



The American Angel

**The first in-depth
report** on the
demographics and
investing activity of
individual American
angel investors

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ANGEL CAPITAL ASSOCIATION



Entrepreneurship

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Executive Summary

The American Angel Campaign

Early-stage financing from angel investors is critical to the success of high-growth startups. Recent estimates suggest that annual US angel investment activity may total as much as \$24 billion each year, contributing to the growth and success of more than 64,000 startups, though the exact amount cannot be measured precisely. Indeed, many details about American angel investors has long eluded public knowledge. Put simply, there is a lack of knowledge on the profile and investment activities of US angel investors. The American Angel campaign was launched with the goal of shedding light on these questions by conducting the largest survey of business angels in the United States and putting faces on the modern American Angel.

This report, commissioned by the Angel Capital Association and the John Huston Fund for Angel Professionalism (raised by Rev1 Ventures), presents the results of the largest ever study of the profile, background, and investment behavior of angels in the US to date. The study comprises responses from 1,659 individual angels from throughout the country who responded to The American Angel survey.

www.theamericanangel.org



What We Learned: Key Takeaways

1

Angels May Be Creating Entrepreneurs, But Entrepreneurs are Also Creating Angels

A key question is how people become angels in the first place: is there a particular background that “creates” more angels than others? The findings presented here demonstrate that angels are created “organically” – that is, angels were, at one point, on the other side of the table as entrepreneurs themselves, and are therefore “local” and familiar with the entrepreneurship ecosystem. 55% of angel investors were previously a founder or CEO of their own startup. There is a virtuous cycle between angels and entrepreneurs—not only do entrepreneurs become angels, but they also give back:

- 60% of angels with an entrepreneurial background take an advisory role and 52% of them take a board seat. This compares to 38% of angels without an entrepreneurial background who take an advisory role, and only 26% of them take a board seat.
- Angels with an entrepreneurial background write larger checks, with an average investment of \$39,000 as compared to \$28,000 for those with no entrepreneurial background.
- Angels with an entrepreneurial background make more investments, with an average of 12 companies in their current portfolio, compared to an average of 10 companies for those with no entrepreneurial background.

55% of angel investors were previously a founder or CEO of their own startup.

In terms of their industry experience, 51% of angel investors also report a background in technology. Taken together, these statistics may provide one explanation for the largely held presumption that the angel investment market is male-dominated (78% of investors in the study are male). Technology has long been acknowledged to be a male-dominated industry, and startup founders and CEOs are also overwhelmingly male. An inevitable gender imbalance emerges when these same individuals become angel investors, resulting in a similar and notable demographic imbalance in the angel investment market. Nevertheless, there is good news on the gender front, as more women become angel investors.

2

Female Angels are Increasing in Number... and Changing the Nature of Angel Investing

The American Angel study finds that women actually comprise 22% of angels, a percentage that is much higher than that of venture capital firms. More importantly, the number of women entering the angel investment market appears to be growing. Of angels who started investing within the last two years, 30% of these are women. Women are also changing the role of the angel investor, demonstrating different preferences and investment behavior from men:

- Female investors place great importance on the gender of the founders they are considering investing in. 51% of women consider the founders’ gender to be highly important, while only 6% of their male counterparts considered the founder’s gender to be highly important. Having more female angels may impact the extent to which women-led startups are being given the opportunity and platform to receive early-stage financing.

- Female investors place more importance on social impact (with 33% stating that a startup's social mission is an "extensively used" criteria), more than twice the percentage of men (16%) who "extensively used" social mission as part of their decision criteria.
- On the other hand, female investors invest more modest amounts of capital, at an average check size of \$26,500, compared with men who invest an average of \$37,700. Female investors are also somewhat less likely to back up their past investments, making follow-on investments 27% of the time as compared with males making follow-on investments for 32% of their investments. The reason for the lower numbers for women may be that more of them are newer to the angel community.

Women comprise 22% of angels, and are 30% of angels who started investing within the last two years.

3

Experienced Angels Invest More Upfront and in Follow-On Rounds

Investment experience is widely recognized as a determinant of venture capital firm performance, and consistent with this, findings suggest that angel investing tenure does change how angel investors evaluate investment opportunities and form an investment strategy. Angel investors with the longest tenure devote 15% of their overall investment portfolio to angel investments and write a check of \$42,000 per startup on average. Others with shorter tenure devote only 7% to angel investments and invest \$25,000 on average. In a given year, investors with at least 10 years of experience invested in an average of 3.8 companies, whereas other investors invested in an average of 3.0 companies. Angels with more experience are also more likely to double down and make subsequent investments in their existing portfolio of startups. Those with the longest tenure devote 39% of their angel portfolio to follow-on investments, while newer angels allocate 23% to follow-on investments.

Angels with the longest tenure write bigger checks, have larger portfolios and make more follow-on investments.

4

Angels are Everywhere . . . Not Just in San Francisco, New York, and Boston

When thinking about where angel investors reside, many consider only three cities: San Francisco, New York, and Boston. The findings presented here suggest a more balanced distribution of angel investing. In particular, 63% of angel investors in the study are located outside of those cities, with large percentages in the Great Lakes (16.2%), Southeast (15.4%), and Mid-Atlantic (10.7%). Entrepreneurs should strongly consider fundraising in geographies other than the west coast and the northeast, and may have the greatest success attracting angel capital in their home regions. Furthermore, angels based in California and New England report writing smaller average checks (\$32,000) than the average of all other regions in the country (\$37,000). Entrepreneurs should also consider the mighty state of Texas, where only 4% of angels in this study reside, but whose average investments are definitely bigger: Texans made the largest angel investments (\$44,000).

63% of the angels in this study are located outside of San Francisco, New York, and Boston.

5

Angel Investing is a “Team Sport”—Angels Invest with Others and are Beginning to Also Use Online Platforms

89% of angel investors in our sample identify prospective investments through angel groups, even when they are not formal members. Despite this, 24% report that independent investing outside of angel groups is their main channel for deal flow. Angels also report identifying deals through friends and associates (52%), direct contact with entrepreneurs (58%), and online and crowdfunding platforms (17%). There is also a trend in the increase of angels investing alongside other funding vehicles, especially through crowdfunding platforms, with 16% of angels reporting the use of a digital platform for at least one investment.

6

Angel Investments are Generating Some Positive Returns and Angels Remain Optimistic

Given the inherent risk of angel investing, most prior studies posit that 5-10% of investments will be economically profitable. This sample of angel investors report that, on average, 11% of their total portfolio yielded a positive exit. After accounting for stagnant portfolio companies (sometimes called “zombies”), 39% of portfolio companies that achieve an exit event are positive exits. In terms of future expectations of returns, angels report higher rates of expected return than their prior investments, which shows considerable confidence in the market. The mean desired target multiple was 9x, with a mean and median target window of 5 years.

7

Angel Investors are Not Mini VCs

Although angel investors are becoming more sophisticated and professional, and increasingly find themselves filling some of the funding gap as VCs move upstream to fund larger investment rounds, angels do not look like VCs. Venture capital continues to be even more heavily male dominated, geographically concentrated in California, New York and Boston, and disproportionately focused on tech centered companies. The angel investing communities are more diverse in many ways and geographically dispersed with greater participation by women.

Angels are more diverse than VCs, both geographically and with more participation by women.

More details on these findings, as well as the complete results from our study, can be found in the full report.

Data Disclaimer

While this is the largest data set ever on individual angels, we recognize that the documented findings within the report do not necessarily reflect all US angel investors. Despite multiple efforts to address the potential sampling biases, there is an over-sampling of ACA members (60% of the sample) and investors in angel groups (68% of the sample), since 80% of ACA members belong to angel groups. It may also be that these angels are more active than angels not connected to angel groups or online platforms. Obtaining retrospective data also has drawbacks, and individuals may have varying levels of recollection of past experiences that could account for some variation in responses. More information on study methodology and limitations are discussed in the Survey Methodology appendix. All analyses, interpretations, and conclusions are the opinion of the authors.

