early Stage," "Venture Capital - Later Stage." Buyout funds are labeled as "Growth/Expansion" and "Buyout." We further require that funds are not missing information on their fund size and that the group managing the fund is not missing the year it was formed (so that we can compute age). Following these filters, we have about 13,006 U.S-based funds that we could map to a U.S.-based private capital group.

## Appendix C.1.   Employee tests (Fund Level)

For our employee-level tests we need to count the number of partners and employees in each fund. Please note that we observe all employees that were ever employed by the specific fund within the group. We use the record of all employees ever employed for the fund according the PitchBook's records, as of the second quarter of 2021. We identify partners as people with the following titles: "Partner," "Managing Director," "General Partner," "Managing Partner," "Owner," "Founder," "Senior Partner," "Senior Vice President," and "CEO." We also count the number of people that are affiliated with the fund, without any restriction on titles. Since not all funds have information on employees, we are left with 8,169 funds, which is the set of U.S-based funds belonging to U.S.-based

private capital groups (2,985 groups), where we observe employment information on at least one fund employee. When we match the list of funds in this sample of our master list of minority-owned groups, we find that 159 funds are owned by minority groups and 8,010 funds are owned by non-minority groups.

## Appendix C.2. Deal tests (Fund Level)

For our deal-level tests, we match the list of funds in our employee-level tests to all deals involving the fund, separately tracking whether the fund led the deal. Again, please note that PitchBook maps deals to specific funds within a group. PitchBook also identifies whether the fund led the deal. According to PitchBook, "the lead investor is the investor who leads other co-investors into the conclusion of a company financing. Also known as a bell cow investor. They usually hold the largest stake, oversee the financing, and are most actively involved in the overall project." Next, we extract the deal size and date for deals PitchBook classifies as "Buyout/LBO," "Later Stage VC," "Seed Round," "Angel (Individual)," "PE Growth/Expansion," and "Early Stage VC." 7,451 funds (of the 8,169 funds in the employee tests) have information on at least one deal.

## Appendix C.3. Constructing a matched sample

When we examine the type of companies backed by funds in our sample we construct a matched sample, matching minority-owned funds in Pitchbook to funds that are similar on observable characteristics while being run by non-minority GPs. To identify matches to the minority funds, all non-minority funds belonging to U.S.-based groups are potential matches. For each minority-owned fund, we restrict a potential match to non-minority owned funds with the same vintage, same strategy (buyout, growth equity, or venture capital), headquartered in the same state, having the same fund number, and then we

select the two that are closest on fund size.

Following this procedure we find matches for 86 minority funds. Some funds had two matches, but in some cases there is only a single similar non-minority owned fund. For the remaining minority funds without a match, we relax the state requirement. We construct this matched sample to examine the ethnicity of company founders in companies that our funds have invested in. Therefore, we require that each fund has at least some data in Pitchbook on investments that we are able to tie directly to the fund. We further require that we can identify the race of at least one portfolio company founder in at least one of these investments. This process leaves us with a matched sample comprising 249 funds, of which 98 are minority funds and 151 are non-minority funds.

## Appendix C.4. Portfolio Company Investments

The funds in our matched sample, described in the previous subsection, have invested in a total of 5,691 deals involving 4,886 companies. Of these, we are able to identify at least one founder of the company in Pitchbook for 3,455 companies. We identify founders using the list of employees listed in Pitchbook as having ever been employed by the company, and searching for the keywords "found," or "owner" in the title or each person. This procedure allows us to identify a total of 7,266 unique company founders working for the companies invested in by funds in our matched sample. Of these company founders, we are able to find a LinkedIn profile url for 6,422 of them. We use the LinkedIn profile URL to collect profile pictures that are utilized to classify the race of the company founders. Of the 6,422 company founder urls, 4,678 have profile pictures that we can use in our analysis. We classify the profile pictures by race using a combination of picture classification algorithms such as Google's image API and human review. We use factors such as whether the founder's last name is predominantly Hispanic (at least 50% of

people who have the same last name identify as Hispanic according to the 2010 Census), whether the founder attended an HBCU, and whether news and media reports identify the founder as a minority when the image alone is inconclusive. Specifically, we used these criteria to verify all images where the image algorithm predicts race with a lower than 50% probability, and we also verified all images the algorithm classified as Black.

# Appendix D.   CIOs

This section provides details on how we assemble our sample of CIOs in public pension funds and endowments, how we classify the race of the CIO, and how we link those institutions to investments in specific private capital funds.

In this analysis we wish to use pairings between limited partners and private capital groups, which requires data on the specific private capital funds that an LP has invested in. For this reason, we rely on the PitchBook sample, as it contains data on at least some LPs in specific private capital funds. We focus our analysis on public pension funds and endowments—traditionally critical investors in private capital groups—since they have relatively high disclosure requirements, ensuring a good coverage in PitchBook of their investments in private capital funds.

We begin with a list of public pension funds and endowments in PitchBook that are recorded as having invested in at least one private capital fund raised between 2000 and 2021. For each of these plans, we manually search for the history of CIOs for that time period, taking note of the years they held the role.

To find CIOs, we rely on several sources. In many cases, the information is available in annual financial reports as they commonly list the name of the individual holding the position of "Chief Investment Officer". When annual reports are not sufficient to give us the complete history of CIOs, we complement the initial search with press releases from

the organization itself, or newspaper articles mentioning appointments or departures of chief investment officers. This strategy is particularly fruitful with university endowments, as they frequently use press releases announcing changes in the post, often including details on how long the departing CIO has been in that position.

However, many endowment funds and local public pension funds do not have a chief investment officer, at least for part of the sample period. Instead, they rely on an investment committee, or outsource investment decisions to an external investment manager or consultant. This appears to be more common for small plans, perhaps because the costs of an internal management team may outweigh the benefits. To ensure that we do not miss any CIOs, we have two RAs search for CIOs independently.

To determine the ethnicity of these CIOs, we rely on a machine learning algorithm that examines pictures and names to predict the likelihood of a given race. We manually validate every CIO classified as a minority by this approach. A minority CIO is one that is determined to be either Black or Hispanic. We gather profile pictures from LinkedIn profiles, team websites at their current jobs, and press releases or news articles.

We use this data to examine whether the likelihood that a public pension fund or endowment is more likely to invest in a minority-owned private capital group when their CIO is a minority. We do these at two different levels: the limited partner–private capital fund–level, or the private capital group–year level.

Specifically, we use the LP–private capital fund pair sample in Table 11 to test whether LPs with minority CIOs are more likely to invest in funds raised by minority GPs. For this test, we create a sample consisting of all potential pairs between funds raised by a specific private capital group and all public pension funds and endowments located in the same state that the groups is headquartered. Our focus of pairings within the same state is motivated by the local bias of public pension funds documented in Hochberg and Rauh (2013). We include all pairs to represent the potential investment set for an LP,

which includes funds the LP did not invest in.

As our goal is to test whether an LP is more likely to invest in a given fund when a minority CIO is in charge, we link CIOs to funds raised during their tenure. Specifically, we use funds' vintage year and link it to the CIO holding that position in the year before. We lag it by a year to capture the period during which fundraising is likely taking place.

We take an alternative approach in Table A15, where we focus only on newly formed partnerships between an LP and a private capital group. A newly formed partnership is defined as the first fund of a specific private capital group that the LP invests in. The goal of this alternative approach is to examine whether the likelihood that LPs form new partnership with minority-owned GPs depends on the race of the CIO of the LP.

Our final approach is used in Table A14, where we look at whether minority-owned private capital groups fare better when they fundraise during years when at least one public pension fund or endowment in their state has a minority CIO. To this end, we collapse the data to the private capital group–year level. We include group–years between 2000 and 2021. For groups founded after 2000 we include them from the year they are founded. A group-year is included until ten years has passed since the group raised its most recent fund, or until 2021.

To indicate the presence of a minority CIO, we define an indicator taking the value of 1 if there is at least one minority CIO in a public pension fund or endowment in the state and year where the group is located, and 0 otherwise. As in the LP–private capital fund pair sample, we lag the CIO classification by one year.

