



# Understanding the Landscape: Access to Capital for Women Entrepreneurs



# Women Business Owners' Access to Capital Literature Review

A Report Prepared by the Federal Research Division,  
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## PREFACE

The National Women's Business Council (NWBC) is the federal government's only independent voice for women entrepreneurs. Its mission is to support groundbreaking research that provides insight into women's business enterprises from startup to success, and to use and share these findings to advise constructive action and policies at the federal level. The NWBC contracted with the Federal Research Division (FRD) of the Library of Congress for research and analytical support to help establish a firm foundation of knowledge concerning the major issues influencing women's entrepreneurship and business ownership.

The goal of this report is to support the council in establishing a knowledge base about women business owners', leaders', and entrepreneurs' access to capital. This report represents a high-level situational analysis, exploring major issues and developments affecting women entrepreneurs to inform the NWBC's framework for defining research priorities and engagement efforts.

The analysis in this report is based on a literature review of peer-reviewed research published in current periodicals and scholarly journals, as well as online. The research is largely focused on business and finance, but also sociology. Additional sources include government reports published by the Congressional Research Service, the U.S. Government Accountability Office, and other federal agencies, along with industry reports produced by leaders in the financial sector.

The report lays out the research findings through a so-called "PEST" framework, examining the existing research in terms of the political, economic, social, and technological factors that impact women business owners' access to capital.

FRD provides customized research and analytical services on domestic and international topics to agencies of the U.S. government, the District of Columbia, and authorized federal contractors on a cost-recovery basis. This report represents an independent analysis by FRD and the author, who has sought to adhere to accepted standards of scholarly objectivity. It should not be construed as an expression of an official U.S. government position, policy, or decision.

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## KEY FINDINGS

Women-owned businesses are an important part of the U.S. economy, making contributions in everything from employment rates to payroll growth. According to data from the 2012 Survey of Business Owners, between 2007 and 2012, employment from women-owned businesses grew to 8.4 million, with equally owned businesses providing an additional 6.5 million jobs. The data also revealed that employment created by women-owned businesses, as either majority or joint owners, generated \$453 billion in payroll growth. In fact, payroll growth in women-owned firms grew at a faster rate (by 52 percent) between 2007 and 2012 than in all firms (by 37 percent).<sup>1</sup> Yet despite this evidence that women business owners make significant contributions to the economy, they continue to struggle to access capital, which in turn restricts their growth.

- Compared with men, women business owners raise smaller amounts of capital to finance their firms and are more reliant on personal, rather than external, sources of financing.
- Initial disparities in the levels of startup capital in women-owned businesses as compared with men-owned businesses do not disappear in the years following startup.
- A key difference between men and women regarding bootstrapping (i.e., financing a business without external capital) is that “women choose bootstrapping instead of overdrafts and men choose bootstrap finance to supplement overdrafts.”<sup>2</sup>
- Women’s networks have fewer viable economic resources compared with men’s.
- Women’s networks have fewer connections with ties to resources like financial capital, but even when they do have networks with weak connections, these are not necessarily beneficial in the way that men’s networks are likely to be.
- Women in business are often tied to an unconscious association with less credibility and a lack of legitimacy.
- Women investors demonstrate a bias toward men business owners, so the gender gap in funding is not likely to narrow simply by having more women become venture capitalists.
- Some research has identified the desire for control and higher levels of risk aversion among women as explanations of why women business owners are more likely to keep their firms small and manageable. Women are also more likely to avoid external sources of financing because it leads them to give up control or take on higher levels of risk.

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<sup>1</sup> Michael J. McManus, *Women’s Business Ownership: Data from the 2012 Survey of Business Owners*, Office of Advocacy Issue Brief 13 (Washington, DC: U.S. Small Business Administration [SBA], Office of Advocacy, May 31, 2017), 1, <http://www.sba.gov/sites/default/files/advocacy/Womens-Business-Ownership-in-the-US.pdf>.

<sup>2</sup> Lynn Neeley and Howard Van Auken, “Differences Between Female and Male Entrepreneurs’ Use of Bootstrap Financing,” *Journal of Developmental Entrepreneurship* 15, no.1 (2010): 31, doi: 10.1142/S1084946710001439.

