INVESTMENT FUNDS, INEQUALITY, AND SCARCITY OF OPPORTUNITY

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ABSTRACT

Investment funds are powerful forces today, not only in financial markets, but in broader social contexts as well. Investment fund principals have assembled vast amounts of wealth, particularly in the private fund arena. The activities of investment funds make them important gatekeepers of economic and other opportunities in a world in which opportunities for many are seemingly more scarce. Investment funds may play an important role in selecting companies for investment, which has an important impact on which companies, which people, and which ideas receive funding. Although investment fund principals may see these decisions as being neutral ones, they often are not. Who such principals are, how they select colleagues, and how they make investment and other decisions are of critical importance for the availability and allocation of varied types of opportunities.

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INTRODUCTION

Investment funds, which include mutual funds and other registered investment companies, private equity funds, and hedge funds, have unparalleled reach today. The activities of such funds raise a broad range of questions. Investment funds may act as gatekeepers for varied types of opportunities. This gatekeeping role is particularly evident today in a world of pervasive sentiments that opportunities for many are increasingly scarce.

The power, scope, and wealth of investment funds have made their activities subject to increasing scrutiny. In the private equity buyout fund arena, for example, questions have been raised concerning the impact of fund activities on employment, corporations, the broader economy, and society more generally. Investment funds may also be key intermediaries between those seeking funds and those with funds to invest. As intermediaries, investment funds are important gatekeepers to economic and other opportunities.

Perceptions of a scarcity of opportunity unfold in contexts in which private investment funds, particularly private equity and hedge funds, have generated significant wealth for their principals. The rise of private equity and hedge funds has led to the creation of a class of highly compensated market participants. Hedge fund managers receive a management fee of 1-2% or more annually based on investments under management and incentive fees (carried interest) that typically range from 15-25% of annual realized performance.[1] Private equity compensation is similarly structured, with management fees of 1.5-2.5% annually and a carried interest allocation of 20% of net profit.[2] These percentages translate in dollar terms into significant payouts for private fund managers.

Since sometime around 2012, a statistic comparing hedge fund managers and kindergarten teachers has been used to draw attention to broader questions of income inequality. In 2014, a year of less-than-stellar hedge fund performance, the twenty-five most successful hedge fund managers earned $11.62 billion, which gave the men on this list an average of $464 million.[3] This $11.62 billion was noted to be more than the aggregate salaries of all kindergarten teachers in the United States (estimated to be $8.5 billion in aggregate).[4]

High levels of compensation for private fund managers are far from a new phenomenon. James Simons, a leading hedge fund manager who profited from

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[1] FRANÇOIS-SERGE LHABITANT, HANDBOOK OF HEDGE FUNDS 30 (2006).

[2] JACK S. LEVIN & DONALD E. ROCAP, STRUCTURING VENTURE CAPITAL, PRIVATE EQUITY, AND ENTREPRENEURIAL TRANSACTIONS ¶1002.1, at 10-1; ¶1004, at 10-1 (2015); Victor Fleischer, *Two and Twenty: Taxing Partnership Profits in Private Equity Funds*, 83 N.Y.U. L. REV. 1, 2 (2008).

[3] Philip Bump, *The 25 Top Hedge Fund Managers Earn More than All Kindergarten Teachers Combined*, WASH. POST: THE FIX (May 10, 2016), https://www.washingtonpost.com/news/the-fix/wp/2015/05/12/the-top-25-hedge-fund-managers-earn-more-than-all-kindergarten-teachers-combined/?utm_term=.7965165d60ea.

[4] *Id.*

shorting subprimes, had earnings of $1.7 billion in 2006.[5] Five hedge fund managers earned more than $1 billion in 2007.[6] The top twenty-five hedge fund managers earned $14 billion in 2006, $16 billion in 2007, and $21.15 billion 2013.[7] In 2007, the top fifty hedge fund managers earned $29 billion, or an average of $581 million each.[8]

The immense wealth generated by investment funds, particularly private funds, highlights broader trends that have led to increased scrutiny of income inequality. Attention has also been given in some instances to questions of diversity. The identity of investment fund principals draws attention to the composition of their portfolios. In the private equity venture capital arena, for example, we have seen a tendency of fund principals to invest primarily in companies run by people with similar demographic profiles. Given the importance of venture capital in the broader economy, this lack of diversity has broader implications that should be examined. Scrutiny of investment fund activities today comes from both within and outside investment funds themselves. Part I of this Article discusses investment funds in relation to questions of diversity, inequality, and scarcity of opportunity, discussing statements made in 2018 and 2019 by Larry Fink, Founder, Chief Executive Officer, and Chairman of BlackRock. Part II examines implications of increased concentration in the investment fund realm, while Part III assesses questions related to diversity and diversification in investments and considers conceptualizations of risk and the relationship between diversity and performance.

I. INEQUALITY AND SCARCITY OF OPPORTUNITY

In early 2018, Larry Fink, Founder, Chief Executive Officer, and Chairman of BlackRock, a leading global investment management firm, released his Annual Letter to CEOs,[9] which is typically sent to CEOs of the largest public

[5] Heidi N. Moore, *How the 10 Richest Hedge Fund Managers Got That Way*, WALL STREET J.: DEAL J. BLOG, (Apr. 16, 2008), http://blogs.wsj.com/deals/2008/04/16/how-filthy-rich-hedge-fund-managers-got-that-way/?mod=WSJBlog.

[6] Dan Seymour, *Hedge-Fund Traders Rake in $2.9 Billion*, SEATTLE TIMES (Apr. 17, 2008, 12:00 AM), https://www.seattletimes.com/business/hedge-fund-traders-rake-in-29-billion/.

[7] Robert Frank, *Record Earnings for Hedge Funders*, WALL STREET J.: WEALTH REPORT (Apr. 14, 2008, 11:32 AM), http://blogs.wsj.com/wealth/2008/04/16/record-earnings-for-hedge-funders/ (discussing 2007 hedge fund earnings); Moore, *supra* note 5 (discussing 2006 hedge fund manager earnings); Alexandra Stevenson, *Hedge Fund Moguls' Pay Has the 1% Looking Up*, N.Y. TIMES, May 6, 2014, at B1.

[8] Sam Pizzigati, *Hedge Fund Managers Turning the Woes of the World into Billion-Dollar Paydays*, ALTERNET (Apr. 24, 2008), https://www.alternet.org/2008/04/hedge_fund_managers_turning_the_woes_of_the_world_into_billion-dollar_paydays/.

[9] Larry Fink, *Larry Fink's 2018 Letter to CEOs: A Sense of Purpose*, BLACKROCK, https://www.blackrock.com/corporate/investor-relations/2018-larry-fink-ceo-letter [https://perma.cc/5RMQ-XMJW] (last visited Apr. 16, 2019) (writing to CEOs about "the most pressing issues facing investors today").

companies in the world. This letter received particular attention in 2018 because Mr. Fink urged companies to make a positive contribution to society: "To prosper over time, every company must not only deliver financial performance, but also show how it makes a positive contribution to society. Companies must benefit all of their stakeholders, including shareholders, employees, customers, and the communities in which they operate."[10]

One year later in his 2019 annual letter, Mr. Fink discussed what he characterized as the inextricable link between profit and purpose.[11] Fink's attention to the social purpose of companies takes place in a broader context in which the role and responsibilities of companies are issues of discussion and at times contestation.[12] The corporate entity form, which developed to a significant degree during the nineteenth and twentieth centuries,[13] has become a dominant social institution globally.[14] Discussions about the role of companies in society underscore the success of the corporation as an entity form.[15]

Although concerns about the power of corporations are not new,[16] global debates about the role and responsibilities of corporations unfold today at a time

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[10] *Id.*

[11] Larry Fink, *Larry Fink's 2019 Letter to CEOs: Purpose & Profit*, BLACKROCK, https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter [https://perma.cc/4Q7F-474P] (last visited Apr. 16, 2019).

[12] LYNN STOUT, THE SHAREHOLDER VALUE MYTH: HOW PUTTING SHAREHOLDERS FIRST HARMS INVESTORS, CORPORATIONS, AND THE PUBLIC 10 (2012) (arguing that "shareholder value ideology is just that—an ideology, not a legal requirement or a practical necessity of modern business life").

[13] The Companies Act 1862, 25 & 26 Vict. c.89, § 6 (Eng.) ("Any seven or more persons associated for any lawful purpose may, by subscribing their names to a Memorandum of Association, and otherwise complying with the requisitions of this Act in respect of registration, forms an incorporated company, with or without limited liability."); David Foucaud, *The Impact of the Companies Act of 1862 Extending Limited Liability to the Banking and Financial Sector in the English Crisis of 1866*, 62 REVUE ÉCONOMIQUE 867, 868 (2011) ("[The Companies Act 1862 was the] culmination of a series of changes removing all obstacles to incorporation. Indeed, in just six years' time, English lawmakers eliminated virtually all constraints: England went from a system of tight restrictions to one of the most permissive in Europe.").

[14] JOHN MICKLETHWAIT & ADRIAN WOOLDRIDGE, THE COMPANY: A SHORT HISTORY OF A REVOLUTIONARY IDEA, at xv (2003) ("Indeed, for most of us, the company's only real rival for our time and energy is the one that is taken for granted—the family."); David McBride, *General Corporation Laws: History and Economics*, 74 LAW & CONTEMP. PROBS. 1, 2 (2011) ("Within the past 150 years, non-governmental corporations have become the principal social institution by which business and economic activity has been conducted—whether for-profit, not-for-profit, or for charitable purposes.").

[15] MICKLETHWAIT & WOOLDRIDGE, *supra* note 14, at xv ("The most important organization in the world is the company: the basis of the prosperity of the West . . . .").

[16] Leonardo Davoudi, Christopher McKenna & Rowena Olegario, *The Historical Role of the Corporation in Society*, 6 J. BRIT. ACAD. 17, 17 (2018) ("This article demonstrates that concerns about corporate power have a long history, and that societies over time have designed a variety of legal systems and forms of corporate governance to address these concerns.").

of significant concern about income inequality.[17] Fink's 2018 letter directly addresses questions related to inequality:

> Since the financial crisis, those with capital have reaped enormous benefits. At the same time, many individuals across the world are facing a combination of low rates, low wage growth, and inadequate retirement systems. Many don't have the financial capacity, the resources, or the tools to save effectively; those who are invested are too often over-allocated to cash. For millions, the prospect of a secure retirement is slipping further and further away – especially among workers with less education, whose job security is increasingly tenuous. I believe these trends are a major source of the anxiety and polarization that we see across the world today.[18]

Fink's 2018 letter acknowledges the struggles faced by many individuals in the United States and elsewhere, for whom real and robust economic and other opportunities appear increasingly scarce and distant possibilities. This scarcity of opportunity reflects the reality or perception (or both) that members of certain groups are being left behind even in contexts of robust economic growth. The scarcity of opportunity reflects a policy environment that has largely failed to address diminishing opportunities for social mobility and advancement.[19]

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[17] *See, e.g.*, THOMAS PIKETTY, CAPITAL IN THE TWENTY-FIRST CENTURY 421 (Arthur Goldhammer trans., 2017) (explaining that "if the best paid individuals set their own salaries, (at least to some extent), the result may be greater and greater inequality"); Mary C. Waters, *Racial and Ethnic Diversity and Public Policy*, *in* THE NEW GILDED AGE: THE CRITICAL INEQUALITY DEBATES OF OUR TIME 230, 232 (David B. Grusky & Tamar Kricheli-Katz eds., 2012) ("[G]rowing income inequality, declining wages for those with the least education, and the historical legacies of slavery and racism create economic and social conditions that disproportionately affect African Americans."); Nicholas Bloom, *Corporations in the Age of Inequality*, HARV. BUS. REV., Dec. 19, 2017 ("If we want to truly understand income inequality — if we want to mitigate it and its pernicious effects — we must look beyond CEO compensation and tax policy and consider the role played by firms and their hiring and compensation policies for ordinary, non-millionaire workers.").

[18] Fink, *supra* note 9.

