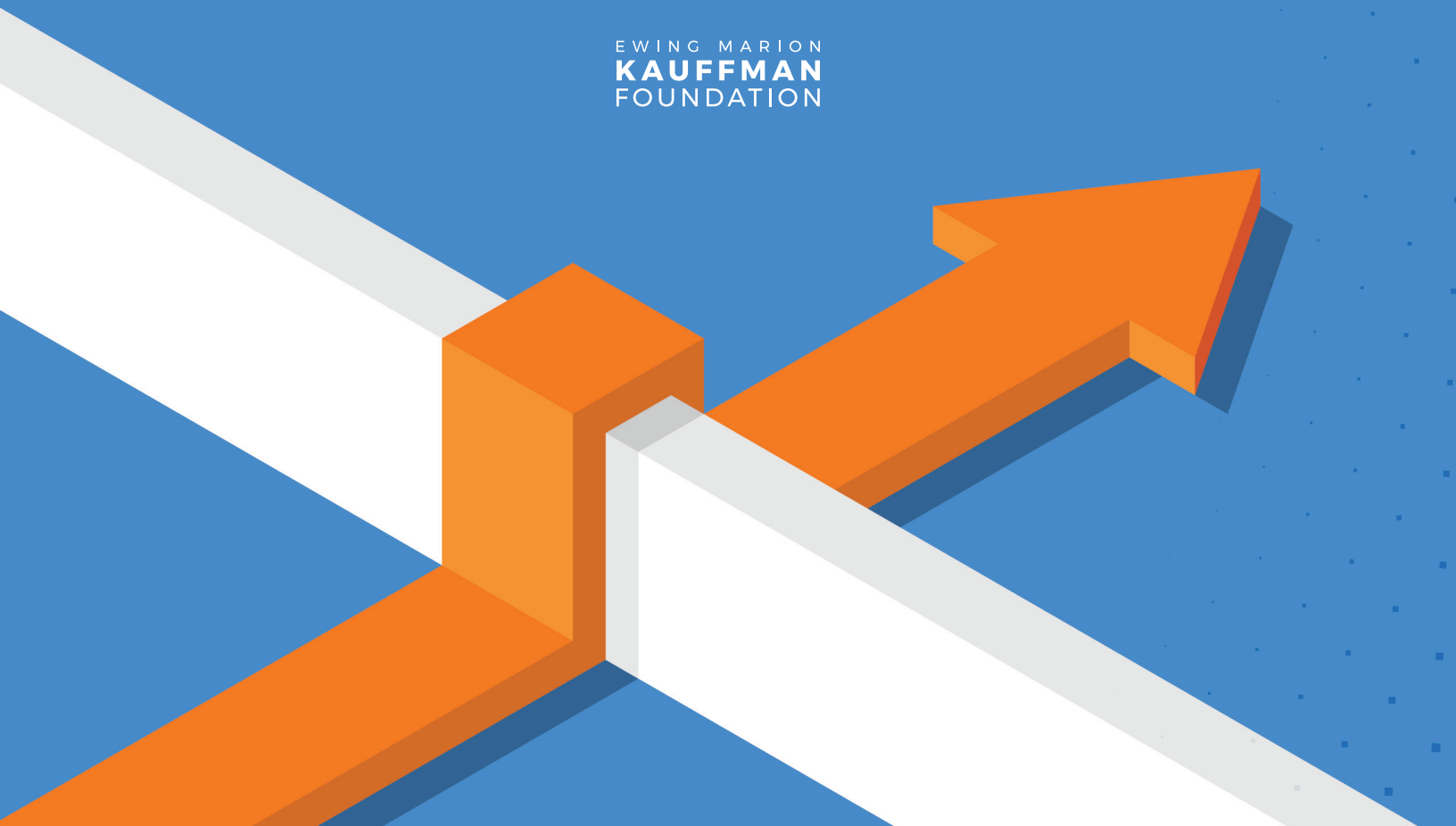


APRIL 2019

ACCESS TO CAPITAL *for*
ENTREPRENEURS:

REMOVING
BARRIERS

EWING MARION
KAUFFMAN
FOUNDATION



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Access to Capital for Entrepreneurs: Removing Barriers

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Access to Capital Landscape Consultative Group

To ensure a diverse set of insights for this report, leaders in fields related to capital and entrepreneurship were consulted for feedback and recommendations. The consultative group consists of entrepreneurs, investors, researchers, and philanthropic leaders, including:

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TABLE OF CONTENTS

1	EXECUTIVE SUMMARY
3	INTRODUCTION
4	THE KNOWLEDGE LANDSCAPE
20	EFFORTS TO HELP ENTREPRENEURS ACCESS CAPITAL
32	GUIDING QUESTIONS TO HELP GENERATE SOLUTIONS
37	ENDNOTES
43	REFERENCES

EXECUTIVE SUMMARY

New businesses play an important role in economic dynamism in the United States, contributing to the economy by creating jobs, innovations, and productivity growth.

The Ewing Marion Kauffman Foundation recognizes this significance of new businesses and believes every entrepreneur who has the potential to succeed should have the supportive conditions necessary to start and grow a business. The Foundation seeks a nation of “Zero Barriers” to entrepreneurship.

Barriers can affect the trends and outcomes associated with entrepreneurship. They can prevent people from ever becoming entrepreneurs, or they can slow the decision to start up and impede business success. There have been persistent gaps in entrepreneurial activity in the United States. Data from 1996 to 2017 show that men are consistently more likely to start businesses each month than women, and 2017 was the first year in which the rate of black and white new entrepreneurs was the same.¹

Lack of access to capital is often cited as one of the primary barriers facing entrepreneurs. This report surveys the current knowledge landscape regarding access to capital with an eye towards innovative concepts for improvement to capital access systems.

The Knowledge Landscape

Access to capital plays an important role in entrepreneurship, in both direct and indirect ways. External private institutional capital—in other words,

bank lending and venture capital—dominates the research and public discourse. Yet, at least 83 percent of entrepreneurs do not access bank loans or venture capital at the time of startup. Almost 65 percent rely on personal and family savings for startup capital, and close to 10 percent carry balances on their personal credit cards.

In fact, entrepreneurs face **geographic, demographic, and wealth barriers**, exacerbated by a capital market structure that does not effectively find and support the majority of entrepreneurs. There is significant unmet demand for financing.

Efforts to Help Entrepreneurs Access Capital

Most efforts to expand access to capital and increase new business creation and success have focused on supporting small business lending and venture capital, direct efforts to provide capital to entrepreneurs. Few of these efforts have created systemic change.

This report identifies barriers entrepreneurs face in accessing capital, surveys efforts to break down these barriers, and identifies possible responses.

EXECUTIVE SUMMARY

Rather than creating and growing specific investment vehicles to invest directly in entrepreneurs, organizations with influence—such as large institutions, foundations, and governments—could instead build up market infrastructure to enable the marketplace of entrepreneurs and capital mechanisms to solve problems.

There are, however, new, innovative strategies that work at the system level or offer alternatives to bank loans and venture capital. An emerging group of people—known as “capital entrepreneurs”—is advancing new vehicles to reduce the barriers entrepreneurs face in accessing capital. They are building more flexible models of capital formation, driving innovation within equity and debt structures, and piloting and developing new ways to source entrepreneurs and deploy capital. These include revenue-based investing, entrepreneur redemption, online lending, crowdfunding, and blockchain.

These capital entrepreneurs would benefit from:

- (1) new industry standards, categories, and technologies to mitigate the friction that limits the flow of capital to entrepreneurs,
- (2) professional communities of practice to help organize and clarify goals and objectives related to increasing access to capital, and
- (3) new strategies for capital aggregation to help increase the flow of capital and close market gaps.

Emerging Solutions

Building capital markets infrastructure represents one opportunity for improving entrepreneurs’ access to capital. Rather than creating and growing specific investment vehicles to invest directly in entrepreneurs, organizations with influence—such as large institutions, foundations, and governments—could instead build up market infrastructure to enable the marketplace of entrepreneurs and capital mechanisms to solve problems.

The Kauffman Foundation has identified five types of infrastructure that show promise:

Capital infrastructure. Greater diversity of investment vehicles and intermediary financial institutions can be developed to bridge the gap between money centers and the spectrum of entrepreneurs seeking capital.

People infrastructure. Capital entrepreneurs have the opportunity to develop new investment vehicles that provide access to the 83 percent of entrepreneurs who are not served by private institutional capital.

Information infrastructure. Enhanced data and technology can create stronger infrastructure and clearer standards for efficient market operations, speeding the flow of capital to a greater number of entrepreneurs.

Knowledge infrastructure. More targeted research can better inform efforts to improve capital access for entrepreneurs, providing insight regarding the origins of capital market gaps and the effects of capital constraints on firms.

Policy infrastructure. Entrepreneurs and capital entrepreneurs can be at the table to assert their voices when lawmakers and regulators are forming policies that affect the functioning of capital markets for entrepreneurs.

In an effort to push thinking on this topic forward and to focus future work on increasing access to capital for entrepreneurs, we close this report with questions for governments, foundations, entrepreneurial support organizations, ecosystem builders, and others within each of these five broad categories.

INTRODUCTION

Entrepreneurship plays an important role in economic dynamism in the United States.

Entrepreneurial ventures serve as the workhorse for the economy by contributing jobs, fueling innovation, and adding productivity. Startups in the United States less than one year old are especially important for net new job creation.² Yet as the rate of startups in the United States has declined, so too has the share of jobs they add to the national economy:³ Per capita startup job creation in the first year declined from 7.52 jobs in 1998 to 5.27 jobs by 2017.⁴

The Kauffman Foundation recognizes the importance of entrepreneurship in the United States and seeks to understand and reduce barriers to entrepreneurship.

Entrepreneurs and researchers often cite lack of access to capital as a significant barrier faced by many entrepreneurs. In order to understand the role of access to capital in entrepreneurship, identify gaps in this access, and determine possible solutions to these gaps, the Kauffman Foundation conducted extensive research on this topic in 2017 and 2018. The effort included:

- A literature review on access to capital, including an analysis of previous attempts to improve access to capital;
- Conversations with more than 500 financial asset owners, investors, and entrepreneurs;
- Regular discussion with a working group of preeminent scholars, entrepreneurs, and investors across the U.S.

This report presents the results of the research, surveying the knowledge landscape on access to capital with an eye toward mechanisms to support systemic improvements in capital access for entrepreneurs in the United States. The report concludes with five key questions to shape a call for action and to guide future thinking.

Entrepreneurs and researchers often cite lack of access to capital as a significant barrier faced by many entrepreneurs.

THE KNOWLEDGE LANDSCAPE

Initial startup costs vary from firm to firm, depending on the size and type of the business, the nature of its activities, its industry, its location, and many other factors.

The vast majority of entrepreneurs need financing to assist with these start-up costs and to grow their businesses. Data from the 2016 Annual Survey of Entrepreneurs⁵ shows that only between 5 and 10 percent of businesses that have paid employees do not need financing at startup. Between 90 and 95 percent of entrepreneurs that hire, then, require some amount of financing to start their businesses.

Types of capital

There is a wide range of types of capital to support new businesses. The use of capital by entrepreneurs varies significantly by type of capital available and by the needs, type, and characteristics of the entrepreneur and the business. Capital can be internal (self-financing) or external (from an outside source). It can also be public (e.g., government grants) or private (e.g., banks or investment firms). And some capital is institutional while other capital can be informal.⁶

External financing for entrepreneurs falls largely into debt and equity categories. Debt financing requires repayment, and equity financing is conditional on an ownership stake in the venture. Equity can be external (i.e., venture capital and angel financing) or inside (i.e., owner financing).

The Kauffman Foundation is particularly interested in **external private institutional capital**, as this type of financing largely represents the ability of the market to meet demand for capital.

As shown in Figure 1, the top three sources of capital used by businesses for startup or initial acquisition capital are: personal/family savings of the entrepreneur (64.4 percent), business loans from banks or financial institutions (16.5 percent), and personal credit cards (9.1 percent). Venture capital is used by only 0.5 percent of entrepreneurs.

External private institutional capital

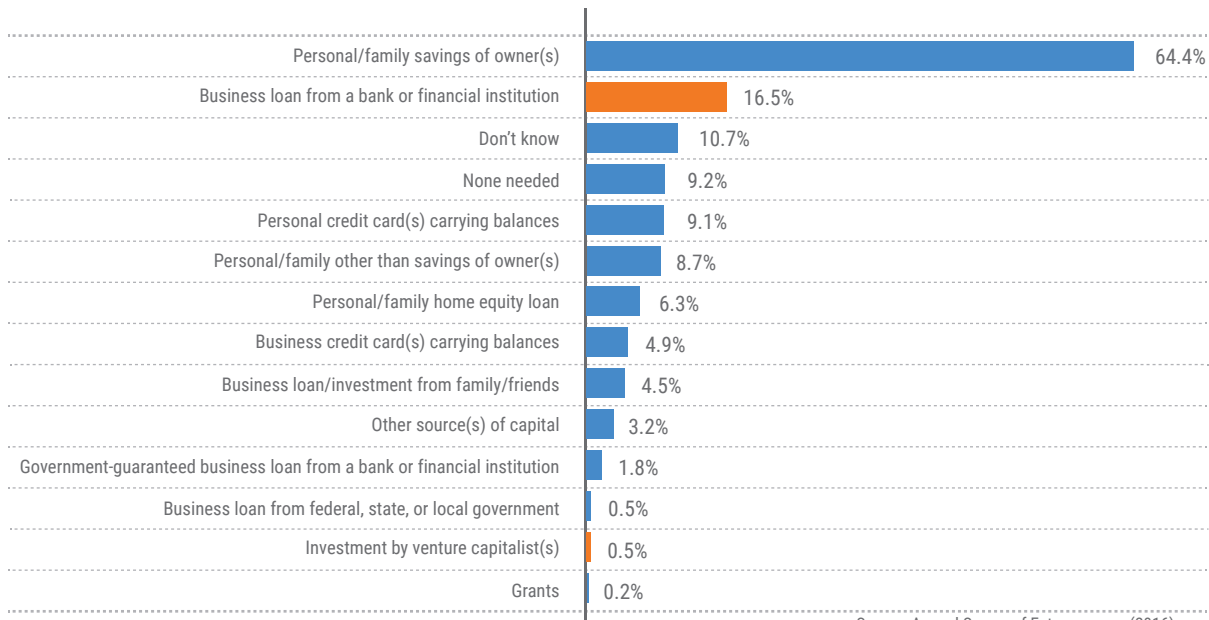
Bank lending (debt) and venture capital (equity) dominate the external private institutional capital landscape. However, as shown in Figure 1, at least 83 percent of new businesses are not accessing this external private institutional capital at startup.⁷

Traditional debt financing can take the form of bank loans and formal credit channels. New firms rely heavily on debt financing and while estimates can vary depending on the time frame and firms being studied, debt channels provide substantial capital for

**Between 90 and 95% of entrepreneurs that hire
require some amount of financing to start their businesses.**

At least 83% of new businesses that hire are not accessing external private institutional capital at startup.

FIGURE 1: Source of Startup Capital



Source: Annual Survey of Entrepreneurs (2016)

entrepreneurs.⁸ A study using Kauffman Firm Survey data estimated traditional debt sources to be close to 40 percent of initial startup capital.⁹

Venture capital (VC) investors take an equity stake in the new business as a condition of financing. While VC financing provides substantial capital that might not otherwise be accessible, it can also be costly for both the VC and the entrepreneur. It relies on effective screening and selection of businesses by the VC. The VC investor may provide management, business planning and development, strategic support and networks, and technical expertise to the new business. For the entrepreneur, VC involvement carries expectations of time commitment, loss of ownership and control rights, and pressure to achieve high returns relative to other types of investors.¹⁰

A key difference between bank and VC financing is ownership and control over management decisions. Entrepreneurs receiving bank loans retain ownership, and banks usually do not play a role in the daily management of the business. VC investors expect equity in return for the investment, and they also can play an active role in developing the business.