About the Authors

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Angel Capital Association

The **Angel Capital Association (ACA)** is the largest angel investor professional development organization in the world. The membership includes over 13,000 angels who invest individually or through 260 angel groups, online platforms, and family offices. ACA members have a collective investment portfolio of more than 90,000 entrepreneurial firms.

www.angelcapitalassociation.org

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Introduction

Early-stage financing is critical to the survival and success of startups that drive job creation and productivity growth in the economy.^{1,2} While previous studies have

focused on the impact of private equity and venture capital in the entrepreneurial ecosystem, there has been much less research on angel investors,³ the high-net worth individuals who provide private early-stage capital for startup businesses. These angel investors play a key role in funding the early stage development of new ventures: in 2016, angel investors provided approximately \$24 billion to drive the growth and success of more than 64,000 startups.⁴

We conducted a nationwide survey to examine who American angel investors are and how they invest. In this study, angel investors responded to a comprehensive survey to gain insight into questions such as:

- Who is the American angel demographically?
- What are the education and experience pathways to becoming angels?
- How do angels identify possible investments, how much do they invest, and how do they perform?
- What are the differences between male and female investors?
- Does experience matter for investment activities and outcomes?
- Are there differences between angels in different regions?

In conjunction with the Angel Capital Association and the John Huston Fund for Angel Professionalism, this study examines angel investors in the United States. With 1,659 respondents answering our comprehensive survey, we were able to put “faces” on angels across the US.

Angel Background

Who are American angels? What are the pathways to becoming angel investors?

Examining the composition of gender, race, age, education, professional background, investor experience, and location in our sample, we shed light on the current state and important trends with significant consequences for angel investment activities and outcomes.

Gender

The conventional assumption is that angel investors in the US are a homogenous group, composed primarily of older white men. While our study results are consistent with this assumption, with 22.1% of respondents being female and 77.9% male, women are considerably more prevalent in angel investing compared to the venture capital community, where the proportion of female partners in US venture capital firms is only about 5-8%⁵, and the number of women investors has actually declined from 9% in 2000⁶ and 10% in 1999.^{7,8}

Encouragingly, and unlike the widening gender gap in the venture capital realm, the percentage of women among angel investor ranks is growing over time. In fact, we find that 30% of newer angel investors (those who started investing since 2014) are women, a significant jump from the 18% of angels who started investing in 2001 or prior.

Increasing numbers of women angel investors may shed light on potential shifts in investment dynamics. To the extent that men and women have distinct investment strategies and return expectations, we expect to see more heterogeneity in style and performance in angel investments than venture capital as more women enter the space to exert their influence.

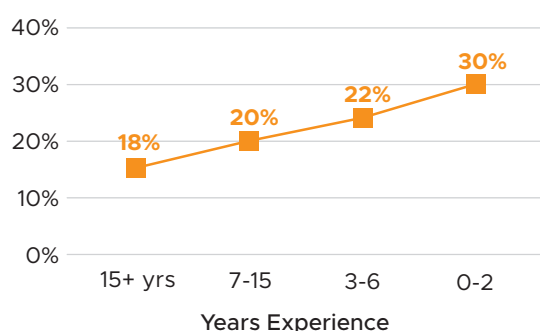
Race

While gender diversity is improving, angel investor ranks still reflect a lack of racial diversity. 87.6% of our 1,593 investors are identified as white, whereas African-American investors encompass only 1.3% of the sample. The numbers highlight the racial gap in angel

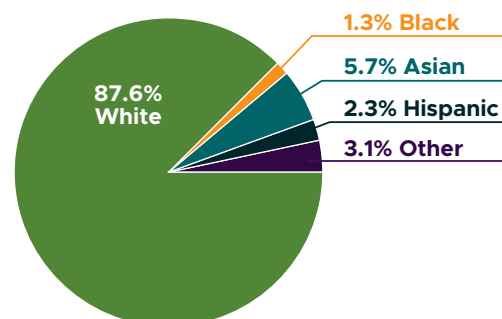
Gender of Angels



Percent Female Investors by Years of Experience



Race Demographics Among Angel Investors



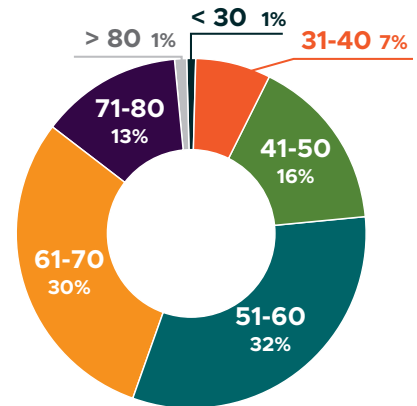
investing as compared to the race demographics of the general population (76.9% of the US population is white and 13.3% is black in 2016).⁹ On the other hand, Asian investors are reasonably represented (5.7% of our investors), identical to the US Asian population of 5.7% in 2016.

The observed racial disparity may explain similar disparities in which entrepreneurs receive funding. In particular, investors tend to invest in “people like them.”^{10,11} Consequently, investor diversity can be crucial to generating portfolio diversity that may yield superior investment and startup performance.^{12,13} Angels need more racial diversity to get to that result.

Age

Most of the angels in this study are older individuals from the “baby boomer” generation, with the mean age of all investors was 57.6 years old. These individuals have had many years of professional experience to amass their wealth. The mean age at which angels make their first angel investment is 48 years old. The majority of investors were between the ages of 50 to 66 years old, with almost 70% of investors 50 years of age or older. Nevertheless, the study represents diversity in age groups, with the youngest angel at 19 years old and oldest angel at 92 years old.

Angels by Age



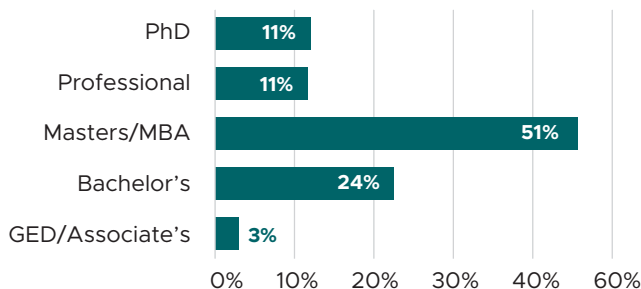
Educational Background

Angel investors are significantly more educated than the general population. 72.8% of the angel investors in our sample have more education than a Bachelor’s degree (Master’s, Professional, or Doctoral), and only 3.2% have less education than a Bachelor’s degree. In stark contrast, the 2016 US Census reports that 12.9% of the population over 25 years old has a degree above Bachelor’s, and 65.8% of the population has less education than a Bachelor’s degree.¹⁴

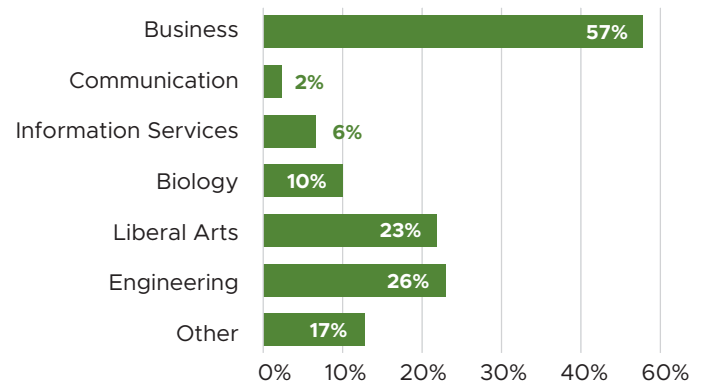
72.8% of the angel investors in our sample have more education than a Bachelor’s degree.