[19] Liz Alderman, *The Middle Class Shrinks in Europe*, N.Y. TIMES, Feb. 16, 2019, at B1 (discussing declining middle-class in Europe and the "unprecedented vulnerability" of middle-class households in Europe, noting that for such households, "risk of falling down the economic ladder is greater than their chances of moving up"); Michael Kimmelman, *France's Yellow Vests Reveal a Crisis of Mobility in All* Its *Forms*, N.Y. TIMES, Dec. 21, 2018, at A4 (analyzing Yellow Vest protests over gas tax in France); Alana Semuels, *The Decline of Social Mobility in the United States*, ATLANTIC (July 14, 2016), https://www.theatlantic.com/business/archive/2016/07/social-mobility-america/491240/ ("It's not an exaggeration: It really is getting harder to move up in America. Those who make very little money in their first jobs will probably still be making very little decades later, and those who start off making middle-class wages have similarly limited paths. Only those who start out at the top are likely to continue making good money throughout their working lives."); Michael Carr & Emily Wiemers, *The Decline in Lifetime Earnings Mobility in the U.S.: Evidence from Survey-Linked Administrative Data* 3 (Wash. Ctr. for Equitable Growth, Working Paper, 2016), https://equitablegrowth.org/working-papers/the-decline-in-lifetime-earnings-mobility-in-the-u-s-evidence-from-survey-linked-administrative-data/ ("Quite in contrast with the

Groups that might experience the scarcity of opportunity include those who have been historically marginalized and who are thus intimately familiar with a world of persistent and pervasive inequality and scarcity of opportunity. For example, in the United States, ethnic and racial hierarchies of wealth are widespread: between 2013 and 2016, the median and mean net worth of African American families ($17,600 and $138,200, respectively), was a fraction of that of white families ($171,000 and $933,700, respectively), the median and mean net worth of Latino families was $20,700 and $191,200, and "all respondents reporting more than one racial identification—have lower net worth than white families but higher net worth than black and Hispanic families."[20]

In addition, in a world of increasing wealth inequality and changing societal, economic, and work conditions driven in part by technological innovation and broader digital economy trends,[21] scarcity of opportunity is expanding and is

existing literature, our results show that increases in inequality since the 1980s have been coupled with declines in lifetime earnings mobility. Summary measures show that mobility has declined for men and women and for college-educated workers. Transition matrices also show declining mobility for workers with less education. Across all subgroups, declines in overall mobility over time are largely the result of a decreasing likelihood of moving from the middle to the top of the earnings distribution over a working lifetime. Declines in middleclass upward mobility are consistent with the polarization in job growth and with rising inequality at the top of the earnings distribution and is particularly problematic in the presence of declining median wages." (citation omitted)). *See generally* OECD, UNDERSTANDING THE SOCIO-ECONOMIC DIVIDE IN EUROPE: BACKGROUND (2017), https://www.oecd.org/els/soc/cope-divide-europe-2017-background-report.pdf [https://perma.cc/T33U-C7AM].

[20] Lisa J. Dettling et al., *Recent Trends in Wealth-Holding by Race and Ethnicity: Evidence from the Survey of Consumer Finances*, FEDS NOTES (Sept. 27, 2017), https://www.federalreserve.gov/econres/notes/feds-notes/recent-trends-in-wealth-holding-by-race-and-ethnicity-evidence-from-the-survey-of-consumer-finances-20170927.htm [https://perma.cc/C29F-Y76X].

[21] Gabriel Zucman, *Global Wealth Inequality* 14-15 (Nat'l Bureau Econ. Research, Working Paper No. 25462, 2019), http://www.nber.org/papers/w25462.pdf ("U.S. wealth concentration seems to have returned to levels last seen during the Roaring Twenties. . . . The two sources currently available to measure wealth inequality in the United States find that the top 1% owns about 40% of total household wealth. . . . In the [Survey of Consumer Finances ("SCF")], the share of total wealth owned by the top 1% has increased by 9 points since 1989 and by 10 points when including the Forbes 400; in capitalized income estimates it has increased by 11 points. The share of wealth owned by the bottom 90% has collapsed in similar proportions in the two datasets (-10 points in both the SCF and capitalized income data)."); Fred Wilson, *Capitalism and Inequality*, AVC (Jan. 23, 2019), https://avc.com/2019/01/capitalism-and-inequality/ [https://perma.cc/43CW-R5JX] ("I believe that technological revolutions, like the industrial revolution and the information revolution, create opportunities for entrepreneurs to reimagine how the economy should operate. Those entrepreneurs, like Rockefeller, Carnegie, Morgan, Bezos, Page, Zuckerberg, build very powerful monopolies and amass billions. As these revolutions reimagine how the economy should operate, many people lose jobs, can't find jobs, find themselves in lower paying jobs, and there is real dislocation that results. And you get this 'immoral wealth imbalance.' . . . I am not for the emerging progressive Robin Hood narrative. I am certainly not for the entrenched

increasingly a tangible presence for members of groups who may not have previously recognized or acknowledged its impact. Such groups include people in varied work contexts, such as workers in diminishing industrial sectors, and denizens of particular regions.[22] A 2019 poll commissioned by the World Economic Forum highlights fairly widespread global sentiments about a lack of social mobility, particularly in developed countries.[23] In the United States, for example, only 10% of respondents indicated that it was extremely common for someone to start poor, work hard, and become rich, while 26% said it was somewhat common.[24] A majority of people in most regions of the world indicated that their government was doing too little to ensure that opportunities were available to all groups of people.[25]

conservative Let Them Eat Cake narrative. I am for a new narrative that understands that everything must change if we are to find ways to support everyone in our society.").

[22] CLARA HENDRICKSON, MARK MURO & WILLIAM A. GALSTON, BROOKINGS INST., COUNTERING THE GEOGRAPHY OF DISCONTENT: STRATEGIES FOR LEFT-BEHIND PLACES 12 (Nov. 2018), https://www.brookings.edu/wp-content/uploads/2018/11/2018.11_Report_Countering-geography-of-discontent_Hendrickson-Muro-Galston.pdf [https://perma.cc/YVX3-SG6S]; ROBERT WUTHNOW, THE LEFT BEHIND: DECLINE AND RAGE IN RURAL AMERICA 1-4 (2018); Mark Ferenchik & Mark Williams, *The Great Divide: Many Ohio Towns Left Behind Despite Strengthening Economy*, COLUMBUS DISPATCH (Dec. 16, 2018, 7:58 AM), https://www.dispatch.com/news/20181216/great-divide-many-ohio-towns-left-behind-despite-strengthening-economy; Karen A. Tramontano, *America Is Failing Workers Left Behind by the New Economy*, WASH. MONTHLY (Mar. 7, 2017), https://washingtonmonthly.com/2017/03/07/america-is-failing-workers-left-behind-by-the-new-economy/ [https://perma.cc/2NAT-CF44].

[23] SAP & QUALTRICS, GLOBALIZATION 4.0: THE HUMAN EXPERIENCE 25 (Jan. 2018), http://www3.weforum.org/docs/WEF_globalization4_Jan18.pdf [https://perma.cc/BT9K-5BK2].

[24] *Id.*

[25] *Id.*

Scarcity of opportunity may be apparent in a range of areas, including lack of access to and existing funding models for education,[26] labor market disruption,[27] insufficient affordable housing,[28] lack of available opportunities for one's

[26] DEMOCRATIC STAFF OF U.S. CONG. J. ECON. COMM., 115TH CONG., THE COLLEGE AFFORDABILITY CRISIS IN AMERICA 1 (Sen. Martin Heinrich, Ranking Member, 2017), https://www.jec.senate.gov/public/_cache/files/5270bffa-c68e-44f0-ac08-693485083747/the-college-affordability-crisis-in-america.pdf [https://perma.cc/F5AZ-RCBT] ("College is not the only road to the American Dream, but it is a proven one. With each successive degree, graduates are more likely to be in the workforce, to be employed, and to earn more. Yet, as the importance of a college degree has increased, so has the cost of one. College prices have soared across the board, at two-year and four-year schools, and at both public and private institutions. This leaves college financially out of reach for many Americans, puts a large financial burden on those that do attend, and leaves many students with high levels of debt." (citation omitted)); *see also* EDBUILD, $23 BILLION 4 (Feb. 2019), https://edbuild.org/content/23-billion/full-report.pdf [https://perma.cc/MHY7-ENNA] ("Nationally, predominantly white school districts get $23 billion more than their nonwhite peers, despite serving a similar number of children. White school districts average revenue receipts of almost $14,000 per student, but nonwhite districts receive only $11,682. That's a divide of over $2,200, on average, per student.").

[27] OECD, NEW MARKETS AND NEW JOBS IN THE DIGITAL ECONOMY (2016), https://www.oecd.org/internet/ministerial/meeting/New-Markets-and-New-Jobs-discussion-paper.pdf [https://perma.cc/7R3S-7KW7] ("While it creates new job opportunities, the digital economy also destroys jobs in sectors with more scope for automation and slower growth in demand, such as manufacturing, retail and finance. This process affects both low- and high-skill jobs in routine occupations. Research by the OECD and others has shown that, historically, higher productivity resulting from technological advances progressively translates into lower prices, higher final demand and higher employment, and eventually compensates for the initial job displacement. This is a lengthy process, however, and exposes some workers to the risk of prolonged unemployment and/or income loss.").

[28] J. Ronald Terwilliger, *Solving the Affordable Housing Crisis: The Key to Unleashing America's Potential*, 26 J. AFF. HOUS. & COMM. DEV. L. 255, 255 (2017) ("As someone who has worked in the homebuilding industry for more than forty-five years, I have never seen the housing situation more desperate. The combination of rising rents and unsustainable housing costs is wreaking havoc on families across America. Inexplicably, the affordable housing crisis is generally an afterthought in our public discourse. Health care, tax reform, infrastructure, and the latest political scandals dominate the attention of lawmakers in Washington. Yet the affordable housing crisis has a very real impact on millions of our fellow citizens and responding resolutely to it is profoundly important for our nation's economy and future prosperity."); Glenn Thrush, *Housing Crisis Grows as HUD Sits on Sideline*, N.Y. TIMES, July 28, 2018, at A1 ("The country is in the grips of an escalating housing affordability crisis. Millions of low-income Americans are paying 70 percent or more of their incomes for shelter, while rents continue to rise and construction of affordable rental apartments lags far behind the need.").

children,[29] low wages,[30] low growth,[31] lack of retirement security,[32] high levels of indebtedness, including from loans taken out to finance education,[33] limited

[29] *See* Amber Narayan & Roy Van der Weide, *This Is How Your Parents Affect Your Social Mobility*, WORLD ECON. F. (July 3, 2018), https://www.weforum.org/agenda/2018/07/intergenerational-mobility-across-the-world-where-socioeconomic-status-of-parents-matters-the-most-and-least [https://perma.cc/9REY-AGEF] ("[L]ower intergenerational mobility (or higher inequality of opportunity) tends to be concentrated in the lagging areas of the US . . . .").

[30] *See* Amanda Novello & Jeff Madrick, *11 Ways American Workers Are Falling Behind the Rest of the World*, CENTURY FOUND. (Sept. 7, 2018), https://tcf.org/content/commentary/11-ways-american-workers-are-falling-behind-the-rest-of-the-world/?agreed=1 [https://perma.cc/8J8W-7XNN] ("U.S. employment has grown for thirty-one straight quarters, since late 2010. For only the fifth time in the post-World War II period, the unemployment rate is now below 4 percent. However, the link between low unemployment and wage growth has eroded. Americans' wages have fallen from 64 percent of GDP to 58 percent from 1980 to 2016. Median wages have stagnated for all income levels except the very top, and the American poverty rate is almost the highest in the rich world. The poor income performance for most Americans has reshaped the nation, contributing to middle-class bitterness, a high poverty rate, and a dispirited electorate.").

[31] *See* Neil Irwin, *A Low-Growth World: One Key to Persistent Economic Anxiety*, N.Y. TIMES, Aug. 7, 2016, at A1 ("One central fact about the global economy lurks just beneath the year's remarkable headlines: Economic growth in advanced nations has been weaker for longer than it has been in the lifetime of most people on earth."); David J. Lynch, *Economic Growth Is Slowing All Around the World*, WASH. POST (Dec. 25, 2018), https://www.washingtonpost.com/business/economy/economic-growth-is-slowing-all-around-the-world/2018/12/25/e2337206-0491-11e9-b5df-5d3874f1ac36_story.html?utm_term=.db52f00fea7a ("A global economy that until recently was humming has broken down, a sharp contrast to the picture just a year ago when the world was experiencing its best growth since 2010 and seemed poised to do even better.").

[32] *See* Teresa Ghilarducci & Tony James, *Americans Haven't Saved Enough for Retirement. What Are We Going to Do About It?*, HARV. BUS. REV. (Mar. 28, 2018), https://hbr.org/2018/03/americans-havent-saved-enough-for-retirement-what-are-we-going-to-do-about-it ("[M]any workers are left with insufficient nest eggs for retirement and won't be able to maintain the economic position they achieved while working.").