VCs typically choose high-risk, high-reward investments that could lead to an IPO or acquisition, in contrast to traditional banks' focus on stable business models with less uncertainty.¹¹ Banks seek repayment of the loan with interest whereas VCs seek the potential for extraordinarily high returns to outweigh the risk of investment and potential losses. When banks lend to early-stage firms, those firms tend to be less risky and less informationally opaque.¹²

Other sources of capital

Angel investors provide personal funds in return for an equity stake in the venture. Compared to VC financing, angel investment tends to be smaller and occur earlier in the life of the new business.¹³ Angel investments are private transactions not subject to public disclosure, and—unlike the venture capital market—there is little institutional infrastructure supporting the angel market. It is therefore difficult to track angel investments, but estimates suggest that the informal angel finance market could be twice as large as the formal venture capital market.¹⁴

Venture debt is a hybrid form of debt/equity finance and provides a mechanism to raise money that limits equity dilution. Venture debt lenders are specialized financial institutions that lend to startups, usually in technology industries as a follow-on to VC rounds.¹⁵

Business incubators and accelerators also serve as sources of capital for entrepreneurs and are often packaged within a broader support program. Incubators can provide guidance and resources, usually focusing on early (even idea level) ventures without taking an equity stake. Incubators may be used by universities, nonprofits, and public agencies to support economic development and job creation.¹⁶

Accelerators focus on late-stage incubation or “graduation” into the market, and can also provide short-term support (typically several months) for business development, networks, and other resources. They may take a minority stake in exchange for seed capital. Accelerators tend to source businesses competitively, including those that are in incubators.¹⁷

Incubators and accelerators serve participating ventures through their own programs, but they can also serve as a pipeline for future private equity financing.¹⁸

As seen in Figure 1, personal savings and self-financing are prevalent, and entrepreneurs can self-finance using several mechanisms. Personal/family savings are used by a majority of new businesses, and even personal credit cards are used more often than business credit cards.

Role of capital in new business success

Existing evidence shows that capital of different types is meaningful for the creation of new businesses. The importance of capital for entrepreneurs is supported by a wide body of research, although the specific types of capital accessed (i.e., banks loans, credit, venture capital, and personal wealth, among others) can vary significantly.¹⁹ The availability of credit has been connected to greater success of new businesses.

Capital plays a significant role in the early years of new businesses. Data from firms in their fourth year of existence shows that the importance of external debt financing rises as new businesses grow.²⁰ An examination of young firms participating in accelerators, which provide financial and nonfinancial support, found that two years after raising capital, funded companies achieved 30 percent more growth in revenue and 50 percent more growth in employment than companies that did not raise funding.²¹ Furthermore, consumer credit access is shown to matter at each stage of new business development.²²

In addition to their direct impacts on individual firms, capital providers can play an important role in ecosystems more broadly by generating systemic and industry ripple effects that support entrepreneurship. A study of 59 accelerators between 2005 and 2012 showed that the arrival of an accelerator in a metropolitan area is linked to regional gains in seed and

In addition to their direct impacts on individual firms, capital providers can play an important role in ecosystems more broadly by generating systemic and industry ripple effects that support entrepreneurship.

early-stage financing, including a 104 percent increase in the number of VC deals, a 1830 percent increase in the amount of seed and early-stage deals, and a 97 percent growth in the number of distinct investors.²³

Moreover, greater availability of capital at the systems level as a result of bank deregulation has been shown to improve opportunities for entrepreneurs. When banks were allowed to expand branches and lend across state lines, new incorporations in a state increased (particularly as the share of large banks in a state increased).²⁴ One study found deregulation was associated specifically with an increase in the share of smaller sized firms, whereas another study found mixed regional results.²⁵ And for the average metropolitan area, doubling the VC supply means moving from four firms to eight firms funded annually, implying the entry of between 2 to 12 establishments for an additional firm.²⁶

The presence of capital providers in the ecosystem can also allow for signaling effects and role model effects in the community. For example, VC funding can serve as a stamp of quality, validating the credibility of the business and leading to more opportunities. It also can contribute to a cycle of repeat entrepreneurship, spinoff opportunities, knowledge transfer, and more broad encouragement of entrepreneurship in the community.²⁷

Barriers to capital access

Despite the importance of capital for entrepreneurs, many entrepreneurs face barriers to securing base and early-stage capital. An efficient marketplace will enable the flow of capital to the most promising entrepreneurial ideas. When access to capital is tied to factors unrelated to the quality or potential of the business—such as geography, gender, race, or wealth—the flow of capital to promising entrepreneurs is slowed.

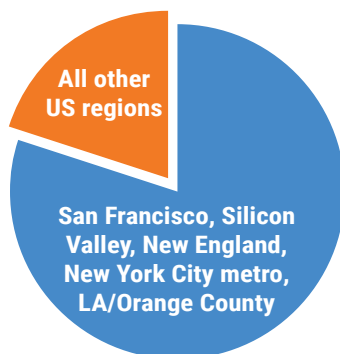
Geographic barriers

Five metro areas—New York City, Miami, Los Angeles, Houston, and Dallas—were estimated to have contributed to 50 percent of net new firm creation between 2010 and 2014.²⁸

In addition, VC industry data reveals considerable geographic and industry concentration. Close to 80 percent of about \$21.1 billion in VC funding in the first quarter of 2018 was disbursed in five regional clusters—San Francisco (North Bay Area), Silicon Valley (South Bay Area), New England, New York City metro, and LA/Orange County—with slightly more than 44 percent in the North and South Bay Areas.²⁹

One reason for these regional disparities may be that capital formation is rarer between the coasts. Investors in emerging businesses prefer to invest in entrepreneurs

Geographic Concentration of VC Funding



\$21.1B VENTURE CAPITAL

In Q1 2018, close to 80% of venture capital funding was disbursed in five regional clusters:

San Francisco, Silicon Valley, New England, New York City metro, and LA/Orange County.

Source: PwC/CB Insights (2018)

THE KNOWLEDGE LANDSCAPE

who are geographically close to them.³⁰ Although technology has the potential to close distances between investors and entrepreneurs, geography plays an important role for tech companies, too, and investors in these companies still tend to invest close to home.³¹

Gender bias

Women are substantially less likely to start businesses than men. In 1996, the rate of new entrepreneurs for women was 260 per 100,000 people, compared to 380 per 100,000 for men (Figure 2). In 2017, the rate of new entrepreneurs for women was 270 per 100,000,



Jerry's Story: The Zero-for-Three Problem

Jerry Nemorin: founder, LendStreet, Cupertino, California

Jerry Nemorin and his family emigrated from Haiti to South Florida as political refugees when he was 12 years old. Throughout his teenage years, Nemorin saw his mother exploited repeatedly by payday lenders and check cashers.

Nemorin was the first in his family to go to college, and he subsequently spent five years on Wall Street learning how the financial system worked, with an eye toward starting a business that could help people like his mom. After graduating

from the University of Virginia's Darden School of Business, he started a firm called LendStreet, which helps the 50 percent of Americans who have personal debt—including student, auto, medical, and credit card debt—to refinance their loans and work themselves out of debt.

Though hundreds of millions of Americans were facing the problem Nemorin was trying to solve, not one of the approximately 300 investors he pitched over a two-year period gave him funding. When asked why in the spring of 2015, he explained: "Venture capitalists are all about pattern recognition. As a black guy in Central Virginia solving poor people's problems, I'm zero-for-three!"

Finally, in 2014, Nemorin got an initial investment from Mitch Kapor and Freeda Klein. Kapor, co-founder of Lotus 1-2-3, and Klein set up Kapor Capital to invest intentionally in entrepreneurs who were undercapitalized by mainstream markets—zero-for-three founders, in Nemorin's terminology. Three years later, Nemorin had raised more than \$100 million from large banks such as JPMorgan Chase and other institutional investors. Because Nemorin was able to access capital, his entrepreneurial talent was unlocked, and he is on a path to transforming lives and communities. Today, he has helped thousands of low-wealth Americans refinance their debts, and the individuals with whom he has worked have raised their credit scores by an average of 200 points.

However, Nemorin's story is not without sacrifice. Nemorin had to move from Virginia to the Bay Area in order to raise money successfully, effectively mitigating one aspect of his zero-for-three problem. The reality is that there are thousands of people like Nemorin across the country who have not yet raised the money they need to start new businesses and cannot or will not move to the coasts to attempt to access the capital they need to get their firms off the ground.

“Venture capitalists are all about pattern recognition. As a black guy, in Central Virginia, solving poor people's problems, I'm zero-for-three!”

compared to 400 per 100,000 for men.³² This reflects new entrepreneurs regardless of incorporation or employer status.

Gender plays a significant role in determining who accesses capital, and research demonstrates that women entrepreneurs in the United States have historically faced and continue to face greater capital constraints than men.³³

Women tend to start firms with less capital than men, and initial disparities do not disappear in the years following startup.³⁴ A study using more than 4,000 new businesses in the Kauffman Firm Survey showed that women used significantly less financial capital at startup than men overall (about two-thirds).³⁵ Men used more than twice as much business debt as women, and three times as much external equity as women.

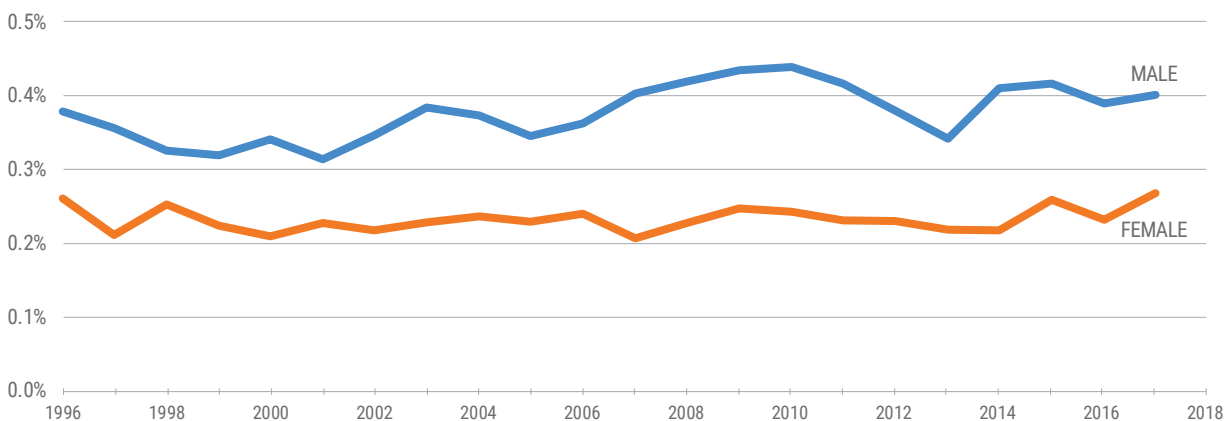
Women entrepreneurs tend to rely more heavily on personal and internal resources rather than external financing compared to male entrepreneurs.³⁶ Women have also been found to be less likely to apply for credit because of fear of rejection.³⁷

The trends in equity financing are also striking. Historically, between 1953 and 1998, less than 5 percent of total venture capital funding went to women-owned firms.³⁸ Pitchbook data for 2017 showed that all-women founding teams raised 2.2 percent of total VC funding (accounting for fewer than 5 percent of deals), compared with all-men teams that raised about 79 percent, and mixed teams that raised about 12 percent of total funding.³⁹

Women have been found to be less likely to receive funding in early-stage decisions from angel investors,⁴⁰ as well as financing from VC firms.⁴¹ Women's firms

In 2017, the rate of new entrepreneurs for women was 270 per 100,000 people, compared to 400 per 100,000 for men.

FIGURE 2: Rate of New Entrepreneurs by Sex



Source: Fairlie et al. (2019), estimates calculated from the Current Population Survey

THE KNOWLEDGE LANDSCAPE

pay higher interest rates and front more collateral than similar men-owned firms.⁴² And, women are more likely to use credit cards, as well.⁴³

Evidence on outcomes for women entrepreneurs who seek funding is mixed. Some studies show that women are less likely to receive bank loans from bank officers than men, even after accounting for objective venture characteristics.⁴⁴ One study found that men were 60 percent more likely to secure funding than women when pitching the same business.⁴⁵

Other studies show no substantial discrimination in approval rates for debt financing, and that differences are instead linked to characteristics of male- and female-owned businesses.⁴⁶ An analysis of survey data from the National Federation of Independent Business (NFIB) showed that while women were less likely to apply for bank loans, they were no less likely to be approved when they did apply.⁴⁷ Women and men founders participating in accelerator programs achieved the same success rate in reaching fundraising goals over a three-year period (10 percent of target), but women founders' goals were significantly lower than men founders' goals.⁴⁸

Investors may unknowingly be asking men and women entirely different questions: they tend to ask men questions about how they will "win" while asking women about how they will "not lose."⁴⁹ Recent research asks if greater participation of women in investment decisions can shrink the gender gap.⁵⁰ Women are more likely to seek funding from female angels than male investors.⁵¹

Racial and ethnic bias

The landscape of entrepreneurship in the United States is marked by significant differences across racial and ethnic groups.⁵² Historic trends reflect racial and ethnic gaps in different modes of entrepreneurship, failure rates, performance, and survival,⁵³ though there is

evidence of a recent increase in the prevalence of some minority businesses.⁵⁴

Capital access is also marked by striking differences across racial and ethnic groups. Trends in capital access overall and by type used vary. Minority-owned firms are found to face significant barriers to capital. For example, minority-owned firms are disproportionately denied when they need and apply for additional credit.⁵⁵ One study compared sources of finance and found that new black-owned businesses start with almost three times less in terms of overall capital than new white-owned businesses, and that this gap does not close as firms mature.⁵⁶

There is also significant variation in the uptake of financing sources. Owner equity for black owners is more than half of total financial capital while white owners put up less than one-third. Outside equity accounted for 1.5 percent and 17 percent of total financial capital in black- and white-owned new businesses, respectively. And, outside debt accounted for close to one-third and more than half of total financial capital in black- and white-owned new business, respectively.⁵⁷

The expansion of credit card availability had a substantial impact on entry into entrepreneurship among black entrepreneurs studied between 1971 and 1990, and this effect was strongest in areas that historically had high rates of racial discrimination.⁵⁸ Close to 15 percent of black entrepreneurs and 11.5 percent of Latino entrepreneurs report using a personal credit card to fund a new business or acquire an existing business, compared to a little over 9 percent for white and Asian entrepreneurs in the Annual Survey of Entrepreneurs.⁵⁹ Interest rates on credit cards can be high, however, making personal credit cards a costly form of credit.⁶⁰

The landscape of entrepreneurship in the United States is marked by significant differences across racial and ethnic groups. Historic trends reflect racial and ethnic gaps in different modes of entrepreneurship, failure rates, performance, and survival, though there is evidence of a recent increase in the prevalence of some minority businesses.

A higher household net worth of a founder is linked to larger amounts of external funding received, even after accounting for human capital, venture characteristics, and demand for funds.

Research shows that racial bias persists over time in decision-making processes related to financing new businesses,⁶¹ such as lender stereotypes about the potential of minority businesses to succeed. Minority firm owners have been found to be charged higher interest rates on bank loans than similar white borrowers.⁶² Black entrepreneurs' loan requests are three times less likely to be approved than those of white entrepreneurs. This difference persists even after accounting for credit scores and other observable characteristics.⁶³

A "mystery-shopping" study of bank lending practices demonstrated discrimination against black business owners: black testers were asked to provide more information about the business than white testers, including information that was not relevant to the business.⁶⁴ These are in spite of recent findings that realized financial returns from equity capital investments in minority-owned businesses can exceed those from white-owned ventures.⁶⁵

Lack of initial wealth

Low-income individuals without initial (pre-existing) wealth also face significant barriers to capital. Research on liquidity constraints showed that the top 95th percentile of wealthy individuals in the United States is more likely to start businesses than other income groups,⁶⁶ and that personal and household wealth are important drivers of entry.⁶⁷ Research at the neighborhood level found that in New York City, the richer third of neighborhoods had more than twice the rate of self-employment than the poorest third.⁶⁸ A higher household net worth of a founder is linked to larger amounts of external funding received, even after accounting for human capital, venture characteristics, and demand for funds.⁶⁹ And individuals who receive a significant cash infusion, such as lottery winners and bequest recipients, are more likely to start businesses.⁷⁰

An increase in home equity has been found to raise the share of people who transition to self-employment.⁷¹

Indeed, a large share of new businesses report using the founder's own funds at the start (see Figure 1 on page 5). While it is not clear if entrepreneurs prefer to rely on personal and family sources of wealth or if they resort to these sources when faced with no better options, wealthy entrepreneurs begin with the advantage of greater equity to put into their businesses.⁷² This advantage is compounded by several others: Wealthy entrepreneurs can self-fund their businesses if they do not want to take on debt, more easily collateralize loans using their assets, rely on a safety net while they devote time and resources to the new business, and reduce their time to start up by avoiding the search for financing. Entrepreneurs without access to home equity and credit cards do not have the option to leverage these resources for the business, and a lack of collateral or poor credit history limits their access to bank lending.⁷³

Wealthy individuals may also have better opportunities for financing through their social networks. Research shows that entrepreneurs with stronger social capital—the depth and resources of one's networks—are more likely to know customers, employees, and investors⁷⁴ or are more likely to be able to access them. Wealthy entrepreneurs may be able to cope with information asymmetries by using their social networks in ways that entrepreneurs without pre-existing wealth cannot, such as by drawing financing from family and friends.