Many angel investors have a formal business education—half holding an M.B.A, and the majority of angels (57.3%) studied business in college. Having formal business training may make angels more comfortable with the challenges of creating a new business. Despite the preponderance of business education, there are still many pathways to becoming an angel, and angels appear to have studied a wide variety of topics in college.

Highest Level of Education Attained



Primary Area of Study



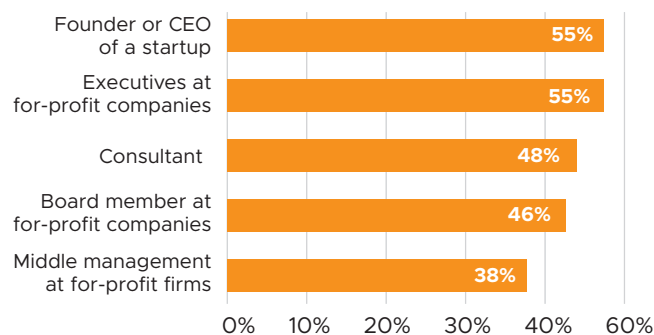
Professional Background

Professional background is an even more important factor in the pathways to becoming an angel. Is there a particular background that seems to “create” more angels than others? We find a predominant pattern—angels have considerable experience as entrepreneurs themselves. They also held leadership positions at larger companies. 54.8% of angel investors were previously the Founder or CEO of their own startups, suggesting that prior experience as an entrepreneur fuels an understanding of startup issues and a network in the entrepreneurial community, resulting in an interest in angel investing.

This observation of “founders funding founders” illustrates how angels are “created organically.” Angels are “local” and familiar with the entrepreneurship ecosystem because in the past, they themselves were on the other side of the table as the entrepreneur. This entrepreneurial experience leads to a more refined and richer framework to understand value-creating startup firms¹⁵, and consequently helps generate better returns.¹⁶

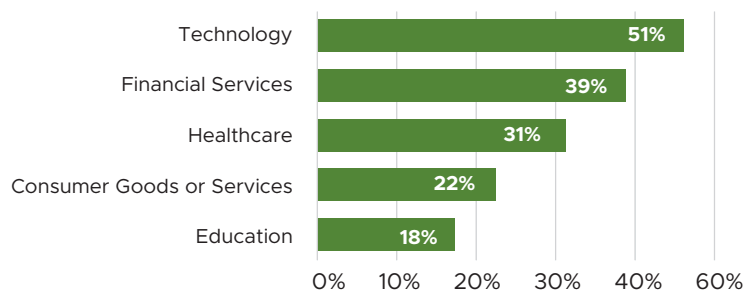
The professional backgrounds of angels may affect what sectors they invest in. Angels have a variety of industry experience, but more emerge heavily from technology and financial services, which may explain the preponderance of angel deals being in information technology (IT) and financial technology (fintech).

Five Most Common Career Positions*



* Angels also held positions such as Startup Executive (36.0%), Professional services (e.g. Attorney, Doctor, Accountant, CPA, CFA, Registered broker/dealer) (22.6%), Private Equity / Venture Capital principal or analyst (18.5%), Non-profit sector (18.0%), and Government (8.7%).

Five Most Common Industry Sectors for Angels*



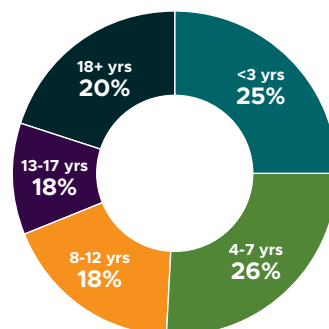
* Other industries include Government (13.4%), Energy (13.3%), Retail (10.3%), and Law (9.3%).

Investing Experience

Our sample consists of a group of investors with balanced and distinct levels of investment experience. A quarter of the investors are relatively new to angel investing, while 20% have been in the arena for 18 or more years. Fewer investors started angel investing at the end of the dot-com bubble (angels with 13-17 years of experience), but significantly more started angel investing after the 2008 financial crisis (angels with less than 8 years of experience), indicating a shift of interest from traditional securities towards angel investments.

20% of angel investors have been in the arena for 18 or more years.

Range of Investor Experience



Tina Fisher,

Entrepreneur and Startup Booster

*Co-founder and Chief Executive,
Modalist
Columbus, OH*

Tina Fisher is using technology smarts homed in the pharmaceutical industry to build her web-based fashion and lifestyle business. As an active member of the Ohio TechAngel Funds and X-Squared Angels in Ohio, she supports other entrepreneurs, too. She has invested in about two dozen companies, most in the technology sector and mostly in Ohio.



“It’s something that’s near and dear to me, supporting entrepreneurs in my own community,” she says.

Fisher says she knows exactly what it feels like to pitch for funding. After a trip to Italy, Fisher launched her first e-commerce company selling fashion goods. Two years ago, she self-funded the launch of Modalist, a global e-marketplace platform for fashion. Now, she is seeking investors to expand into a fast-growing niche: connecting online style influencers to retailers. Modalist Social Runway offers bloggers and Instagrammers a way to monetize their influence and boost revenue across multiple social media channels.

“I’ve learned to be agile,” Fisher says. That’s exactly the trait she looks for when she evaluates new angel investment opportunities and the entrepreneurs behind each startup.

Location

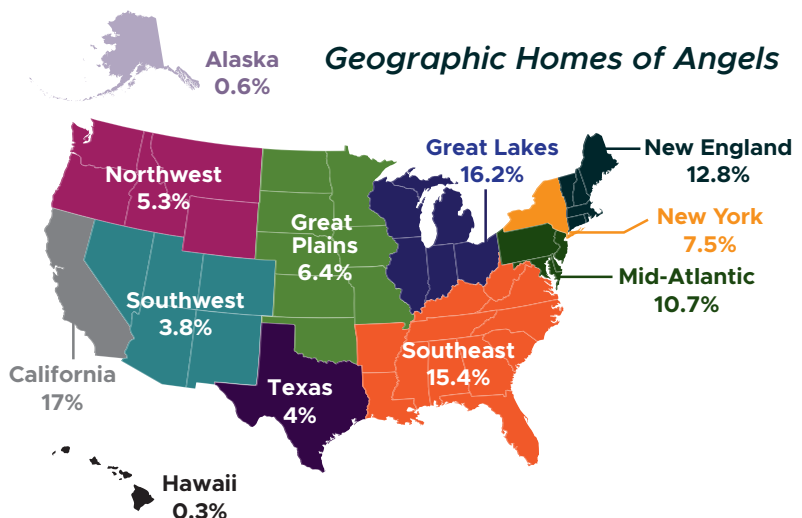
When people think of angel investors, they tend to think about three cities—San Francisco, New York City, and Boston. However, we find that angels reside more broadly than how the angel community

is often described in media reports. There is a balanced spread of angel investing beyond the large cities. In particular, 63% of angel investors are located outside of those three cities, with large percentages in the Great Lakes (16.2%), Southeast (15.4%), and Mid-Atlantic (10.7%). Rural areas or less developed areas, such as the Great Plains and Southwest regions, appear to have smaller concentrations of angels.

This geographic distribution of angels is significantly more diverse than are venture capitalists, where five states account for 88.9% of all committed capital.¹⁷ The distinct geographic distribution of angel investors has three main implications for entrepreneurs and policymakers. First, while entrepreneurs commonly go to California, New York, and New England for fundraising, they should consider the other overlooked regions of the country as well. They may find angel investors in their own communities, fitting a common interest of angels in investing in companies in their cities and regions. Second, policymakers at local, state, and federal level must continue to develop policies that support the health and growth of angels to invest in startups everywhere. Third, community leaders may have more angels nearby than they realize. By better developing opportunities to connect angels to each other and to local entrepreneurs, these community leaders may build robust support for the entrepreneurs and spur local economic growth.

Angels are everywhere.

Large percentages of angel investors are located in the Great Lakes (16.2%), Southeast (15.4%), and Mid-Atlantic (10.7%).