[33] *See* FED. RESERVE BANK OF N.Y., CTR. FOR MICROECONOMIC DATA, QUARTERLY REPORT ON HOUSEHOLD DEBT AND CREDIT: 2018: Q4, at 2 (Feb. 2019), https://www.newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/hhdc_2018q4.pd5 [https://perma.cc/E4UG-WFNT] (noting increases in aggregate household debt balances, which are $869 billion or 6.9% higher than the previous peak of $1.68 trillion in the third quarter of 2008); Anne Helen Petersen, *Here's Why So Many Americans Feel Cheated By Their Student Loans*, BUZZFEED NEWS (Feb. 9, 2019, 10:31 AM), https://www.buzzfeednews.com/article/annehelenpetersen/student-debt-college-public-service-loan-forgiveness [https://perma.cc/SBK5-BVVX] ("There's a reason our current debt situation has been dubbed a 'student loan crisis': It foreshadows radical shifts in the way millions of Americans, most of them still in early adulthood, will be able to participate in the economy, in society, in the workplace. For many of us, student debt means delaying — if not entirely forgoing — homeownership, marriage, and parenthood. This new form of social stratification — between those who have student debt, and those who do not — will have ramifications for generations to come.").

access to finance on nonexploitative terms,[34] limited access to healthcare,[35] inadequate transportation and other infrastructure,[36] and other circumstances, including those described in Fink's 2018 letter. In the United States, scarcity of opportunity contributes to increasing economic and financial instability for a significant portion of the population.[37]

Scarcity of opportunity exists in a time of almost unparalleled plenty, at least for some, in an era that has been likened to a new gilded age.[38] The 2018 Wealth-X Billionaire Census notes that billionaire wealth "surged by 24% to a record level in 2017."[39] Billionaire wealth may also increase economic concentration:

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[34] *See* SUSANNA MONTEZEMOLO, CTR. FOR RESPONSIBLE LENDING, PAYDAY LENDING ABUSES AND PREDATORY PRACTICES 2 (Sept. 2013), https://www.responsiblelending.org/state-of-lending/reports/10-Payday-Loans.pdf [https://perma.cc/6SN2-QP5H] ("Payday loans—high-cost small loans averaging $350 that usually must be repaid in a single payment after two weeks—are designed to create a long-term debt trap. . . . Payday loans create a debt treadmill that makes struggling families worse off than they were before they received a payday loan."); Thomas B. Edsall, *Making Money Off the Poor*, N.Y. TIMES: OPINIONATOR (Sept. 17, 2013, 10:48 PM), https://opinionator.blogs.nytimes.com/2013/09/17/making-money-off -the-poor/ [https://perma.cc/SC6V-B6LX] ("In the current political climate, there is little prospect for a major initiative to improve life chances for those at the bottom. But there is more we can do: enact restraints on predatory lending and corrupt eviction procedures, for one. Even more important would be to revive public discussion about the multiple impediments that restrict opportunity for those who are already confronted with hurdles to advancement far higher than those facing the affluent.").

[35] *See Key Facts about the Uninsured Population*, HENRY J. KAISER FAMILY FOUND. (Dec. 7, 2018), https://www.kff.org/uninsured/fact-sheet/key-facts-about-the-uninsured-population [https://perma.cc/2VA4-PNTQ]; Robin Warshaw, *Health Disparities Affect Millions in Rural U.S. Communities*, AAMC NEWS (Oct. 31, 2017), https://news.aamc.org/patient-care/article/health-disparities-affect-millions-rural-us-commun/ [https://perma.cc/9ALN-6NB2]. *See generally* NAT'L RESEARCH COUNCIL & INST. OF MED. OF NAT'L ACADS., U.S. HEALTH IN INTERNATIONAL PERSPECTIVE: SHORTER LIVES, POORER HEALTH (Steven H. Woolf & Laudan Aron, eds., 2013).

[36] *See* Mikayla Bouchard, *Transportation Emerges as Key to Escaping Poverty*, N.Y. TIMES, May 7, 2015, at A3; Jenny Hyde, *Transportation: The Overlooked Poverty Problem*, SHARED JUSTICE (Mar. 10, 2016), http://www.sharedjustice.org/domestic-justice/2016/3/10/transportation-the-overlooked-poverty-problem [https://perma.cc/5YRB-2GZ3].

[37] Vann R. Newkirk II, *The Shutdown Showed How Precarious Americans' Finances Really Are*, ATLANTIC (Jan. 29, 2019), https://www.theatlantic.com/politics/archive/2019/01/shutdown-laid-bare-americas-financial-precarity/581539/?utm_source=newsletter&utm_medium=email&utm_campaign=politics-daily-newsletter&utm_content=20190129&silverid-ref=MzEwMTkxNDcyNDc2S0.

[38] *See* Tom Wheeler, *Who Makes the Rules in New Gilded Age?: Lessons from the Industrial Age Inform the Information Age*, BROOKINGS (Dec. 12, 2018), https://www.brookings.edu/research/who-makes-the-rules-in-the-new-gilded-age/ [https://perma.cc/BHA3-BHF7] ("Today we live in the new Gilded Age: technology-driven innovations have again improved daily life while creating great wealth, inequality of circumstances, non-competitive markets, and viral deceit.").

[39] *The Wealth-X Billionaire Census 2018*, WEALTH-X (May 15, 2018), https://www.wealthx.com/report/the-wealth-x-billionaire-census-2018/ [https://perma.cc/FX7C-J9HC].

of the 143 technology billionaires in the world, half live in Silicon Valley.[40] Notably, billionaire wealth in Silicon Valley exists alongside significant scarcity of opportunity.[41] Because wealth impacts behavior, increasing wealth and economic concentration may have a broader societal impact that may not be adequately considered from a policy perspective. In Silicon Valley and elsewhere, "unicorns"[42] and other well-funded technology companies celebrate breaking things and disruption,[43] often without taking sufficient account of the human costs of disruption and its impact on scarcity of opportunity. "Sharing economy" companies, while drawing vital attention to the need to update rules and regulations to accommodate changing technologies and other circumstances, seem to demonstrate a disregard for regulatory compliance more generally.[44] Theranos, a failed Silicon Valley unicorn company, made false claims about its blood detection technology that have led to a stream of books, articles, podcasts, and films about the fraud,[45] as well as criminal charges against founder Elizabeth Holmes and former president Ramesh "Sunny" Balwani.[46]

[40] Theodore Schleifer, *There Are 143 Tech Billionaires Around the World, and Half of Them Live in Silicon Valley*, RECODE (May 19, 2018, 9:00 AM), https://www.recode.net/2018/5/19/17370288/silicon-valley-how-many-billionaires-start-up-tech-bay-area [https://perma.cc/9ZVM-278A].

[41] CAL. BUDGET & POLICY CTR., INEQUALITY AND ECONOMIC SECURITY IN SILICON VALLEY 8-9 (May 2016), https://calbudgetcenter.org/wp-content/uploads/Inequality-and-Economic-Security-in-Silicon-Valley-05.25.2016.pdf [https://perma.cc/J7NH-X4Z4]; Shirin Ghaffary, *Inequality in Silicon Valley Is Getting Worse: Wages Are Down for Everyone but the Top 10 Percent*, RECODE (Oct. 13, 2018, 1:28 PM), https://www.recode.net/2018/10/13/17953004/wages-workers-silicon-valley-income-inequality [https://perma.cc/PH3U-C7MN].

[42] Unicorns are privately held companies with a valuation of more than $1 billion. Salvador Rodriguez, *The Real Reason Everyone Calls Billion-Dollar Startups 'Unicorns,'* INT'L BUS. TIMES (Sept. 3, 2015, 12:25 PM), https://www.ibtimes.com/real-reason-everyone-calls-billion-dollar-startups-unicorns-2079596 [https://perma.cc/5LZL-5HBM].

[43] *See generally* JONATHAN TAPLIN, MOVE FAST AND BREAK THINGS: HOW FACEBOOK, GOOGLE, AND AMAZON CORNERED CULTURE AND UNDERMINED DEMOCRACY (2017).

[44] JIM MINIFIE, GRATTAN INST., PEER-TO-PEER PRESSURE: POLICY FOR THE SHARING ECONOMY (Apr. 2016), https://grattan.edu.au/wp-content/uploads/2016/04/871-Peer-to-peer-pressure.pdf [https://perma.cc/6K6S-6WF9]; Abbey Stemler, *The Myth of the Sharing Economy and Its Implications for Regulating Innovation*, 67 EMORY L.J. 197, 199 (2017); Joe Cahill, *The Fallacy of the Sharing Economy*, CRAIN'S CHI. BUS.: JOE CAHILL ON BUS. (June 1, 2018, 7:00 AM), https://www.chicagobusiness.com/article/20180601/ISSUE10/180609999/sharing-economy-s-uber-airbnb-require-business-regulation [https://perma.cc/SYC2-N3SZ]; Scott Smith, *The Sharing Economy Isn't Sharing Its Wealth with You*, QUARTZ: IDEAS (June 5, 2013), https://qz.com/91036/the-sharing-econ-isnt-sharing-its-wealth-with-you/ [https://perma.cc/9JVP-9VUS].

[45] *See* JOHN CARREYROU, BAD BLOOD: SECRETS AND LIES IN A SILICON VALLEY STARTUP (2018); *The Inventor: Out for Blood in the Silicon Valley* (HBO Documentary Films Jan. 24, 2019); *The Dropout* (ABC Radio and ABC News Nightline Feb. 2019), http://abcradio.com/podcasts/the-dropout/; Dave McNary, *Legendary Wins Bidding War for Jennifer Lawrence Movie 'Bad Blood'*, VARIETY (June 23, 2016, 8:57 PM), https://variety.com/2016/film/news/legendary-wins-bidding-jennifer-lawrence-movie-bad-blood-1201802332/.

[46] United States v. Holmes, No. cr-18-00258 (N.D. Cal. June 14, 2018), ECF No. 1.

Evasion of rules by the wealthy highlight differential experiences of those with plenty and those with less. One study using experimental and other methods, suggests that "the upper class may be more disposed to the unethical."[47] Elite rule breaking is readily apparent in the 2019 "Operation Varsity Blues" college admissions bribery scandal.[48] This scandal, which has been described as the largest college admissions scam ever prosecuted,[49] has led to dismissals and in some instances criminal charges and the arrests of prominent figures in entertainment and finance, including well-known actresses, the former CEO of a major investment management firm,[50] the co-chair of a major law firm, and a major investor in startup companies, including Uber and Airbnb.[51]

This college admissions and bribery scandal struck a chord for many because access to education can be a key, even life-defining opportunity. One

[47] Paul K. Piffa et al., *Higher Social Class Predicts Increased Unethical Behavior*, 109 PROC. NAT'L ACAD. SCI. U.S. 4086, 4086 (2012).

[48] Kathryn Rubino, *Co-Chair of Biglaw Firm Charged in College Admissions Scandal*, ABOVE THE LAW (Mar. 12, 2019, 12:50 PM), https://abovethelaw.com/2019/03/willkie-farr-chair-caught-in-college-admissions-scandal/ ("The allegations in the indictment are just an astonishing display of elitism and rule breaking. It's like every hard-working poor kid's worst dream — not only do they have to beat an educational system that is slanted against them, but rich parents are able to throw money at illegal schemes to get their kids into the best colleges, all with the kid under the illusion they really deserved the place they got.").

[49] The U.S. Attorney's Office for the District of Massachusets describes the college admissions testing and bribery scheme as follows: "Dozens of individuals involved in a nationwide conspiracy that facilitated cheating on college entrance exams and the admission of students to elite universities as purported athletic recruits were arrested by federal agents in multiple states and charged in documents unsealed on March 12, 2019, in federal court in Boston. Athletic coaches from Yale, Stanford, USC, Wake Forest and Georgetown, among others, are implicated, as well as parents and exam administrators." *Investigations of College Admission and Testing Bribery Scheme*, U.S. ATT'Y'S OFF., D. MASS, https://www.justice.gov/usao-ma/investigations-college-admissions-and-testing-bribery-scheme (last visited Apr. 16, 2019).

[50] Thornton McEnery, *Former PIMCO CEO Doug Hodge Named In Fraud Complaint Alongside Aunt Becky From "Full House,"* DEALBREAKER (Mar. 12, 2019), https://dealbreaker.com/2019/03/doug-hodge-bill-mcglashan-college-bribery-fraud-complaint [https://perma.cc/UR3M-F5VC].

[51] *See* Tomio Geron, *Lightspeed Co-Founder Out After Being Linked to College Admissions Scandal*, WALL STREET J. (Mar. 27, 2019), https://www.wsj.com/articles/lightspeed-co-founder-out-after-being-linked-to-college-admissions-scandal-11553735612; Kate Taylor, *Warning for Students and Additional Arrests on College Campuses*, N.Y. TIMES, Mar. 14, 2019, at A16; Gabe Samandi, *Fordham Alum Accused in Nationwide Admissions Scandal*, OBSERVER (Mar. 27, 2019), https://fordhamobserver.com/39635/top-stories/featured-stories/fordham-alum-accused-in-nationwide-admissions-scandal/ [https://perma.cc/D8KL-KXHX]; Theodore Schleifer, *One of Silicon Valley's Most Prominent Voices for Ethical Investing Is Out Amid the College Admissions Bribery Scandal*, RECODE (Mar. 14, 2019, 6:03 PM), https://www.recode.net/2019/3/12/18262003/bill-mcglashan-colle ge-admissions-scandal-tpg-stanford-usc-yale [https://perma.cc/SD9D-EX8L] ("Prosecutors charged Bill McGlashan, a founder and managing partner at TPG Growth — which has made landmark investments in companies like Uber and Airbnb — on fraud allegations for trying to engineer the admission of his son to the University of Southern California.").

commentator noted, "The documents facilitate no such doubt, though, when it comes to their subtextual indictment of American meritocracy and its hallowed institutions and loudest defenders. The wealthy believe their kids deserve special treatment, even as they preach a gospel of self-reliance."[52] The college admissions and bribery scandal reflects a type of opportunity hoarding that has implications for scarcity of opportunity.[53]

Access to education at elite universities is a scarce resource that has consequences that extend beyond an initial admission decision. How we allocate these and other opportunities determines not only who gets access but also who experiences scarcity. The college admissions and bribery scandal lays bare that the same opportunities may not be available to all. Further, lack of opportunity that might lead to experiences of scarcity may cluster in ways that expose the same people to multiple sources of scarcity. Those who experience scarcity may be altered by it; moreover, scarcity may have a deep psychological impact that can change behaviors and perceptions of the world.[54] Poverty and scarcity of opportunity are connected to stress, which affects human health and wellbeing,[55] including rates of certain kinds of diseases.[56]

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[52] Jack Dickey, *Underneath the College Admissions Scandal, There's Even More Scandal*, SPORTS ILLUSTRATED (Mar. 12, 2019), https://www.si.com/college-football/2019/03/12/college-admissions-scandal-reveals-meritocracy-flaws [https://perma.cc/CP8L-2A3Y].