Throughout these three different analyses, we only include funds raised in a year and state for which we have ethnicity data for at least one CIO working in a local public pension plan or endowment during the preceding year.

# Appendix E.   Biographical Data from LinkedIn

## *Appendix E.1.   Human Capital from LinkedIn*

When examining the fundraising success of aspiring first-time fundraisers using our Form D sample, we collect biographical data capturing the human capital of senior partners and founders. This section details the steps we take to gather this data.

To measure human capital, we gather education and work experiences from individual LinkedIn profiles, using information on those pages as of the 17th of March 2022. Specifically, we take the following steps:

1. We collect the name and title from the team page of the private capital groups' websites. We process all employees with one of the following titles: "Founder," "Co-Founder," "Founding Managing Partner," "Founding General Partner," "Founding Partner," "Managing Partner," "General Partner," "Senior Partner," "Partner," "CEO," "President," "Chairman," "Chair," "Senior Managing Director," "Managing Director," "Director," or "Senior Vice President." For groups whose website is now defunct, we access these team pages using https://web.archive.org/.

2. For each individual identified we attempt to locate their LinkedIn URL. If available, we use the link provided on the group's team page. Otherwise, we attempt to find it through online searches. We complement this list with LinkedIn URLs provided by PitchBook for individuals with the relevant titles indicated as working at, or having worked at, that private capital group.

3. We validate all proposed matches using the listed work experiences on their LinkedIn profiles. We look primarily for an experience confirming that the individual has worked at the private capital group they are associated with. If the profile has not

been updated since they started their position, we cross-validate their prior experiences with information listed on the biography on the team page. If we are unable to verify a given LinkedIn profile, we drop that individual from our sample.

4. For each individual, we collect their work experiences and educational information from their LinkedIn profile.

   a. For each work experience, we gather the start and end year, the title, the company name, and the company's LinkedIn page, if available.

      i. We match each company an individual has worked at to the set of U.S. startups in PitchBook. We define a startup as a company that raised at least one venture round. A venture round is a round PitchBook designates as "Early Stage," "Seed Round," or "Late Stage." We further require that at least one investor participating in the round is an investment group that PitchBook classifies as "Venture Capital," "Buyout," or "Growth Equity," and where the group has at least one fund set up as a limited partnership. When matching companies we use fuzzy matching on company name, and website (if available). We manually verify each proposed match. If the company has a verified match, and the individual's title in that company is listed as a "Founder" or "Owner," we code the experience as "Startup Experience."

      ii. Separately, we match each company to the set of U.S. private capital groups in PitchBook following the same procedure. If the individual's title in such company includes "Founder," "Partner," or "Managing Director," we code that experience as "PE Experience." Note that the "Partner" component comprises a range of partner seniority levels from "Managing Partner" to "Junior Partner."

iii. Finally, we use these measures to calculate the number of years of prior experience in private equity or venture capital, and startup experience. To avoid a look-ahead bias, we only consider positions started prior to the founding year of the private capital group.

b. For each educational experience, we collect information on the school and the degree.

i. We match all schools to the top 50 U.S. schools. See section E.E.2 for a full list of schools. If an individual has a degree from any such school we code it as having graduated from a "Top 50 School."

ii. We map each degree into either a pre-university degree, an undergraduate degree, or a graduate degree. An individual's highest degree is use to determine the level of education, and we generate a dummy indicating whether the individual has a "Graduate Degree."

For the 1,988 groups in our initial set of groups in the Form D data, we identify 3,923 senior partners and founders. We are able to find the LinkedIn URL for 3,646 (93%) of them, of which 3,170 contain at least one entry of prior work or education. As described in Appendix B, we restrict our sample to groups formed no more than three years before they filed their first Form D, and for which we can find biographical data on at least one founder or senior partner. After imposing these requirements, our final sample consists of 684 groups where we have biographical data on 2,028 individuals. Table A3 summarizes this sample, with Panel B documenting the average and median number of work experiences and schools attended listed on their profiles, as well as the fraction of individuals with at least a bachelor degree, at least a master's degree, prior startup experience, and prior PE/VC experience.

*Appendix E.2.   Top Schools*

The following list comprises the top ranked universities worldwide, according to the U.S. News rankings in 2020, which we use in our classification of Top 50 universities.

1. Imperial College London

2. The University of British Columbia

3. University of Cambridge

4. University of Oxford

5. University of Toronto

6. University of Washington

7. Boston College

8. Brandeis University

9. McGill University

10. Brown University

11. Carnegie Mellon University

12. Columbia University

13. Cornell University

14. Dartmouth College

15. Duke University

16. Emory University

17. Georgetown University

18. Georgia Institute of Technology

19. Harvard University

20. Lehigh University

21. Massachusetts Institute of Technology

22. New York University

23. Northeastern University

24. Northwestern University

25. Pepperdine University

26. Princeton University

27. Rensselaer Polytechnic Institute

28. Rice University

29. Stanford University

30. The College of William and Mary

31. The Johns Hopkins University

32. The University of Chicago

33. Tufts University

34. Tulane University

35. University of California, Berkeley

36. University of California, Los Angeles

37. University of Illinois at Urbana-Champaign

38. University of Michigan, Ann Arbor

39. University of Minnesota, Twin Cities

40. University of North Carolina at Chapel Hill

41. University of Notre Dame

42. University of Pennsylvania

43. University of Rochester

44. University of Southern California

45. University of Texas at Austin

46. University of Virginia

47. Vanderbilt University

48. Wake Forest University

49. Washington University in St. Louis

50. Yale University

**Figure A1: WSJ Index of Racial Attention**

This figure presents the quarterly time-series of the number of Wall Street Journal (WSJ) articles that are related to racial issues. The time-series goes from Q1 1985 to Q3 2020. We use Factiva to search for articles containing keywords indicating mentions of racial issues in WSJ and count the number of articles. Specifically, we conduct the search quarter-by-quarter for articles using relevant keywords (see text for details).
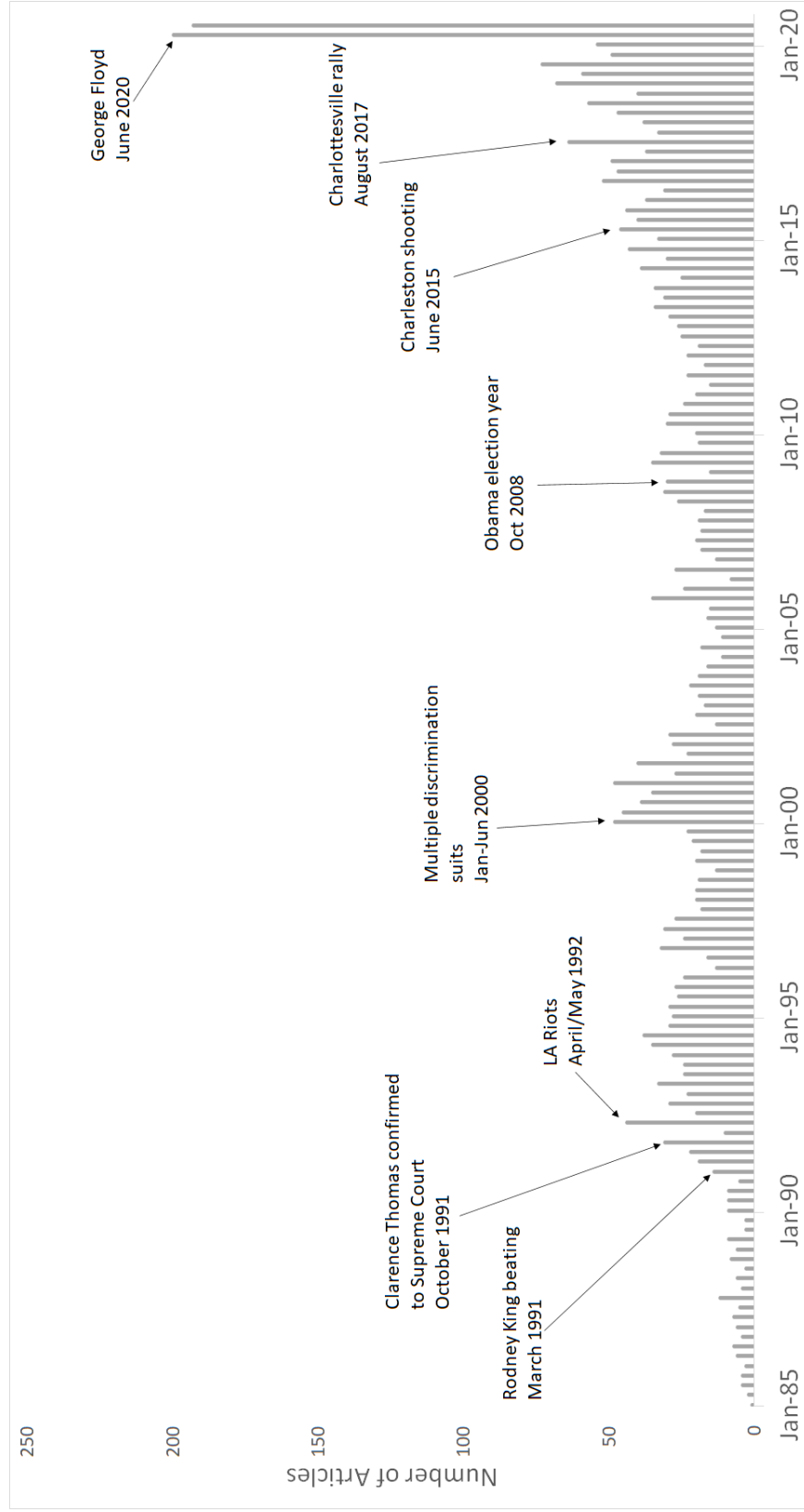
### Table A1: Summary Statistics of Burgiss Sample by Race