- The profile of a woman pursuing high-growth entrepreneurship is that of a highly educated parent with high levels of entrepreneurial intensity; in contrast, the profile of a man pursuing high-growth entrepreneurship is that of a young person with no experience in the business's industry.
- Although more men use seed crowdfunding, women are more successful.

The literature exploring women business owners' access to capital is strong, but gaps in the field remain. Opportunities for future research include investigating women's growth intentions and business life cycles, gender differences related to risk aversion and tolerance, investor behavior toward women business owners and founders, the role of social networks in a firm's growth, and the fundamental preferences behind women business owners' capital-raising strategies.

## INTRODUCTION

In order to help the National Women's Business Council maintain its awareness of current and emerging areas of study in women's entrepreneurship and business ownership, this report explores recent research into women business owners' access to capital.<sup>3</sup> Women-owned businesses are an important component of the U.S. economy, yet women consistently face barriers to securing capital. Factors contributing to (and in some cases mediating) these barriers will be discussed through the prism of a "PEST" framework, which provides a context for the various political, economic, social, and technological elements that impact women in business. This report, however, is not exhaustive and is meant to highlight the relevant research and identify areas where more study is warranted.

Today, women-owned businesses account for about one-third of all types of business in the United States, but just 16 percent of employer firms and less than 10 percent of high-growth firms.<sup>4</sup> The Women's Business Ownership Act of 1988 was landmark legislation that helped the number of women-owned businesses grow from 4.1 million in 1987 to 8.6 million in 2013<sup>5</sup>, and more today. Yet these women-owned businesses continue to face obstacles that impede their growth, many of which are in place from the beginning: Women start businesses with smaller amounts of capital than men, are less likely to raise capital from external sources, and, according to the U.S. Department of Commerce's Economics and Statistics Administration, are more likely to say they do not need financing to start a business because they are more likely than men to rely on owner-provided equity to launch their firms.<sup>6</sup> Over time, women-owned businesses show lower levels of growth and remain smaller than men-owned businesses.<sup>7</sup>

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<sup>3</sup> The focus of this report is research published between 2010 and 2017. Research published prior to 2010 that informed the references listed in the text has been noted in the report and collected in a supplemental bibliography of additional resources.

<sup>4</sup> Alicia Robb, Susan Coleman, and Dane Stangler, *Sources of Economic Hope: Women's Entrepreneurship* (Kansas City, MO: Ewing Marion Kauffman Foundation, 2014), 3, <http://www.kauffman.org/what-we-do/research/2014/11/sources-of-economic-hope-womens-entrepreneurship>.

<sup>5</sup> U.S. Senate, Committee on Small Business and Entrepreneurship, "21<sup>st</sup> Century Barriers to Women's Entrepreneurship," July 23, 2014, 2, [https://www.sbc.senate.gov/public/\\_cache/files/4/b/4b5a4074-7a30-40bd-9aac-e6a1346328c4/EB412421BCAC7268E680B3BBB06E6D25.report-on-womens-entrepreneurship---wa-edition-final2.pdf](https://www.sbc.senate.gov/public/_cache/files/4/b/4b5a4074-7a30-40bd-9aac-e6a1346328c4/EB412421BCAC7268E680B3BBB06E6D25.report-on-womens-entrepreneurship---wa-edition-final2.pdf). At the time the 2012 Survey of Business Owners data was released, small and large women-owned businesses had grown to 9.8 million.