[53] *See* RICHARD V. REEVES, DREAM HOARDERS 97 (2017) ("But we cannot ignore another contributor to class persistence: opportunity hoarding. This occurs when the upper middle class does not win by being better but by rigging the competition in our favor."); Richard Reeves, *How the Middle Class Hoards Wealth and Opportunity for Itself*, GUARDIAN (July 15, 2017, 7:05 PM), https://www.theguardian.com/inequality/2017/jul/15/how-us-middle-classes-hoard-opportunity-privilege [https://perma.cc/4NPS-5E83] ("In fact, upper-middle-class status is passed down to the next generation more effectively than in the past, and in the United States more than in other countries."). *See generally* John L. Rury & Argun Saatcioglu, *Opportunity Hoarding*, *in* THE WILEY BLACKWELL ENCYCLOPEDIA OF RACE, ETHNICITY, AND NATIONALISM (A. D. Smith et al. eds., 2016) (giving overview of scholarship and media uses of term "opportunity hoarding").

[54] SENDHIL MULLAINATHAN & ELDAR SHAFIR, SCARCITY: WHY HAVING TOO LITTLE MEANS SO MUCH 7 (2013) ("Scarcity captures the mind. Just as the starving subjects had food on their mind, when we experience scarcity of any kind, we become absorbed by it. The mind oreints automatically, powerfully, toward unfulfilled needs.").

[55] *See generally* WILLIAM L. LOVALLO, STRESS AND HEALTH: BIOLOGICAL AND PSYCHOLOGICAL INTERRACTIONS (3d. ed. 2015).

[56] Andrew Curry, *Why Living in a Poor Neighborhood Can Change Your Biology*, NAUTILUS (June 14, 2018), http://nautil.us/issue/61/coordinates/why-living-in-a-poor-neighborhood-can-change-your-biology-rp [https://perma.cc/ST7D-YXMP] ("But as the experiment went on, researchers began encountering anecdotal evidence that surprised them. The people who moved out of poor neighborhoods were healthier. When they went back and measured the differences between people who got vouchers and people who didn't, the results were remarkable: The people who got vouchers to move to low-poverty neighborhoods had significantly lower rates of obesity and Type 2 diabetes."); Raphael W. Bostic, *Foreword* to LISA SANBONMATSU ET AL., U.S. DEP'T OF HOUS. & URBAN DEV., MOVING TO OPPORTUNITY FOR FAIR HOUSING DEMONSTRATION PROGRAM: FINAL IMPACTS EVALUATION 2 (2011), https://www.huduser.gov/publications/pdf/mtofhd_fullreport_v2.pdf [https://perma.cc/RD49

This scarcity of opportunity is profoundly affecting many countries, including the United States, and may be contributing to lower economic growth and heightened societal instability.[57] Mr. Fink's 2019 annual letter highlights an increasing trend towards instability that is connected to scarcity of opportunity:

> frustration with years of stagnant wages, the effect of technology on jobs, and uncertainty about the future have fueled popular anger, nationalism, and xenophobia. In response, some of the world's leading democracies have descended into wrenching political dysfunction, which has exacerbated, rather than quelled, this public frustration. Trust in multilateralism and official institutions is crumbling.[58]

II. INVESTMENT FUND CONCENTRATION AND SCARCITY OF OPPORTUNITY

Inequality and increased wealth concentration are also increasingly evident within and among corporations. For example, the gap between CEO and worker pay has been increasing over time, reaching a multiple of some 361 in 2017.[59] Increased inequality among corporations is a key driving force of increased income inequality.[60] In addition to having a potentially significant impact on

-7TK2] ("The study found that the opportunity to live in lower poverty neighborhoods was associated with better health outcomes. Women in the experimental group were less likely to have extreme obesity and diabetes compared to women in the control group. The women and their female children in the experimental group also experienced less psychological distress and major depression. . . . Families in the experimental group did not experience better employment or income outcomes than the other families.").

[57] RICARDO FUENTES-NIEVA & NICK GALASSO, 178 OXFAM BRIEFING PAPER: WORKING FOR THE FEW 5 (2014), https://www.oxfam.org/sites/www.oxfam.org/files/bp-working-for-few-political-capture-economic-inequality-200114-en.pdf [https://perma.cc/N2XB-48LZ] ("Furthermore, post-recovery austerity policies are hitting poor people hard, while making the rich even richer."); Richard V. Reeves, *The Economic Case for Social Mobility*, BROOKINGS INST. (Aug. 16, 2013), https://www.brookings.edu/opinions/the-economic-case-for-social-mobility/ [https://perma.cc/7MN4-S9W4] (noting that it is "plausible that low mobility is a factor behind weaker growth").

[58] Fink, *supra* note 11.

[59] *Executive Paywatch*, AFL-CIO, https://aflcio.org/paywatch [https://perma.cc/D5JP-NNMA] (last visited Apr. 16, 2019) ("In 2017, CEOs of S&P 500 Index companies received, on average, $13.94 million in total compensation, according to the AFL-CIO's analysis of available data. America's production and nonsupervisory workers earned only $38,613, on average, in 2017—a CEO-to-worker pay ratio of 361 to 1.").

[60] Bloom, *supra* note 17 (discussing wage gap between firms as larger driver of increasing income inequality than wage gap within individual companies); Sarah Green Carmichael, *The Rise of Corporate Inequality*, HARV. BUS. REV. (Mar. 23, 2017), https://hbr.org/ideacast/2017/03/the-rise-of-corporate-inequality.html ("The rich have got richer, the middle has kind of tapered along, and the poor have actually done worse over time. But what was amazing in our data is the vast majority there, so something like 70% or 80% of this increase in inequality can be explained by the firm you work in. So inequality has gone up dramatically. But actually for most people, what's happened is their colleagues have got richer or poorer with them. So inequality is mainly across firms. And actually, inequality within firms has really not increased that much.").

individuals who experience scarce opportunities, increasing societal inequality is thus having a significant institutional impact, including both within and among corporations.[61] Increasing inequality in the United States is a reflection of increasing economic concentration,[62] which has implications for business competitiveness, as well as attitudes towards business.[63]

Concentration is also apparent in the realm of investment funds and other institutional investors. Institutional investors, which include investment funds, insurance companies, and pension funds among others, have become a powerful force in global financial markets. Although institutional investors are not a new phenomenon,[64] such investors have become increasingly prominent participants in global financial markets in recent decades. The proportion of equity ownership in corporations held by institutional investors increased from 8% in 1950 to, by some estimates, as high as 80% in 2017.[65] This increase in institutional investors' percentage ownership of stock market capitalization has occurred alongside a tremendous increase in overall market capitalization. For example, the market capitalization of all stocks listed on the New York Stock Exchange ("NYSE") grew from $94 billion in 1950 to close to $20.78 trillion in

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[61] DAVID WEBBER, THE RISE OF THE WORKING-CLASS SHAREHOLDER 151 (2018) (analyzing changing role of worker capital through action of worker shareholders of corporations).

[62] TIM WU, THE CURSE OF BIGNESS: ANTITRUST IN THE NEW GILDED AGE 15 (2018) ("Look at the global economy and witness the rule of concentrated oligopolies and monopolies, in industries like finance, media, airlines, and telecommunications . . . . With this centralization of private power has come a renewed concentration of wealth, and a wide gap between the rich and poor.").

[63] *Id.* ("There is widespread anger at big business and how they treat customers, especially in concentrated or monopolized industries like insurance, pharmaceuticals, airlines, and other insensitive behemoths."); David Wessel, *Is Lack of Competition Strangling the U.S. Economy?*, HARV. BUS. REV., Mar.-Apr. 2018, at 106, 107 ("There's no question that most industries are becoming more concentrated.").

[64] Oscar Gelderblom & Joost Jonker, *With a View to Hold: The Emergence of Institutional Investors on the Amsterdam Securities Market During the Seventeenth and Eighteenth Centuries*, *in* THE ORIGINS AND DEVELOPMENT OF FINANCIAL MARKETS AND INSTITUTIONS: FROM THE SEVENTEENTH CENTURY TO THE PRESENT 71, 71 (Jeremy Atack & Larry Neal eds., 2009) ("Institutional investors in themselves are an old phenomenon in Europe.").

[65] Luis Aguilar, Comm'r, U.S. Sec. & Exch. Comm'n, Institutional Investors: Power and Responsibility, Address at Georgia State University (Apr. 19, 2013), https://www.sec.gov/news/speech/2013-spch041913laahtm [https://perma.cc/9MJF-33KN] (noting that "proportion of U.S. public equities managed by institutions has risen steadily over the past six decades, from about 7 or 8% of market capitalization in 1950, to about 67% in 2010"); Marshall E. Blume & Donald B. Keim, Institutional Investors and Stock Market Liquidity: Trends and Relationships 4 (Aug. 21, 2012) (unpublished manuscript), http://finance.wharton.upenn.edu/~keim/research/ChangingInstitutionPreferences_21Aug2012.pdf [https://perma.cc/8MJC-8N9U] (examining relationship between growth of institutional investing and increase in market illiquidity); Charles McGrath, *80% of Equity Market Cap Held By Institutions*, PENSIONS & INV. (Apr. 25, 2017, 1:02 PM), https://www.pionline.com/article/20170425/INTERACTIVE/170429926/80-of-equity-market-cap-held-by-institutions [https://perma.cc/6RV6-PCT5] ("Of the 10 largest U.S. companies, institutions own between 70% and 85.8%.").

December 2018,[66] an increase of some 220-fold. This would suggest that in aggregate, institutional investors on the NYSE today own more than 2,000 times the amount they held in 1950, which reflects significant concentration of stock ownership.[67]

Institutional investors are dominant market players today, which makes their activities significant to both capital markets and society more generally.[68] The investment fund category is diverse, with varied pools of funds, sources of invested funds, and investment strategies.[69] In 2017, U.S. registered investment companies reached $22.5 trillion in net assets, with worldwide regulated funds reaching $49.3 trillion in net assets.[70] Private equity funds and hedge funds have grown significantly in recent years, due in part to increasing investor demand for "alternative" asset classes that generate higher returns.[71] Global private

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[66] WORLD FED'N OF EXCHS., MONTHLY REPORT: JANUARY 2018 (noting NYSE stocks worth $20,679,476.9 in December 2018); Aguilar, *supra* note 65 (noting NYSE stocks were worth approximately $94 billion in 1950).

[67] This figure assumes overall institutional investor NYSE ownership of approximately 70%. The impact of inflation would account for an approximately 10.4-fold increase, with $94 million in 1950 translating into approximately $978.5 million in 2018 dollars. *What Is a Dollar Worth? Inflation Calculator App*, FED. RES. BANK OF MINNEAPOLIS, https://www.minneapolisfed.org/community/financial-and-economic-education/cpi-calculator-information/app [https://perma.cc/429J-FDNY] (last visited Apr. 16, 2019) (calculating current values accounting for inflation).

[68] Aguilar, *supra* note 65 ("[I]nstitutional investors are dominant market players, but it is difficult to fit them into any particular category.").

[69] DIANA FARRELL ET AL., MCKINSEY & CO., THE NEW POWER BROKERS: HOW OIL, ASIA, HEDGE FUNDS AND PRIVATE EQUITY ARE SHAPING GLOBAL CAPITAL MARKETS 19 (2007), https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Global%20Capital%20Markets/How%20the%20new%20power%20brokers%20are%20shaping%20global%20capital%20markets/MGI_Power_brokers_shaping_global_markets_full_report.ashx [https://perma.cc/LAW9-56EZ] ("The world's capital markets are entering a new phase of globalization.").

[70] INV. CO. INST., 2018 INVESTMENT COMPANY FACT BOOK, at ii (2018), http://www.icifactbook.org/deployedfiles/FactBook/Site%20Properties/pdf/2018/2018_factbook.pdf [https://perma.cc/33LY-EDAM] (comparing total net assets of worldwide regulated open-end funds at $49.3 trillion with U.S.-registered investment company total net assets at $22.5 trillion).