This table reports summary statistics for our sample of U.S.-based and -focused private capital funds for the Burgiss sample as of the second quarter of 2021. The table reports summary statistics by unique funds in Panel A, and by individual deals in Panel B. Both panels split the statistics by whether or not the fund is managed by a minority-owned private capital group. A group is a *Minority Group* if at least 50% of the founders or senior partners are Black or Hispanic. *Fund Size* is the size of the fund in $ million. *Vintage Year* is the year the fund closed fundraising. *Fund Sequence* is the number of the fund within a given fund family. *I(Venture Capital)* and *I(Buyout)* are indicators for whether a fund is a venture capital or a buyout fund. *I(First-time fund)* is an indicator that equals one for first-time funds and zero otherwise. *TVPI* is the total value to paid-in capital of the fund as of the end of the sample period. It is defined as the sum of distributions and any remaining NAV, divided by the sum of all contributions. PME is the public market equivalent of Kaplan and Schoar (2005), using realized values of the S&P500 to discount cash flows. In Panel B, *Investment Year* is the year of the initial deal investment. *Holding TVPI* is the TVPI of that deal. *Holding Period* is the number of years between the initial investment date and the exit date, or Q2 2021 if the investment is still held. The final column reports the t-statistic for a test of differences in means of the variables. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes significance at the 5% level, and $^{*}p < 0.10$ denotes significance at the 10% level.

**Panel A: Fund Sample**

| | Non-Minority Groups | | Minority Groups | | |
| | N = 2,209 | | N = 40 | | |
| | Mean | Median | Mean | Median | T-stat |
|---|---|---|---|---|---|
| Vintage Year | 2010.8 | 2011.0 | 2013.7 | 2014.0 | 3.32*** |
| Fund Size ($ Millions) | 844.0 | 325.0 | 1834.0 | 542.0 | 0.10 |
| I(Venture Capital) | 0.47 | 0.0 | 0.18 | 0.0 | −1.10 |
| I(Buyout) | 0.51 | 0.0 | 0.78 | 1.0 | 0.95 |
| Fund Sequence | 3.9 | 3.0 | 2.8 | 2.0 | −1.98** |
| I(First-Time Fund) | 0.14 | 0.0 | 0.15 | 0.0 | 0.04 |
| PME | 1.12 | 1.06 | 1.03 | 1.03 | −0.38 |
| TVPI | 1.36 | 1.24 | 1.21 | 1.20 | −0.57 |

**Panel B: Deal-Level Sample**

| **All Deals** | N = 21,802 | | N = 257 | | |
| | Mean | Median | Mean | Median | T-stat |
|---|---|---|---|---|---|
| Investment Year | 2013.3 | 2011.0 | 2016.1 | 2014.0 | 12.23*** |
| Holding TVPI | 2.39 | 1.13 | 2.08 | 1.51 | −1.80* |
| Holding Period | 4.73 | 4.00 | 3.73 | 3.25 | −5.89*** |
| **Exited Deals** | N = 10,752 | | N = 63 | | |
| Investment Year | 2009.7 | 2010.0 | 2012.7 | 2014.0 | 6.80*** |
| Holding TVPI | 2.25 | 1.03 | 2.32 | 2.26 | 0.32 |
| Holding Period | 5.47 | 5.00 | 4.02 | 4.25 | −5.14*** |

**Table A2: Summary Statistics of PitchBook Samples by Race**

This table reports summary statistics for our sample of U.S.-based and -focused private capital funds. Panel A presents statistics for the full PitchBook sample as of the second quarter of 2021, and Panel B presents statistics for the matched PitchBook sample we use in the portfolio company analysis. The table reports summary statistics by unique funds, split by whether or not the fund is managed by a minority-owned private capital group. A group is a *Minority Group* if at least 50% of the founders or senior partners are Black or Hispanic. *Fund Size* is the total amount of funding the fund raised, in $ million. *Vintage Year* is the year the fund closed fundraising. *Fund Sequence* is the fund number of funds raised by the group. *I(Venture Capital)* and *I(Buyout)* are indicators for whether a fund is a venture capital or buyout fund. *I(First-Time Fund)* is an indicator that equals one for first-time funds and zero otherwise. The final column reports the t-statistic for a test of differences in means of the variables. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes significance at the 5% level, and $^{*}p < 0.10$ denotes significance at the 10% level.

**Panel A: Full Sample**

| | Non-Minority Groups | | Minority Groups | | |
| | N = 8,010 | | N = 159 | | |
| | Mean | Median | Mean | Median | T-stat |
|---|---|---|---|---|---|
| Vintage Year | 2010.51 | 2013.0 | 2015.10 | 2017.00 | 8.88*** |
| Fund Size ($ Millions) | 462.76 | 120.0 | 561.05 | 137.32 | 0.37 |
| I(Venture Capital) | 0.59 | 1.0 | 0.46 | 0.00 | $-1.75^*$ |
| I(Buyout) | 0.41 | 0.0 | 0.54 | 1.00 | 1.75* |
| Fund Sequence | 6.75 | 3.0 | 2.94 | 2.00 | $-4.25^{***}$ |
| I(First-Time Fund) | 0.26 | 0.0 | 0.37 | 0.00 | 2.61*** |

**Panel B: Matched Sample**

| | N = 151 | | N = 98 | | |
| | Mean | Median | Mean | Median | T-stat |
|---|---|---|---|---|---|
| Vintage Year | 2015.51 | 2017.0 | 2015.85 | 2017.0 | 0.49 |
| Fund Size ($ Millions) | 994.82 | 350.0 | 754.91 | 155.5 | $-0.53$ |
| I(Venture Capital) | 0.52 | 1.0 | 0.52 | 1.0 | $-0.03$ |
| I(Buyout) | 0.48 | 0.0 | 0.48 | 0.0 | 0.03 |
| Fund Sequence | 2.89 | 2.0 | 3.08 | 2.0 | 0.27 |
| I(First-Time Fund) | 0.36 | 0.0 | 0.39 | 0.0 | 0.34 |