Investment and Performance

How do angels identify possible investments, how much do they invest, and how do they perform? Scrutinizing the investment channel, portfolio composition, investment strategy, and performance of our angels, we offer insights into the general patterns and dynamics of angel investment activities and outcomes.

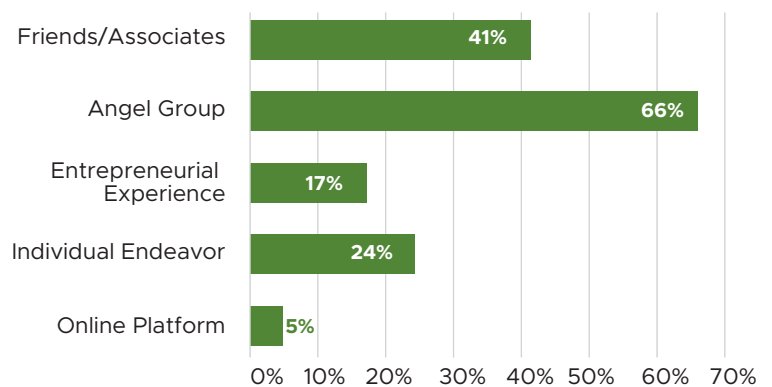
Investment Channel

Looking how angels make their very first investment, we find that angels are mostly likely to get involved through traditional angel groups rather than via the influence of informal relationships, individual endeavor, or emerging online vehicles. Interestingly, the median time for an angel in our sample made their first investment during the Great Recession. This observation suggests that investors in that period shifted their investment interests towards alternatives

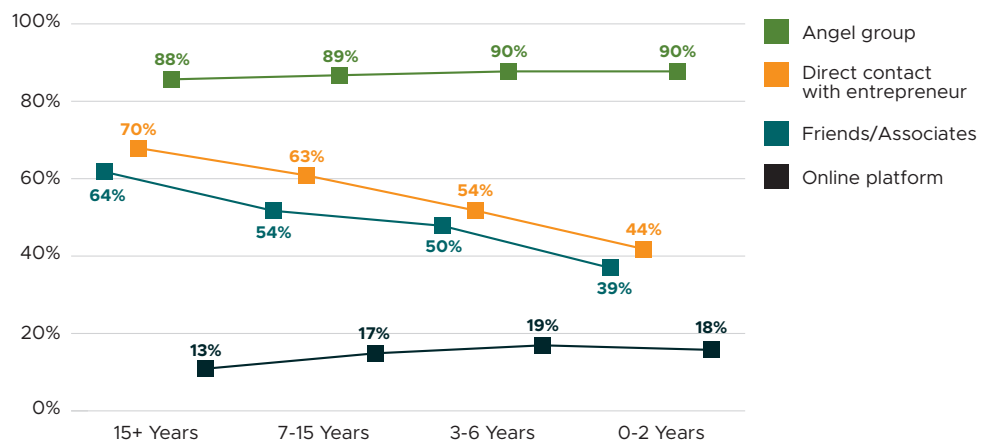
to traditional securities, possibly because the perceived risk of startup investing might have been seen as more on par with the level of risk associated with public stocks and debt in that period.

There is a consistent pattern in how angels make subsequent investments. Angels in the dataset predominantly identify possible investments through angel groups (89.3%), but also resort to friends and associates (51.8%) and direct contact with an entrepreneur (58.0%). The reliance on angel groups to discover investment opportunities is particularly prominent among angels who have less than two years of investing experience and who may appreciate the initial training many groups provide. Experienced angels are significantly more likely to leverage personal relationships.

Initial Involvement Path



Identification of Prospective Investments by Years of Angel Investment Experience



Angels invest in deals similarly to how they find deals: 86.2% of angel investors have invested through an angel group at least once, 62.9% have invested independently, 26.2% have invested with a venture capitalist partner, and 16.2% have used an online platform.

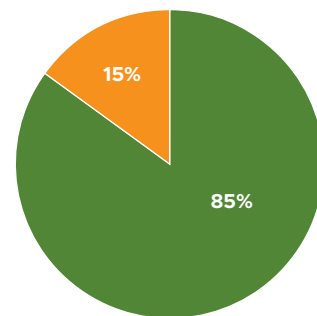
Portfolio Composition

Building a portfolio of angel investments helps to offset some of the risks in investing in early-stage companies. Opinions vary on the optimal number of companies or investments to include in a portfolio, but prior research finds that angels with 12 investments over a period of five years or more have a 75% chance of a 2.6x return on their investment dollars.¹⁸ The mean current portfolio size of the angel investors in this study is 11.4 investments, with a median of 7 investments. Moreover, experienced angels appear to be doing better in terms of expanded portfolio size. Angels with five or more years of experience have on average 14.2 investments in their current portfolio, while those with less than five years of experience have on average 7.5 investments. In terms of overall range, some investors have only one current investment, while others have a portfolio of more than 100 investments.

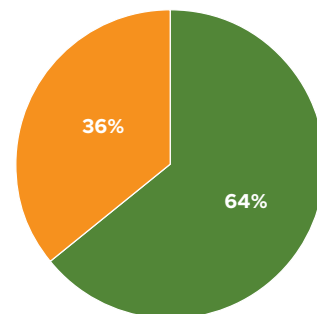
Angels with five or more years of experience have on average 14.2 investments in their current portfolio.

Diving deeper beyond the number of companies in the overall portfolio, we also analyzed how angels evaluate specific investment opportunities. First and foremost, angels invest in people. The quality of the founding team in terms of both experience and personal characteristics are most critical to angel investors. In rating the factors most important to an investment decision are personal characteristics such as passion, trustworthiness and coachability. Other factors such as military affiliations, minority representation, and university affiliations do not play an important role for many angel investors in making their investment choices.

Importance of Quality of Team to Investors



Importance of Experience and Knowledge of Team to Investors



■ Important
 ■ Not Important

Investment Strategy

Investors grow their portfolios at different rates over time. Overall angels who have been investing for more than two years plan on maintaining a steady level of investing, with over 50% claiming they will invest at the same rate in the future. Newer angels with 0-2 years of investment experience are more likely to adopt an aggressive strategy in their earlier investing stage and plan to increase the amount of investments in the next year (2016-2017) relative to the amount in the previous year (2015-2016). On the other hand, angels with more than 15 years of experience are more likely to consider cutting down annual investment outflow perhaps due to portfolio maturity or their age.

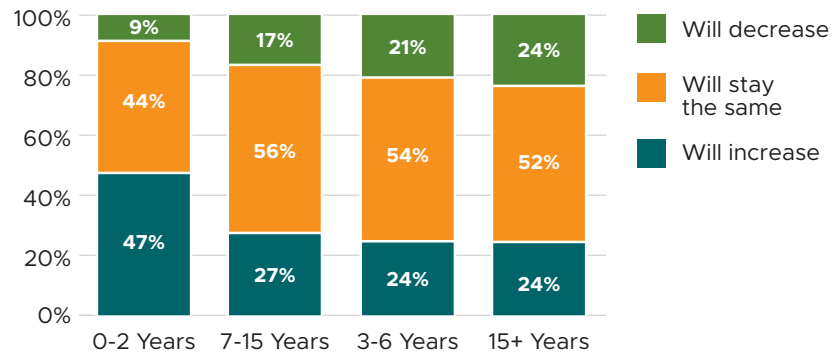
When evaluating the overall portfolio diversity, angels ideally need to achieve a balance between the number of investments and the individual investment size. While the amount invested per

round can go as high as \$750,000 in our sample, the average check written among all investors is \$35,255, with a smaller median of \$25,000. The middle 50% of all angels invest between \$15,000 and \$37,500 per investment. Individual investors may focus more on diversifying by keeping each check relatively small to achieve a greater number of investments.