[71] DIANA FARRELL ET AL., *supra* note 69, at 138 (noting that "institutional investors are still in the process of allocaitng a larger share of their portfolios to private equity and other alternative asset classes"); MCKINSEY & CO., THE RISE AND RISE OF PRIVATE MARKETS: MCKINSEY GLOBAL PRIVATE MARKETS REVIEW 2018, at 3 (2018) (analyzing growth of private markets, including private equity, "the largest private asset class"), https://www.mckinsey.com/~/media/mckinsey/industries/private%20equity%20and%20principal%20investors/our%20insights/the%20rise%20and%20rise%20of%20private%20equity/the-rise-and-rise-of-private-markets-mckinsey-global-private-markets-review-2018.ashx [https://perma.cc/FY99-Y5DP]; Steven N. Kaplan & Per Strömberg, *Leveraged Buyouts and Private Equity*, 23 J. ECON. PERSP. 121, 122 (2009) ("Accordingly, we expect that a significant part of the growth in private equity activity and institutions is permanent.").

equity assets under management reached an estimated $3.06 trillion in 2017,[72] while hedge fund assets reached a record high of some $3.22 trillion in March 2018.[73]

Varied statistics give evidence of the concentrated nature of institutional investor stock ownership. Investment Company Institute statistics indicate that as of the end of 2017, registered investment companies owned 31% of U.S. corporate equity, 20% of U.S. and foreign corporate bonds, 13% of U.S. Treasury and government agency securities, 25% of U.S. municipal securities, and 25% of commercial paper.[74] As of December 2016, the largest institutional investor owned 6.3% of total holdings in U.S. stocks, and the top ten owned 26.5% of total equity assets.[75] These concentrated ownership patterns may enable large institutions to have a bigger impact on asset prices than a similarly sized aggregate collection of smaller independent entities, and may also lead to higher stock price volatility.[76] Although the United States has been a leader in the trend toward greater institutional ownership of public markets, increasing institutional ownership is a global phenomenon.[77]

Concerns about the impact of investment funds and other institutional investors are, however, not a recent phenomenon. The Investment Company Act of 1940 was adopted in large part in response to perceived problems with investment fund activities, particularly those of closed-end funds prior to the

[72] James Comtois, *Preqin: Private Equity AUM Grows 20% in 2017 to Record $3.06 Trillion*, PENSIONS & INV. (July 24, 2018, 1:33 PM), https://www.pionline.com/article/20180724/ONLINE/180729930/preqin-private-equity-aum-grows-20-in-2017-to-record-306-trillion [https://perma.cc/UN96-22NS] (noting private equity industry's $3.06 trillion assets under management reflected 20% growth from 2016).

[73] Amanda Cantrell, *Hedge Fund Assets Hit Record High*, INSTITUTIONAL INVESTOR (Apr. 19, 2018), https://www.institutionalinvestor.com/article/b17v773lkvph3y/hedge-fund-assets-hit-record-high [https://perma.cc/R993-FQ2T] (noting hedge fund sector "took in $1.1 billion of net new money in the first quarter of 2018").

[74] *See generally* INV. CO. INST., *supra* note 70 (reviewing trends and activities in investment company industry).

[75] Itzhak Ben-David et al., *The Granular Nature of Large Institutional Investors* 1 (Fisher Coll. of Bus., Working Paper No. 2015-03-09, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2620271 ("Since 1980, the top 10 institutional investors have quadrupled their holdings in U.S. stocks.").

[76] *Id.* at 2 (stating that given research "it is reasonable to conjecture that large institutions have a bigger impact on asset prices than a collection of smaller independent entities," and that "ownership by large institutions increases volatility in the underlying securities").

[77] E. PHILIP DAVIS & BENN STEIL, INSTITUTIONAL INVESTORS 328 (2001) (showing increasing institutional ownership from 1977-1991 in NYSE firms); OECD, OECD INSTITUTIONAL INVESTOR STATISTICS 2018, at 173-79 (2018), https://doi.org/10.1787/instinv-2018-en [https://perma.cc/VQ5T-T9HG] (showing increasing financial assets and liabilities of investment funds); Miguel A. Ferreira & Pedro Matos, *The Colors of Investors' Money: The Role of Institutional Investors Around the World*, 88 J. FIN. ECON. 499, 503 (2008) ("As expected, institutional ownership is highest in the U.S., but global institutional portfolio managers also hold large fractions of stock markets in countries such as Canada and Sweden.").

1929 stock market crash.[78] In 1973, the Senate Committee on Finance issued a report about institutional investors.[79] This report, which begins by discussing the "depressed state of the U.S. stock market," focused on the role and activities of institutional investors in public markets, noting that their trading activities had doubled from 35% in 1963 to 70% in 1973.[80] Notably, the Finance Committee report queried both the implications of interlocking relationships between institutional investors and their portfolio companies, and institutional investor ownership concentration in large companies, which was thought to be particularly concerning in light of pension reform legislation.[81] The report notes that $1 billion in pension funds per month was being invested in securities markets, largely through institutional investors.[82]

The concentration of institutional investor ownership in large corporations noted in the 1973 report continues to be of concern. The scale and potential market impact of large institutional investors has also been a subject of interest to researchers from varied fields. Some commentators have focused on the role of institutional investors in governance,[83] the background of investment fund deal failures,[84] as well as questions of competition and collusion that arise from

78 SEC. & EXCH. COMM'N, INVESTMENT TRUSTS AND INVESTMENT COMPANIES: REPORT OF THE SECURITIES AND EXCHANGE COMMISSION 5 (1939) ("Commencing in 1929, however, the number of new investment counsel firms increased rapidly."); MATTHEW P. FINK, THE RISE OF MUTUAL FUNDS: AN INSIDER'S VIEW 3 (2d ed. 2011) ("But the 1929 crash proved to be near-disastrous for closed-end funds, spurred public acceptance of mutual funds, and led to calls for government regulation of all types of investment companies.").

79 S. COMM. ON FIN., 93RD CONG., THE ROLE OF INSTITUTIONAL INVESTORS IN THE STOCK MARKET 1 (Comm. Print 1973) ("The depressed state of the U.S. stock market for the past several years cannot be easily explained by the state of the economy or by passing psychological factors.").

80 *Id*. at 1, 2 ("Institutional investors—trust departments of large U.S. banks, insurance companies, mutual funds, pension funds, large endowment funds, foundations—today dominate market transactions, accounting for over 70 percent of the dollar value of New York Stock Exchange trading, compared with 35 percent in 1963.").

81 *Id*. at 5, 8.

82 *Id*. at 8 ("Approximately $1 billion a month of pension funds are channeled into the securities market, mainly through institutional investors.").

83 OECD, THE ROLE OF INSTITUTIONAL INVESTORS IN PROMOTING GOOD CORPORATE GOVERNANCE 10 (2011), https://www.oecd.org/daf/ca/49081553.pdf [https://perma.cc/QFJ2-DCAL] ("A great deal can be done both by private agents and policy makers to improve the corporate governance outcomes of institutional investors' behaviour."); Lucian A. Bebchuk, Alma Cohen & Scott Hirst, *The Agency Problems of Institutional Investors*, 31 J. ECON. PERSP. 89, 90 (2017) (developing framework to understand agency problems of institutional investors); Stephen J. Choi & Jill E. Fisch, *On Beyond CalPERS: Survey Evidence on the Developing Role of Public Pension Funds in Corporate Governance*, 61 VAND. L. REV. 315, 316 (2008) (examining pension fund institutional activism); Marcel Kahan & Edward B. Rock, *Hedge Funds in Corporate Governance and Corporate Control*, 3 CORP. GOVERNANCE L. REV. 134, 134 (2007) (analyzing differences in hedge fund activism from traditional institutional activism).

84 Steven M. Davidoff Solomon, *The Failure of Private Equity*, 82 S. CAL. L. REV. 481, 482 (2009) (analyzing failure of private equity firms after 2007 when the "unexpected turn of

cross-ownership by investment funds within industries.[85] For example, as of March 31, 2013, across all of its funds, BlackRock held 8.3% of United Airlines, 6.6% of JetBlue Airlines, 4.7% of Delta Air Lines, and 4.5% of Southwest Airlines.[86] This type of common ownership concentration by institutional investors within industries may have anti-competitive consequences: one empirical study found that ticket prices of the average U.S. airline route are 3% to 7% higher under common ownership by large institutions than would be the case under separate ownership.[87]

The growth in institutional investor assets reflects the increased power and influence of institutional investors today. As institutional investors have grown more dominant, concerns about their power and influence have increased.[88] With increased power has come greater scrutiny about the activities and responsibilities of institutional investors.

Further, greater concentration among institutional investors means that their investment choices may have an ever outsized influence on the landscape of available economic and other opportunities. Opportunities today are filtered through increasingly concentrated industry sectors, including by means of institutional investors or companies that might have significant ownership or funding by such institutional investors. How such investors and companies make investment, employment, and other decisions is thus of critical importance.

events and the general revaluation and decline in stock prices it wrought led private equity firms to reassess their pending acquisitions—acquisitions which had been agreed to in more stable times"); Josh Kosman, *Why Private Equity Firms Like Bain Really Are the Worst of Capitalism*, ROLLING STONE (May 23, 2012, 6:35 PM), https://www.rollingstone.com/politics/politics-news/why-private-equity-firms-like-bain-really-are-the-worst-of-capitalism-241519/ [https://perma.cc/VC7A-5NB2] (arguing that private equity's critics are "against a predatory system created and perpetuated by Wall Street solely to pump its own profits").

[85] MONOPOLKOMISSION, COMPETITIVE SIGNIFICANCE OF INSTITUTIONAL INVESTORS' MINORITY SHAREHOLDINGS para. 690 (2016), https://www.monopolkommission.de/images/HG21/Main_Report_XXI_Institutional_investors.pdf [https://perma.cc/V9ET-MEAU] ("Particularly advisable are sector-specific studies on the cross-ownership of companies by institutional investors and the significance of shareholders with competitive interest, as well as their effects on market outcomes."); Steven Davidoff Solomon, *Rise of Giant Investors Raises Competition Questions*, N.Y. TIMES, Apr. 13, 2016, at B3 (asking whether institutional investor cross-ownership "either explicitly or implicitly pushe[s] companies to compete less").

[86] Davidoff Solomon, *supra* note 85 (providing example of institutional investor BlackRock's cross-ownership in airline industry).

[87] José Azar, Martin C. Schmalz & Isabel Tecu, *Anticompetitive Effects of Common Ownership*, 73 J. FIN. 1513, 1517 (2018) ("Using fixed-effect panel regressions, we find that ticket prices are approximately 3% to 7% higher in the average U.S. airline route than would be the case under separate ownership.").

[88] ERIC A. POSNER & E. GLEN WEYL, RADICAL MARKETS: UPROOTING CAPITALISM AND DEMOCRACY FOR A JUST SOCIETY 171 (2018) ("How can these asset managers fly so securely under the radar while wielding financial power unparalleled in the history of the world, with the possible exception of Roman emperors?").

Mr. Fink's annual letters draw attention to a scarcity of opportunity that may be shaped by the activities and decisions of such funds themselves. However, confronting scarcity of opportunity requires more than just words.[89] Actions matter, and the extent to which the actions of such funds take sufficient account of the implications of scarcity of opportunity and the role of investment funds in fostering the creation of opportunities matters, particularly given the increasing concentration and power of investment funds today.[90] Investment funds appear to be taking varied approaches to recognizing and addressing questions related to broader access to opportunities in the investment fund universe.

Private equity funds, which follow a range of investment approaches, including leveraged buyout and venture capital strategies, have grown signifcantly in recent years.[91] As private equity funds have grown in scale and geographic reach, significant questions have been raised about the potential impact of private equity funds on employment, corporations, and the broader economy.[92] Venture capital funds are important participants and gatekeepers in critical societal sectors: "VC-backed companies play an increasingly important role in the U.S. economy. Over the past 20 years, these companies have been a prime driver of both economic growth and private sector employment,"[93] which means that activities in this sector can significantly impact available economic opportunities for a broad range of people.

Investors' decisions and companies' employment decisions have been increasingly scrutinized in Silicon Valley, which has been characterized as a boys' club with limited opportunities available for women entrepreneurs.[94] The

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[89] Joe McGrath, *Asset Owners Big on Talking 'Diversity,'* INSTITUTIONAL INVESTOR (Nov. 1, 2017), https://www.institutionalinvestor.com/article/b15fkwqmv564qy/asset-owners-big-on-talking-diversity ("Nearly three quarters of asset owners mention diversity in their annual reporting, but less than half are taking action to achive it."); Olivia Seddon-Daines & Yasmine Chinwala, *Diversity from an Investor's Perspective*, NEW FIN. (Oct. 2017), https://newfinancial.org/report-diversity-from-an-investors-perspective/ (looking at how and why asset owners approach diversity (in the people sense of the word rather than in terms of investment diversification), noting that such owners are an essential source of capital for financial markets whose needs and actions have a significant impact on the financial system).

[90] DIANA FARELL ET AL., *supra* note 69, at 19 (discussing hedge funds and private equity as two new power brokers in global financial markets).

[91] *Id.* at 131 (noting term private equity is generally used to refer to private investment funds that are not classified as hedge funds and may include three primary types of funds: venture capital funds, leveraged buyout funds, and other types of funds).