Lack of initial wealth can also affect activities after starting the business. Low-wealth individuals are more likely to lack financial literacy⁷⁵ and other advantages shown to be important for business success, such as managerial experience and education.⁷⁶ Lower-wealth entrepreneurs are also found to be more likely to drop out after starting businesses.⁷⁷

Wealth disparities highlight the challenge facing entrepreneurs from poorer households. In 2015, average income among households in the lowest fifth of the income distribution was \$20,000, compared to \$292,000 among households in the highest fifth of the income distribution. And within the highest fifth, income was highly skewed towards the top of the distribution.⁷⁸ Rising wealth and income inequality since the early 1990s⁷⁹ and the Great Recession have limited the ability of low-wealth individuals to not only self-finance their businesses directly, but also to leverage other assets like home equity to obtain business loans.

Shift in the banking environment

The environment that shapes access to capital has also changed over the last several decades, creating additional barriers for entrepreneurs. In many contexts, community banks serve as a first source of capital for businesses, and are important specifically for some sectors.⁸⁰ They also disproportionately serve rural areas, and are found to be four times more likely to locate offices in rural areas.⁸¹ Yet, community bank lending has declined significantly over the last generation. Large banks have become larger, while there are fewer small and medium-sized banks. Larger banks survived the Great Recession with balance sheets restored, while small banks—the ones more likely to lend to entrepreneurs—were limited by both economic conditions and new regulatory barriers. Between Q2 1994 and Q2 2014, the number of community banks declined from 10,329 to 6,094. During the same 20 year period, the number of large banks grew from 73 to 120.⁸² In 2014, community banks with less than 10 billion in assets made up only 22 percent of bank loans.⁸³

Capital for lending also is in decline. While 1,042 de novo community banks were formed between 2000 and 2008, only six new banks opened between 2011 and 2017. In fact, the total number of banks in the U.S. in 2018 was just below 5,700—the lowest number since the 19th century.⁸⁴

Information asymmetry

The persistence of information asymmetry in capital markets between the supply of capital (investors) and the demand for capital (entrepreneurs) gives rise to barriers faced by entrepreneurs. Entrepreneurs face a larger challenge than established businesses in accessing capital because established businesses can leverage their longer track records and existing relationships.

Many entrepreneurs, by contrast, lack an established track record, and banks often have limited information about new businesses, which can raise the perceived risk of making loans to them. New businesses also often lack stable cash flows and high-quality collateral, which some lenders, like banks, typically use to determine risk. Information asymmetries can also deepen perceptions about the difficulty of accessing capital.

Multi-dimensional barriers

Obtaining a precise picture of who accesses capital (and who does not) is complex because of the dynamics shaping access to capital and the role of demand and supply in the capital markets. Much of the research on capital constraints facing entrepreneurs has been conducted on entrepreneurs, which likely understates the disparities in capital access among potential entrepreneurs who did not begin operations because of a lack of capital,⁸⁵ or people who were afraid to seek capital.⁸⁶

It is also not clear if underserved entrepreneurs have a lower demand for external financing, face a more limited supply, or—more likely—experience a combination of demand and supply factors in their efforts to access capital. For example, women apply for significantly smaller loans than men⁸⁷ and only 9 percent of proposals submitted to angel investors came from women entrepreneurs.⁸⁸ Research shows that the subtle and embedded psychological and cognitive processes of the entrepreneur and the investor can be complex.⁸⁹

Larger banks survived the Great Recession with balance sheets restored, while small banks—the ones more likely to lend to entrepreneurs—were limited by both economic conditions and new regulatory barriers.

Barriers can also be multi-dimensional, and capital can be related to other resources for businesses. A straightforward picture is complicated because there are a variety of direct and indirect dynamics that can influence how capital is channeled to entrepreneurs, such as credit scores or home ownership.

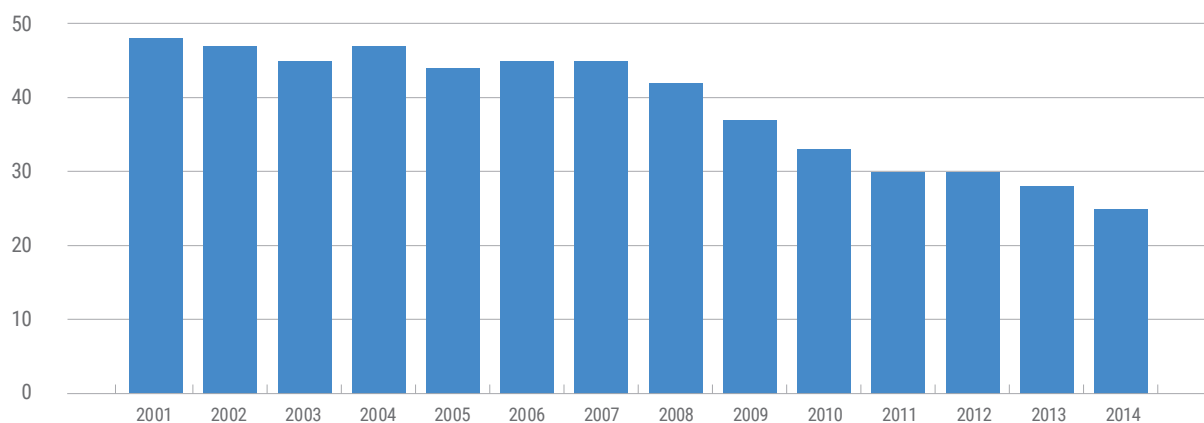
Many factors interact within an ecosystem and shape entrepreneurship outcomes through individual, business, cultural, financial, and structural pathways. The decline in capital for lending intersects with racial barriers. For example, the number of black-owned banks in the country has been declining (Figure 3) falling from 48 in 2001 to 25 in 2014.⁹⁰

One factor driving disparities in capital investment among black and white entrepreneurs is tied to persistent differences in founder financial status at the start of the business.⁹¹

Geography and gender intersect in various ways, as well, creating additional disparities in financing. For instance, among women entrepreneurs participating in accelerator support programs, women in New York, Massachusetts, and California were much more likely to try to raise as much money as men. Outside these states, however, men's goals for raising money were almost twice as high as those of women.⁹² Perceptions of fit in certain industries or subtle signals and cues—such as regional or foreign accents—can also drive differences between funding success among men and women pitching the same business.⁹³

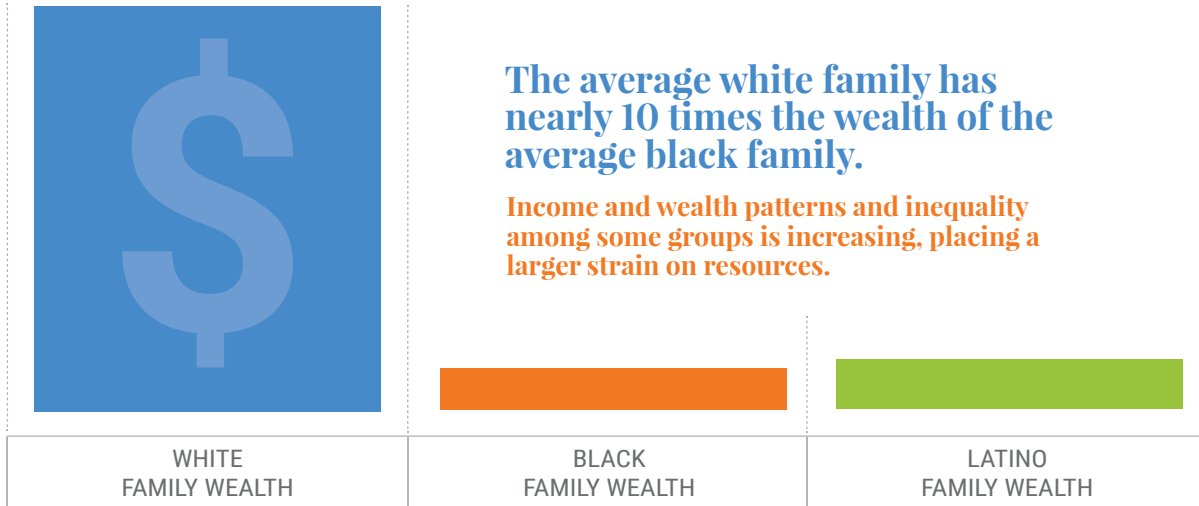
Intersections between underlying wealth disparities and race are also significant, affecting the interest and timing of the decision to pursue entrepreneurship. Income and wealth patterns and inequality among some groups is increasing, placing a larger strain on resources. In 2016, the Survey of Consumer Finances showed that

FIGURE 3: The Dwindling Number of Black-Owned Banks



Source: The Federal Deposit Insurance Corp.

Median Household Wealth



the median net worth for white families was \$171,000, compared to the median net worth of \$17,600 for black families and \$20,700 for Latino families.⁹⁴ Across groups, wealth is concentrated at the top of the wealth distribution.

Finally, the extent of entrepreneurs' difficulties in accessing bank financing may vary by the type of business or the stage of business life. Among technology firms that went public before the dotcom bubble, for example, the majority (75 percent) had already established bank lending relations prior to IPO, despite having minimal earnings and few fixed assets.⁹⁵

Capital fit

The existing structure of the capital markets can exacerbate these barriers and create additional challenges for entrepreneurs. The ability of the marketplace to deliver the right "capital fit" has important implications for entrepreneurs' ability to access the funds they need and for the creation and success of new businesses. Current trends in capital access indicate that the types or volume of capital available is not always aligned with the needs of new firms.

External private investors provide a fairly limited number of types of capital, and entrepreneurs and their businesses are very diverse. Some businesses, for example, do not match well with either banks or VCs. They may have significant growth potential but are not fast or large enough to attract VC interest. At the same time, they may lack the collateral or historical track records to attract bank loans, or they may have financing needs that are too large for most banks. As a result, many entrepreneurs are left without the appropriate capital fit.

VC firms, in particular, fund only a tiny slice of the volume of new businesses overall: less than 1 percent of firms reported VC financing at startup in separate samples taken in 2004 and 2016.⁹⁶ Venture capital's structures were developed for specific high-growth industries (e.g., semiconductors, personal computing, and biotech), and its structures and practices are not relevant to most businesses and sectors. In fact, a disproportionate volume of VC funding and returns are related to a small number of companies. In 2016, for example, five companies (Uber, Airbnb, WeWork, Magic Leap, and Snapchat) accounted for significant venture capital funding in the United States—and four

of those five were in New York or California. While venture capital is an essential ingredient in many of the biggest new companies, provides a significant amount of equity funding for early-stage companies, and receives disproportionate media focus and research attention, it is not accessible or appropriate for most new businesses. VC financing focuses narrowly on specific types of new businesses, and even the lowest thresholds for VC financing significantly exceed the needs of many new businesses.

Constrained access to capital can put entrepreneurs in a position where they have to “take what they can get” rather than the financing that would be the best fit for their needs. Many entrepreneurs report not wanting to take on debt,⁹⁷ yet, as shown in Figure 1 on page 5, 16.5 percent of entrepreneurs reported accessing bank or financial institution loans among their sources for startup capital. Other data sources show varied reliance on debt financing. One study shows that as much as 32 percent of startups report some outstanding debt.⁹⁸

Another study found that bank loans, lines of credit, and asset-backed loans and mortgages were used for close to 28 percent of all funds.⁹⁹

Evidence that entrepreneurs sometimes combine multiple types of financing also suggests that capital fit can be a challenge for entrepreneurs. As there is limited research on joint use of financing types¹⁰⁰ and how entrepreneurs make these choices, it is unclear whether different types are substitutes or complements for each other.¹⁰¹ Firms with bank relationships were found to be more likely to have funding from VC sources.¹⁰² At the same time, firms with VC financing use a significant amount of debt.¹⁰³

The most common financing structures are not natural fits for many types of businesses. The matrix below provides examples of certain businesses and how they fit (or don't fit) with equity or debt financing.

Research suggesting that some entrepreneurs need capital but are not willing to access the types of

Examples of Capital Segmentation: Matching Types of Entrepreneurs to Types of Capital

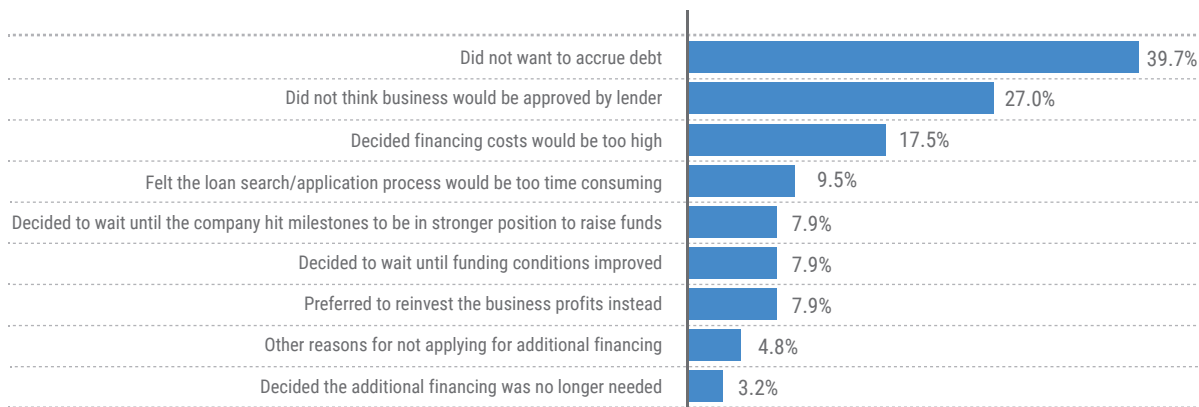
	EQUITY	DEBT	OTHER
Early-Stage	Tech company that seeks angel investment or is applying to an accelerator	Farmer or small producer who has purchase orders from a large company and seeks a bank loan	Company with growth that does not fit technology investors' "hockey stick" profile but is too early-stage for debt
Steady-Growth	A local coffee shop that seeks crowdfunding	Mom and pop business that was established 20 years ago and seeks a small business loan	A food truck or other capital-light business that has growth potential but does not qualify for a loan
Fast-Growth	Tech company with market traction that seeks venture capital	A growing company that seeks a bank loan	A large, successful company with owners who would like to sell the company to its employees

9.5% of all employer firms surveyed reported a negative impact on profits due to a lack of access to start-up financial capital, and 10.6% of all firms reported a negative impact due to the cost of capital.

financing available to them also indicates that capital fit is a problem. Figure 4 below presents evidence of the disconnect, documenting reasons that entrepreneurs who need financing do not seek it. Many are concerned about the cost of obtaining funds to start or support continuing operations of a business, with 17.5 percent reporting that financing costs would be too high. Debt finance vehicles specifically are unappealing to some entrepreneurs: 39.7 percent of entrepreneurs who needed but did not apply for financing reported that they did not want to accrue debt. The use of credit cards to finance a new business can be especially unappealing as they can be expensive with high interest rates.¹⁰⁴

Perceptions about the difficulty of accessing capital are also meaningful for entrepreneurs—even the expectation of facing barriers can prevent potential entrepreneurs from attempting to raise capital.¹⁰⁵ Among business owners who needed but did not seek additional financing, 27 percent did not think the business would be approved by a lender, and 9.5 percent felt that the loan search/application process would be too time-consuming (see Figure 4). Related to this, concern about difficulty accessing capital can carry over into the early life of a new business: a significant proportion (almost 18 percent) of young four-year-old businesses reported not applying for funding at some point because they feared they would be denied.¹⁰⁶

FIGURE 4: Reasons Entrepreneurs Did Not Pursue Capital Despite Need



Source: Annual Survey of Entrepreneurs (2016)

Investor Incentives

The misalignment of investor incentives with the needs of entrepreneurs is one of the factors contributing to the lack of capital fit for many entrepreneurs. The structure and rewards for investors to provide capital influence the types and patterns of entrepreneurial financing available in the marketplace.