**Median check size
for all angels is
\$25,000.**

Follow on investments (subsequent investments in companies in which they already made an initial investment) are another key consideration for angel investors. Follow-on investments are very common: 75.9% of investors made at least one follow-on investment. In fact, 49.4% of angels have made 3 or more follow-on investments.

Identification of Prospective Investments by Years of Angel Investment



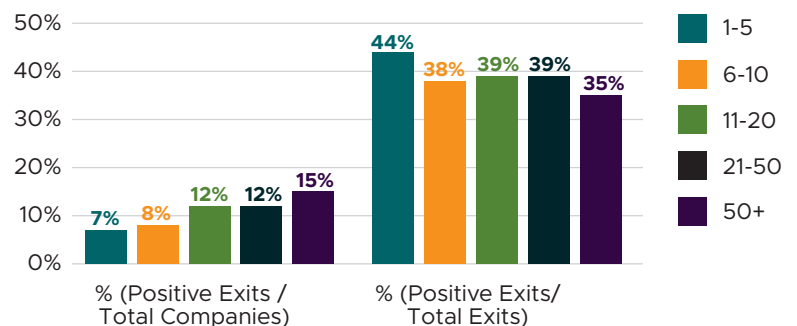
Performance

What are the expectations for the performance of angel investments? Angel investors often seek a target time window for exit opportunities—IPO and M&A events, as well as secondary sales to other investors—after making their initial investment to regain liquidity. The study finds that angels hope to get a return on their investment in an average and median desired target window of five years. The mean targeted multiple is 9x of invested dollars. This expectation for return is perhaps overly optimistic, given that the majority of exits in recent years have a multiple of less than 5x.¹⁹

Overall, about 40 percent of investment exits were positive, providing angels more money than their original investments. (In negative exits, angels lose some or all of their investment dollars.) The American Angel compared the number of positive exits to both the number of total exits and the number of companies in which angels invested. Analysis took into account “zombies,” a term for businesses that continue to operate but don’t provide investors with a positive exit strategy. The number of positive exits as a percentage of total investments varies based on both the number of zombies and newer investments that have not matured to the point of being acquired or going public.

The study finds that angel investment outcomes are generally positive. While angels might have slightly over-optimistic expectations, angels can rely on a moderate rate of positive exits to make additional investments or to balance out losses for sustainable portfolio growth.

Percentage of Positive Exits By Total Number of Companies Invested



How Men and Women Differ in Angel Investing

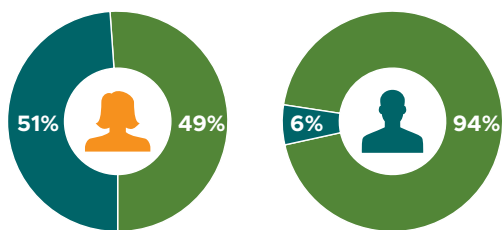
What are the differences between male and female investors? Focusing on investment preferences and criteria, behavior, and performance, we document increasing heterogeneity in investment styles and objectives as more female angel investors arise and change the nature of angel investing.

Investment Preferences and Criteria

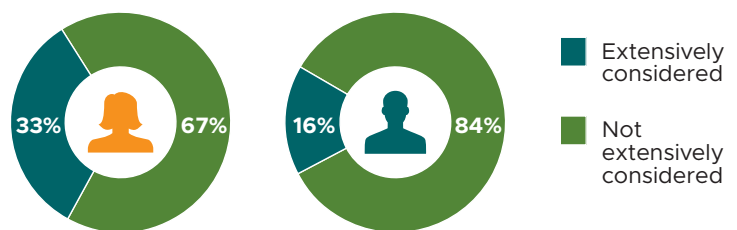
Males and females value different factors in making angel investment decisions. First, male angels put significantly less emphasis on gender of the founder than female angels, with 67.1% of male investors viewing gender to be not an important factor at all. Perhaps because so many entrepreneurs are male, male investors take gender as a given. Only 6.4% of male angels consider gender as highly important (a score of 4 or 5, on a 1 to 5 scale), whereas 51.3% of female angels believe that gender is a highly important aspect for making new investment.

Beyond gender of the founder, there are also significant differences in how men and women evaluate the social impact of a startup. Women are twice as likely to say social impact is important—33% for women and 16% for men.

Gender of the Founder More Important To Women Investors



Gender Difference: Social Impact of Business



The large gender disparity in the first two factors may explain recent trends in investment styles. As the number of female angels picked up in recent years, we also see an increasing overall interest in impact investing and gender lens investing.



Women also place a higher importance on the growth potential of an investment. 62% of women rate market growth as the most important factor versus 52% for men.

Women care about the gender of founders by nearly 10 times more than men—51% to 6%.

Women are twice as likely to say social impact is important—33% for women and 16% for men.

Investment Behavior

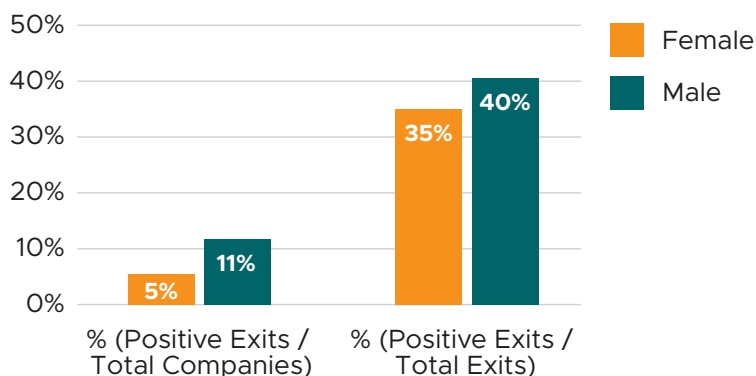
Gender differences also exist in investment behavior. Male investors tend to write larger checks, invest in more companies, and make more follow-on investments. Male angels invest an average amount of \$37,671 per round, while female angels on average invest \$26,652 (a significant difference). Important differences include:

	 Males	 Females
Average check size	\$37,671	\$26,652
Companies in portfolio	15.9	12.3
% follow-on investments	32%	27%

Investment Performance

Examining our measures of investment performance, we find that male angels appear to have a higher probability of making returns via positive exit. The differences we discover may reflect gender discrepancy in investment preferences and criteria, consistent with the observation that women are more interested in social and gender aspects of the venture rather than pure financial returns. In fact, female investors are more likely to rely on “gut feeling” to make investment choices, and they are driven by social impact, potentially sacrificing higher returns. Male investors tend to more aggressively seek returns, by investing in riskier and more diverse portfolios.²⁰

Percentage of Positive Exits By Gender



Alicia Syrett,

Advocate for
Women-led Startups

*Founder/ CEO of Pantegriion Capital •
New York, NY*

Alicia Syrett thrives investing in high-growth, high-risk and high-return industries. She loves working with entrepreneurs in the early stages of business. If those entrepreneurs are women, all the better.



Syrett knows the high-risk, high-return entrepreneurial world first-hand. She was the first employee and managing director in what grew into a multibillion dollar private equity firm. “I was responsible for doing anything and everything to get the firm up and running,” she says.

Once the business was well established, she looked for a new challenge. In 2011, she launched Pantegriion Capital, a vehicle for her own angel investing. She’s also a board member for New York Angels.

Many of Syrett’s angel investments have been in women-led startups. She launched Point 25 Initiative, a program to help women entrepreneurs build robust advisory boards, and #MentHERnyc, an event to connect early-stage, women-led companies with active investors.

“Supporting women is an area that I care about deeply,” she says. “It’s a greater calling to recreate a more diverse startup ecosystem from the ground up.”

Ron Weissman, Active Angel, Business Mentor and Advisor

*Chair, Software Special Interest
Group of Band of Angels
San Francisco, CA*

Angel investor Ron Weissman is an educator at heart. “I love working with startups and mentoring management teams,” he says.