[92] Anuradha Gurung & Josh Lerner, *Executive Summary*, *in* THE GLOBALIZATION OF ALTERNATIVE INVESTMENTS WORKING PAPERS VOLUME 1: THE GLOBAL ECONOMIC IMPACT OF PRIVATE EQUITY REPORT, at vii, vii (2008).

[93] Ilya A. Strebulaev & Will Gornall, *How Much Does Venture Capital Drive the U.S. Economy?*, INSIGHTS BY STAN. BUS. (Oct. 21, 2015), https://www.gsb.stanford.edu/insights/how-much-does-venture-capital-drive-us-economy [https://perma.cc/K5AP-LVZA].

[94] EMILY CHANG, BROTOPIA: BREAKING UP THE BOYS' CLUB OF SILICON VALLEY 40 (2018) (asking what would have happened "if women had been encouraged to join the tech industry rather than having been ostracized by it?" and "[h]ow would our economy and culture be different now if the leaders of the 1990s internet and personal computer revolution hadn't

boys' club mentality that has so shaped the Silicon Valley is evident in investment fund decision-making in the context of entrepreneurial and high growth companies.

Venture capital funds, which have traditionally been dominant investors in Silicon Valley firms, also operate in ways that exclude significant segments of the population and rarely invest in all-female management teams; 75% of venture capital firms have never had a senior women investor.[95] African American and Latinx women are virtually absent in the venture capital arena. Companies in Silicon Valley have a poor track record in offering opportunities to a diverse range of people, including people of color and women: "[T]he diversity challenge is a region-wide sector problem that should be addressed by the leading companies working collectively rather than each technology company working individually."[96]

Although many of the firms in the Silicon Valley were once small startup companies with few employees and limited power, exclusionary practices evident in funds investing in Silicon Valley companies are largely mirrored within such companies themselves, even as these companies have grown and become among the largest companies in the world.[97] The rise of Silicon Valley has put the lack of diversity within many Silicon Valley firms in sharp focus.[98]

been so remarkably full of themselves and comfortable risking trillions of investor dollars?"); Liza Mundy, *Why Is Silicon Valley So Awful to Women?*, ATLANTIC (Apr. 2017), https://www.theatlantic.com/magazine/archive/2017/04/why-is-silicon-valley-so-awful-to-women/517788/ [https://perma.cc/B9EM-J836] ("Still, it was a reminder that as a woman in tech, she should be prepared to have her authority questioned at any moment, even by some guy trying to get a job at her company.").

[95] Cromwell Schubarth, *More VC Firms Have Women Partners But Nearly 75% Have None*, SILICON VALLEY BUS. J. (Jan. 2, 2019, 11:54 AM), https://www.bizjournals.com/sanjose/news/2019/01/02/women-partners-at-vc-firms-2018.html [https://perma.cc/U97S-94VH] ("The number of women hired as senior venture investors shot up in the past two years, but nearly three quarters of big firms have none.").

[96] BUCK GEE & DENISE PECK, ASCEND FOUND., THE ILLUSION OF ASIAN SUCCESS: SCANT PROGRESS FOR MINORITIES IN CRACKING THE GLASS CEILING FROM 2007-2015, at 4 (2017), https://c.ymcdn.com/sites/www.ascendleadership.org/resource/resmgr/research/TheIllusionofAsianSuccess.pdf [https://perma.cc/9TS4-A5VF]; *see also* Brentin Mock, *When It Comes to Tech, Racial Disparities Are Far Worse Than Gender Disparities*, CITYLAB (Oct. 5, 2017), https://www.citylab.com/equity/2017/10/when-it-comes-to-tech-racial-disparities-are-far-worse-than-gender-disparities/542013/ [https://perma.cc/CXG9-EU7W].

[97] Lori Ioannou, *Silicon Valley's Achilles' Heel Threatens to Topple Its Supremacy in Innovation*, CNBC (June 20, 2018, 11:59 AM), https://www.cnbc.com/2018/06/20/silicon-valleys-diversity-problem-is-its-achilles-heel.html [https://perma.cc/FJ2B-7X9Z] ("Silicon Valley may be the world's leading hotbed of innovation and genius, but it struggles with diversity and unconscious bias. . . . Left untreated, this may be the Achilles' heel that topples the technology industry's supremacy as an entrepreneurial center of excellence. That's because having a diverse workforce is a competitive advantage that drives productivity and profits as companies sell their products and services to a broad population.").

[98] Tom Foremski, *Solving Silicon Valley's Diversity Problem*, ZDNET (Dec. 20, 2017, 5:02 PM), http://www.zdnet.com/article/solving-silicon-valleys-diversity-problem/ [https://perma

Given the economic significance of Silicon Valley companies today, the lack of diversity and wage inequality within them has significant implications for broader questions of opportunity, access, and income inequality.[99] A 2018 report by the National Urban League highlights the impact of exclusionary hiring practices within Silicon Valley firms on economic opportunities for African Americans.[100]

Patterns of exclusion within investment funds that invest in the Silicon Valley are thus mirrored in important respects by the companies in which such funds invest. Although those running investment funds may see themselves as objective decision makers, available evidence suggests that this is not in fact the case, particularly with respect to businesses owned by people of color and women. A 2018 study by Morgan Stanley, for example, noted that "[w]hile the majority of investors perceive the funding landscape as balanced, their actual

.cc/N4GU-5MZ9] ("But my observation is that many Silicon Valley workplaces are awful and the addition of gender discrimination must make it even worse."); PBSNewsHour, *How Silicon Valley Is Trying to Fix Its Diversity Problem*, PBS NEWSHOUR (Jan. 15, 2016, 7:26 PM), http://www.pbs.org/newshour/bb/how-silicon-valley-is-trying-to-fix-its-diversity-problem/ [https://perma.cc/2QRB-GKZ5] (reporting on steps Silicon Valley companies are taking to address lack of diversity); Sinduja Rangarajan, *Here's the Clearest Picture of Silicon Valley's Diversity Yet: It's Bad. But Some Companies Are Doing Less Bad*, REVEAL (June 25, 2018), https://www.revealnews.org/article/heres-the-clearest-picture-of-silicon-valleys-diversity-yet/ [https://perma.cc/JEC4-FR3B] ("Ten large technology companies in Silicon Valley did not employ a single black woman in 2016."); Katy Steinmetz, *Uber's Problems Are Silicon Valley's Problems*, TIME (June 13, 2017, 8:47 PM), http://time.com/4814714/uber-diversity-sexism-kalanick-report/ [https://perma.cc/45DB-5JTS] ("Silicon Valley has struggled for years with diversity and inclusion, as critics have wondered whether the industry can achieve its grand self-image: a bunch of brilliant minds set on making the world a better place, for whom no problem is too tough to solve, no status quo too established to upend."); Kaya Thomas, *Dear Investors, Fund More Underrepresented Founders in Tech*, TECHCRUNCH (July 27, 2015), https://techcrunch.com/2015/07/27/dear-investors-fund-more-underrepresented-founders-in-tech/ [https://perma.cc/4DLU-EJAB] (reporting that "only 1 percent of VC-funded startup founders are black" while "87 percent of VC backed founders are white and 83 percent of all founding teams of these companies are all white").

[99] U.S. EQUAL EMP'T OPPORTUNITY COMM'N, DIVERSITY IN HIGH TECH 14-26 (2016), https://www.eeoc.gov/eeoc/statistics/reports/hightech/upload/diversity-in-high-tech-report.pdf [https://perma.cc/HW7J-VLYT] (examining "demographic diversity in the 'high tech' sector"); Sharla N. Alegria, *Wage Inequality Among Tech Workers*, WORDPRESS: SHARLA N. ALEGRIA (June 11, 2014), https://sharlanalegria.wordpress.com/2014/06/11/wage-inequality-among-tech-workers/ [https://perma.cc/595E-DU7S] (theorizing that "the unexplained gap in wages can be thought of as a rough measure of discrimination").

[100] NAT'L URBAN LEAGUE, STATE OF BLACK AMERICA 2018—SAVE OUR CITIES: POWERING THE DIGITAL REVOLUTION (May 2018), http://soba.iamempowered.com/2018-report [https://perma.cc/2F58-X6V4]; *see also* P.R. Lockhart, *The Digital Revolution Is Leaving Black People Behind*, VOX (May 4, 2018, 12:20 PM), https://www.vox.com/technology/2018/5/4/17318522/state-of-black-america-2018-national-urban-league-silicon-valley-race [https://perma.cc/7ZFS-9HMC].

investments in multicultural and women-owned businesses are highly skewed. In our recent survey, we found by just how much."[101]

Skewed patterns of investor decisionmaking are also evident in bond markets for historically black colleges and universities ("HBCUs"). Bond traders have noted that it is far more difficult to place bond offerings for HBCUs than is the case for similarly positioned educational institutions that are not HBCUs.[102] An empirical study of municipal bond issuances by colleges and universities found that HBCU bond issuances had higher underwriter spreads because they are more difficult to place.[103] After controlling for various factors, including bond features, measures of underwriter quality, school metrics, and regional characteristics, and taking account of the impact of credit quality, the researchers suggest that racial bias at the level of the individual retail investor explains the HBCU underwriter spread.[104] This bias also extends to institutional investors such as local insurance companies, which similarly do not invest in HBCU bonds.[105] The authors note:

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[101] *The Trillion-Dollar Blind Spot*, MORGAN STANLEY (Dec. 11, 2018), https://www.morganstanley.com/ideas/trillion-dollar-blind-spot-infographic [https://perma.cc/GP3C-Q63S] ("[I]nvestors report capitalizing multicultural and women-owned businesses at 80% less than businesses overall."); *see also* CHRISTINE KYMN, U.S. SMALL BUS. ADMIN., ACCESS TO CAPITAL FOR WOMEN- AND MINORITY-OWNED BUSINESSES: REVISITING KEY VARIABLES 5 (2014) https://www.sba.gov/sites/default/files/Issue%20Brief%203%20Access%20to%20Capital.pdf [https://perma.cc/9GH9-DFZQ] ("Multiple studies find disproportionate loan denials to minority business owners and disproportionately discouraged prospective applicants among women and minority business owners, despite controls for metrics of financial health."); MORGAN STANLEY, THE GROWING MARKET INVESTORS ARE MISSING: THE TRILLION-DOLLAR CASE FOR INVESTING IN FEMALE AND MULTICULTURAL ENTREPRENEURS 3 (2018), https://www.morganstanley.com/pub/content/dam/msdotcom/mcil/growing-market-investors-are-missing.pdf [https://perma.cc/6VMX-N6HL] ("Nearly eight in ten investors say that multicultural and female entrepreneurs receive the right amount, or more, of capital than their business models deserve, yet these same investors dramatically underinvest in this population.").

[102] *Historically Black Colleges Pay Higher Costs in Bond Market*, FUQUA INSIGHTS, DUKE FUQUA SCH. OF BUS. (Apr. 11, 2016), https://www.fuqua.duke.edu/duke-fuqua-insights/black-college-pay-bond-market [https://perma.cc/ZDR3-V3MT]; Scott Jaschik, *The Cost of Being an HBCU*, INSIDE HIGHER ED (Apr. 11, 2016), https://www.insidehighered.com/news/2016/04/11/study-black-colleges-pay-more-issue-bonds-colleges-similar-financial-circumstances [https://perma.cc/AV5E-SJPN].

[103] Casey Dougal et al., *What's in a (School) Name? Racial Discrimination in Higher Education Bond Markets*, J. FIN. ECON. (forthcoming) (manuscript at 3).

[104] *Id.* (manuscript at 35).

[105] *Id.* (manuscript at 37-38) ("Together, we interpret the evidence in this section as suggesting that although insurance companies seem to have a strong preference for issuers in the same state, this is not true for HBCUs. The apparent lack of interest from local institutions – to the extent that this can be generalized from the portfolios of insurers – means that HBCU-issued bonds must either be sold to retail investors, which may be difficult to find in states where HBCUs are located, or to institutional clients out of state, which may find these bonds less attractive for tax reasons.").

> [A]mong Alabama, Louisiana, and Mississippi – states with the highest levels of anti-Black racial animus – gross spreads for HBCUs were much higher compared to other states. In these three states (along with Georgia, with ranks fourth-highest in racial animus), HBCUs are almost entirely excluded from insurance company portfolios, perhaps helping explain why underwriters and/or dealers face particular difficulty finding willing investors for these bonds.[106]

III. DIVERSIFICATION AND DIVERSITY IN INVESTMENT FUNDS

In the post-World War II era, investment funds initially grew in a context permeated by ideas about allocation of portfolio investments strongly influenced by modern portfolio theory ("MPT"). Professor Harry Markowitz, regarded as the father of MPT,[107] conceptualized portfolios as reflecting a choice of the mean and variance of a portfolio of assets.[108] As developed by Markowitz and others, MPT introduced concepts and ways to undertake diversification and asset allocation. MPT also enabled those assembling investment portfolios to assemble optimal portfolios with limited volatility and improved performance relative to other potential portfolios. Although subsequent developments, including the rapid growth of varied investment fund strategies, have resulted in significant changes relative to the 1950s and likely less use of MPT in the investment fund arena, diversification remains important conceptually: "The concept of diversification is so intuitive and so strong that it has been continually applied to different areas within finance."[109] In addition to having an impact on investment decision making, MPT has affected investment fund approaches to corporate structure, behavior, and governance.[110] MPT highlights the importance of diversity in investment activities.