One reason large firms tend to avoid investing in small businesses and funds, for example, is the

substantial cost of due diligence—the research necessary to understand the investment potential of an opportunity. Large asset holders with multi-billion-dollar mandates (e.g., pension funds, insurance companies, and endowments) have limited range, legitimately constrained by fee structures and operational capacity. As it can take the same amount of time to conduct due diligence on a \$10 million investment as it does for a \$100 million investment, incentives likely favor the larger deal for larger investors.¹⁰⁷

Investor Incentives: How Institutional “Math” Can Create Financing Gaps for Entrepreneurs

In an effort to better understand investor behavior and the obstacles to entrepreneurs’ capital access, the Kauffman Foundation spoke with more than 300 large financial asset holders (including endowments, pension funds, institutions, individuals, and family offices) that invest into venture capital funds and other vehicles about their investment needs and aspirations.

Many investors reported that investment opportunities in emerging funds that target underserved entrepreneurs are often too small to matter to them. For example, one institution shared that they are unlikely to make an investment that represents less than 1 percent of their approximately \$2 billion endowment, due to the time and costs involved in due diligence. As a result, their minimum investment size is \$20 million. Furthermore, they shared that fiduciary policies require that they do not fund more than 10 percent of any specific investment vehicle. Together, these factors mean that the minimum total size for any investment vehicle this endowment would support is approximately \$200 million. This minimum, then, inhibits its ability to capitalize new banks, venture funds, or other investment vehicles—to invest directly in entrepreneurs. These calculations are representative of other endowments interviewed as well.

We also found that a disproportionate amount of the capital provided to entrepreneurs comes from relatively small asset holders. We interviewed or surveyed nearly 200 small venture funds and found that very few had institutions capitalizing them. These funds were primarily capitalized by family offices (investment companies of high-net-worth individuals), which constitute only about 5 percent of the world’s investable capital. And in interviews with more than 200 venture capital funds intentionally focused on U.S. markets outside of California, New York, and Massachusetts, we did not identify a fund that was larger than \$200 million in size.

We interviewed or surveyed nearly 200 small venture funds and found that very few had institutions capitalizing them.

Impact of unmet demand

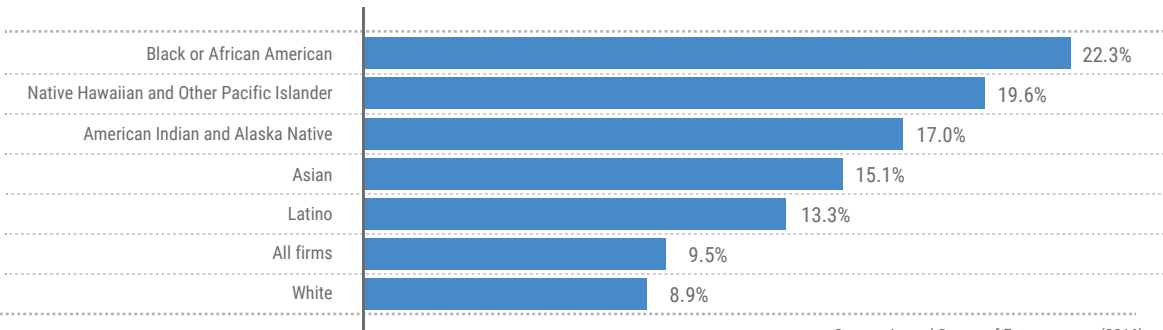
These barriers and the lack of capital fit for many new businesses mean that there is significant unmet demand among entrepreneurs who need capital, and that entrepreneurs are often unable to choose the financing services that work best for their specific businesses. In most markets, there are many more entrepreneurs trying to raise money than there are investors willing to invest. Traditional forms of capital (debt and equity) are not reaching all entrepreneurs who need financing. And the most promising entrepreneurial companies are not necessarily those that are accessing capital.

Lack of access to capital can present major barriers for entrepreneurs and have significant consequences for business starts, business performance, and business growth. In the 2016 American Survey of Entrepreneurs,

9.5 percent of firms surveyed reported a negative impact on profits due to a lack of access to start-up capital, and 10.6 percent of firms reported a negative impact due to the cost of capital.¹⁰⁸ Capital can be used to strengthen leadership and management in new businesses, employ or acquire technical expertise, and invest in business resilience like backup systems. An inability to invest in these areas could slow new business activities but not necessarily lead to business failure.

Data demonstrates that a lack of access to capital has a disproportionate effect on minority entrepreneurs. As shown in Figure 5, 22.3 percent of black entrepreneurs report that a lack of access to capital negatively impacted profitability. This proportion is considerably higher than the 15.1 percent of Latino entrepreneurs, the 13.3 percent of Asian entrepreneurs, and the 8.9 percent of white-owned businesses.

FIGURE 5: Percent of Entrepreneurs Reporting Profits Negatively Impacted by Lack of Access to Capital



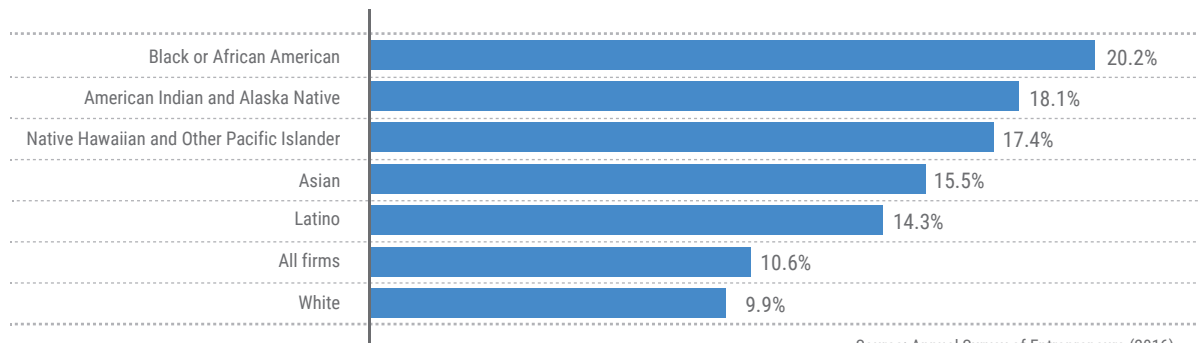
22.3% of black entrepreneurs report that a lack of access to capital negatively impacted profitability.

One in five black-owned businesses reported that profits were negatively impacted by the cost of capital.

Similarly, as presented in Figure 6 below, more than 1 in 5 black-owned businesses (20.2 percent) reported that profits were negatively impacted by the cost of capital. This share is higher than that for businesses owned

by Asians (15.5 percent) and Latinos (14.3 percent), and it is more than double the share of white-owned businesses (9.9 percent).

FIGURE 6: Percent of Entrepreneurs Reporting Profits Negatively Impacted by the Cost of Capital



Source: Annual Survey of Entrepreneurs (2016)

Conclusions

1. Access to capital supports entrepreneurial starts and successes.
2. There is evidence of barriers to capital access along several dimensions, including both geographic and demographic factors.
3. Capital markets are not structured to serve many entrepreneurs, leaving a significant unmet demand for financing.

EFFORTS TO HELP ENTREPRENEURS ACCESS CAPITAL

Many intervention strategies have been implemented across sectors to increase access to capital for founders. Key initiatives are presented below, by sector:

- **The public sector.** Federal, state, and local governments have made direct investments, grants, and guarantees (e.g., Small Business Administration loans, Small Business Innovation Research grants, Small Business Technology Transfer Program); capitalized intermediaries (e.g., regional venture capital funds); and set standards for types of investments and types of vehicles that serve public aims (e.g., New Markets Tax Credit, small business investment companies).
- **The private sector.** Some private companies and organizations have been created to increase access to capital for entrepreneurs. Examples include institutions such as Community Development Financial Institutions (CDFIs) which, in partnership with philanthropic efforts, provide seed funding mechanisms, sometimes through incubators and accelerators.
- **The philanthropic sector.** Foundations have played a leading role in capital formation by creating and defining investment categories (e.g., angel investing, impact investing); working with the private sector on the formation and acceleration of capital vehicles (e.g., CDFIs, microfinance banks); making direct and intermediary investments from grant-making budgets and endowments; and developing transparent standards and categories (e.g., B Corporation

certification for companies with validated social impact).

Direct efforts to provide capital to entrepreneurs

Efforts to stimulate economic growth by providing cash directly to highly promising entrepreneurs have been an active strategy for several decades. At a state level, multiple significant pilots are underway. For example, the State of New York and the City of Buffalo operate 43North, among the world's largest startup competitions, which offers a cut of \$5 million in prizes plus other incentives to winning startups that move to upstate New York, and \$1 million to the grand prize winner. Similarly, the City of St. Louis sponsors the Arch Grant program, which offers \$50,000 to approximately 20 companies each year.

On a national level, AOL co-founder Steve Case leads an initiative called "Rise of the Rest," with a \$150 million seed fund that has focused attention more actively on geographic disparities in venture capital by investing in traditionally underserved regions. Other organizations that are pursuing similar strategies include accelerators, programs, and funds.

EFFORTS TO HELP ENTREPRENEURS ACCESS CAPITAL

The largest program providing capital directly to underinvested entrepreneurs may be the Small Business Administration (SBA) loan program, which guaranteed more than \$25 billion in 2017.¹⁰⁹ Since the program was created in 1964, it helped entrepreneurs access capital through loan guarantees. A study of SBA loan programs between 1990 and 2009 points to a positive relationship between SBA-guaranteed lending and job creation.¹¹⁰ Results for similar programs are generally difficult to track.

Finally, microfinance has grown into a \$30 billion global industry that focuses on borrowers who would not be able to access traditional forms of financing like bank loans due to unbanked status, lack of collateralization, perceived inability to repay, or discrimination.¹¹¹ The hypothesis underlying the microfinance model is that even a small loan to poor entrepreneurs can help lift them out of poverty by increasing their income. These small loans serve as investments in business activities and can help entrepreneurs smooth cash flow.

Such direct funding efforts to target specific segments of entrepreneurs and close disparities in access to capital are encouraging. There is, however, limited evidence that microfinance has contributed to large-scale systemic transformation to date. This could be because there is a misalignment of goals and interests between the financial backers of microfinance vehicles, the microfinance banks, and the borrowers. Though popular in emerging markets, microfinance proliferated slowly in advanced economies like the United States. Slow uptake of the traditional model, in which a microfinance bank disburses small loans to entrepreneurs is tied to the broader banking landscape in the United States, including bank presence, credit risk assessment,¹¹² and regulatory set-up.

Efforts to support capital formation through fund creation

There is a difference between investing at the individual level (a single venture capital firm or a single company) and at the system level (a pooled vehicle that provides capital to many managers, such as a fund of funds, or open infrastructure that all funds can use). Investing in a single venture capital firm or enterprise requires the asset holder to pick winners and losers. By contrast, foundations and governments have played more effective roles when they create structural changes by building infrastructure and system-level changes.

Results concerning the effectiveness of government and philanthropic venture capital formation strategies have been mixed. Philanthropic and government programs to promote capital investment with a venture capital focus typically fall short of their goals; government programs, in particular, can fail if they directly manage investments or use the wrong tool for the context.¹¹³

Some capital fund formation attempts have been more successful in helping entrepreneurs in targeted sectors, but less successful in creating sustained systems change in the economy. For example, the European Seed Capital Fund Pilot Scheme, backed by the European Union, formed venture capital funds that increased firm formation in the short term, but faced the long-term business model challenges of small funds. Many smaller funds close due to lack of long-term viability.¹¹⁴ Future efforts to form capital vehicles should consider the underlying business model challenges of running small, local capital vehicles sustainably.

Other efforts have been more successful. “Yozma I,” which originated in an Israeli government program to

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EFFORTS TO HELP ENTREPRENEURS ACCESS CAPITAL

In recent years, a number of communities have created capital vehicles for their local entrepreneurs in the form of investment programs tied to accelerators. Many of these programs have resulted in increased access to capital for founders, in part because they mitigate the information asymmetry problem.

develop the venture capital industry, led to the creation of drop-down funds and also served as a model for professionally managed venture capital funds. The Inter-American Development Bank's Multilateral Investment Fund (MIF), a fund of funds for Latin America, is seen as the godmother of the venture capital industry in Latin America. MIF specifically focuses on the capital entrepreneur building the new investment vehicle and targets its support to the specific needs and context of that effort. A distinguishing characteristic of MIF is its broad and flexible view of both the types of capital it provides to fund managers (debt, equity, quasi-equity, credit guarantees, and more) and the variety of funds it supports, which also helps attract and sometimes mitigate risk for private capital to invest alongside.

Numerous states have launched fund formation projects (e.g., CAPCOs, CDFIs, venture funds). Analyses of these projects show varied evidence of success, but comparative studies are few. It is therefore difficult at present to draw substantial conclusions regarding best practices in these types of efforts.

In recent years, a number of communities have created capital vehicles for their local entrepreneurs in the form of investment programs tied to accelerators. Many of these programs have resulted in increased access to capital for founders, in part because they mitigate the information asymmetry problem. Such programs can give entrepreneurs valuable information about capital providers in their ecosystem, and some even offer direct capital investment.¹¹⁵

Online communities also have sought to address information asymmetry. For example, AngelList launched in 2010 to make the investment process more transparent for angel investors and entrepreneurs through an online platform. Since its launch, 1,040 startups have raised \$445 million from angel investors on this platform.¹¹⁶

All forms of investing must deal with issues of liquidity, risk, and return. For an investor, an equity investment has the potential for a higher return, but it also is higher risk and lower liquidity. A debt investment offers a lower return, but it has lower risk and higher liquidity. Typically, equity investors are only repaid when a company achieves an "exit," usually in the form of an IPO or an acquisition. Since most entrepreneurs start without an exit strategy, they are often hindered from raising equity financing because either they do not want to sell their companies or they are building businesses that are unlikely to be acquired. For debt investors, new businesses are often too risky due to lack of cash flow and hard assets to lend against.

New alternative financing models have emerged to solve for both returns and liquidity, and to resolve the challenge for companies trapped by the equity-debt paradigm. Several systems-change organizations have sought to redesign the framework through which asset holders view capital. In Portland, Oregon, the group Zebras Unite seeks solid returns through revenue-based payments or other innovative mechanisms to invest in companies it calls "zebras"—in contrast to the "unicorns" that venture capitalists are known to seek. Along the same lines, the Tugboat Institute in Silicon Valley has launched the Evergreen movement, which seeks to finance and support growing companies with the assumption that they will not be acquired by larger companies.

Revenue-based investing

Several emerging capital entrepreneurs (people creating new service businesses to invest in entrepreneurs) are developing professional, innovative fund structures that close market gaps, but they are facing challenges related to developing and implementing their business models, raising capital, and creating broader awareness of their work. While these funds often are relatively small in the

(continued on p. 24)



Lula's Story: Selling Kentucky Blue Snapper

Lula Luu, co-founder, Fin Gourmet, Paducah, Kentucky

Lula Luu was born in South Vietnam to parents who fought alongside U.S. troops. After the Communist occupation, Luu escaped Vietnam and lived in refugee camps across South Asia for several years before eventually moving to the U.S. She earned a scholarship to the University of Kentucky and a Ph.D. in nutrition, specializing in metabolic processes in individuals of Asian descent. Through her work with Vietnamese shrimpers in the Gulf of Mexico outside New Orleans, Louisiana, Luu developed Fin Gourmet. Fin originated in 2010 as a jobs program for Gulf shrimpers during the six-month off-season, focusing on Asian carp. Through the program, Luu could recruit participants to various health-related studies in which she was involved, providing additional benefit to them for their participation in university-based health research.

Soon after Luu started Fin as a not-for-profit entity, the BP oil spill occurred. Fishermen suddenly needed to show that they were affected by the oil spill aftermath and chose not to work as they prepared to appeal to BP for damages. As Luu had already invested a significant amount of work developing the Fin business plan and had come to recognize the tremendous benefits of the plentiful carp, she decided to turn the project into a formal for-profit company. While she continued to work at her academic jobs during the day, she continued to build Fin by working at night over the next two years, developing products, marketing, and the company's first customers. She now runs the company full-time.

From the start, Fin sought to employ individuals who were marginalized by race, income, geography, and circumstance. Luu's first employees in New Orleans were women from domestic violence shelters. Later, Fin would hire workers in recovery from substance abuse and those coming out of prison. Fin sells two primary products to high-end customers: all-natural surimi-based prepared products and boneless fillets. The company sells the remaining parts of the fish to companies that make pet treats, fish meal, and fertilizer. Fin is a no-waste company.