His teaching and mentoring expertise stems from a career that covers education, technology and investing. He taught Italian Renaissance history, and then pivoted to technology, working with Steve Jobs at NeXT Inc. He was drawn to investing and was a partner in a global venture capital firm. In 2006, Weissman became an angel investor and now advises startups and other angel investors.

Weissman has led or participated in more than 40 angel or venture capital deals and invested in or advised more than 60 startups, mostly in business or healthcare software. Currently, he’s a board director for two companies and an active advisor to four others.

He’s a frequent speaker at angel investor gatherings around the globe. “It’s a passion for me, sharing angel best practices,” he says. His main message: Don’t fall in love with a founder’s vision without careful attention to the company’s business and capital strategies.

Impact of Experience

Does experience matter for investment activities and outcomes? Concentrating on professional experience and experience in angel investing, we look at how angels emerge from past entrepreneurial experience, the impact of experience on investment patterns, and the trend toward more diverse backgrounds of angel investors (meaning there are multiple paths to becoming an angel investor).

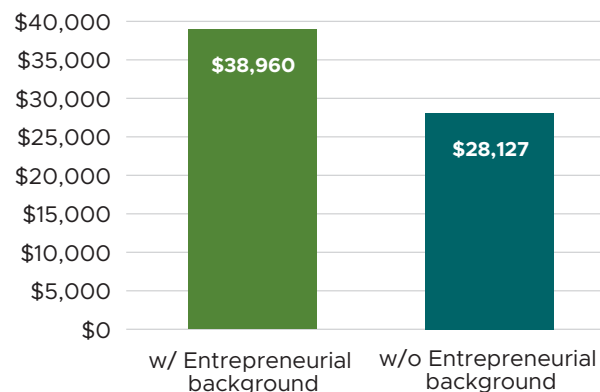
Professional Experience

Noting that the majority of angels in our study have entrepreneurial backgrounds, we further find that these angels exhibit different investment behavior

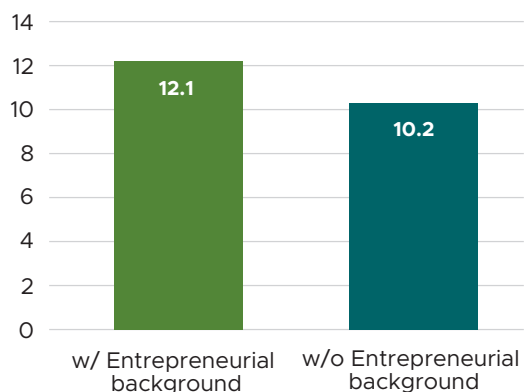
“Entrepreneurial” angels write larger checks, invest in more companies, take a more active role and have better returns.

from their counterparts without entrepreneurial backgrounds. “Entrepreneurial” angels write larger checks, invest in more companies, take a more active role and have better returns.

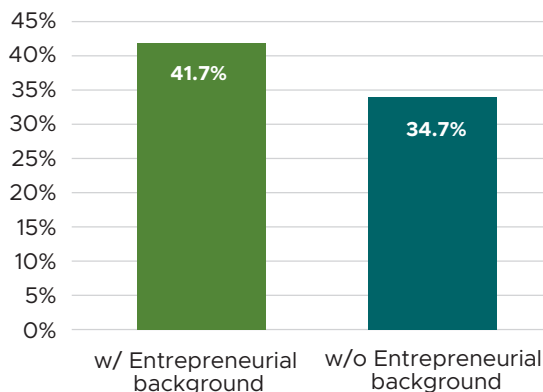
Average Amount of Check



Number of Companies in Portfolio



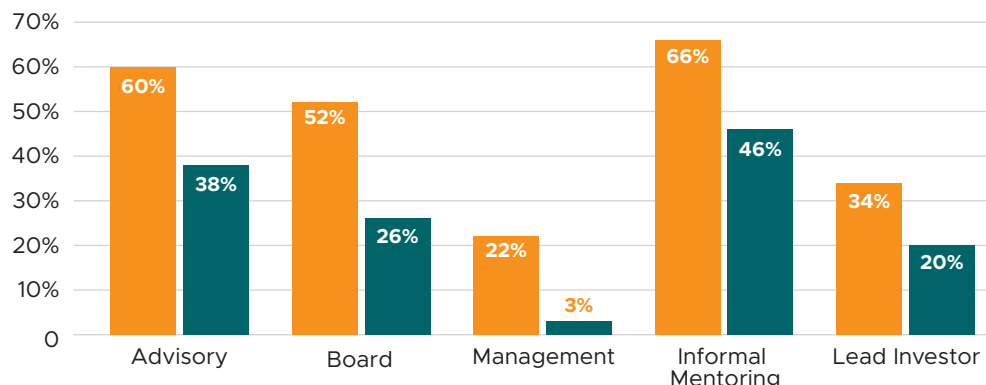
Percent of Positive Exits to Total Exits



As investors take advisory roles, board seats, management roles, informal mentoring, and serve as lead investors, they consequently contribute more non-financial resources that are also key to startup success.

Percent Active Roles with Portfolio Companies

- w/ entrepreneurial experience
- w/o entrepreneurial experience

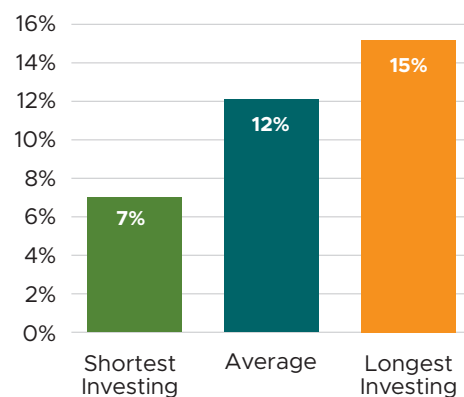


Investment Experience

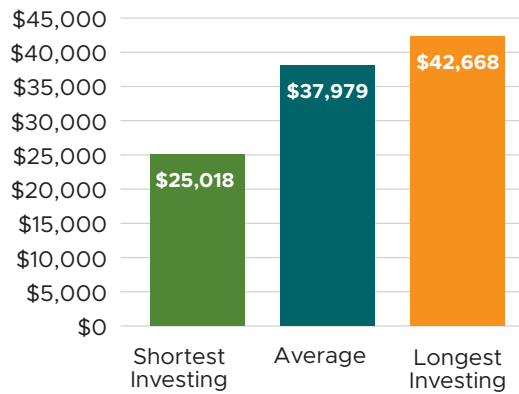
Investment tenure, or experience in investing, plays a key role in entrepreneurial investment performance, and this effect is well documented among venture capital firms.^{21,22} In angel investing, experience matters too, affecting how investors evaluate opportunities.²³ To examine variation in investment activities and outcomes across different levels of investment experience, we split our sample based on how long the investor has been involved in angel investing, between those with the longest investment tenure (10 or more years of investing), those with the shortest investment tenure (three or fewer years of investing), and those in the middle (3-10 years of investing).

More experienced investors with longer investment tenure devote a higher percentage of their total investment portfolio to angel investments, write larger checks per round, and make more follow-on investments.