[106] *Id.* (manuscript at 38).

[107] Edwin J. Elton & Martin J. Gruber, *Modern Portfolio Theory, 1950 to Date* 2 (NYU Stern Bus. Sch., Dep't of Fin., Working Paper No. FIN-98-026, 1998) (noting that "Markowitz (1952 and 1959) is the father of modern portfolio theory" and that "Markowitz formulated the portfolio problem as a choice of the means and variance of a portfolio of assets").

[108] HARRY M. MARKOWITZ, PORTFOLIO SELECTION: EFFICIENT DIVERSIFICATION OF INVESTMENTS 109-10 (1959) ("[I]t is logically possible to accept the use of mean and variance [as criteria of portfolio selection] and either accept or reject the expected utility maxim."); Harry Markowitz, *Portfolio Selection*, 7 J. FIN. 77, 77 (1952) (arguing that in choosing a portfolio "the investor does (or should) consider expected return a desirable thing *and* variance of return an undesirable thing").

[109] Frank J. Fabozzi, Francis Gupta & Harry M. Markowitz, *The Legacy of Modern Portfolio Theory*, J. INVESTING, Fall 2002, at 7, 8 ("Conventional wisdom has always dictated not putting all your eggs in one basket. In more technical terms, this adage is addressing the benefits of diversification.").

[110] Jim Hawley & Jon Lukomnik, The Third, Systems Stage of Corporate Governance: Why Institutional Investors Need to Move Beyond Modern Portfolio Theory 1 (Mar. 2, 2018) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3127767 ("By looking at system focus this paper breaks ground by arguing one must examine the role

The investment fund universe reflects a diversity of investment strategies and transactional structures to achieve investment goals. The increasing power and scope of investment funds and other institutional investors draws attention to what such institutions own, how they behave as investors, investment strategies and other activities, and who they are both with respect to the internal demographics of institutional investors and their portfolio investments.

Questions related to diversity of funds' investments are not new, although the contexts within which such questions might arise are different in tenor and substance today. Questions related to internal diversity within investment funds are relatively new and are likely a result of the greater visibility and financial and economic importance of investment funds today, as well as broader societal trends. Investors in investment funds may also have an impact on fund investment policies. Pension fund investors, for example, have engaged in activism surrounding a range of issues,[111] including increasingly with respect to diversity.[112]

Although they wield unparalleled financial power, the current scale and power of registered investment companies, particularly mutual funds, which have traditionally invested in different types of investments than venture capital and other private funds,[113] is somewhat obscured: "The key features of these . . . [funds], which keep them 'boring,' is that they are *diversified* and many of their investments are held somewhat *passively*. . . . They also often *manage* the assets that are technically owned by workers and other ordinary people."[114] The benefits of financial intermediation by investment funds may obscure the harm potentially caused by such powerful institutions: "economic

modern portfolio theory (MPT) in the investment processes and explore how MPT impacts corporate structure, behavior and governance.").

[111] *See* WEBBER, *supra* note 61, at 161 (noting that due to investor activism "[t]he interface between public pension funds, labor union funds, and private equity funds is the most fraught relationship described in this book"); Choi & Fisch, *supra* note 83, at 316 (noting that "CalPERS was at the forefront of broader-based initiatives to increase shareholder monitoring, initiatives that included the use of shareholder proposals to improve corporate governance and support of the SEC's shareholder direct access proposal").

[112] *See infra* notes 123-135 and accompanying text (discussing benefits of diversity in investment funds).

[113] In recent years, investors in high growth entrepreneurial firms have included those other than the venture capital funds that had traditionally invested in this space, including mutual funds and private equity buyout funds. BARRY KRAMER, MICHAEL PATRICK & NICOLE HARPER, FENWICK & WEST LLP, THE TERMS BEHIND THE UNICORN VALUATIONS AS OF MARCH 31, 2015, at 1 (2015), https://www.fenwick.com/FenwickDocuments/The-Terms-Behind-the-Unicorn-Valuations.pdf [https://perma.cc/R8R2-QBQX] (noting that 75% of unicorn financings were led by investors who were not traditional VCs); Sergey Chernenko, Josh Lerner & Yao Zeng, *Mutual Funds as Venture Capitalists? Evidence from Unicorns* 3 (Nat'l Bureau of Econ. Research, Working Paper No. 23981, 2017), https://www.nber.org/papers/w23981 [https://perma.cc/3MYK-L6NR] (using contract-level data to analyze consequences of recent trend in open-end mutual funds to invest in venture capital backed unicorn companies).

[114] POSNER & WEYL, *supra* note 88, at 171.

research suggests that diversified institutional investors have harmed a wide range of industries, raising prices for consumers, reducing investment and innovation, and potentially lowering wages."[115] The diversity of investment strategies within the investment fund arena makes it difficult to generalize broadly about the impact of fund activities. Much thus remains to be explored about the impact of institutional investment on commodity prices,[116] stock market liquidity,[117] and other areas.

Investment funds represent pools of money that reflect patterns of intermediation characteristic of financial markets today. A wide range of individuals and institutions may have contributed to the pools of funds managed by investment managers. Financial intermediaries may provide benefits to financial systems, including pooling funds and directing such funds to those in need, providing liquidity, reducing transaction costs, information gathering, risk sharing, and other functions.[118] At the same time, however, intermediaries are potentially powerful gatekeepers to economic and other opportunities, particularly for those who need access to capital. Intermediaries' decisions may be significant and problematic in their aggregate impact. This is particularly the case to the extent that such decisions reflect a mirrortocracy or systematic patterns of exclusion,[119] both in terms of those who are hired as investment professionals and firms that receive funding from investment funds. Investment funds may thus serve to exacerbate scarcity of opportunity by virtue of those selected to act as principals of such funds and the investment and other decisions made by such principals.

The scale of investment funds today and the terms by which they engage with their portfolio companies, with each other, and with existing legal and regulatory frameworks, may have broader social consequences. Professor Victor Fleischer has drawn attention to the broader societal implications of the tax treatment of private investment fund carried interest, which he sees as contributing to income

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115 *Id*. at 172 (discussing potential harm caused by institutional investors).

116 *See* Keith H. Black, *The Role of Institutional Investors in Rising Commodity Prices*, J. INVESTING, Fall 2009, at 21, 26 ("[W]e find that fundamental factors beyond institutional investment are largely responsible for the recent increase in commodity prices.").

117 Marshall E. Blume & Donald B. Keim, Institutional Investors and Stock Market Liquidity: Trends and Relationships 22 (Aug. 21, 2012) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2147757 ("[W]e show that institutional participation in equities markets has played an increasingly important role in explaining cross-sectional variability in illiquidity.").

118 DAVID R. BURTON & NORBERT J. MICHEL, THE HERITAGE FOUND., BACKGROUNDER NO. 3108, FINANCIAL INSTITUTIONS: NECESSARY FOR PROSPERITY 1 (2016), https://www.heritage.org/markets-and-finance/report/financial-institutions-necessary-prosperity [https://perma.cc/7D4E-CV9R] (explaining financial intermediaries "are a central reason why the U.S. economy is as productive as it is"); Franklin Allen & Douglas Gale, *Financial Intermediaries and Markets*, 72 ECONOMETRICA 1023, 1024-25 (2004) (explaining two functions of intermediaries in model: asset pooling and risk sharing).

119 *See infra* note 136 and accompanying text.

inequality.[120] Others connect cross linkages in institutional investor ownership within economic sectors to economic inequality:

> With respect to the US-American economy the omnipresence of this phenomenon [corporate linkage through minority equity holdings of institutional investors held in more than one supplier of an economic sector] is at times seen as the explanation for fundamental connections, such as the increase of economic inequality and the failure of employment rates to rise in firms that have just recently reported formidable profits.[121]

Inequality and the scarcity of opportunity may ebb and flow in part as a result of actions by multiple actors, including government, whose policies may affect the landscape of available opportunities. Private actors, including those within investment funds and their portfolio companies, may also undertake action at the individual or corporate level that may have an impact on conditions of inequality and scarcity of opportunity in the aggregate.

Moreover, conceptualization of risk and return that is a key underpinning of MPT has implications for questions of diversity within investment funds and their portfolio companies. Existing empirical evidence suggests that demographic diversity is associated with better performance.[122] Given this, investment funds would likely benefit from embracing greater diversity within funds and their portfolio companies.[123] The broad failure to do so reflects continued patterns of exclusion and discrimination.[124] Until recently, investment funds have, for the most part, not focused on questions related to internal diversity or the diversity of portfolio companies. This inattention and lack of appreciation for diversity may, however, be changing. One source of this change is other institutional investors, including pension funds, which often represent pension fund participants that are far more diverse than the places where their

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[120] Victor Fleischer, *Alpha: Labor Is the New Capital*, TAX L. REV. (forthcoming) (manuscript at 43) ("What the tax system can and should do is treat people fairly, with average tax rates rising with income. The tax system fails spectacularly at the very top end, where capital gains are concentrated.").

[121] MONOPOLKOMMISSION, *supra* note 85, para. 667 (explaining importance of "minority shareholdings to those that via institutional investors are held in more than one supplier of an economic sector").

[122] *See infra* notes 130-132 and accompanying text.

[123] MORGAN STANLEY, *supra* note 101, at 14 ("There is no question that the systematic failure to find and fund female and multicultural entrepreneurs represents a market inefficiency.").

[124] Joanna Glasner, *Gender Discrimination Alleged in Suit Against Kleiner Perkins Similar to Claims Against Male-Dominated Hedge Funds: Employment Attorney*, PE HUB NETWORK (May 22, 2012), https://www.pehub.com/2012/05/gender-discrimination-alleged-in-suit-against-kleiner-perkins-similar-to-claims-against-male-dominated-hedge-funds-employment-attorney/# [https://perma.cc/XA6L-X9YE]; Pat Miguel Tomaino, *How Can Investors Help Confront Racial Injustice?*, MEDIUM: ZEVIN VIEWS (May 8, 2017), https://medium.com/zevin-views/racial-justice-6f45f784c7 [https://perma.cc/HC57-HYN6]; *Women in Asset Management Tell Their Stories of Discrimination*, FIN. TIMES (Dec. 17, 2017), https://www.ft.com/content/273b95dc-d134-11e7-9dbb-291a884dd8c6.

funds put their money.[125] American Investment Council data from 2012 suggests that public and private pension funds comprise 42% of private equity investment.[126] As a recent Bloomberg article notes, however, "the private equity industry is run almost entirely by white men."[127] The article recounts an incident involving the private equity fund firm TPG during a meeting with the Vice Chairman of the Oregon Investment Council:

> About 30 minutes into the almost three-hour meeting, John Russell, the vice chairman of the council, asked the group to look at what amounted to Exhibit A: photos of the firm's leaders in its flagship buyout unit, TPG Capital.
>
> "When I first looked at that, it was stunning to me," Russell said. A March TPG marketing document shows only 2 women among the 37 executives of TPG Capital. One of them is a partner.
>
> "It isn't that people of different ages, genders and ethnicity are better managers," Russell said to Coulter. "It is just that they have a view of the world that is broader. And companies can get into trouble without that diversity."[128]

In addition to attention to questions related to diversity in the venture capital fund arena, by 2018, a wave of initiatives and commentary relating to diversity within the broader investment fund universe had begun to appear.[129] These initiatives and the Fink 2018 and 2019 letters reflect broader approaches to thinking about fund activities. A number of initiatives undertaken by investment funds in recent years suggest that at least some firms are taking practical steps to take broader account of their activities and the implications of such activities,

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[125] Choi & Fisch, *supra* note 83, at 316 ("Academics, regulators, and policymakers have looked to the examples of CalPERS and several other public pension funds to support the claims that institutional investors can use their substantial equity stakes and sophistication effectively to overcome collective action problems, and that institutional activism can improve corporate performance.").

[126] *Get the Facts on Private Equity*, AM. INVESTMENT COUNCIL (Jan. 12, 2012), https://www.investmentcouncil.org/get-the-facts-on-private-equity/ [https://perma.cc/453D-LN92] ("Public and private pension funds make up 42 percent of all private equity investment.").

[127] Sabrina Willmer, *TPG Scolded for 'Stunning' Lack of Diversity by Pension Official*, BLOOMBERG (June 20, 2018, 5:00 AM), https://www.bloomberg.com/news/articles/2018-06-20/tpg-scolded-for-stunning-lack-of-diversity-by-pension-official (discussing client pushback on TPG demonstrating "how big investment firms are facing pressure from some institutional investors to change their white-male dominated culture").

[128] *Id.* (noting that "Oregon isn't the only state taking action following an onslaught of sexual harassment claims against executives in media, entertainment and finance").