Fin has a small operation in Paducah, Kentucky, but it draws fishermen from Louisiana to Iowa. When the company sought financing to grow the business, however, it didn't fit into investors' typical funding categories. While Fin Gourmet would be an ideal client for a community bank, Paducah, like most rural communities, had seen community banks close. Lenders from large banks in Louisville and Nashville said that, as a two-year-old business, Fin was too risky; venture capitalists said the company was not high-growth enough for equity funding. Village Capital¹¹⁷ helped Fin by creating a hybrid financing option that was a better fit for the business. The first investment round was royalty based: Investors would receive 5 percent of Fin's top-line revenue until they received a 3x return on investment, which they believed would be a good fit for both Fin's business fundamentals and growth ambitions.

The experiment hasn't been perfect. Fin sometimes falters because of interruptions in the supply chains it has developed from scratch. Luu must not only build the business and market, and create products from scratch, but also create the raw material supply. This initial instability has caused disruption in consistent growth, but Village Capital has been flexible in helping Fin navigate. One lesson learned was that the first repayment would have worked better in the second or even third years of operations rather than the first, as it takes time for a capital injection to result in hires and revenues. Despite its challenges, Fin's experience demonstrates a role for financial innovation.

EFFORTS TO HELP ENTREPRENEURS ACCESS CAPITAL

capital markets, their innovations are drawing attention and could potentially lead to important changes to the field.

One increasingly visible model is revenue-based investing (which includes dividend financing, royalty-based investing, or shared earnings) in which entrepreneurs pay a percentage of revenue or free cash flow over time to investors. While this structure is not new—it has historically been used to finance businesses such as restaurants or movies—capital entrepreneurs are increasingly utilizing this structure in new ways.

Lighter Capital in Seattle, for example, has raised a fund to provide revenue-based investing to software-as-a-service businesses. Such businesses often have predictable cash flows but long sales cycles. They are typically seen as too risky for conventional debt, but not high-growth enough for equity. Indie.vc, a Utah-based fund, has used this financing model for founders who want to remain independent and do not want to be forced to sell their companies. And the State of Colorado has backed the Greater Colorado Venture Fund to make rural investments using revenue-based investing as its primary investment structure, as it sees it as a better fit for rural businesses. The Telluride Accelerator's experience points to the appeal and potential for this structure: the accelerator offered a number of investment structures for its first five businesses and revenue-based investing was a popular choice.

Just as venture capital and debt are a fit for specific types of companies and not others, however, revenue-based investing is not appropriate for all ventures.

Entrepreneur redemption

Other innovators have explored a model called entrepreneur redemption, through which founders can buy out their investors over time. Employee ownership is one attractive implementation of entrepreneur redemption. Price Cutter Supermarkets and Burns & McDonnell Engineering are two examples of Missouri companies that have robust employee stock ownership plans. These plans require strong advance planning and mission-aligned investors, but they can create wealth for thousands of people while aligning the interests of capital and labor.

Online and technology-based lenders

A growing number of capital providers and capital entrepreneurs are using technology or other strategies to make more investments faster. The effect this will have on barriers collectively remains to be seen. Digitization has encouraged banks to use a transaction-based model instead of meeting with entrepreneurs, which in the Swedish context, has been found to hurt women disproportionately more than men.¹¹⁸ At the same time, new online lenders are using large datasets and refined algorithms to make loans more quickly and effectively. They might be more likely to take a risk on businesses that are not bankable, often using proprietary algorithms to forecast the likelihood of business success. OnDeck, Kabbage, and PayPal are examples of three online lending companies that use innovative technology to underwrite small business loans. Collectively, they lent \$5 billion to small businesses in 2017. This figure may, however, represent only 1 percent of the potential impact: marketplace lending could reach \$490 billion by 2020.¹¹⁹

SoFi and MPower are two examples of companies that originated in student lending but are expanding to use individuals' online footprints to make quick loan decisions. Tala uses similar data for emerging markets. And Fig Loans and Lendable track companies' cash flows and make loans based on technology that predicts companies' needs and abilities to return the investments. PayPal has launched PayPal Working Capital, a flagship product that lent \$3 billion to PayPal merchants, using their transaction history as an alternative to underwriting. Square offers a flat-fee business loan program, Square Capital, to eligible sellers, who are identified by factors such as account history, payment frequency, and processing volume through Square. And, QuickBooks also offers business loans through QuickBooks Capital, which accepts applications from eligible account holders based on time with QuickBooks, personal and business credit history, and revenues.

Online and technology-based lending can expand geographic and demographic opportunities to access capital. Online lenders report significantly higher geographic distribution of capital compared to the venture capital and banking industries, as well as

(continued on p. 26)

Jacob, Michael, and Olympia's Story: Using Data to Include the Majority of American Businesses in the Lending Marketplace

Jacob Haar, Michael Hokenson, and Olympia De Castro, co-founders,
Community Investment Management

Services businesses employ 86 percent of the U.S. workforce.¹²⁰ The lending model in the United States, however, was created for manufacturing businesses through the collateralization of assets. As a result, traditional banks often cannot underwrite the value of these services firms, from veterinarians and software-as-a-service technology companies to marketing firms and car washes.

Capital entrepreneurs Jacob Haar and Michael Hokensen spent a decade building an investment fund focused on microlenders and small and medium lenders in emerging markets. They funded more than 75 lenders in 35 countries, ultimately selling their fund to a larger investment fund. After the exit, they teamed up with co-founder Olympia De Castro to apply their expertise and advanced technology to track small business cash flows in U.S. markets. They noticed consistent challenges contributing to the decline of lending to small businesses in the United States: lack of infrastructure to reach people in rural locations; small transaction sizes that make it difficult for lenders to manage profitably; and a lack of understanding of how to serve minority populations. At the same time, they saw a growing group of businesses using technology to forecast business cash flows, evaluate entrepreneurial talent, and underwrite risk.

The team created Community Investment Management (CIM) because they saw an opportunity to aggregate capital and help fund these innovative online lenders. To date, CIM has lent out more than \$400 million to more than 5,000 businesses, all through intermediaries, and it has produced a strong return for its investors. Women, people of color, and/or military veterans own half of the businesses they have funded. They focus on the quality of the enterprise they are underwriting, the caliber of the technology-based underwriting procedure, and its track record. One of their investees is Jerry Nemorin of LendStreet, whose story was shared earlier in this report.

Despite CIM's success, Haar sees much more to do, including a vital role for philanthropy. He explains, "We don't have many groups that are real advocates for entrepreneurs and small businesses. One of the challenges is that there isn't much capital out there that understands the opportunity. For the 5,000 businesses we've lent to, there is unmet demand for 45,000. Now, not all of them should receive a loan, but if we could expand the credit box a little bit, we could serve a much larger segment of this market. Foundations could play a role in first-loss or risk-mitigation capital, for example." Such a role for foundations could empower lenders like CIM to expand their targets and serve worthy, if riskier, businesses.

Haar continues, "Philanthropic institutions can also play a role in policy research and education. A lot of what we see in the online/fintech space is predatory, based on short-term thinking and operating with little restraint." According to Haar, there are several problems. Laws and the Consumer Financial Protection Bureau protect individual consumers from such predatory practices, but small businesses do not have similar protections. There is no Truth in Lending Act for small businesses. Further, financial literacy may be lower among small business owners. Many entrepreneurs who run small businesses are asking for protections like those that consumers have today.

To address this problem, CIM engages with other organizations, such as the Aspen Institute, and has worked with peers to form the Responsible Business Lending Coalition to promote a Small Business Borrowers' Bill of Rights.

EFFORTS TO HELP ENTREPRENEURS ACCESS CAPITAL

higher percentages of women and minority receiving investments.¹²¹

Alternative ways to finance entrepreneurial businesses

Crowdfunding

Crowdfunding campaigns enable entrepreneurs to raise capital from individual small investors or lenders—the “crowd”—largely over the internet and on social media platforms. Crowdfunding platforms create a venue for entrepreneurs who seek capital to connect directly with potential, often smaller-scale investors, facilitating the flow of an alternative source of entrepreneurial capital that otherwise would be very costly or unmatched. This model of disintermediated financing allows for the direct flow of capital from investors to entrepreneurs, unlike traditional models of capital provided by intermediaries like banks. Crowdfunding can be donation-based; reward-based, including pre-purchase; debt-based; and equity-based.¹²²

Companies have raised more than \$3.5 billion since 2011 via crowdfunding platforms such as Kickstarter and Indiegogo.¹²³ Several experimental efforts also have attempted to use crowdfunding to encourage community ownership of initiatives. For example, Kansas City-based Neighborly is using crowdfunding in communities to fund parks, schools, and other projects, raising more than \$25 million in municipal bonds.

Crowdfunding is still a new relatively mechanism for entrepreneurial financing, and entrepreneurial financing through crowdfunding may be in smaller amounts given

the nature of some crowdfunding models, like reward-based or debt. It is too early to assess the ability of equity crowdfunding to consistently provide amounts approximating the size of traditional VC funds.

Regulatory priorities and needs for different crowdfunding models vary. For example, debt crowdfunding allows investors to make loans including interest, whereas reward-based crowdfunding does not involve payments or repayments back to the investor. Equity crowdfunding was limited to accredited investors until the 2012 Jumpstart Our Business Startups (JOBS) Act reduced restrictions for non-accredited investors. The popularity of crowdfunding is growing, and many capital entrepreneurs are developing new ventures despite regulatory uncertainty.

Some aspects of crowdfunding may offer promise to democratize entrepreneurial finance and increase transparency.¹²⁴ Crowdfunding could shape market conditions for individual investors and entrepreneurs by broadening investment opportunities (supply) and lowering the costs associated with seeking financing (demand). Debt-based crowdfunding widens opportunities for individual investors to choose the level of risk associated with investing their savings, and it provides entrepreneurs with less costly and rapid mechanisms to access financing from a larger pool of potential investors.¹²⁵

Crowdfunding, then, may be able to reach a more diverse set of founders than traditional capital sources. Research finds, for example, that women are 32 percent more likely to reach their goals than men in successful crowdfunding campaigns.¹²⁶

Crowdfunding platforms create a venue for entrepreneurs who seek capital to connect directly with potential, often smaller-scale investors, facilitating the flow of an alternative source of entrepreneurial capital that otherwise would be very costly or unmatched.

EFFORTS TO HELP ENTREPRENEURS ACCESS CAPITAL

Capital entrepreneurs are often operating in silos and lack professional standards, public awareness, communities of practice, and other basic market infrastructure elements. They face their own barriers to entry, business model challenges, and risks.

Crowdfunding also raises new questions, such as how platforms manage the flow of information between the crowd and the entrepreneurs. Platforms can reduce information asymmetries by prescreening and sourcing deals and becoming rich sources of knowledge about both the investors and the entrepreneurs.¹²⁷ At the same time, crowdfunding platforms and their fee structures can vary significantly.

Blockchain

A blockchain is a continuously growing online list of records that are linked and secured—a decentralized, transparent ledger. Blockchain transactions (peer-to-peer payments or payments for a service) cannot be hacked, stolen, or forged. A 2017 study of entrepreneurs in the private venture capital database TokenData reported \$5.6 billion in initial coin offerings that utilized blockchain technology to fund their companies.¹²⁸

The effect of Blockchain on capital market gaps has not yet been well established. Blockchain can improve recordkeeping by maintaining a continuous, real-time record of all transactions in a system, which should improve business efficiency and intelligence. Blockchain often cuts out intermediaries in a system, improving speed and reducing transaction costs. Like crowdfunding, blockchain could also enable direct engagement between entrepreneurs and their investors or customers, possibly improving capital access for entrepreneurs too small or niche to be funded by others. One example, Abra, helps entrepreneurs issue “tokens” (shares) of their companies directly to the public, potentially helping entrepreneurs raise capital more directly.

Using blockchain technology to raise capital has risks, however, as regulatory frameworks and market norms are evolving.

Infrastructure, Communities of Practice, and Systems-Level Innovation

Capital entrepreneurs are often operating in silos and lack professional standards, public visibility, communities of practice, and other basic market infrastructure elements. They face their own barriers to entry, business model challenges, and risks.

Capital entrepreneurs would benefit from (1) new industry standards, categories, and technologies to mitigate the friction that limits the flow of capital to entrepreneurs, (2) professional communities of practice to help organize and clarify goals and to share learning related to increasing access to capital, and (3) new strategies for capital aggregation to help increase the flow of capital and close market gaps.

New standards, categories, and technologies

Asymmetric information between capital providers and entrepreneurs—and even among capital providers—creates substantial friction that limits the flow of capital to entrepreneurs. New common standards and categories could mitigate this friction and facilitate the flow of capital to entrepreneurs. A consideration of the development and impact of FICO scores and D&B ratings, as well as the SWIFT code, may inform future efforts to create new standards and categories for entrepreneurial financing. While these two examples followed different paths, both have been adopted industry-wide successfully.

FICO and D&B. The FICO score, the most commonly used barometer of an individual’s creditworthiness, and the D&B rating, a common rating of a business’s creditworthiness, were standards created by private individuals to evaluate creditworthiness and help

EFFORTS TO HELP ENTREPRENEURS ACCESS CAPITAL

address a market gap. These standards were owned by ratings agencies that went on to become the successful Fair Isaac Corporation and Dun & Bradstreet, both of which are now publicly traded on the New York Stock Exchange.

Given the vast amount of data now available in the world, the relevance of FICO scores and D&B ratings may be changing. FICO scores can be insufficient because they are backward-looking and lack nuance. A FICO score reflects the footprint of an individual's history, but it cannot fully forecast future outcomes or determine causes of debt. FICO treats an individual who is in debt because of a medical emergency as similar to someone who overspent on discretionary purchases. Similarly, D&B ratings may be inadequate because they rely on a business' historical footprint, which may be a deficient barometer for very small or new businesses.

SWIFT code. The SWIFT code, which banks use to identify and interact with each other, was created to solve communications problems between and among international banking institutions more than 40 years ago. In 1973, 239 banks from 15 countries convened to determine the best means of communicating about cross-border transactions. As a result of the meeting, a cooperative called the Society for Worldwide Interbank Financial Telecommunication (SWIFT) was created. Banks agreed to use common standards for messaging across borders, which SWIFT would define and arbitrate. Today, SWIFT is a governing global infrastructure that services more than 11,000 institutions in 200 countries.

FICO and D&B are bottom-up examples of organizations developing effective standards that tens of thousands of financial services institutions have adopted. SWIFT is a top-down example of capital providers collaborating to improve infrastructure. Both of these efforts can inform future strategies, particularly efforts aimed at mitigating the effect of information asymmetries in the market.

Communities of practice

Over the past 30 years, foundations, private sector players, and governments have sought to fund and convene communities of practice around specific capital strategies. Building a community of practice for capital entrepreneurs would help organize and clarify goals and objectives related to increasing access to capital. For example, from 1946 to 1973, the American Research and Development Corporation helped train a generation of fund managers to use a pioneering type of financing at the time—venture capital.¹²⁹ Communities of practice for specific capital segments are described below.

Venture capital (e.g., National Venture Capital Association (NVCA)). In the early 1970s, the NVCA was organized to convene a network of investors under the umbrella of “venture capital.” Over the past 40 years, venture capital has grown from a disorganized group of boutique firms to an asset class that endowments and institutional managers take seriously. In 1993, the Community Development Venture Capital Association was formed among smaller, more regionally focused VC funds to share notes, resources, and best practices. The Kauffman Fellows program was launched as a leadership development program for venture capitalists and has become a community for shared learning, professional development, and fund building that involves more than 589 Fellows in 46 countries.

Angel investing (e.g., Angel Capital Association (ACA)). Individuals have been investing directly in companies for decades. In the early 2000s, the Kauffman Foundation organized a series of national roundtables called Angel Organization Summits, to discuss the best way to organize and support a forum to share best practices with the angel investor community. The ACA, an organization that grew out of these summits, is now an industry voice, organizing platform, and community of practice for more than 100 angel investment groups.

Given the vast amount of data now available in the world, the relevance of FICO scores and D&B ratings may be changing. FICO scores can be insufficient because they are backward-looking and lack nuance.

EFFORTS TO HELP ENTREPRENEURS ACCESS CAPITAL

Impact investing. Impact investing is an intentional strategy that aligns the dual goals of financial returns and social impact. This work includes educating board members, investors, and decision-makers, and developing governance structures (such as B Corporations), impact measurements, and management incentives. In 2009, the Rockefeller Foundation convened more than two dozen leaders from around the world who were engaging in strategies that blended financial and impact objectives—and who were all using different terms for this work (e.g., “social venture capital,” “triple-bottom-line investing”). Participants agreed to call this

work “impact investing,” and they created the Global Impact Investing Network, an industry association, and IRIS, a common language for reporting standards.