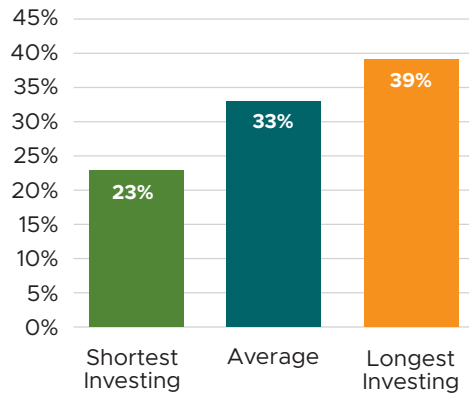
Angel Portfolio as Percent of All Investments



\$ Average Amount Per Round



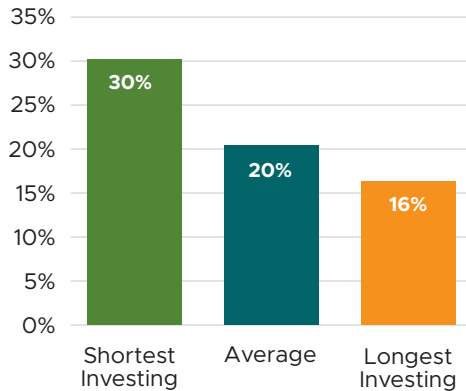
Percent Follow-on Investment



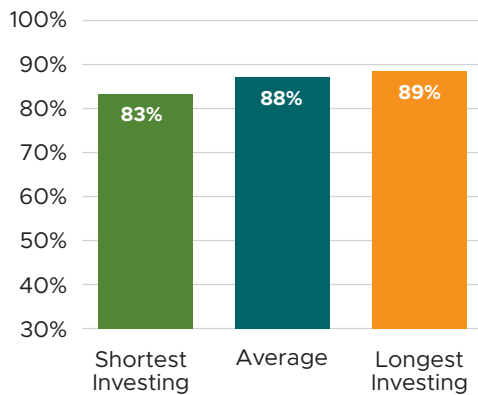
Gender and Racial Diversity

Aside from differences in current investment behavior, our data suggests an important trend in the demographic composition of angels: angel investors are becoming more diverse in recent years. Among newer angels, there is a higher proportion of female investors, a higher proportion of non-white investors, and a higher proportion of individuals coming from backgrounds other than entrepreneurship.

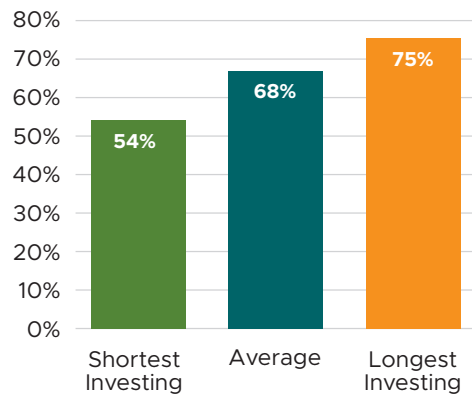
Percent Female



Percent White



Percent Entrepreneurial Background

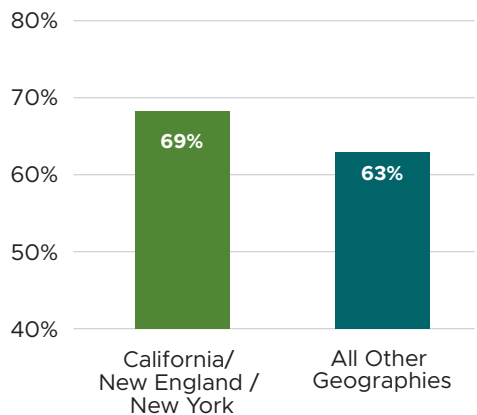


Geographic Variation

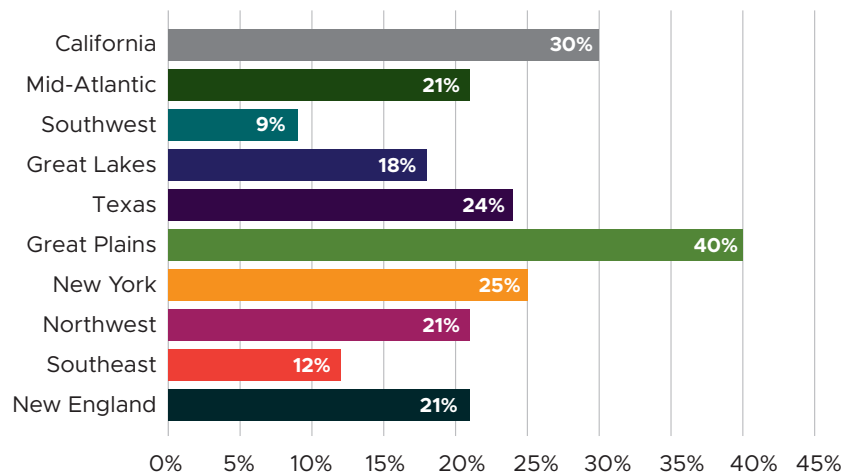
Are there differences between angels in different regions? While angels do exist all over the US, there are further geographic nuances in angel demographics and investment activities.

Angel investors located in California, Boston, and New England (traditionally viewed as the largest markets for angels) are more likely to have an entrepreneurial background, consistent with the observation that entrepreneurs create angels, as these are also the regions where entrepreneurs gather. Interestingly, the growth in female angels does not appear to track as well in these same markets. The highest proportion of women is found to be in the Midwest (40%), suggesting that female investors are not concentrated in these markets but rather emerge and remain in their local region.

Percent Investors with Entrepreneurial Backgrounds



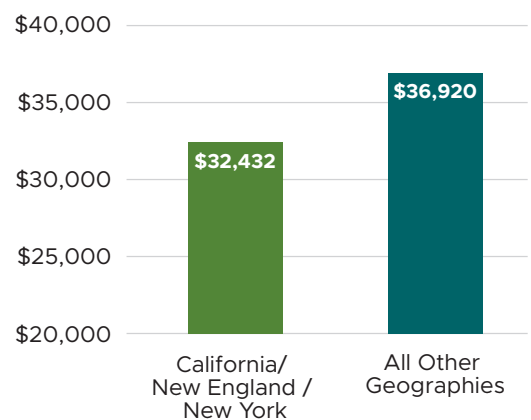
Percent Female Investors



In terms of investment activity, investors located in California, New England, and New York write smaller checks, as compared with their counterparts in other geographies. Note that we discussed earlier how these same regions (California, New England, and New York) are those where angels are most likely to have had an entrepreneurial background—and angels who were previously entrepreneurs were found to write larger checks than those who did not have an entrepreneurial background. We found that what explains this apparent inconsistency is that angels with an entrepreneurial background, residing **outside** California, Boston, and New York are those writing the largest checks, accounting for this difference.

This geographic variation suggests that entrepreneurs should consider the less known regions of the country when fundraising. For example, it could be advantageous to consider the mighty state of Texas, where only 4% of angels in our sample live, but where things are definitely bigger, with the largest average check size of any region (\$44,000).

\$ Amount Per Round





Where Do We Go Next?

The American Angel study provides important new knowledge about individual angels, and we plan to build on this inaugural report, conducting additional analyses in the coming years. Not only will we want to monitor trends like the growing diversity of angel investors over time, but we also plan to dive deeper into additional questions such as comparing investment returns for angels with different sized portfolios, amongst others.

We plan to build on this inaugural report, conducting additional analyses in the coming years.

We believe that a greater understanding of angel demographics and preferences will help lead to an enhanced funding environment for high growth startups and the ecosystem as a whole, and hope that entrepreneurs, the startup support community, and policy makers all collectively take note of the findings of The American Angel to this end. Given the geographic diversity of angel investors, founders will make a more concerted effort to meet with investors in their own regions rather than defaulting to Silicon Valley – and policy makers may want to think about placing more emphasis on policies that grow the number of smart angel investors in their own communities and states.

We welcome ideas and questions to look into for future The American Angel research.

Appendix—Survey Methodology

Methodology

This study was conducted through a partnership between the Angel Capital Association (ACA) and Wharton Entrepreneurship. Participants were angel investors surveyed throughout multiple rounds between March 2016 and February 2017. ACA and Wharton Entrepreneurship jointly constructed a 15 to 30-minute online survey questionnaire with 40 quantitative and 4 qualitative/open-ended questions covering four topic areas:

1. Sample Demographics
2. Path to Becoming an Angel
3. Current Angel Activities
4. Opinions and Perceptions on Angel Investment Criteria

The final sample included 1,659 US residents, ages 18+, who qualified as an accredited angel investor. Respondents met sample criteria if they had a minimum net worth of \$1 million (not including their primary residence) or annual individual income of \$200,000, the same conditions required by the Securities and Exchange Commission to be accredited investors. Respondents were asked to answer the questions related to their personal history, including their investment history.