## Table A3: Summary Statistics of Aspiring First-Time Fundraisers (Form D)

This table presents summary statistics of aspiring first-time fundraisers filing Form D. Panel A contains descriptives about the funds, while Panel B contains biographical data on the partners of the group filing Form D. A unit of observation is a Form D filing made by a private capital group aspiring to raise their first-time fund between 2009 to 2020. The biographical data in Panel B is aggregated from the individual to the fund level. We identify aspiring first-time fundraisers by restricting the sample to private capital groups that filed their first Form D within three years of group formation, and by removing filings where the fund name indicates that this is not a first-time fund. For details, see Appendix B. *Minority Owned* is an indicator that equals one if at least 50 percent of the founders or senior partners of the group are Black or Hispanic. *Venture Capital* is an indicator taking the value 1 if a venture capital fund files the Form D, and 0 if it is a private equity fund (buyout or growth); *Fund Size* is the total amount (in $ million) of funding the fund has raised in its most recent Form D filing. *Vintage Year* is the year the fund closed fundraising. *Percent Raised* is the amount of funding raised as a percentage of the fundraising target. *Age* is the number of years between group formation and the final Form D filing. *# Executives* is the number of executives listed in the Form D filing. *Frac. Emp Grad* is the fraction of the group's partners with graduate degrees. *Frac. Emp Top 50* is the fraction of the group's partners that graduated from Top 50 schools. *Frac. Emp Sup* is the fraction of the group's partners with startup experience. *Frac. Emp LP* is the fraction of the group's partners for whom we could find LinkedIn profiles. *Frac. Emp VC* is the fraction of the group's partners with past venture capital experience. *Average Experience SU* is the average number of years a group's partners worked as startup founders before starting the private capital group. *Average Experience VC* is the average number of years the group's partners worked at a private equity or venture capital fund. *Average Graduation Year* is the average number of years since the group's senior partners or founders finished their bachelor degrees. The final column reports the t-statistic for a test of differences in means of the variables. ***$p < 0.01$ denotes significance at the 1% level, **$p < 0.05$ denotes significance at the 5% level, and *$p < 0.10$ denotes significance at the 10% level.

**Panel A: Fund Data**

|  | Non-Minority Groups | | Minority Groups | | |
|  | N = 642 | | N = 42 | | |
|  | Mean | Median | Mean | Median | T-stat |
|---|---|---|---|---|---|
| Total Offering ($ Millions) | 39.70 | 19.47 | 37.80 | 17.5 | −0.21 |
| Amount Sold ($ Millions) | 10.11 | 3.40 | 6.07 | 0.0 | −2.23** |
| Percent Raised (%) | 49.77 | 43.50 | 24.90 | 0.0 | −4.02*** |
| # Investors | 15.79 | 7.00 | 10.81 | 0.0 | −1.71* |
| Year | 2016.78 | 2017.00 | 2017.33 | 2018.0 | 1.33 |
| # Executives | 2.08 | 2.00 | 1.98 | 2.0 | −0.62 |
| Used Broker | 0.07 | 0.00 | 0.02 | 0.0 | −1.69* |
| Age (yrs) | 1.20 | 1.00 | 0.81 | 1.0 | −2.75*** |
| Venture Capital | 0.59 | 1.00 | 0.71 | 1.0 | 1.69* |

**Panel B: Biographical Data**

|  | Mean | Median | Mean | Median | T-stat |
|---|---|---|---|---|---|
| Frac. Emp LP | 0.93 | 1.00 | 0.93 | 1.00 | −0.18 |
| Frac. Emp Grad | 0.56 | 0.50 | 0.56 | 0.50 | −0.09 |
| Frac. Emp Top 50 | 0.67 | 0.61 | 0.62 | 0.67 | −0.82 |
| Frac. Emp Sup | 0.09 | 0.00 | 0.15 | 0.00 | 1.24 |
| Frac. Emp VC | 0.29 | 0.00 | 0.27 | 0.24 | −0.44 |
| Average Experience SU (yrs) | 1.23 | 0.00 | 2.07 | 0.00 | 1.38 |
| Average Experience VC (yrs) | 4.59 | 2.00 | 3.28 | 3.00 | −1.85* |
| Average Graduation Year | 1995.99 | 1996.25 | 1994.85 | 1996.50 | −0.92 |

**Table A4: Minority Ownership and Portfolio Company Investments**

This table presents coefficients from OLS regressions run at the fund level with standard errors reported in parentheses. A unit of observation is a fund in PitchBook with data on at least one investment between 2000 and Q2 2021. We match minority funds to non-minority funds on vintage year, state, fund number, and fund size. For details, see Appendix C.C.3. For each fund in the matched sample, we classify the ethnicity of the founders of portfolio companies that these funds invested in. For details, see Appendix C.C.1. The portfolio company level data is aggregated to the fund level. In Columns (1) to (3), the dependent variable is an indicator for whether a fund invests in any portfolio company where at least one of the founders is Black or Hispanic. In Columns (4) to (6), the dependent variable is the fraction of portfolio companies where at least one founder is a minority, times 100. The key independent variable is *Minority Owned*, which is an indicator that equals one if at least 50 percent of the founders or senior partners are Black or Hispanic. We include as controls the log of the most recent fund number, *Ln(Fund Number)*; the log of the group's age, *Ln(Group Age)*; an indicator for whether the fund is a venture capital group (buyout groups are the omitted category); and *Ln(Fund Size)*, the log of the fund's size. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes significance at the 5% level, and $^{*}p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable: | I(Minority Investment) | | | P(Minority Investments) | | |
|---|---|---|---|---|---|---|
| Minority owned | 0.186*** | 0.173** | 0.218*** | 8.871*** | 7.921*** | 6.994*** |
| | (0.065) | (0.071) | (0.066) | (2.625) | (2.567) | (2.295) |
| Ln(Fund Number) | | | 0.041 | | | 0.689 |
| | | | (0.072) | | | (2.167) |
| Ln(Fund Size) | | | -0.004 | | | -1.639** |
| | | | (0.027) | | | (0.816) |
| Venture Capital Fund | | | 0.476*** | | | 4.228 |
| | | | (0.097) | | | (3.666) |
| Ln(Group Age) | | | 0.044 | | | -0.478 |
| | | | (0.065) | | | (1.843) |
| Number of Funds | 248 | 242 | 242 | 248 | 242 | 242 |
| Adjusted $R^2$ | 0.068 | 0.074 | 0.187 | 0.104 | 0.120 | 0.154 |
| Year FE? | X | X | X | X | X | X |
| State FE? | | X | X | | X | X |

**Table A5: Which private capital groups file Form D? Evidence from PitchBook**

This table reports characteristics of U.S.-based and -focused private capital groups in the PitchBook database with data on founding year. We separately report statistics for funds in PitchBook that we are able to match to a Form D filing, and those that we cannot. A group is matched to a Form D filing if we are able to match exactly on name and location, or if we can manually verify a fuzzy name match. To facilitate comparison across rows, *Diff* reports the normalized difference (difference between the two groups' mean normalized by the pooled standard deviation) in means of the characteristics in column one. Panel A reports statistics for all groups in PitchBook that have raised at least one private capital fund. Panel B reports statistics for private capital groups formed between 2010 and 2020, matching the time period of our Form D sample of aspiring first-time funds. The final column reports the t-statistic for a test of differences in means of the variables. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes significance at the 5% level, and $^*p < 0.10$ denotes significance at the 10% level.

| | **Other** | | | **Has Form D** | | | **Tests** | |
|---|---|---|---|---|---|---|---|---|
| | N | Mean | Std. Dev. | N | Mean | Std. Dev. | Diff | T-stat |
| **Panel A: All Private Capital Groups in PitchBook** | | | | | | | | |
| Year Founded | 1,873 | 2000.23 | 11.38 | 2,240 | 2009.42 | 10.46 | 0.84 | 26.76*** |
| # Investments | 1,873 | 58.27 | 107.43 | 2,240 | 82.21 | 180.52 | 0.16 | 5.26*** |
| # Exits | 1,873 | 25.50 | 44.03 | 2,240 | 26.78 | 67.82 | 0.02 | 0.73 |
| PE Hub | 1,873 | 0.49 | 0.50 | 2,240 | 0.59 | 0.49 | 0.21 | 6.58*** |
| Venture Capital | 1,873 | 0.55 | 0.50 | 2,240 | 0.60 | 0.49 | 0.10 | 3.30*** |
| Buyout | 1,873 | 0.45 | 0.50 | 2,240 | 0.40 | 0.49 | -0.10 | -3.30*** |
| **Panel B: PitchBook Private Capital Groups Founded between 2010 to 2020** | | | | | | | | |
| Year Founded | 306 | 2014.85 | 2.84 | 1,536 | 2014.62 | 2.67 | -0.09 | -1.31 |
| # Investments | 306 | 21.66 | 30.59 | 1,536 | 40.74 | 100.25 | 0.21 | 6.16*** |
| # Exits | 306 | 5.16 | 9.49 | 1,536 | 9.08 | 28.01 | 0.15 | 4.37*** |
| PE Hub | 306 | 0.60 | 0.49 | 1,536 | 0.61 | 0.49 | 0.02 | 0.24 |
| Venture Capital | 306 | 0.76 | 0.43 | 1,536 | 0.69 | 0.46 | -0.16 | -2.73*** |
| Buyout | 306 | 0.24 | 0.43 | 1,536 | 0.31 | 0.46 | 0.16 | 2.73*** |