Capital allocators

To address barriers related to geography, demographics, and social and educational networks, several foundations and other organizations have launched strategies to change who has decision-making power in the capital markets. As discussed above, capital allocation decision makers may be less likely to fund entrepreneurs from different geographic or demographic

Daryn’s story: Challenging the System for Capital Allocators

Daryn Dodson, founder, Illumen Capital, Washington, D.C.¹³⁰

It is rare to see an entrepreneur and community activist become a private equity investor, but Daryn Dodson is working to integrate social justice with the capital markets. Dodson is the founder of Illumen Capital, a fund of funds that is tackling implicit bias and the demographic disparities it produces in asset management and entrepreneurship.

Dodson worked for the national microfinance advocacy organization Self-Help, where he contributed to the successful passage of legislation protecting vulnerable communities from predatory lending. Dodson then attended Stanford Business School. While many of his classmates went to New York or San Francisco after graduation, Dodson went to New Orleans to help accelerate the entrepreneurial resurgence in the city post-Katrina. After leaving New Orleans, he spent nearly a decade playing a leading role in private equity investments for the Calvert Funds in Washington, D.C.

Through this work, Dodson recognized that gender, racial, and geographic disparities in access to capital mirror the disparities in decision-making power in managing capital. In 2017, Dodson started Illumen Capital to change this dynamic. He has worked with prominent Stanford researchers on implicit bias and decision-making, and he is raising \$100 million in a fund of funds structure that reduces bias and empowers talent, regardless of ethnicity or gender. He also is working to create a community of practice in which fund managers and their investors can share best practices and world-class research on how to combat persistent inequalities in the capital markets.

Dodson explains, “A lot of people in asset management don’t have the context or appetite to engage on issues of race and gender. Fear is a big barrier. Fear that they may be wrong about their strategy. Fear that they have to change. A lot of people ask me to prove that racism is a challenge. That is a higher bar than many prospective VCs have when they are raising a fund based on an emerging strategy. I’m held to a higher bar. Then I have to convince them that there is economic value in solving this problem, which is ironic in a supposedly data-driven industry that has embraced a talent distribution that is statistically impossible.”

EFFORTS TO HELP ENTREPRENEURS ACCESS CAPITAL

groups than their own. Furthermore, tight social and educational networks can lead to a lack of cognitive diversity, as well.¹³¹ In 2017, firms owned by women and minorities managed 1.3 percent of assets in the \$69 trillion asset management industry, and firms with substantial or majority women or minority ownership represented 8.6 percent of total firms in the industry. However, across asset class and controlling for risk, there was no statistically significant difference in

performance of these funds. In fact, women-owned firms were overrepresented in the top quartile of all performers.¹³² More diverse investors may lead to more access to capital for diverse founders.¹³³ The Level Playing Field Institute provided seed capital to funds run by women and people of color through an affiliated foundation, seeding more than 20 fund managers and sharing best practices.

Emily Reinhardt's Story: A Main Street Entrepreneur

An Investee of AltCap, a Kauffman Foundation Grantee, Kansas City, Missouri

Emily Reinhardt is a Kansas City native who hoped to pursue a career as an artist after graduating from Kansas State University (KSU), but instead took a full-time job as a waitress. Her big break came when a former KSU professor and close mentor gave Reinhardt his pottery wheel and kiln—a gift with a \$5,000 value.

For the past seven years, Reinhardt's business, The Object Enthusiast, has sold beautiful pottery, and Reinhardt has been able to support herself full-time. Her business is doing well, and demand for her products has exceeded her capacity. Initially, however, she lacked the capital to grow. The microloan she received from AltCap in 2017 helped her hire her first full-time employee and move to a studio with a bigger production capacity. These expenditures paid off: her revenues doubled in one year.

Reinhardt sees field-building opportunities that could help other similar artist-entrepreneurs. Educational programming on building a business and financial literacy, as well as microgrants and microloans could help other aspiring artists get started. These microgrants and microloans would serve the same purpose as Reinhardt's mentor's gift. She explained, "For somebody in the beginning stages of making something come to life, a gift or microloan could be huge."

Reinhardt's story highlights the importance of receiving capital beyond the money alone. The \$5,000 kiln she was able to use had substantial cash value, but it also mattered to Reinhardt that someone believed in her and bet on her. When investors, lenders, and capital entrepreneurs are in a position to support entrepreneurs, particularly those who are underestimated by mainstream markets, there are significant non-monetary benefits in these entrepreneurs' increased ability to fulfill their potential.

Supported by the Kauffman Foundation, AltCap and other Kansas City microlenders are participating in a pilot project in which they sell their loans to larger banks. The transaction allows the banks to earn Community Reinvestment Act credits, while the microlenders can recycle their capital and lend more money to entrepreneurs.

EFFORTS TO HELP ENTREPRENEURS ACCESS CAPITAL

Capital aggregation

One of the challenges in expanding access to capital is that, as discussed above, it is difficult to create an investment vehicle large enough to interest institutional investors, yet small enough to work with most emerging entrepreneurs. In an effort to bridge large institutions and small businesses, a pilot funded by the Kauffman Foundation in Kansas City helps microlenders sell their loans to larger commercial banks. This initiative was inspired by the nonprofit Accion Chicago. In this framework, small lenders play the role of investment originator (similar to the role of mortgage originators), and large lenders who purchase the loans provide liquidity and greater amounts of capital. This effort to bridge the gap between small capital vehicles and large institutions offers promise.

Capital entrepreneurs also have developed aggregation strategies. CIM, for example, uses data to understand the quality of community banks' loans and raises institutional capital to support them—as a type of “fund of funds” for community banks. In its first two years, CIM has raised more than \$300 million to fund these banks. Such aggregation efforts are also largely too new to determine their impact. There is a risk that the link between small investors, such as microfinance banks, and larger capital sources may encourage small investors to take less risk, in effect adopting an institutional-grade approach to lending. But it also is possible that small investors will take more risk, knowing that strong performance will be rewarded with greater access to capital.

In an effort to bridge large institutions and small businesses, a pilot funded by the Kauffman Foundation in Kansas City helps microlenders sell their loans to larger commercial banks. This initiative was inspired by the nonprofit Accion Chicago.

Conclusions

1. Most public attention and research have focused on bank loans and venture capital, but at least 83 percent of entrepreneurs do not access either type at the time of startup. An emerging group of capital entrepreneurs is building more flexible models of capital formation, driving innovation within equity and debt structures, as well as piloting and developing new ways to source entrepreneurs and deploy capital.
2. Some capital formation strategies can provide improved outcomes for entrepreneurs in specific target segments, but there is little evidence of efforts that have resulted in systemic change.
3. Interventions that show promise for systems change can strengthen the tools, communities of practice, and methodologies for capital entrepreneurs and allocators.

GUIDING QUESTIONS TO HELP GENERATE SOLUTIONS

The efforts to create innovations in entrepreneurial financing and broaden access to capital presented above are promising, but there is much more work to be done. We believe the most effective, long-term approach to broadening access to capital is not by investing in specific funds or companies, but instead by building the critical market infrastructure that leads to better access.

This report is meant to provide some context for the development of future strategies to help entrepreneurs more effectively access the capital they need to start and succeed. In an effort to push this thinking forward further, we present five broad categories of questions for governments, foundations, entrepreneurial support organizations, ecosystem builders, and others.

Capital Infrastructure

Question: How can philanthropic organizations, governments, and other leaders play a role in bridging the gap between large asset holders and the entrepreneurs who are currently too small to be served effectively by the capital markets?

Most capital vehicles that invest in entrepreneurs are too small to be significant to the vast majority of large asset holders. Bank formation and reform, for example, generally are focused on banks that have more than \$50 billion. A typical community bank, which is a more likely source of financing for an underserved entrepreneur, averages only \$300 million in assets. Since the Great Recession, the smallest community banks have declined 41 percent, and new bank formation is at an all-time low.

Similar barriers exist in venture capital.

Improvements in capital infrastructure should address the following questions:

- **Is it possible to aggregate similar assets and sell them upstream?** The Kauffman Foundation's microfinance pilot in Kansas City is one example. The Foundation is helping several local microfinance banks sell their loans to larger banks, thus unlocking more capital for new investments. Philanthropic capital may be able to play a similar role in capital aggregation in other regions and asset classes.
- **Can philanthropic capital be deployed, such as grants and program-related investments, to form new capital vehicles where none exist?** To offer one example, philanthropic capital could help seed a new community bank—or invest in infrastructure for a collaboration of banks—that uses technology to invest in entrepreneurs who cannot currently access capital.
- **Does building a community of capital entrepreneurs help them access larger pools of capital?** This could be a variation on “fund of funds” or other capital aggregation models.

GUIDING QUESTIONS TO HELP GENERATE SOLUTIONS

- **Can an intentional focus on capital in a specific place potentially unlock assets to invest in entrepreneurs?** Philanthropic capital could build on policies such as recently legislated Opportunity Zones to create “placemaking vehicles” that aggregate different types of investment in one geographic area (e.g., real estate/co-working, seed grants to microentrepreneurs, small business loans to retail, high-growth equity in potential large employers).
- **Can philanthropy and government incentivize the capital markets to focus on a given market gap, whether geographic or demographic?** Matching private funds and/or providing downside risk mitigation could energize and direct private capital to a targeted challenge.

Any strategy that addresses these questions should measure the degree to which entrepreneurs can access the broader capital markets. It would be preferable for entrepreneurs to interact with more specialized (e.g., place-based, sector-based) organizations that are the right size and the right fit—rather than a few institutions (e.g., banks, venture capitalists) managing the flow of capital from capital markets to entrepreneurs.

People Infrastructure

Question: Is it possible to support capital entrepreneurs who are forming innovative strategies, business models, and vehicles that remove barriers for investment-worthy entrepreneurs who are not currently well-served?

Many entrepreneurs are too risky for conventional debt benchmarks or do not fit the “hockey stick” growth trajectory that equity investors seek. Other entrepreneurs may lack the financial literacy necessary to understand the capital markets and where their firms could best access capital. Moreover, decision-makers among certain asset managers are highly homogeneous by race and gender.

This landscape has described an emerging group of capital entrepreneurs—entrepreneurs who are forming new types of investment funds. They are developing

innovative structures to support entrepreneurs who are not currently served by the capital marketplace.

Possible solutions should consider the following questions:

- **What is the benefit of gathering and evaluating data on companies that do not fit small business debt and venture capital?** Stronger data on the entrepreneurs not served by equity and debt services may help validate and scale new forms of capital, such as revenue-based investing or employee ownership.
- **Can systemic change be accelerated by supporting a community of capital entrepreneurs?** Programs that support convening and sharing best practices among investors, similar to the models of the Kauffman Fellows or Angel Capital Association, may support the development of new capital vehicles.
- **How can investment capital support capital entrepreneurs in the formation of funds?** Targeted grants or investments could potentially support the development of new capital vehicles, such as by seeding capital vehicles, mitigating risk, or providing infrastructure to help capital entrepreneurs.
- **How can the financial literacy of entrepreneurs be improved cost-effectively?** Local incubators and accelerator programs already provide financial literacy education and training for small, select groups of entrepreneurs. Online education programs could exponentially increase information reach.

A wave of new investment models and capital entrepreneurs are already emerging organically. Just as venture capital and angel investing defined categories in the past, new investment models could develop into new categories that serve more entrepreneurs. Biases and blind spots in decision-making also must be addressed to ensure entrepreneurs have a fair shot at accessing capital to build companies, spur innovation, and drive economic growth.

GUIDING QUESTIONS TO HELP GENERATE SOLUTIONS

Information Infrastructure

Question: What standards, categories, or methodologies for financial information could speed the flow of capital to entrepreneurs not currently served?

Current decision-making processes are often dated (e.g., lending based on assets and historical data) or biased (e.g., creating concentrations of capital skewed demographically and regionally).

Possible solutions should consider the following questions:

- **How can new technologies help investors source and evaluate businesses to include many more entrepreneurs than are served today?** Standards, similar to the FICO score, that use predictive technologies to forecast a business's potential could improve the chances that a promising early-stage entrepreneur can access capital.
- **How can data help speed the flow of capital into smaller capital vehicles?** For example, with the right data systems for underwriting, microloans potentially can be pooled, securitized, and sold at larger scale, thus helping bigger banks access businesses more rapidly and helping smaller entrepreneurs access capital more readily.
- **How can better information create transparency and/or remove bias from investment?** Helping investors use data and benchmarks to evaluate businesses could help mitigate gender, demographic, and geographic biases in decision-making.
- **What kinds of standards and best practices would help create systemic change in the ecosystem?** Standardized terms and language for new investment structures can reduce transaction costs for investors and entrepreneurs to agree on better fits between capital structures and business needs.

Knowledge Infrastructure

Question: What knowledge, data, and research are needed to inform the development of future capital market efforts to serve entrepreneurs?

The existing data and research evidence point to systematic differences in capital access for entrepreneurs, and to imperfections in the market that can result in barriers to capital access. There is a lack of knowledge specifically on the roots and trends in capital market gaps and possible solutions, as well as on the form and size of these gaps. In addition, almost all research on capital constraints for entrepreneurs relies on data collected from individuals who have already become entrepreneurs. For this reason, it has not been possible to determine or measure the true extent of capital markets as a barrier that prevents individuals from starting businesses.

If research can better identify specific interventions that improve access to capital for entrepreneurs, this knowledge can enable program and policy actors, including capital entrepreneurs, to conduct more targeted, effective activities to close gaps in the marketplace.

Possible solutions should consider the following questions:

- **What are the micro-level trends in demand for capital?** How much capital do entrepreneurs need? To what extent is access to capital a barrier preventing a potential entrepreneur from starting a business? How important is access to capital, compared to other resources needed to start a business?
- **What capital sources suffer from excess demand, and for which types of entrepreneurs?** Better understanding of existing and ideal pairings of entrepreneurs and different types of capital can help identify promising areas for capital formation efforts. There is also a need for more information about the underlying demand factors related to gaps in capital access.

GUIDING QUESTIONS TO HELP GENERATE SOLUTIONS

- **What are the effects of new innovations in capital markets?** Rigorous statistical evidence on the relative effectiveness of new tools, such as technology and data-driven algorithms to offer capital, is needed to assess the benefits and appropriateness of these tools to solve capital market gaps. The use of data to target businesses can be more effective, but it could potentially also deepen existing biases for minority entrepreneurs, and this question has not been adequately studied in the existing research.
- **What metrics can track capital access and entrepreneurial success better?** There is a need to clearly and carefully specify metrics, since “success” is not just the amount or type of financing raised. The effect of changes in access to capital on specific groups of entrepreneurs can inform more specific efforts to improve access. There is a growing focus among entrepreneurship support organizations and programs to offer capital as part of a broader package, and the ability to identify if and how access to capital leads to specific desired firm outcomes, and under what circumstances, will be useful to design future programs.

Policy Infrastructure

Question: How can the voices of entrepreneurs be better integrated into capital markets policy to ensure more entrepreneurial starts and growth?

Much of capital markets policy is informed by large institutions and ultra-high-net-worth individuals. Changes in the nature and structure of capital markets should include entrepreneurs’ voices in order to design systems which provide more favorable conditions for capital formation serving entrepreneurs. A successful strategy will ensure that entrepreneurs play a central role in policy conceptualization, changes to existing policy, and new policy design.

Possible solutions should consider the following questions:

- **How can economic development dollars be used to better support entrepreneurs (versus large companies)?** It is important for policymakers and local economic development planners to assess

expected returns on investments of different types, such as efforts to attract large companies and projects (e.g., Amazon HQ2) and investments in local entrepreneurs and the local business environment.

- **How can incentive programs be designed to be entrepreneur-friendly?** Policymakers should take a fresh look at the regulations and implications of tax incentive programs (e.g., Opportunity Zones) that do not specifically focus on entrepreneurs and ask how to consider their potential effects.
- **How can securities and asset management policy do better for entrepreneurs?** Federal guidance on how pension funds and endowments interpret fiduciary obligations can affect how much risk these institutions are allowed to allocate to investments in underserved entrepreneurs, such as in their own sectors or regions.
- **How can competition policy ensure a competitive market for any entrepreneur with a great idea?** Some interpretations of antitrust law and competition policy may have unanticipated effects on new bank formation and capital formation for entrepreneurs and small businesses.
- **How can policy ensure that banks are able to serve small entrepreneurs as well as large customers?** Policy and regulation may have many negative effects (intended or unintended) on the formation and success of community banks. For example, any evaluation of the Community Reinvestment Act or other regulations of banking ought to include the voices of entrepreneurs.

Next Steps

While this landscape is extensive, it is by no means complete. The linkages between access to capital and firm success need to be explored more fully in the research, especially as they relate to barriers for communities and traditionally undercapitalized segments of the population.