<sup>6</sup> Alicia Robb and Susan Coleman, "Financing High-Growth Women-Owned Enterprises: Evidence from the United States" (paper presented at the ICSB [International Council for Small Business] World Conference Proceedings,

## POLITICAL FACTORS

For the amount of federal legislation and programs aimed at helping businesses access capital, there appears to be limited research on the effectiveness of these programs or their impact on women business owners in particular. This section provides an overview of new and relevant federal legislation; federal programs implemented as a result of these laws or otherwise pertinent to this discussion; and the current regulatory environment, with a particular focus on some aspects of financial technology, or “fintech.” Wherever possible, the impacts on women business owners as distinct from the general business population are noted. Notably, new legislation has resulted in a new regulatory category for “emerging growth company,” which exempts such businesses from many of the regulatory and disclosure requirements typically necessary for companies wishing to go public, ostensibly making it easier for startups to raise capital. Another important change resulting from recent legislation is an amendment to the Equal Credit Opportunity Act (ECOA), which facilitates the enforcement of fair lending laws and enables the collection of relevant data.

### Federal Legislation

Two recent laws have created additional means for businesses to access capital: the Small Business Jobs Act of 2010 and the Jumpstart Our Business Startups (JOBS) Act. The former established two programs at the U.S. Department of the Treasury, authorized several pilot programs at the U.S. Small Business Administration (SBA), and made numerous changes to the SBA’s loan guaranty and contracting programs.<sup>8</sup> Featuring incentive programs, this act allocated \$30 billion to the new Small Business Lending Fund—with \$4 billion of that funding mandated to encourage community banks—and funded the new State Small Business Credit Initiative with \$1.5 billion, of which \$1.45 billion was available to program participants.<sup>9</sup>

The JOBS Act, which was signed by President Barack Obama in 2012, established a new regulatory structure for startups and small businesses that allows them to raise capital through securities offerings using internet crowdfunding applications.<sup>10</sup> To accomplish this, it introduced a new regulatory category, the “emerging growth company,” which it defines as businesses with gross revenues of less than \$1 billion. The act exempts these companies from many of the regulatory and disclosure requirements otherwise required in the initial registration statement that public companies must file with the U.S. Securities and Exchange Commission and provides

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Dublin, Ireland, June 11–14, 2014), 5, ProQuest; U.S. Department of Commerce (DOC), Economics and Statistics Administration, *Women-Owned Businesses in the 21<sup>st</sup> Century* (Washington, DC: DOC, Economics and Statistics Administration, October 2010), 1, 17, <http://www.esa.doc.gov/sites/default/files/women-owned-businesses.pdf>.

<sup>7</sup> Amy E. Davis and Kelly G. Shaver, “Understanding Gendered Variations in Business Growth Intentions Across the Life Course,” *Entrepreneurship Theory and Practice* 36, no. 3 (2012), 496, doi: 10.1111/j.1540-6520.2012.00508.x.

<sup>8</sup> U.S. Department of the Treasury, Office of the Inspector General, “Small Business Lending Fund Program and State Small Business Credit Initiative,” last updated October 13, 2017, <https://www.treasury.gov/about/organizational-structure/ig/Pages/Office-of-Small-Business-Lending-Fund-Program-Oversight.aspx>; Robert Jay Dilger, *State Small Business Credit Initiative: Implementation and Funding Issues*, CRS Report to Congress R42581 (Washington, DC: Library of Congress, Congressional Research Service [CRS], April 13, 2017), 1, ProQuest Congressional.

<sup>9</sup> Dilger, *State Small Business Credit Initiative*, 1.

<sup>10</sup> Robert Jay Dilger, *Small Business: Access to Capital and Job Creation*, CRS Report to Congress R40985 (Washington, DC: Library of Congress, CRS, February 10, 2017), 14, ProQuest Congressional.

further relief after the company goes public.<sup>11</sup> Although not women-specific, these laws ostensibly help women business owners with funding that has been made available to small businesses in general.

Section 1071 of the Dodd–Frank Wall Street Reform and Consumer Protection (Dodd–Frank) Act also seeks to assist small businesses, including women-owned businesses specifically, by facilitating the enforcement of fair lending laws. This section amends the ECOA to require financial institutions to compile, maintain, and submit to the Consumer Financial Protection Bureau (CFPB) certain data on credit applications by women-owned, minority-owned, and small businesses, including the race, sex, and ethnicity of the principal business owners.<sup>12</sup> Under the ECOA, lenders could not ask about or document such information, which was intended “to prevent lenders from unlawfully considering it when evaluating an applicant’s credit worthiness.” However, the inability to gather these data points made it difficult to determine whether lenders engaged in discriminatory behavior toward women. Section 1071’s amending of the ECOA should help with enforcement, as well as “determine whether discrepancies in loan rates for women occurred as a result of gender discrimination by the commercial lender or [are] strictly due to the type of businesses in which women choose to engage.”<sup>13</sup> The CFPB interprets Section 1071 to mean that financial institutions are not obligated to collect and submit this data “until the bureau issues implementing regulations and those regulations take effect.” It is currently working on these rules; an extended Request for Information ended on September 14, 2017.<sup>14</sup>