## Table A6: Association Between Minority Ownership and Fundraising For First-Time private capital Funds (Form D)

This table presents coefficients from OLS regressions run at the fund level, with standard errors reported in parentheses. A unit of observation is a Form D filing, made between 2009 to 2020 by a private capital group attempting to raise their first fund. We identify aspiring first-time fundraisers by restricting the sample to private capital groups that filed their first Form D within three years of group formation, and by removing filings where the fund name indicates that this is not a first-time fund. For details, see Appendix B. The dependent variable in column (1), *Ln(Funding Raised)* is the log amount of funding raised by the fund, as reported on its most recent Form D filing. In column (2), it is the log number of investors investing in the fund. The key independent variable is *Minority Owned*, which is an indicator that equals one if at least 50 percent of the founders or senior partners of the group are Black or Hispanic. Controls include *Venture Capital Fund*, an indicator taking the value 1 if a venture capital fund files the Form D, and 0 if it is a private equity fund (buyout or growth); *Ln(Executives)*, which is the natural logarithm of the number of executives listed in the Form D filing; *Ln(Age)*, which is the log of the number of years since the group was formed; *Frac. Emp Grad*, which is the fraction of the group's partners with graduate degrees; *Frac. Emp Top 50*, which is the fraction of the group's partners that graduated from Top 50 schools (See E.E.2 for the list of top schools); *Frac. Emp Sup*, which is the fraction of the group's partners with startup experience; *Frac. Emp LP*, which is the fraction of the group's partners for whom we could find LinkedIn profiles; *Frac. Emp VC*, which is the fraction of the group's partners with past venture capital experience; *Average Experience SU*, which is the average number of years a group's partners worked as startup founders before starting the private capital group; and *Average Experience VC*, which is the average number of years the group's partners worked at a private equity or venture capital fund. Averages for the biographical measures do not include partners and founders for which we do not have a LinkedIn profile. ***$p < 0.01$ denotes significance at the 1% level, **$p < 0.05$ denotes significance at the 5% level, and *$p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

|  | Ln(Funding Raised) | Ln(# Investors) |
|---|---|---|
| Minority Owned | -1.057** | -1.311** |
|  | (0.519) | (0.588) |
| Venture Capital Fund | -0.408 | 0.016 |
|  | (0.260) | (0.273) |
| Ln(Executives) | -0.062 | -0.093 |
|  | (0.231) | (0.242) |
| Frac. Emp LP | 0.018 | 0.037 |
|  | (0.818) | (0.863) |
| Frac. Emp Grad | 0.752* | 0.702* |
|  | (0.397) | (0.419) |
| Frac. Emp Top 50 | -0.616 | -0.893** |
|  | (0.411) | (0.427) |
| Average Experience SU (yrs) | 0.078 | 0.099* |
|  | (0.049) | (0.054) |
| Average Experience VC (yrs) | -0.015 | -0.063** |
|  | (0.028) | (0.029) |
| Ln(Age) | 1.686*** | 1.835*** |
|  | (0.248) | (0.263) |
| Observations | 684 | 684 |
| Adjusted $R^2$ | 0.075 | 0.088 |
| Year FE? | X | X |

**Table A7: Association Between Minority Ownership and Number of Employees (People/partners per dollar — PitchBook Fund Level)**

This table presents coefficients from OLS regressions run at the fund level, with standard errors reported in parentheses. A unit of observation is a fund. The dependent variable in columns one to three, *# All Fund Employees/Fund Size*, is the number of unique employees that ever worked for the fund normalized by the size of the fund. The dependent variable in columns four to six is the number of employees with at least a partner or founder-level title that ever worked for the fund normalized by the fund's size. The key independent variable is *Minority Owned*, which is an indicator that equals one if at least 50 percent of the founders or senior partners of the group are Black or Hispanic. Controls include the log of the most recent fund number, *Ln(Fund Number)*; the log of the group's age, *Ln(Group Age)*; an indicator for whether the fund is a venture capital group (buyout groups are the omitted category); and *Ln(Fund Size)*, the log of the fund size. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes significance at the 5% level, and $^{*}p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable: | # All Fund Employees / Fund Size | | | # Partners or Higher / Fund Size | | |
|---|---|---|---|---|---|---|
| Minority owned | -0.239 | -0.229 | -0.083 | -0.240 | -0.230 | -0.103 |
| × Ln(Fund Number) | (0.264) | (0.258) | (0.263) | (0.269) | (0.263) | (0.264) |
| | | | | | | |
| Minority owned | 0.383 | 0.386 | 0.291 | 0.391 | 0.389 | 0.303 |
| | (0.422) | (0.396) | (0.360) | (0.416) | (0.390) | (0.357) |
| | | | | | | |
| Ln(Fund Number) | -0.027 | -0.034* | 0.155*** | -0.026 | -0.035** | 0.129*** |
| | (0.030) | (0.019) | (0.051) | (0.029) | (0.018) | (0.047) |
| | | | | | | |
| Ln(Fund Size) | | | -0.380*** | | | -0.337*** |
| | | | (0.074) | | | (0.071) |
| | | | | | | |
| Venture Capital Fund | | | -0.295*** | | | -0.287*** |
| | | | (0.082) | | | (0.081) |
| | | | | | | |
| Ln(Group Age) | | | 0.068 | | | 0.063 |
| | | | (0.042) | | | (0.040) |
| Observations | 8,169 | 8,169 | 8,169 | 8,169 | 8,169 | 8,169 |
| Adjusted $R^2$ | 0.001 | 0.004 | 0.083 | 0.001 | 0.003 | 0.071 |
| Year FE? | X | X | X | X | X | X |
| State FE? | | X | X | | X | X |

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**Table A8: Association Between Minority Ownership and Number of Employees (Within Private Capital Group)**

This table presents coefficients from OLS regressions run at the fund level, with standard errors reported in parentheses. A unit of observation is a fund. The dependent variable in columns one to three, *Ln(# All Fund Employees)*, is the log number of unique employees that ever worked for the fund. The dependent variable in columns four to six is the log number of employees with at least a partner title that ever worked for the fund. The key independent variable is *Minority Owned*, which is an indicator that equals one if at least 50 percent of the founders or senior partners of the group are Black or Hispanic. Controls include the log of the most recent fund number, *Ln(Fund Number)*; the log of the group's age, *Ln(Group Age)*; an indicator for whether the fund is a venture capital group (buyout groups are the omitted category); and *Ln(Fund Size)*, the log of the fund size. ***$p < 0.01$ denotes significance at the 1% level, **$p < 0.05$ denotes significance at the 5% level, and *$p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable: | Ln(# All Fund Employees) | | | Ln(# Partner or Higher) | | |
|---|---|---|---|---|---|---|
| Minority owned | 0.009 | 0.005 | -0.077 | -0.014 | -0.018 | -0.080 |
| × Ln(Fund Number) | (0.080) | (0.081) | (0.070) | (0.076) | (0.076) | (0.068) |
| | | | | | | |
| Ln(Fund Number) | 0.140*** | 0.147*** | 0.089*** | 0.110*** | 0.116*** | 0.083*** |
| | (0.031) | (0.030) | (0.034) | (0.027) | (0.026) | (0.027) |
| | | | | | | |
| Ln(Fund Size) | | | 0.158*** | | | 0.136*** |
| | | | (0.010) | | | (0.010) |
| | | | | | | |
| Venture Capital Fund | | | -0.005 | | | -0.027 |
| | | | (0.064) | | | (0.061) |
| | | | | | | |
| Ln(Group Age) | | | 0.066** | | | 0.017 |
| | | | (0.032) | | | (0.032) |
| Observations | 6,858 | 6,858 | 6,858 | 6,858 | 6,858 | 6,858 |
| Adjusted $R^2$ | 0.534 | 0.538 | 0.586 | 0.521 | 0.524 | 0.565 |
| Year FE? | X | X | X | X | X | X |
| State FE? | | X | X | | X | X |
| Investor FE? | X | X | X | X | X | X |