[129] *Id.* ("The Institutional Limited Partners Association, a trade group, plans to give questions to investors by September to use during due diligence about the gender and ethnic makeup by seniority of firms, policies promoting diversity and if anyone left due to sexual harassment.").

particularly as they relate to questions of demographic diversity.[130] These initiatives are an important counterbalance to the concentration that has come with the rise of investment funds and other institutional investors and the concentration of opportunity that has accompanied investment fund concentration.

Greater attention to questions of diversity by investment funds and their portfolio companies reflects understanding of diversity's importance in contributing to better performance.[131] A 2016 report by Intel and Dalberg notes: "The U.S. technology industry could generate an additional $470 billion to $570 billion in new value –which consists of a combination of higher revenues and higher market values – through full representation of racial/ethnic diversity among staff and greater representation of gender diversity among leadership."[132]

A number of investment firms are also addressing questions of diversity by undertaking initiatives to address questions related to portfolio company board diversity,[133] as well as diversity within investment funds themselves,[134]

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[130] VIVIAN HUNT, DENNIS LAYTON & SARA PRINCE, MCKINSEY & CO., DIVERSITY MATTERS 1 (2015), https://assets.mckinsey.com/~/media/857F440109AA4D13A54D9C496D86ED58.ashx [https://perma.cc/29WL-C7LW] (examining relationship between company diversity and success).

[131] *Id.*; Nicholas Bloom, *Corporations in the Age of Inequality*, HARV. BUS. REV., Mar.-Apr. 2017; Paul Gompers & Silpa Kovvali, *The Other Diversity Dividend*, HARV. BUS. REV. (July-Aug. 2018), https://hbr.org/2018/07/the-other-diversity-dividend ("Along all dimensions measured, the more similar the investment partners, the lower their investments' performance.").

[132] ANDRIA THOMAS ET AL., INTEL & DALBERG, DECODING DIVERSITY: THE FINANCIAL AND ECONOMIC RETURNS TO DIVERSITY IN TECH (2016), https://www.intel.com/content/www/us/en/diversity/decoding-diversity-report.html [https://perma.cc/5TCA-JD28].

[133] *Boardroom Accountability Project 2.0*, BOARDROOM ACCOUNTABILITY PROJECT, https://comptroller.nyc.gov/services/financial-matters/boardroom-accountability-project/boardroom-accountability-project-2-0/ [https://perma.cc/8R3N-TECL] (last visited Apr. 16, 2019) ("The next phase of the . . . [New York City Comptroller Boardroom Accountability Project] will ratchet up the pressure on some of the biggest companies in the world to make their boards more diverse, independent, and climate-competent, so that they are in a position to deliver better long-term returns for investors.").

[134] Arleen Jacobius, *A Long Way to Go in Manager Diversity: Efforts Being Made to Draw More Women into Industry, But Numbers Illustrate Gap*, 46 PENSIONS & INV. 1, 1 (2018) ("Money managers are creating or expanding programs to increase the number of women in the industry, now a hot topic as high-profile pay and discrimination lawsuits grab headlines and investors press managers to disclose efforts to boost diversity."); *Time for Real Diversity in Asset Management*, 46 PENSIONS & INV. 10, 10 (2018) ("The data, taken together, are hard to refute. Asset management is a male-dominated field – in absolute numbers, pay and leadership – and that could be harming returns."); Madison Sargis & Kathryn Wing, *Female Fund Manager Performance: What Does Gender Have to Do With It?*, MORNINGSTAR: MORNINGSTAR BLOG (Mar. 8, 2018), https://www.morningstar.com/blog/2018/03/08/female-fund-managers.html [https://perma.cc/E2KY-FHFK] ("[W]e find that performance does not explain the low participation rate of women in the fund industry. And the idea that men have outperformed was not supported in the data either."); *William Blair Spotlights Program to Increase Women in Asset Management*, WILLIAM BLAIR (July 19 2018), https://www.william

primarily in relation to gender,[135] with less attention to diversity with respect to race, ethnicity, schools attended, and other criteria.

CONCLUSION

Scarcity of opportunity draws attention to increasing concentration in varied economic sectors. Increasing concentration brings into sharp focus the activities of principals within businesses whose decisions influence the shape of opportunity for so many. Opportunities in far too many places for far too many people are either scarce or not distributed in a transparent way. Scarcity of opportunity shines a bright light on the decision-making processes that reflect systematic patterns of exclusion.

Decisions that exclude and that reflect a club-like approach are problematic in this broader context. Exclusion may be based on metrics such as ethnic or

blair.com/en/News-Items/2018/July/19/Talk-on-Increasing-Women-in-Asset-Management.aspx [https://perma.cc/484U-2PUB] (describing event hosted by William Blair with "focus on increasing the number of women professionals in the asset management industry").

[135] The push for board diversity also extends to proxy advisers. Kristin Broughton, *Small Companies Face Added Pressure to Put Women on Boards*, WALL. STREET J. (Feb. 13, 2019), https://www.wsj.com/articles/small-companies-face-added-pressure-to-put-women-on-boards-11550070322 ("Proxy adviser Glass Lewis & Co., under a policy that takes effect this year, will recommend that investors vote against re-electing directors who chair nominating committees at companies with all-male boards. . . . Investors are increasingly viewing lack of diversity on boards as a sign of broader problems with a company's recruitment process . . . ."); Chris Butera, *NYS Common Cracks Down on Corporate Board Diversity*, CHIEF INVESTMENT OFFICER (Mar. 22, 2018), https://www.ai-cio.com/news/nys-common-cracks-corporate-board-diversity/ [https://perma.cc/F48G-D8HA] (announcing "that the fund will vote against all board directors eligible for re-election at companies without any women on their boards"); David Hellier & Emily Chasan, *Big Investors Push Harder for More Women Directors*, BLOOMBERG (Apr. 19, 2018, 8:42 AM), https://www.bloomberg.com/news/articles/2018-04-19/investors-prepare-to-flex-muscle-in-support-of-women-on-boards ("Emboldened by last year's successful campaigns against excessive executive pay, some of the world's biggest investors are shifting their focus to women—or the lack thereof—on corporate boards."); Sarah Krouse, *BlackRock: Companies Should Have at Least Two Female Directors*, WALL STREET J. (Feb. 2, 2018), https://www.wsj.com/articles/blackrock-companies-should-have-at-least-two-female-directors-1517598407 ("The disclosure represents a small but significant shift for one of the largest shareholders of American companies."); Richard Vernon Smith, *California Mandates Female Representation on Public Company Boards*, FORBES (Oct. 1, 2018, 12:04 PM), https://www.forbes.com/sites/allbusiness/2018/10/01/california-mandates-female-representation-public-company-boards/#16aa73e1775d [https://perma.cc/VU62-QB6P] (discussing new California law requiring that, by end of 2021, companies have set number of women on boards based on company size and imposing penalties for violations); Amy Whyte, *State Street to Turn Up the Heat on All-Male Boards*, INSTITUTIONAL INVESTOR (Sep. 27, 2018), https://www.institutionalinvestor.com/article/b1b4fh28ys3mr9/State-Street-to-Turn-Up-the-Heat-on-All-Male-Boards [https://perma.cc/KZW6-M6MX] (noting State Street's announcement that "it will udpate new proxy voting guidelines in 2020 for firms that have no women on their boards and have failed to engage in 'successful dialogue on State Street Global Advisor's board diversity program for three consecutive years'").

racial groups, gender, geographic location, or schools attended, for example, or a combination of factors. An estimated 40% of venture capitalists in Silicon Valley attended either Harvard or Stanford.[136] This concentration of graduates of these two universities highlights the impact of employment decisions within venture capital firms on opportunities for those who have attended a broad range of other educational institutions. Harvard and Stanford both have highly diverse student bodies with respect to gender, race, and ethnicity, but less so with respect to socioeconomic status.[137] Despite recruiting heavily from two schools with diverse student bodies, venture capitalists in Silicon Valley are 82% male and nearly 60% white male.[138] Notably, firms in Silicon Valley fail to even reflect the diversity evident among undergraduate computer science majors at Stanford University, whose numbers are considerably less diverse than Stanford University as a whole.[139] These demographic patterns suggest systematic exclusion of a wide range of people that, not surprisingly, reflect historical patterns of exclusion.[140]

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[136] Richard Kirby, *Where Did You Go to School?*, MEDIUM: NOTEWORTHY – J. BLOG (July 30, 2018), https://blog.usejournal.com/where-did-you-go-to-school-bde54d846188 [https://perma.cc/7HQX-DMND] ("With 82% of the industry being male, nearly 60% of the industry being white male, and 40% of the industry coming from just two academic institutions, it is no wonder that this industry feels so insular and less of a meritocracy but more of a mirrortocracy.").

[137] Max Larkin, *Harvard Has Become More Racially Diverse, But Most of Its Students Are Still Really Rich*, WBUR (Oct. 24, 2018), https://www.wbur.org/edify/2018/10/24/harvard-diverse-wealth [https://perma.cc/87K7-QZTF] (noting that Harvard's most recently admitted class as of October 2018 was 15% African-American, nearly 23% Asian-American, and around 12% identified as Hispanic or Latino).

[138] Kirby, *supra* note 136 (theorizing that "[e]veryone wants to work with those they are most similar to, and education, gender, and race are attributes that allow people to find similarities in others").

[139] Jorge Cueto, *Race and Gender Among Computer Science Majors at Stanford*, MEDIUM (July 13, 2015), https://medium.com/@jcueto/race-and-gender-among-computer-science-majors-at-stanford-3824c4062e3a [https://perma.cc/F4Y2-V48J] ("Considering that Stanford's undergraduate student body is 52.8% male and 47.2% female, this Computer Science-specific gender ratio is severely imbalanced. And yet, this 69.7% male to 30.3% female ratio is still an improvement over numbers from 2012 . . . . How does this ratio compare to that of major tech companies in Silicon Valley? Well, as imbalanced as Stanford's ratio is, the situation at tech giants such as Google and Facebook is even more severe. For instance, in its June 2015 workforce demographics report, Google revealed that only 18% of its tech employees are women. Similarly, in its own June 2015 diversity report, Facebook revealed that only 16% of its tech workforce consisted of women. What I wonder is—shouldn't these numbers be at least a little bit closer to the 30.3% at Stanford?"); Winnie Wu, *Race and Gender Among Computer Science Concentrators at Harvard*, MEDIUM (July 9, 2015), https://medium.com/@winniewu/race-and-gender-among-computer-science-concentrators-at-harvard-1c1943a20457 [https://perma.cc/A85H-KVLH] (finding Harvard computer science are concentrators: 53% Asian, 39% White, 5% Hispanic, and 3% Black).

[140] Sarah Jeong & Rachel Becker, *Science Doesn't Explain Tech's Diversity Problem—History Does*, VERGE (Aug. 16, 2017, 2:28 PM), https://www.theverge.com/2017/8/16/16153740/tech-diversity-problem-science-history-explainer-inequality ("[T]he representation of

Further, the composition of venture capital firms who manage venture capital investment funds in the Silicon Valley has discernible consequences for the ability of such firms to make investment decisions and influences the types of companies and founders such firms choose for investments:

> Jill Layfield, CEO of high-end women's shoe brand Tamara Mellon, one of 21 companies on the 2018 CNBC Upstart 100 list with either a female founder or CEO, recalled a moment during the company's recent $24 million Series B fundraising when she could "see the disconnect" happening on the faces of the men sitting across the table from her. "They said, 'Maybe we will bring in a female fashion consultant to help us understand, or I will ask my wife tonight at dinner."
>
> Palmer, too, remembers "pitching the wife or assistant on a conference call because the person across the table just didn't get it," and neither she nor Layfield were about to wait for the "wife's" analysis before walking away from the VC.[141]

Concentration that derives from varied characteristics, including ethnicity, race, gender, geographic location, or school attended means that those making decisions may reflect a narrow range of ideas and experiences. These limited experiences may in turn result in less than optimal investment decisions as a result of a lack of or a narrow range of experience and expertise. It is not just the impact in individual cases that should be of concern. As a 2018 Morgan Stanley report notes:

> Women and people of color have long faced barriers starting their own businesses and raising capital to fund them. Some barriers have been structural, others cultural, but all have been costly — and often in ways we'll never be able to quantify. We can only imagine what businesses might have taken off, what products consumers might have enjoyed, and what innovations and returns might have been realized had women and people of color enjoyed equal access to capital and opportunity.[142]

The increasing power and influence of investment funds mandates scrutiny of what funds do and how they undertake such activities. How opportunities are distributed is of critical importance today. Ameliorating scarcity of opportunity requires identification and taking account of processes by which decisions and policies that narrow opportunities are made. Confronting exclusion in the investment fund arena requires attention to decisions about funding, as well as the internal constitution of investment funds and their portfolio investments.

women in tech is dire even compared to science and engineering fields.").

[141] Eric Rosenbaum, *The Silicon Valley Boys Club Confronts a Powerful and Well-Connected Network Trying to Debunk the Male-Founder Myth*, CNBC (Oct. 9, 2018, 10:29 AM), https://www.cnbc.com/2018/10/09/silicon-valley-boys-club-confronts-a-powerful-rising-female-network.html [https://perma.cc/5PYV-VU2S].

[142] MORGAN STANLEY, *supra* note 101, at 1.