## Federal Programs

The U.S. Department of the Treasury’s Small Business Lending Fund was established by the Small Business Jobs Act of 2010 to provide capital to qualified community banks and community development loan funds (CDLFs). This capital is meant to encourage so-called “Main Street Banks” (i.e., consumer lending institutions, as opposed to investment banks affiliated with Wall Street) to engage in lending to small businesses to help create jobs and promote economic growth. To date, the Treasury Department has invested over \$4 billion in 332 institutions through the fund, with \$3.9 billion going to 281 community banks and \$104 million going to 51 CDLFs.<sup>15</sup> However, the establishment and implementation of this program has been quite controversial and it remains unclear how much it has increased lending to small businesses, largely due to questions about the validity of the data submitted to the Treasury Department by participating institutions.<sup>16</sup> Additionally, finding data to gauge how women-owned businesses

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<sup>11</sup> Seth C. Oranburg, “A Place of Their Own: Crowds in the New Market for Equity Crowdfunding,” *Minnesota Law Review* 100, no. 2 (2016): 338, [http://www.minnesotalawreview.org/wp-content/uploads/2016/10/Oranburg\\_FinalOnline.pdf](http://www.minnesotalawreview.org/wp-content/uploads/2016/10/Oranburg_FinalOnline.pdf).

<sup>12</sup> Consumer Financial Protection Bureau (CFPB), *Key Dimensions of the Small Business Lending Landscape* (Washington, DC: CFPB, May 2017), 2, [http://files.consumerfinance.gov/f/documents/201705\\_cfpb\\_Key-Dimensions-Small-Business-Lending-Landscape.pdf](http://files.consumerfinance.gov/f/documents/201705_cfpb_Key-Dimensions-Small-Business-Lending-Landscape.pdf).

<sup>13</sup> Jennifer Bruno, “Microfinance or Micro-Commercial Banking: The Great Recession’s Impact on Women’s Access to Microcredit in the United States,” *Women’s Rights Law Reporter* 34, no. 1 (2012): 13, 21.

<sup>14</sup> CFPB, *Key Dimensions*, 2; Request for Information Regarding the Small Business Lending Market, 82 Fed. Reg. 32,177 (July 12, 2017).

<sup>15</sup> U.S. Department of the Treasury, “Resource Center: Small Business Lending Fund,” last updated October 12, 2017, <https://www.treasury.gov/resource-center/sb-programs/Pages/Small-Business-Lending-Fund.aspx>.

<sup>16</sup> Robert Jay Dilger, *The Small Business Lending Fund*, CRS Report to Congress R42045 (Washington, DC: Library of Congress, CRS, July 13, 2017), 26, ProQuest Congressional.

have been helped by this program has proven difficult. However, at least one women-centric CDLF has participated: the Wisconsin Women's Business Initiative Corporation.<sup>17</sup>

Also administered by the Treasury Department, the State Small Business Credit Initiative (SSBCI) was designed to expand existing or create new state small business investment programs, such as capital access, collateral support, loan participation, loan guarantee, and venture capital programs. The department's goal for the initiative called for participants to leverage SSBCI funds to generate new small business lending at a rate of at least ten times the amount received. In applying for the funding, participants were required to describe how they would use the money to provide access to capital for small businesses, including those owned by women. All allocation agreements expired on March 31, 2017.<sup>18</sup>