**Table A9: Association Between Minority Ownership and Number of Employees (Fund Number Less Than Five)**

This table presents coefficients from OLS regressions run at the fund level, with standard errors reported in parentheses. A unit of observation is a fund. The dependent variable in columns one to three, *Ln(# All Fund Employees)*, is the log number of unique employees that ever worked for the fund. The dependent variable in columns four to six is the log number of employees with at least a partner title that ever worked for the fund. The key independent variable is *Minority Owned*, which is an indicator that equals one if at least 50 percent of the founders or senior partners of the group are Black or Hispanic. Controls include the log of the most recent fund number, *Ln(Fund Number)*; the log of the group's age, *Ln(Group Age)*; an indicator for whether the fund is a venture capital group (buyout groups are the omitted category); and *Ln(Fund Size)*, the log of the fund size. ***$p < 0.01$ denotes significance at the 1% level, **$p < 0.05$ denotes significance at the 5% level, and *$p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable: | Ln(# All Fund Employees) | | | Ln(# Partner or Higher) | | |
|---|---|---|---|---|---|---|
| Minority owned | -0.042 | -0.016 | -0.010 | -0.005 | 0.020 | 0.020 |
| × Ln(Fund Number) | (0.104) | (0.103) | (0.078) | (0.097) | (0.096) | (0.079) |
| | | | | | | |
| Minority owned | 0.047 | 0.037 | 0.066 | 0.001 | -0.011 | 0.009 |
| | (0.071) | (0.074) | (0.069) | (0.070) | (0.072) | (0.067) |
| | | | | | | |
| Ln(Fund Number) | 0.307*** | 0.299*** | 0.112*** | 0.257*** | 0.249*** | 0.127*** |
| | (0.016) | (0.016) | (0.020) | (0.015) | (0.015) | (0.018) |
| | | | | | | |
| Ln(Fund Size) | | | 0.186*** | | | 0.164*** |
| | | | (0.006) | | | (0.006) |
| | | | | | | |
| Venture Capital Fund | | | 0.208*** | | | 0.178*** |
| | | | (0.023) | | | (0.022) |
| | | | | | | |
| Ln(Group Age) | | | 0.071*** | | | 0.012 |
| | | | (0.016) | | | (0.015) |
| Observations | 5,881 | 5,881 | 5,881 | 5,881 | 5,881 | 5,881 |
| Adjusted $R^2$ | 0.138 | 0.154 | 0.315 | 0.118 | 0.133 | 0.278 |
| Year FE? | X | X | X | X | X | X |
| State FE? | | X | X | | X | X |

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**Table A10: Association Between Minority Ownership and Number of Employees (Fund Number Less Than Five)**

This table presents coefficients from OLS regressions run at the fund level, with standard errors reported in parentheses. A unit of observation is a fund. The dependent variable in columns one to three, *# All Fund Employees/Fund Size*, is the number of unique employees that ever worked for the fund normalized by the size of the fund. The dependent variable in columns four to six is the number of employees with at least a partner or founder-level title that ever worked for the fund normalized by the fund's size. The key independent variable is *Minority Owned*, which is an indicator that equals one if at least 50 percent of the founders or senior partners of the group are Black or Hispanic. Controls include the log of the most recent fund number, *Ln(Fund Number)*; the log of the group's age, *Ln(Group Age)*; an indicator for whether the fund is a venture capital group (buyout groups are the omitted category); and *Ln(Fund Size)*, the log of the fund size. $***p < 0.01$ denotes significance at the 1% level, $**p < 0.05$ denotes significance at the 5% level, and $*p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable: | # All Fund Employees Fund Size | | | # Partners or Higher Fund Size | | |
|---|---|---|---|---|---|---|
| Minority owned | -0.225 | -0.245 | -0.238 | -0.235 | -0.254 | -0.246 |
| × Ln(Fund Number) | (0.396) | (0.399) | (0.387) | (0.411) | (0.415) | (0.402) |
| | | | | | | |
| Ln(Fund Number) | -0.067 | -0.058 | 0.230* | -0.066 | -0.059 | 0.193 |
| | (0.054) | (0.055) | (0.136) | (0.053) | (0.054) | (0.131) |
| | | | | | | |
| Minority owned | 0.385 | 0.384 | 0.355 | 0.393 | 0.389 | 0.359 |
| | (0.466) | (0.443) | (0.407) | (0.463) | (0.441) | (0.409) |
| | | | | | | |
| Ln(Fund Size) | | | -0.440*** | | | -0.396*** |
| | | | (0.108) | | | (0.104) |
| | | | | | | |
| Venture Capital Fund | | | -0.364*** | | | -0.356*** |
| | | | (0.122) | | | (0.122) |
| | | | | | | |
| Ln(Group Age) | | | 0.024 | | | 0.029 |
| | | | (0.059) | | | (0.056) |
| Observations | 5,881 | 5,881 | 5,881 | 5,881 | 5,881 | 5,881 |
| Adjusted $R^2$ | 0.002 | -0.002 | 0.077 | 0.001 | -0.004 | 0.065 |
| Year FE? | X | X | X | X | X | X |
| State FE? | | X | X | | X | X |

**Table A11: Association Between Minority Ownership and Number of Employees (Within Investor, Fund number Less Than Five)**

This table presents coefficients from OLS regressions run at the fund level, with standard errors reported in parentheses. A unit of observation is a fund. The dependent variable in columns one to three, *Ln(# All Fund Employees)*, is the log number of unique employees that ever worked for the fund. The dependent variable in columns four to six is the log number of employees with at least a partner title that ever worked for the fund. The key independent variable is *Minority Owned*, which is an indicator that equals one if at least 50 percent of the founders or senior partners of the group are Black or Hispanic. Controls include the log of the most recent fund number, *Ln(Fund Number)*; the log of the group's age, *Ln(Group Age)*; an indicator for whether the fund is a venture capital group (buyout groups are the omitted category); and *Ln(Fund Size)*, the log of the fund size. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes significance at the 5% level, and $^{*}p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable: | Ln(# All Fund Employees) | | | Ln(# Partner or Higher) | | |
|---|---|---|---|---|---|---|
| Minority owned | -0.075 | -0.078 | -0.122 | -0.068 | -0.069 | -0.104 |
| × Ln(Fund Number) | (0.106) | (0.107) | (0.100) | (0.105) | (0.105) | (0.101) |
| Ln(Fund Number) | 0.205*** | 0.210*** | 0.133*** | 0.196*** | 0.199*** | 0.139*** |
| | (0.033) | (0.033) | (0.035) | (0.030) | (0.030) | (0.033) |
| Ln(Fund Size) | | | 0.144*** | | | 0.119*** |
| | | | (0.011) | | | (0.010) |
| Venture Capital Fund | | | 0.018 | | | -0.053 |
| | | | (0.099) | | | (0.096) |
| Ln(Group Age) | | | 0.049 | | | 0.032 |
| | | | (0.036) | | | (0.035) |
| Observations | 4541 | 4541 | 4541 | 4541 | 4541 | 4541 |
| Adjusted $R^2$ | 0.556 | 0.553 | 0.591 | 0.554 | 0.552 | 0.582 |
| Year FE? | X | X | X | X | X | X |
| State FE? | | X | X | | X | X |
| Investor FE? | X | X | X | X | X | X |