No single organization, foundation, or government agency can eliminate the capital challenges facing entrepreneurship in the U.S.

We can, however, see potential emerging paths for future action. When capital entrepreneurs develop innovative

GUIDING QUESTIONS TO HELP GENERATE SOLUTIONS

investment funds, entrepreneurs who can't access conventional equity or debt gain new ways to access capital. When industry standards are created (such as FICO or SWIFT), or categories are organized (such as "angel investing" and "venture capital"), the resulting infrastructure can potentially accelerate the flow of billions of dollars.

The Kauffman Foundation will pursue the answers to these questions, developing collaborations to experiment, learn, and generate solutions. Most directly, the Kauffman Foundation recently launched a national Capital Access Lab. The Capital Access Lab seeks to catalyze new financing mechanisms to serve the more than 83 percent of entrepreneurs who don't access venture capital or bank loans, increasing capital investment to underserved entrepreneurs who have been historically left behind, including due to their race, ethnicity, gender, socioeconomic class, and/or geographic location. The Kauffman Foundation has committed \$3 million to seed this new fund.

In addition, the Kauffman Foundation's New Entrepreneurial Learning team will assist entrepreneurs

in accessing capital via education and collaboration. Our Entrepreneurial Ecosystems team will facilitate the development of communities that include capital entrepreneurs. Our Entrepreneurial Support Organizations team will work with organizations across the U.S. to develop solutions for entrepreneurs who do not access venture capital or bank lending. Our Knowledge Creation and Research team will gather more granular data and assess the efficacy of capital interventions. Our Policy team will advocate for the voice of entrepreneurs in capital markets policy. We will continue to seek out new ideas toward these ends.

"Zero Barriers" for entrepreneurs can be realized only through collaboration on multiple fronts to develop, enable, and sustainably grow innovative investment strategies, policy, infrastructure, and opportunity for a new and diverse generation of entrepreneurs. We are confident that, with innovation, persistence, and inclusion, the challenges in dismantling barriers can be overcome, thus renewing the American entrepreneurial spirit for future generations.

The Kauffman Foundation recently launched a national Capital Access Lab. The Capital Access Lab seeks to catalyze new financing mechanisms to serve the more than 83% of entrepreneurs who don't access venture capital or bank loans, increasing capital investment to underserved entrepreneurs who have been historically left behind.

The Kauffman Foundation has committed \$3 million to seed this new fund.

ENDNOTES

ENDNOTES

1. Fairlie et al. (2019).
2. See Dvorkin and Gascon (2017), Decker et al. (2014), and Haltiwanger et al. (2013).
3. Decker et al. (2014).
4. Fairlie et al. (2019).
5. See <https://www.census.gov/programs-surveys/ase.html>. The ASE covers firms with paid employees.
6. Love (2018).
7. Responses are non-mutually exclusive. At best, 83 percent of entrepreneurs did not access external private institutional capital. It is not possible to determine if the 17 percent of entrepreneurs that accessed external private institutional capital also accessed other types of capital.
8. For example, Zarutski (2006) found that almost 58 percent of new firms in the US used outside debt, and Berger and Udell (2003) found that use of debt by small and large firms was at about 50 percent. Cole et al. (1996) found that banks provided more than 60 percent of credit to small business, using 1993 survey data. See Robb and Robinson (2014).
9. Robb and Robinson (2014).
10. See Love (2018) and Denis (2004).
11. Barry and Mihov (2015).
12. See Love (2018) and Gonzalez and James (2007).
13. The average age of companies receiving angel investment is 10.5 months versus more than 12 months for VC financing. Close to 70 percent of firms are at the pre-revenue stage when financed by angels, compared to 40 percent when financed by VCs. See Love (2018) for more. Business angels may create business angel networks (BANS) that make larger investments, offering angels the benefit of not having to work individually (e.g., lower transaction costs, diversification, and visibility). This can also move focus from smaller investments closer to VC practices (see Wallmeroth et al., 2017) and follow ventures from early to late stages of financing (Wright et al., 2016).
14. See Love (2018) and Wallmeroth et al. (2017).
15. See De Rassenfosse and Fischer (2016).
16. Lewis et al. (2011).
17. Miller and Bound (2011).
18. For example, the Y Combinator accelerator invested \$20,000 of seed money into Airbnb, after which it raised \$600,000 from a VC firm, followed by \$7.2 and \$100 million investments (Miller and Bound, 2011).
19. See Frid et al. (2016); Love (2018); Robb et al. (2010); Elston and Audretsch (2011).
20. Robb et al. (2010).
21. Estimates provided by Peter Roberts (2018), using the Entrepreneur Database Project.
22. Herkenhoff et al. (2016).
23. Fehder and Hochberg (2014).
24. Black and Straham (2002).

25. Cetorelli and Strahan (2006).
26. See Samila and Sorenson (2011).
27. Cole et al. (2016).
28. Economic Innovation Group (2017).
29. PwC / CB Insights (2018).
30. See Sorenson and Stuart (2001) and Wong et al. (2009).
31. See Love (2018), Mason (2007), and Zook (2002).
32. Fairlie et al. (2019). The rate of new entrepreneurs captures new business creation, regardless of incorporation or employer status.
33. See National Women's Business Council (2018); Coleman and Robb (2012); Alsos et al. (2006); Boden and Nucci (2000); Carter and Rosa (1998); Fairlie and Robb (2009).
34. National Women's Business Council (2018).
35. Coleman and Robb (2009).
36. National Women's Business Council (2018); Coleman and Robb (2009); Green et al. (2003).
37. See Cavalluzzo et al. (2002); Orser et al. (2006).
38. Brush et al. (2003).
39. Zarya (2018), using Pitchbook data.
40. Becker-Blease and Sohl (2007); Brooks et al. (2014).
41. Nelson and Levesque (2007); Greene et al. (2001)
42. See Fundera (2018) and Robb (2013).
43. Robb and Wolken (2002).
44. See Carter et al. (2007).
45. Brooks et al. (2014).
46. See Orser et al. (2006) for a discussion.
47. Treichel and Scott (2006).
48. Estimates provided by Peter Roberts (2018), using the Entrepreneur Database Project.
49. Kanze et al. (2017).
50. Raina (2019; 2016).
51. Becker-Blease and Sohl (2007).
52. Refer to <https://www.census.gov/topics/population/race/about.html> for more on race and ethnicity in Census.
53. Fairlie and Robb (2014; 2007); Blanchflower (2009).
54. Fairlie et al. (2019).
55. Cole (2014).
56. See Fairlie et al. (2017).
57. Love (2018); Fairlie et al. (2017).
58. Chatterji and Seamens (2012).

ENDNOTES

59. Data from Annual Survey of Entrepreneurs.
60. See Scott (2009).
61. Jost et al. (2009); Blanchard et al. (2008); Blanchflower et al. (2003).
62. See Love (2018); Bates and Robb (2013); and Blanchflower et al. (2003).
63. These other characteristics explain about 50 percent of the total capital gap; of these, lower credit scores and lower founder personal net worth explain two-thirds. See Fairlie et al. (2017) for more.
64. Bone et al. (2018). Black testers were asked to provide information, such as financial statements, personal W2s, detail on accounts receivables, marital status, and spousal employment.
65. Bates et al. (2018).
66. Hurst and Lusardi (2004).
67. Evans and Jovanovic (1989); Fairlie and Krashinsky (2017).
68. Laney et al. (2013).
69. Frid et al. (2016). Kerr et al. (2019) find a limited positive response of greater ability to borrow against one's home in entrepreneurship, and note that most entrepreneurs do not use home equity to finance their businesses.
70. See Blanchflower and Oswald (1998); Hurst and Lusardi (2004). Hurst and Lusardi (2004) find that past and future inheritance are correlated with business entry, noting that recipients tend to already have large amounts of wealth.
71. Corradin and Popov (2015).
72. Love (2018).
73. See Love (2018).
74. Bosma et al. (2004); Stuart and Sorenson (2005).
75. See Laney et al. (2013).
76. Frid et al. (2016).
77. Ibid.
78. Congressional Budget Office (2018).
79. See Bricker et al. (2016); Saez and Zucman (2016); Piketty and Saez (2003).
80. Lux and Greene (2015).
81. Federal Deposit Insurance Corporation (2012).
82. Lux and Greene (2015).
83. Ibid.
84. Maxfield (2017); Kane et al. (2018); Of the 30 de novo applications for deposit insurance from 2011–2017, six were approved, 10 withdrawn, and 14 outstanding as of Kane et al. (2018).
85. See Blanchflower et al. (2003).
86. See Bennett and Chatterji (2017); Blanchflower et al. (2003); Fairlie et al. (2017).
87. Coleman (2007).
88. Becker-Blease and Sohl (2007).
89. See Kanze et al. (2017).

90. See Nunn (2017); Fletcher (2015).
91. Fairlie (2017).
92. Estimates provided by Roberts (2018), using the Entrepreneur Database Project.
93. Huang et al. (2013); Lee and Huang (2018).
94. Dettling et al. (2017). Thompson and Suarez (2015) found that median net wealth fell for all families between 2007 and 2010, but wealth of white families started to recover between 2010–2013 while the wealth of black families continued to decline. They estimate that median wealth of black families fell from \$19,200 in 2007 to \$11,100 in 2013, and that by 2013, median net worth of white families was \$134,000, while it was \$14,000 for Latino families and \$11,000 for black families.
95. Gonzalez and James (2007).
96. The baseline 2004 sample in the Kauffman Firm Survey showed that less than 1 percent of firms accessed VC financing (Robb et al., 2010); the 2016 Annual Survey of Entrepreneurs showed that 0.5 percent of entrepreneurs reported accessing VC financing at the time of startup.
97. Annual Survey of Entrepreneurs data (2016).
98. Joint Small Business Credit Report (2014).
99. See Gartner et al. (2012).
100. This question is a fruitful path for future research; see Cosh et al (2009) and Barry and Mihov (2015).
101. Barry and Mihov (2015).
102. Gonzales and James (2007).
103. Robb and Robinson (2014).
104. Scott (2009).
105. See Bennett and Chatterji (2017).
106. Robb et al. (2010).
107. World Economic Forum Industries and Deloitte Touche Tohmatsu (2013).
108. Cost of capital refers to the cost of obtaining funds to start or support continuing business operations.
109. See www.sba.gov/about-sba/sba-newsroom/press-releases-media-advisories/sba-lending-activity-fy17-shows-consistent-growth.
110. Brown and Earle (2015).
111. Love (2018).
112. Pedrini et al. (2016).
113. See Lerner (2010).
114. Murray (1999).
115. Cohen and Hochberg (2014); Roberts and Lall (2019).
116. Disclosure: The Kauffman Foundation owns a minority stake in AngelList and manages the investment as part of its investment portfolio.
117. Disclosure: Village Capital is a Kauffman Foundation grantee and co-founded by a co-author of this report.
118. Malmstrom and Wincent (2018).

ENDNOTES

119. Morgan Stanley (2015).
120. Schwartz (2016).
121. Ahmed et al. (2015).
122. See Love (2018), Bradford (2012), and Wallmeroth et al. (2017). Donation-based crowdfunding allows investors to donate capital to the entrepreneur without receiving anything in return, and can be used to raise funds from social media for microfinance institutions. Reward-based crowdfunding allows entrepreneurs to sell a product by jointly fundraising and marketing, reducing the need for the business to obtain financing before starting production. In this model, future customers actually become the backers of a business by providing working capital for a reward, such as pre-purchase of the product being developed. Debt crowdfunding allows investors to provide loans directly to businesses. This model enables peer-to-peer lending without the need for financial intermediaries, but with the ability to include interest payments. For example, Funding Circle allows individuals to lend to other individuals and to businesses, and StreetShares allows individuals to lend to businesses started by veterans. Equity crowdfunding allows entrepreneurs to raise funds from investors in exchange for profit sharing arrangements, enabling securities-based relationships between investors and entrepreneurs.
123. Kauffman Foundation (2016).
124. Rewards-based crowdfunding could change the traditional model for some entrepreneurs to raise financing before production, which allows customers to play a larger role in screening for future successful ventures. See Bellavitis et al. (2016).
125. Love (2018).
126. PwC (2017).
127. Mamonov et al. (2017)
128. Fabric Ventures and TokenData (2018).
129. Hsu and Kenney (2005).
130. Disclosure: Daryn Dodson is an innovator in residence at the Kauffman Foundation.
131. Kerby (2018) tracked the colleges attended by a group of venture capitalists and found that 40 percent attended either Harvard or Stanford for undergraduate or graduate work: <https://blog.usejournal.com/where-did-you-go-to-school-bde54d846188>.
132. Lerner (2019).
133. This is an important question for future research, as there is still limited causal evidence on the effect of greater representation among women as investors and recent research is mixed (see Raina, 2019 and National Women's Business Council, 2018).

REFERENCES

REFERENCES

- Ahmed, U. Beck, T., McDaniel, C., and Schropp, S. (2015) "Filling the gap: How technology enables access to finance for small- and medium-sized enterprises," *Innovations*, 10(3-4): 35-48.
- Alsos, G., Isaksen, E., Ljunggren, E. (2006) "New venture financing and subsequent business growth in men- and women-led businesses," *Entrepreneurship Theory and Practice*, 30(5): 667-686.
- Barry, C. and Mihov, V. (2015). Debt financing, venture capital, and the performance of initial public offerings, *Journal of Banking & Finance*, Volume 58: 144-165.
- Bates, T., Bradford, W., and Seamans, R. (2018) "Minority entrepreneurship in twenty-first century America," *Small Business Economics*, 50(30): 415-427.
- Bates, T. and Robb, A. (2013) "Greater access to capital is needed to unleash the local economic development potential of minority-owned businesses," *Economic Development Quarterly*, 27: 250-259.
- Becker-Blease, J. and Sohl, J. (2007) "Do women-owned businesses have equal access to angel capital?" *Journal of Business Venturing*, 22(4): 503-521.
- Bellavitis, C., Filatotchev, I., Kamuriwo, D., and Vanacker, T. (2017). "Entrepreneurial finance: new frontiers of research and practice," *Venture Capital*, 19(1-2): 1-16.
- Bennett, V. and Chatterji, A. (2017) "The entrepreneurial process: evidence from a nationally representative survey," working paper.
- Berger, A and Udell, G. (2003), "Small business and debt finance," pp 299-330 in Acs, Z. and Audretsch, D. (eds), *Handbook of entrepreneurship research*, Springer: New York.
- Black, S. and Strahan, P. (2002) "Entrepreneurship and bank credit availability," *The Journal of Finance* 57: 2807-2833.
- Blanchard, L., Zhao, B., and Yinger, J. (2008) "Do lenders discriminate against minority and women entrepreneurs?" *Journal of Urban Economics*, 63(2): 467-497.
- Blanchflower, D. (2009) "Minority self-employment in the United States and the impact of affirmative action programs," *Annals of Finance*, 5: 361.
- Blanchflower, D., Levine, P., and Zimmerman, D. (2003) "Discrimination in the small business credit market," *Review of Economics and Statistics*, 85(4): 930-943.
- Blanchflower, D. and Oswald, A. (1998) "What makes an entrepreneur?" *Journal of Labor Economics*, 16(1): 26-60.
- Boden, R. and Nucci, A. (2000) "On the survival prospects of men's and women's new business ventures," *Journal of Business Venturing*, 15(4): 347-362.
- Bone, S., Christensen, G., Williams, J., Adams, S., Lederer, A., and Lubin, P. (2018) "Detecting discrimination in small business lending," working paper, Utah State University.
- Bosma, N., van Praag, M., Thurik, R., and de Wit, G. (2004) "The value of human and social capital investments for the business performance of startups," *Small Business Economics*, 23 (2): 227-236.