A total of 57 states, territories, and eligible municipalities participated in the SSBCI program. As of December 2016, \$1.43 billion (98 percent of the total funding) had been disbursed. Of the 57 participants, 53 had received their final tranche.<sup>19</sup> Loan participation and venture capital programs were the most popular, with nearly double the number of participants as the other programs, and received the greatest share of funding (see table 1). Though it is unclear how women-owned businesses have been impacted by the SSBCI program, some states offer additional incentives to encourage lending to such companies. For example, Alabama's loan participation program offers a subsidy on the interest, reducing the rate on the state portion of loans to women-owned businesses from 4 percent to 3 percent.<sup>20</sup>

**Table 1. SSBCI Participation and Funding by Program Type**

Program Type	Number of Participants	Share of Funding
Capital Access	23	2.7%
Collateral Support	16	18.4%
Loan Guarantee	20	16.9%
Loan Participation	40	32.5%
Venture Capital	38	29.5%

*Source:* Dilger, *State Small Business Credit Initiative*, 11, 14.

Through December 2015, the SSBCI funds had supported 16,919 small business private-sector loans or investments, and had generated nearly \$8.4 billion in new capital, or \$8.02 for every \$1 in SSBCI funds. As of December 2016, participants had spent about 88 percent of the funding, or \$1.27 billion. However, it is difficult to determine the full extent of the initiative's effects on small business lending because of variables such as a lender's local economy and because the amount of funding is so small, representing just 0.25 percent of the national market for non-agricultural business loans.<sup>21</sup>

<sup>17</sup> U.S. Department of the Treasury, *Report of SBLF Participants' Small Business Lending Growth* (Washington, DC: U.S. Department of the Treasury, July 2017), 16, [https://www.treasury.gov/resource-center/sbprograms/Documents/LGR\\_July\\_2017\\_FINAL\\_07-01-2017.pdf](https://www.treasury.gov/resource-center/sbprograms/Documents/LGR_July_2017_FINAL_07-01-2017.pdf).

<sup>18</sup> Dilger, *State Small Business Credit Initiative*, 1, 2, 10.

<sup>19</sup> Dilger, *State Small Business Credit Initiative*, 2.

<sup>20</sup> Alabama Department of Economic and Community Affairs, Community and Economic Division, "Alabama SSBCI Program," accessed September 29, 2017, <http://adeca.alabama.gov/Divisions/ced/cdp/Documents/Alabama%20SSBCI%20Program%20-%20More%20Information.pdf>.

<sup>21</sup> Dilger, *State Small Business Credit Initiative*, 2–4.

Like the Treasury Department, the SBA administers several types of programs to support small businesses, including loan guaranty and venture capital programs that enhance access to capital. With the exception of the Office of Disaster Assistance, the SBA does not make direct loans, but rather guarantees loans issued by approved lenders, who are encouraged to provide loans to small businesses "that might not otherwise obtain financing on reasonable terms and conditions."<sup>22</sup> Because of the high rate of failure among startups, providing financial support through SBA-guaranteed loans or venture capital investments is considered a high-risk/high-reward endeavor. Advocates of this support cite job creation whereas opponents focus on the risk of default. Although there are some SBA programs focused on early-stage businesses, most are designed to assist small businesses at all stages of development.<sup>23</sup> The SBA's capital access programs include the 7(a) loan guaranty program, the 504/CDC (Certified Development Company) loan guaranty program, and the microloan program.

Named after the section of the Small Business Act that authorizes it, the 7(a) loan guaranty program is one of the SBA's two largest loan guaranty programs, with \$24.1 billion approved for fiscal year (FY) 2016.<sup>24</sup> It provides participating certified lenders with a guaranty of repayment in the case of a default: up to 85 percent of qualified loan amounts of \$150,000 or less, or up to 75 percent of qualified loan amounts exceeding \$150,000 to the limit of \$5 million.<sup>25</sup> In FY2016, the SBA approved 64,073 loans, with the average loan amounting to \$376,537. About 14 percent, or \$3.37 billion, went to women-owned businesses that year, which represented the largest share of funding such companies (defined as businesses in which women were the majority of the ownership team) had received through the program since 2011.<sup>26</sup> Tables 2 and 3 show the breakdown of 7(a) program funding and participation for women- and men-owned businesses.