**Table A12: Association Between Minority Ownership and Average Deal Size (All Deals —
PitchBook Fund Level)**

This table presents coefficients from OLS regressions run at the fund level, with standard errors reported
in parentheses. A unit of observation is a fund. The dependent variable in columns one to three, *Ln(Check
Size)*, is log average investment size of the deal for all deals that the fund participated in. The dependent
variable in columns four to six is the average deal size normalized by the size of the fund. The key
independent variable is *Minority Owned*, which is an indicator that equals one if at least 50 percent
of the founders or senior partners of the group are Black or Hispanic. Controls include the log of the
most recent fund number, *Ln(Fund Number)*; the log of the group's age, *Ln(Group Age)*; an indicator
for whether the fund is a venture capital group (buyout groups are the omitted category); and *Ln(Fund
Size)*, the log of the fund size. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes
significance at the 5% level, and $^{*}p < 0.10$ denotes significance at the 10% level. We cluster standard
errors by private capital group.

| Dependent Variable: | Ln(Check Size) | | | Check Size/ Fund Size | | |
|---|---|---|---|---|---|---|
| Minority owned | 0.154 | 0.225 | -0.076 | -0.468* | -0.398 | 0.001 |
| × Ln(Fund Number) | (0.404) | (0.355) | (0.178) | (0.275) | (0.263) | (0.335) |
| | | | | | | |
| Minority owned | -0.130 | -0.171 | -0.232* | -0.026 | -0.053 | -0.408 |
| | (0.205) | (0.200) | (0.137) | (0.382) | (0.368) | (0.296) |
| | | | | | | |
| Ln(Fund Number) | 0.496*** | 0.490*** | 0.228*** | 0.006 | -0.021 | 0.558*** |
| | (0.052) | (0.041) | (0.038) | (0.077) | (0.046) | (0.078) |
| | | | | | | |
| Ln(Fund Size) | | | 0.369*** | | | -0.957*** |
| | | | (0.014) | | | (0.052) |
| | | | | | | |
| Venture Capital Fund | | | -0.912*** | | | -1.367*** |
| | | | (0.045) | | | (0.106) |
| | | | | | | |
| Ln(Group Age) | | | -0.061** | | | -0.015 |
| | | | (0.030) | | | (0.065) |
| Observations | 7450 | 7450 | 7450 | 7450 | 7450 | 7450 |
| Adjusted $R^2$ | 0.121 | 0.204 | 0.516 | 0.013 | 0.032 | 0.292 |
| Year FE? | X | X | X | X | X | X |
| State FE? | | X | X | | X | X |

**Table A13: Top 25 Fatal Police Encounters by Newspaper Coverage**

This table lists the 25 most-publicized fatal encounters between unarmed minorities and the police and the total number of news articles covering each fatal encounter. The Number of Articles is the total number of articles in LexisNexis over a 30-day period after the event that mention the name of the deceased and either the keywords "police and death" or "police and killed." See section IV.D.1 for data sources and additional details.

| Name | Date | Number of Articles | Ethnicity | Age | Gender |
|---|---|---|---|---|---|
| George Floyd | May 25, 2020 | 37026 | Black | 46 | M |
| Michael Brown | Aug 09, 2014 | 5937 | Black | 18 | M |
| Daunte Wright | Apr 11, 2021 | 3144 | Black | 20 | M |
| Walter Scott | Apr 04, 2015 | 1342 | Black | 50 | M |
| Terence Crutcher | Sep 16, 2016 | 867 | Black | 40 | M |
| Stephon Clark | Mar 18, 2018 | 828 | Black | 23 | M |
| Jamar Clark | Nov 15, 2015 | 796 | Black | 24 | M |
| Eric Garner | Jul 17, 2014 | 622 | Black | 43 | M |
| Tony Robinson | Mar 06, 2015 | 451 | Black | 19 | M |
| Atatiana Jefferson | Oct 12, 2019 | 387 | Black | 28 | F |
| Samuel Dubose | Jul 19, 2015 | 366 | Black | 43 | M |
| Antwon Rose | Jun 19, 2018 | 365 | Black | 17 | M |
| Eric Harris | Apr 02, 2015 | 290 | Black | 44 | M |
| Akai Gurley | Nov 20, 2014 | 269 | Black | 28 | M |
| Jordan Edwards | Apr 29, 2017 | 259 | Black | 15 | M |
| Bettie Jones | Dec 26, 2015 | 241 | Black | 55 | F |
| Christian Taylor | Aug 07, 2015 | 214 | Black | 19 | M |
| Nathaniel Jones | Nov 30, 2003 | 192 | Black | 41 | M |
| Alfred Olango | Sep 27, 2016 | 189 | Black | 30 | M |
| Rigoberto Alpizar | Dec 07, 2005 | 141 | Hispanic | 44 | M |
| Andy Lopez | Oct 22, 2013 | 130 | Hispanic | 13 | M |
| Antonio Zambrano-Montes | Feb 10, 2015 | 119 | Hispanic | 35 | M |
| Ezell Ford | Aug 11, 2014 | 116 | Black | 25 | M |
| Rudy Eugene | May 26, 2012 | 107 | Black | 31 | M |
| Tyre King | Sep 14, 2016 | 107 | Black | 13 | M |

**Table A14: Association Between Minority Fundraising and Minority Chief Investment Officers (PitchBook Group-Year)**

This table presents coefficients from OLS regressions on the fundraising success of private capital groups, with standard errors reported in parentheses. The unit of analysis in columns (1) to (3) is a group-year, with the dependent variable *I(Raised New Fund)* being an indicator taking the value one in years during which the group raised at least one new fund, and zero for all other years. It takes the value zero for the first year any group enters the sample. A group first enters the sample the later of when it raises its first fund, or 2000. A group exits the sample the earlier of ten years following the year it raised its last fund, or 2021. In columns (4) to (6), we condition on years in which a new fund is raised. The dependent variable in columns four to six, *Ln(New Fund Size)*, is the size of the follow-on fund. The first fund raised by a group is not included in this analysis. The key independent variables are: *Minority Owned*, which is an indicator that equals one if at least 50 percent of the founders or senior partners of the group are Black or Hispanic; and *Minority CIO*, an indicator that equals one if at least one CIO of a public pension fund or endowment in the state where the group is headquartered is Black or Hispanic. Controls include the log of the most recent fund number, *Ln(Fund Number)*; the log of the group's age, *Ln(Group Age)*; an indicator for whether the fund is a venture capital group (buyout groups are the omitted category); and *Ln(Fund Size)*, the log of the fund size. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes significance at the 5% level, and $^{*}p < 0.10$ denotes significance at the 10% level. We cluster standard errors by private capital group.

| Dependent Variable: | I(Raised New Fund) | | | Ln(New Fund Size) | | |
|---|---|---|---|---|---|---|
| Minority CIO × Minority Owned | -0.020 | -0.008 | -0.011 | 2.407*** | 2.037*** | 0.648** |
| | (0.046) | (0.048) | (0.041) | (0.889) | (0.782) | (0.297) |
| Minority owned | 0.038 | 0.027 | 0.045 | -1.877** | -1.534** | -0.308 |
| | (0.039) | (0.040) | (0.035) | (0.770) | (0.640) | (0.278) |
| Minority CIO | 0.015** | -0.009 | -0.009 | 0.303** | 0.273** | 0.117 |
| | (0.007) | (0.010) | (0.010) | (0.123) | (0.131) | (0.077) |
| Ln(Age) | | | -0.043*** | | | 0.015 |
| | | | (0.005) | | | (0.048) |
| Ln(Fund Size) | | | 0.011*** | | | 0.611*** |
| | | | (0.002) | | | (0.022) |
| Venture Capital Fund | | | 0.027*** | | | -0.463*** |
| | | | (0.006) | | | (0.051) |
| Ln(Fund Number) | | | 0.069*** | | | 0.161*** |
| | | | (0.006) | | | (0.038) |
| Ln(Years Since Previous Fund) | | | 0.023*** | | | 0.135*** |
| | | | (0.004) | | | (0.043) |
| Observations | 26066 | 26065 | 26065 | 3637 | 3635 | 3635 |
| Adjusted $R^2$ | 0.013 | 0.018 | 0.041 | 0.028 | 0.123 | 0.573 |
| Year FE? | X | X | X | X | X | X |
| State FE? | | X | X | | X | X |