- Bradford, C (2012). "Crowdfunding and the federal securities laws," *Columbia Business Law Review*, 1:5–150.
- Bricker, J., Henriques, A., Krimmel, J., and Sabelhaus, J. (2016) "Measuring income and wealth at the top using administrative and survey data," *Brookings Papers on Economic Activity*, 47(1): 261-331.
- Brooks, A., Huang, L., Kearney, S., and Murray, F. (2014) "Investors prefer entrepreneurial ventures pitched by attractive men," *Proceedings of the National Academy of Sciences*, 111(12): 4427–4431.
- Brown, J. and Earle, J. (2015) "Finance and growth at the firm level: Evidence from SBA loans," *Journal of Finance*, 72(3): 1039-1080.
- Brush, C., Carter, N., Gatewood, E., Greene, P. and Hart, M. (2001) "The Diana Project: women business owners and equity capital: the myths dispelled," Babson College Center for Entrepreneurship Research Paper 2009-11.
- Burhouse, S, Chu, K., Goodstein, R., Northwood, J., Osaki, Y. and Sharma, D. (2014) "2013 FDIC national survey of unbanked and underbanked households," October.
- Carter, S., Shaw, E., Lam, W., and Wilson, F. (2007) "Gender, entrepreneurship, and bank lending: The criteria and processes used by bank loan officers in assessing applications," *Entrepreneurship Theory and Practice*, 31(3).
- Carter, S. and Rosa, P. (1998) "The financing of male- and female-owned businesses," *Entrepreneurship and Regional Development*, 10(3): 225-242.
- Cavalluzzo, K., Cavalluzzo, L. and Wolken, J. (2002) "Competition, small business financing, and discrimination: Evidence from a new survey," *Journal of Business*, 75(4): 641-679.
- Cetorelli, N. and Strahan, P. (2006) "Finance as a barrier to entry: Bank competition and industry structure in local U.S. markets," *The Journal of Finance*, 61 (1): 437–461.
- Chatterji, A. and Seamans, R. (2012) "Entrepreneurial finance, credit cards, and race," *Journal of Financial Economics*, 106(1): 182-195.
- Cohen, S. and Hochberg, Y. (2014) "Accelerating startups: The seed accelerator phenomenon," working paper.
- Cole, R. (2014) "Credit scores and credit market outcomes: Evidence from the survey of Small Business Finances and the Kauffman Firm Survey," Small Business Research Summary, No 219, Small Business Administration Office of Advocacy.
- Cole, R., Cumming, D., and Li, D. (2016) "Do banks or VCs spur small firm growth?" *Journal of International Financial Markets, Institutions and Money*, 41: 60-72.
- Cole, R., Wolken, J., and Woodburn, L. (1996) "Bank and nonbank competition for small business credit: Evidence from the 1987 and 1993 National Surveys of Small Business Finances," *Federal Reserve Bulletin*, 82: 983-995.
- Coleman, S. (2007) "The role of human and financial capital in the profitability and growth of women-owned small firms," *Journal of Small Business Management*, 45(3).
- Coleman, S. and Robb, A. (2009) "A comparison of new firm financing by gender: Evidence from the Kauffman Firm Survey data," *Small Business Economics*, 33(4): 397-411.
- Congressional Budget Office (2018) The distribution of household income, 2015, November: https://www.cbo.gov/system/files?file=2018-11/54646-Distribution_of_Household_Income_2015_0.pdf.

REFERENCES

- Corradin, S. and Popov, A. (2015) "House prices, home equity borrowing, and entrepreneurship," *Review of Financial Studies*, 28(8): 2399-2428.
- Cosh, A., Cumming, D., and Hughes, A. (2009) "Outside entrepreneurial capital," *The Economic Journal*, 119(540): 1494-1533.
- De Rassenfosse, G. and Fischer, T. (2016) "Venture debt financing: determinants of the lending decision," *Strategic Entrepreneurship Journal*, 10(3): 235-256.
- Decker, R., Haltiwanger, J., Jarmin, R., and Miranda, J. (2014). "The role of entrepreneurship in US job creation and economic dynamism," *Journal of Economic Perspectives*, 28(3): 3-24.
- Denis, D. (2004) "Entrepreneurial finance: An overview of the issues and evidence," *Journal of Corporate Finance*, 10: 301-326.
- Dettling, L., Hsu, J., Jacobs, L., Moore, K., and Thompson, J. (2017) "Recent trends in wealth-holding by race and ethnicity: Evidence from the Survey of Consumer Finances," FED Notes, Board of Governors of the Federal Reserve System, September 27.
- Dvorkin, M. and Gascon, C. (2017) "Startups create many jobs, but they often don't last," *The Regional Economist*, Federal Reserve Bank of St. Louis.
- Economic Innovation Group (2017), *Dynamism in Retreat*.
- Elston, J. and Audretsch, D. (2011) "Financing the entrepreneurial decision: an empirical approach using experimental data on risk attitudes," *Small Business Economics*, 36: 209-222.
- Evans, D. and Jovanovic, B. (1989) "An estimated model of entrepreneurial choice under liquidity constraints," *Journal of Political Economy*, 97(4): 808-827.
- Ewing Marion Kauffman Foundation (2016) "Changing capital: emerging trends in entrepreneurial finance," October.
- Fabric Ventures and TokenData (2018) The state of the token market. A year in review & an outlook for 2018, report.
- Fairlie, R. (2017) "Financing black-owned businesses," Stanford Institute for Economic Policy Research Policy Brief, May.
- Fairlie, R., Desai, S., and Herrmann, A. (2019) "2017 National report on early-stage entrepreneurship," Kauffman Indicators of Entrepreneurship, Ewing Marion Kauffman Foundation: Kansas City.
- Fairlie, R., and Krashinsky, H. (2012) "Liquidity constraints, household wealth, and entrepreneurship revisited," *Review of Income and Wealth*, 58: 279-306.
- Fairlie, R., Robb, A., and Robinson, D. (2017) "Black and white: Access to capital among minority-owned startups," Stanford Institute for Economic Policy Research, working paper 17-003.
- Fairlie, R. and Robb, A. (2014) *Race and entrepreneurial success black-, asian-, and white-owned businesses in the United States*, MIT Press: Cambridge.
- Fairlie, R. and Robb, A. (2009) "Gender differences in business performance: Evidence from the Characteristics of Business Owners Survey," *Small Business Economics*, 33(4): 375-395.
- Fairlie, R. and Robb, A. (2007) "Why are black-owned businesses less successful than white-owned businesses? The role of families, inheritances, and business human capital," *Journal of Labor Economics*, 25: 289-323.

- Federal Deposit Insurance Corporation (2012) Community Banking Study, December.
- Fehder, D. and Hochberg, Y. (2014) "Accelerators and the regional supply of venture capital investment," working paper.
- Fletcher, A. (2015) "The country's last black-owned banks are in a fight for their survival," *Washington Post*, February 13.
- Frid, C., Wyman, D., and Coffet, B. (2016) "Effects of wealth inequality on entrepreneurship," *Small Business Economics*, 47(4): 895–920b.
- Fundera (2018) "State of small business lending: Spotlight on women entrepreneurs."
- Gartner, W, Frid, C., and Alexander, J. (2012) "Financing the emerging firm," *Small Business Economics*, 39(3): 745-761.
- Gonzalez, L. and James, C. (2007) "Banks and bubbles: how good are bankers at spotting winners?" *Journal of Financial Economics*, 86: 40–70.
- Graham, J. and Harvey, C. (2001) "The theory and practice of corporate finance: Evidence from the field," *Journal of Financial Economics*, 60: 187-243.
- Greene, P., Brush, C., Hart, M., and Saporito, P. (2001) "Patterns of venture capital funding: Is gender a factor?" *Venture Capital*, 3(1): 63-83.
- Greene, P., Hart, M., Gatewood, E., Brush, C. and Carter, N. (2003) "Women entrepreneurs: moving front and center: an overview of research and theory," white paper.
- Haltiwanger, J., Jarmin, R., and Miranda, J. (2013). "Who creates jobs? Small versus large versus young," *Review of Economics and Statistics*, 95(2): 347-361.
- Herkenhoff, K., Phillips, K., and Cohen-Cole, E. (2016) "The impact of consumer credit on employment, earnings and entrepreneurship," NBER working paper 22846.
- Hsu, D. and Kenney, M. (2005) "Organizing Venture Capital: the Rise and Demise of American Research & Development Corporation, 1946–1973," *Industrial and Corporate Change*, 14(4): 579-616.
- Huang, L., Frideger, M., and Pearce, J. (2013) "Political skill: Explaining the effects of nonnative accent on managerial hiring and entrepreneurial investment decisions," *Journal of Applied Psychology*, 98(6): 1005-1017.
- Hurst, E. and Lusardi, A. (2004) "Liquidity constraints, household wealth and entrepreneurship," *Journal of Political Economy*, 112 (2): 319–347.
- Joint Small Business Credit Survey Report (2014) Federal Reserve Banks of New York, Atlanta, Cleveland, and Philadelphia.
- Jost, J., Rudman, L., Blair, I., Carney, D., Dasgupta, N., Glaser J., and Hardin, C. (2009) "The existence of implicit bias is beyond reasonable doubt: A refutation of ideological and methodological objections and executive summary of ten studies that no manager should ignore," *Research in Organizational Behavior*, 29: 39–69.
- Kane, J., McKay, D., Morrissey, J., King, J., Arciniegas, J., Simonetti, L., and Svalina, M. (2018) "Phoenix rising? De novo bank formation?" *VedderPrice*, March 22.
- Kanze, D., Huang, L., Conley, M., and Higgins, T. (2017) "We ask men to win and women not to lose: Closing the gender gap in startup funding," *Academy of Management Journal* 61(2).
- Kerby, R. (2018) "Where did you go to school?" blog post: <https://blog.usejournal.com/where-did-you-go-to-school->

REFERENCES

bde54d846188.

- Kerr, S., Kerr, W. and Nanda, R. (2017) "House money and entrepreneurship," working paper.
- Laney, K., Bowles, J., and Hilliard, T. (2013) "Launching low-income entrepreneurs", Center for an Urban Future, New York.
- Lee, M., and Huang, L. (2018) "Gender bias, social impact framing, and evaluation of entrepreneurial ventures," *Organization Science*, 29(1): 1-16.
- Lerner, J. (2019) "Diversifying investments: A study of ownership diversity in the asset management industry," Knight Foundation Report, May.
- Lerner, J. (2010) "The future of public efforts to boost entrepreneurship and venture capital," *Small Business Economics*, 35(3): 255-264.
- Lewis, D.A., Harper-Anderson, E., and Molnar, L.A. (2011), "Incubating success: incubation best practices that lead to successful new ventures," Washington, DC: US Department of Commerce, Economic Development Administration.
- Love, I. (2018) "Entrepreneurial access to finance in the United States," working paper.
- Lux, M. and Greene, R. (2015) "The state and fate of community banking," Harvard Kennedy School, M-RCBG Associate Working Paper Series, No. 37.
- Mamonov, S., Malaga, R., and Rosenblum, J. (2017) "An exploratory analysis of Title II equity crowdfunding success," *Venture Capital*, 19(3): 239–256.
- Malmstrom, M. and Wincent, J. (2018) "Digitization of banks disproportionately hurts women entrepreneurs," *Harvard Business Review*, September 19.
- Mason, C. (2007) "Venture capital: A geographical perspective," pp 86-112 in Landstrom, H. (ed) *Handbook of research on venture capital*, Edward Elgar: Cheltenham.
- Maxfield, J. (2017) "The New Crop of De Novo Banks," *BankDirector.com*, April 5.
- Miller, P. and Bound, K. (2011) "The startup factories: The rise of accelerator programs to support new technology ventures," NESTA discussion paper.
- Meyer, A. and Yeager, T. (2001) "Are Small Rural Banks Vulnerable to Local Economic Downturns?" *Federal Reserve Bank of St. Louis Review*, 83(2): 25–38.
- Morgan Stanley (2015) "Can P2P lending reinvent banking?" June.
- Murray, G. (2009) "Early-stage venture capital funds, scale economies, and public support," *Venture Capital*, 11(4): 357–384.
- National Women's Business Council (2018) "Understanding the landscape: Access to capital for women entrepreneurs," March 1.
- Nelson, T. and Levesque, L. (2007) "The status of women in corporate governance in high-growth, high-potential firms," *Entrepreneurship Theory and Practice*, 31(2): 209-232.

- Nunn, S. (2017) "As black-owned banks struggle, community sounds alarm," *Wall Street Journal*, August 6.
- Orser, B., Riding, A. and Manley, K. (2006) "Women entrepreneurs and financial capital," *Entrepreneurship Theory and Practice*, 30: 643-665.
- Pedrini, M., Bramanti, V., Minciullo, M., and Ferri, L. (2016) "Rethinking microfinance for developed countries," *Journal of International Development*, 28 (2): 281–302.
- Picketty, T. and Saez, E. (2003) "Income inequality in the United States, 1913-1998," *Quarterly Journal of Economics*, 118(1): 1-41.
- PwC (2017) "Women unbound: Unleashing female entrepreneurial potential," July.
- PwC / CB Insights (2018) "MoneyTree Report," Q1.
- Raina, S. (2019) "VCs, founders, and the performance gender gap," working paper.
- Raina, S. (2016) "Research: The gender gap in startup success disappears when women fund women," *Harvard Business Review*, July 26.
- Robb, A. and Fairlie, R. (2007) "Access to financial capital among US businesses: the case of African American firms," *Annals of the American Academy of Political and Social Science*, 613: 47-72.
- Robb, A., Reedy, E., Ballou, J., DesRoches, D., Potter, F., and Zhao, Z. (2010) "An overview of Kauffman Firm Survey: Results from the 2004–2008 data," report, May.
- Robb, A. and Robinson, D. (2014) "The capital decision structure of new firms," *The Review of Financial Studies*, 27 (1): 153–179.
- Robb, A. and Wolken, J. (2002) "Firm, owner and financing characteristics: Differences between female- and male-owned small businesses," Finance and Economics Discussion Series Working Paper 2002-18, The Federal Reserve Board.
- Roberts, P. and Lall, S. (2019) *Observing acceleration*, Palgrave MacMillan.
- Samila, S. and Sorenson, O. (2011) "Venture capital, entrepreneurship, and economic growth," *Review of Economics and Statistics*, 93 (1): 338–349.
- Saez, E. and Zucman, G. (2016) "Wealth inequality in the United States since 1913: Evidence from capitalized income tax data," *The Quarterly Journal of Economics*, 131(2): 519-578.
- Schmalz, M., Sraer, D., and Thesmar, D. (2017) "Housing Collateral and Entrepreneurship," *The Journal of Finance*, 72(1): 99–132.
- Schwartz, N (2016). "U.S. Growth and Employment Data Tell Different Stories," *New York Times*, January 17.
- Scott, R. (2009) "The use of credit card debt by new firms," Ewing Marion Kauffman Foundation: Kansas City.
- Sorenson, O and Stuart, T. (2001) "Syndication networks and the spatial distribution of venture capital investments," *American Journal of Sociology*, 106(6): 1546-1588.

REFERENCES

- Stuart, T. and Sorenson, O. (2005) "Social networks and entrepreneurship," pp. 233-252 in Alvarez, S, Agarwal, R., and Sorenson, O. (eds). *Handbook of entrepreneurship research*, Boston: Springer.
- Taylor, R., Kochhar, R., Fry, R., Velasco, G., and Motel, S. (2011) "Wealth gaps rise to record highs between whites, blacks, hispanics", Pew Research Center, July 2011.
- Thompson, J. and Suarez, G. (2015) "Exploring the racial wealth gap using the Survey of Consumer Finances," Finance and Economics Discussion Series 2015-076, Board of Governors of the Federal Reserve System: Washington D.C.
- Treichel, M. and Scott, J. (2006) "Women-owned businesses and access to bank credit: Evidence from three surveys since 1987," *Venture Capital*, 8(1): 51-67.
- Wall, H. (2003) "Entrepreneurship and the deregulation of banking," working paper, Federal Reserve Bank of St. Louis.
- Wallmeroth, J., Wirtz, P., and Groh, A. (2017) "Venture capital, angel financing, and crowdfunding of entrepreneurial ventures: A literature review," *Foundations and Trends in Entrepreneurship*, 14(1): 1-129.
- Wong, A., Bhatia, M., and Freeman, Z. (2009) "Angel finance: The other venture capital," *Strategic Change*, 18: 221-230.
- World Economic Forum Industries and Deloitte Touche Tohmatsu (2013) "From the Margins to the Mainstream: Assessment of the Impact Investment Sector and Opportunities to Engage Mainstream Investors," September.
- Wright, M., Lumpkin, T., Zott, C., and Agarwal, R. (2016) "The evolving entrepreneurial finance landscape," *Strategic Entrepreneurship Journal*, 10: 229-234.
- Zarutskie, R. (2006) "Evidence on the effects of bank competition on firm borrowing and investment," *Journal of Financial Economics*, 81(3): 503-537.
- Zarya, V. (2018) "Female founders got 2% of venture capital dollars in 2017," *Fortune*.
- 2018, www.biz2credit.com/research-reports/women-owned-businesses-improved-2016.
- Zook, M. (2002) "Grounded capital: venture financing and the geography of the internet industry, 1994-2000." *Journal of Economic Geography*, 2(2): 151-177.



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