Based on the population that met the sampling criteria, participation was requested through direct email channels (76.1%), angel group leaders (9.0%), and general media outlets (14.9%). To gather additional qualitative information about the experiences of angel investors, an additional sample of 152 respondents were recruited from networks of investors. This convenience sample was designed to test assumed validity of the data. Since this extra sample was unweighted and non-representative of the broader US angel population, the original survey data were the only data utilized for this study.

Data were analyzed by researchers from Wharton Entrepreneurship and Harvard Business School. Descriptive analyses were conducted to examine frequencies and means of experiences across the sample and by subgroups. Subgroup analyses were conducted to examine experiences by gender, race, and industry type, in addition to all other variables cited in this report. Significance testing was used to determine whether group differences were statistically significant (at the $p < .05$ level), and findings meeting this criterion are reported as “significant differences.” Several variables were also combined into scales to examine cumulative experiences. Correlation and regression analyses were used to examine relationships between variables and determine direction of relationships.

Limitations

While this study documents important findings about angel investors and their background, general perceptions, and behaviors, we discuss potential biases in sampling and subgroup analyses and acknowledge several limitations.

Sampling

All sample surveys and polls, whether they use probability sampling, are subject to multiple sources of error which are most often not possible to quantify or estimate, mainly including sampling error, error associated with self-selection, error associated with nonresponse, and post-survey weighting and adjustments.

1. Sampling error:

Our use of various channels (email, general media, and group-based) as well as sources (ACA-registered investors and non-ACA angel investors) was designed to encompass and represent the general accredited angel investor population. By collaborating with ACA to access large pools of angel investor contacts, both within and outside of ACA, we ensured that our sample of investors was not derived solely from one type of channel or source.

2. Error associated with self-selection:

Self-selection bias may emerge when individuals with positive experiences disproportionately participate in our survey. While there is no way to fully eliminate this possibility, our survey results do not suggest that this is a problem. For example, a willingness to share positive rather than negative performance would raise the attrition rate between early survey sections (on demographics and generic information about their path to becoming an angel) and later sections that ask specifically about investment styles and performance. We did not find any critical attrition in the transition between those questions.

3. Error associated with nonresponse:

The overall response rate from various channels is around 10%. This level of response rate is consistent with response rates in previous studies on venture capitalists.²⁴

4. Post-survey weighting and adjustments:

We calculate different possible sampling errors with different probabilities for pure, unweighted, and random samples to ensure the sample is representative of the broader US angel population.

The data have further been empirically tested for nonresponse bias and sampling errors, by comparing the composition of the current sample with several other groups, including: 4,538 registered members of the Angel Capital Association and 7,570 non-registered angel investors whose contact information was either provided by PitchBook or publicly available from other sources. For each of these, we examined comparisons across age, gender, geographic region, race, income, employment and education, when necessary, to account for concerns with external and internal validity. Our results suggest that there were no observable concerns. Because the sample is based on those who agreed to participate in the survey, we acknowledge that theoretical sampling error cannot be entirely eliminated.

Subgroup Analyses

Examining subgroup differences was a critical component of this study and we examined variables in most cases by gender, experience, entrepreneurship background, length of investment experience, and other characteristics. Due to sample size limitations, we were not able to report results on smaller racial and ethnic groups and intersectional groups by race and gender. Additional research is needed to examine additional race and gender categories.

Endnotes

1. Decker, Ryan, John Haltiwanger, Ron Jarmin, and Javier Miranda. 2014. *The role of entrepreneurship in US job creation and economic dynamism*. *Journal of Economic Perspectives* 28(3) 3–24.
2. Haltiwanger, John, Ron S Jarmin, and Javier Miranda. 2013. Who creates jobs? Small versus large versus young. *Review of Economics and Statistics* 95(2) 347–361.
3. To qualify as an angel investor in the United States, one must meet U.S. Securities and Exchange Commission (SEC) standards for an accredited investor. Individuals qualify as an accredited investor if their income exceeds \$200,000 in each of the two most recent years (or \$300,000 in joint income with one's spouse) and they reasonably expect to reach the same income level in the current year. Individuals may also qualify as an accredited investor if their net worth exceeds \$1 million (individually or jointly with a spouse), excluding the value of their primary residence.
4. Center for Venture Research at the University of New Hampshire.
5. Kathleen Chaykowski, "Meet The Top Women Investors In VC In 2017," *Forbes*, April 18, 2017, <https://www.forbes.com>.
6. Claire Cain Miller, "Where Are The Women Venture Capitalists?" *Forbes*, January 25, 2017, <https://www.forbes.com>.
7. Brush, C.G., Greene, P.G., Balachandra, L., Davis, A.E. and Blank, A.M. 2014. Women entrepreneurs 2014: bridging the gender gap in venture capital. *Arthur M. Blank Center for Entrepreneurship Babson College*.
8. Claire Cain Miller, "Where Are The Women Venture Capitalists?" *Forbes*, January 25, 2017, <https://www.forbes.com>.
9. 2016 U.S. Census Data. <https://www.census.gov/quickfacts/fact/table/US/PST045216>.
10. Hegde, D. and Tumlinson, J., 2014. Does social proximity enhance business partnerships? Theory and evidence from ethnicity's role in US venture capital. *Management Science*, 60(9), pp.2355-2380.
11. Bengtsson, O. and Hsu, D.H., 2015. Ethnic matching in the US venture capital market. *Journal of Business Venturing*, 30(2), pp.338-354.
12. Freear, John, Jeffrey E. Sohl, William E. Wetzel. 1994. Angels and non-angels: Are there differences? *Journal of Business Venturing* 9(2) 109-123.
13. Richard, O., Barnett, T., Dwyer, S., & Chadwick, K. 2004. Cultural Diversity in Management, Firm Performance, and the Moderating Role of Entrepreneurial Orientation Dimensions. *Academy of Management Journal* 47(2), 255-266.
14. 2016 U.S. Census Data. <https://www.census.gov/data/tables/time-series/demo/income-poverty/cps-pinc/pinc-03.html>.
15. Collewaert, V. and Manigart, S., 2016. Valuation of Angel-Backed companies: The role of investor human capital. *Journal of Small Business Management*, 54(1), pp.356-372.
16. Wiltbank, R.E., 2009. *Siding with the Angels: Business Angel investing-promising outcomes and effective strategies*. Nesta.
17. 2016 NVCA Yearbook.
18. 2016 Angel Returns Study.
19. Wiltbank, R.E., 2016. Tracking Angel Returns. Retrieved from <http://angelresourceinstitute.org/reports/angel-returns-full-version-2016.pdf>.
20. Harrison, R.T. and Mason, C.M., 2007. Does gender matter? Women business angels and the supply of entrepreneurial finance. *Entrepreneurship Theory and Practice*, 31(3), pp.445-472.
21. Hsu, D.H., 2004. What do entrepreneurs pay for venture capital affiliation?. *Journal of Finance*, 59(4), pp.1805-1844.
22. Sørensen, M., 2007. How smart is smart money? A two-sided matching model of Venture Capital. *Journal of Finance*, 62(6), pp.2725-2762.
23. Mitteness, C.R., Baucus, M.S. and Sudek, R., 2012. Horse vs. jockey? How stage of funding process and industry experience affect the evaluations of angel investors. *Venture Capital*, 14(4), pp.241-267.
24. Mason, Colin M., and Richard T Harrison. 2002. Is it worth it? The rates of return from informal venture capital investments. *Journal of Business Venturing* 17(3) 211-236.



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