## Table A15: Association Between Minority Fundraising and Minority Chief Investment Officers (PitchBook LP-Group Level)

This table presents coefficients from OLS regressions run at the limited partner–private capital group pair level, with standard errors reported in parentheses. A unit of observation is a limited partner–private capital group pair, where we keep the first instance of a limited partner investing in a fund raised by the private capital group. We only include public pension funds and endowments in our set of LPs. We also restrict our analysis to LPs for which: PitchBook has data on at least one private capital fund investment by the LP; the LP has had a CIO during our sample period; and we are able to determine the race of the CIO. The dependent variable, *I(Minority Owned)*, is an indicator that equals one if fund the LP backs is run by a private capital group for which 50 percent of the senior partners or founders of the group are Black or Hispanic. The primary independent variable, *Minority CIO*, is an indicator for whether the CIO, in the year before the fund is raised, is Black or Hispanic. Controls include the log of the most recent fund number, *Ln(Fund Number)*; the log of the group's age, *Ln(Group Age)*; an indicator for whether the fund is a venture capital group (buyout groups are the omitted category); and *Ln(Fund Size)*, the log of the fund size. The number of observations decreases in Column (2) because we excludes states with only one fund as there is no variation within that state. Similarly, the number of observations in Column (4) is lower than Column (3) because we drop limited partners that have only made a single investment, as there is no variation within the limited partner's portfolio. $^{***}p < 0.01$ denotes significance at the 1% level, $^{**}p < 0.05$ denotes significance at the 5% level, and $^{*}p < 0.10$ denotes significance at the 10% level. We cluster standard errors by the limited partner–private capital group pair.

| Dependent Variable | I(Minority Fund) | | | |
|---|---|---|---|---|
| Minority CIO | 0.051*** | 0.049*** | 0.042*** | -0.014 |
| | (0.017) | (0.016) | (0.016) | (0.030) |
| Ln(Fund Number) | | | -0.012** | -0.007 |
| | | | (0.006) | (0.006) |
| Ln(Fund Size) | | | -0.013*** | -0.011** |
| | | | (0.004) | (0.004) |
| Venture Capital Fund | | | -0.088*** | -0.087*** |
| | | | (0.012) | (0.013) |
| Ln(Group Age) | | | -0.017** | -0.023*** |
| | | | (0.007) | (0.007) |
| Observations | 2654 | 2648 | 2648 | 2626 |
| Adjusted $R^2$ | 0.039 | 0.067 | 0.097 | 0.137 |
| Has Year FE? | X | X | X | X |
| State FE? | | X | X | X |
| LP FE? | | | | X |

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**Table A16:** Which Executives are listed on Form D?

This table summarizes the prevalence of various titles of employees of private capital groups in PitchBook and Form D filings. The (*Full Title*) of employees is provided by PitchBook. This table uses a sample of groups in the Form D sample that we are able to match to PitchBook. *Total* is the unique count of all employees working for the groups in the matched sample, according to PitchBook. *PitchBook* is the count of executives that are in PitchBook but not in the Form D filing. *PitchBook-FormD* are the employees listed in the Form D filing that we are able to match to the set of employees in PitchBook. The matching procedure consists of two step. First, we match the private capital group filing the Form D to PitchBook using fuzzy name matching. Second, we match the individuals listed on the Form D filing to the set of employees working at the private capital group according to PitchBook. This match is done with fuzzy name matching. We verify all matches by hand to ensure accuracy, both when matching private capital groups on name and state, and when matching employees within a group.

| | PitchBook | PitchBook-FormD | Total | PercentFormD |
|---|---|---|---|---|
| *Full Title* | | | | |
| All | 2732 | 312 | 3044 | 10.0 |
| Co-Founder & Managing Partner | 67 | 134 | 201 | 67.0 |
| Managing Partner | 82 | 77 | 159 | 48.0 |
| Partner | 407 | 49 | 456 | 11.0 |
| Managing Director | 178 | 33 | 211 | 16.0 |
| Principal | 378 | 10 | 388 | 3.0 |
| Vice President | 324 | 6 | 330 | 2.0 |
| Analyst | 171 | 1 | 172 | 1.0 |
| Senior Associate | 243 | 1 | 244 | 0.0 |
| Venture Partner | 243 | 1 | 244 | 0.0 |
| Associate | 639 | 0 | 639 | 0.0 |

## Table A17: Examples of Groups that Failed to Raise a First-time Fund

This table tabulates examples of groups that filed a Form D filing while attempting to raise their first fund, but failed to raise it. A large limited partner provided us with a list of groups that failed to raise a first-time fund, which we match to Form D. We last verified these links on 08/12/2022.

| FundName | Link to Form D Filing |
|---|---|
| Allegory Venture Partners Fund I | https://www.sec.gov/Archives/edgar/data/0001650228/000090571815000733/xslFormDX01/primary_doc.xml |
| Bespoke Fund One | https://www.sec.gov/Archives/edgar/data/0001636199/000090571815000321/xslFormDX01/primary_doc.xml |
| CART Venture Fund | https://www.sec.gov/Archives/edgar/data/0001619378/000161937814000001/xslFormDX01/primary_doc.xml |
| Chasm Capital Fund Management | https://www.sec.gov/Archives/edgar/data/0001604845/000160484514000002/xslFormDX01/primary_doc.xml |
| Chrysalix RoboValley Fund | https://www.sec.gov/Archives/edgar/data/0001753210/000175321018000002/xslFormDX01/primary_doc.xml |
| Crystal Tech Fund | https://www.sec.gov/Archives/edgar/data/0001600385/000160038514000001/xslFormDX01/primary_doc.xml |
| DGNL Ventures I | https://www.sec.gov/Archives/edgar/data/0001671407/000167140716000002/xslFormDX01/primary_doc.xml |
| Expansive Ventures I | https://www.sec.gov/Archives/edgar/data/0001628598/000162859814000001/xslFormDX01/primary_doc.xml |
| Fin Venture Capital I | https://www.sec.gov/Archives/edgar/data/1742196/000174219618000001/xslFormDX01/primary_doc.xml |
| HighGear Ventures I | https://www.sec.gov/Archives/edgar/data/1710311/000171031117000001/xslFormDX01/primary_doc.xml |
| Liquidax Global Exchange Fund I | https://www.sec.gov/Archives/edgar/data/1704556/000163658717000008/xslFormDX01/primary_doc.xml |
| McKinley Technology Equity Fund | https://www.sec.gov/Archives/edgar/data/1430241/000143024111000001/xslFormDX01/primary_doc.xml |
| MFV Partners Fund I | https://www.sec.gov/Archives/edgar/data/1728837/000172883718000001/xslFormDX01/primary_doc.xml |
| Moonshots Capital Fund 1 | https://www.sec.gov/Archives/edgar/data/1714616/000171461617000002/xslFormDX01/primary_doc.xml |
| Next Play Capital I | https://www.sec.gov/Archives/edgar/data/1620327/000162032714000001/xslFormDX01/primary_doc.xml |
| Novus Via Fund I | https://www.sec.gov/Archives/edgar/data/1572625/000157262515000002/xslFormDX01/primary_doc.xml |
| Pure Venture Fund I | https://www.sec.gov/Archives/edgar/data/1633543/000090572915000049/xslFormDX01/primary_doc.xml |
| Single Oak Venture Fund I | https://www.sec.gov/Archives/edgar/data/0001634817/000149315215000678/xslFormDX01/primary_doc.xml |
| Syno Ventures | https://www.sec.gov/Archives/edgar/data/0001635624/000163562415000001/xslFormDX01/primary_doc.xml |
| Townsend Battery Partners | https://www.sec.gov/Archives/edgar/data/0001593506/000159350613000001/xslFormDX01/primary_doc.xml |
| Vestcom Venture I | https://www.sec.gov/Archives/edgar/data/1617919/000147793214004793/xslFormDX01/primary_doc.xml |
| Visionary Private Equity Group I | https://www.sec.gov/Archives/edgar/data/1588490/000158849018000001/xslFormDX01/primary_doc.xml |
| White Oak Innovestment Fund I | https://www.sec.gov/Archives/edgar/data/1596966/000159696614000001/xslFormDX01/primary_doc.xml |