**Table 2. SBA 7(a) Program Funding, 2011–16**

Year	Total Funding	Women-Owned (>50%)		Women-Owned (≤50%)*		Men-Owned	
		Funding	Share of Funding	Funding	Share of Funding	Funding	Share of Funding
2011	\$19.6 billion	\$2.3 billion	12%	\$3.1 billion	16%	\$14.2 billion	72%
2012	\$15.2 billion	\$1.8 billion	12%	\$2.6 billion	17%	\$10.8 billion	71%
2013	\$17.9 billion	\$2.3 billion	13%	\$2.9 billion	16%	\$12.6 billion	71%
2014	\$19.2 billion	\$2.5 billion	13%	\$3.3 billion	17%	\$13.4 billion	70%
2015	\$23.6 billion	\$3.1 billion	13%	\$3.9 billion	17%	\$16.6 billion	70%
2016	\$24.1 billion	\$3.4 billion	14%	\$3.9 billion	16%	\$16.8 billion	70%

\* Although the National Women's Business Council normally includes this category with men-owned businesses, the SBA's data reflects joint ownership as distinct from women- and men-owned firms. However, regardless of how the data is categorized, majority women-owned businesses are accessing a very small proportion of these funds.

Source: SBA, "SBA Lending Statistics for Major Programs as of September 30, 2016," 1.

<sup>22</sup> Robert Jay Dilger and Sean Lowry, *Small Business Administration: A Primer on Programs and Funding*, CRS Report to Congress RL33243 (Washington, DC: Library of Congress, CRS, June 5, 2017), 1, 6, ProQuest Congressional.

<sup>23</sup> Robert Jay Dilger, *SBA Assistance to Small Business Startups: Client Experiences and Program Impact*, CRS Report to Congress R43083 (Washington, DC: Library of Congress, CRS, June 1, 2017), 2–3, ProQuest Congressional.

<sup>24</sup> Dilger and Lowry, *Small Business Administration*, 10; Dilger, *SBA Assistance*, 11.

<sup>25</sup> Dilger, *SBA Assistance*, 12.

<sup>26</sup> Robert Jay Dilger, *Small Business Administration 7(a) Loan Guaranty Program*, CRS Report to Congress R41146 (Washington, DC: Library of Congress, CRS, May 15, 2017), 1, 22, ProQuest Congressional.

**Table 3. SBA 7(a) Program Participation, 2011–16**

Year	Total Participants	Women-Owned (>50%)		Women-Owned (≤50%)		Men-Owned	
		Participants	Share of Participants	Participants	Share of Participants	Participants	Share of Participants
2011	53,710	8,751	16%	7,856	15%	37,103	69%
2012	44,376	7,119	16%	7,081	16%	30,176	68%
2013	46,395	7,697	17%	7,475	16%	31,223	67%
2014	52,044	8,814	17%	8,051	15%	35,179	68%
2015	63,461	11,360	18%	9,312	15%	42,789	67%
2016	64,073	11,826	18%	9,054	14%	43,192	67%

*Source:* SBA, "SBA Lending Statistics," 2.

The 504/CDC program is the second of the SBA's two largest loan guaranty programs, with \$4.7 billion approved in FY2016.<sup>27</sup> The SBA administers this program through certified development companies, which are private, nonprofit corporations established to support economic development within underserved communities.<sup>28</sup> Named for Section 504 of the Small Business Investment Act of 1958, it provides long-term, fixed-rate financing for major fixed assets. Of the total project costs, a third-party lender provides at least 50 percent of the financing; the CDC provides up to 40 percent, which is backed by a 100 percent SBA-guaranteed debenture; and the applicant provides at least 10 percent of the financing. To remain in the program, the borrowers must meet one of two economic development objectives:

- They must create or retain at least one job for every \$65,000 of project debenture (small manufacturers must do this for every \$100,000) and three-quarters of those jobs must be created in the community where the project is located, or
- If they are unable to meet that objective, they must meet one of five community development goals or ten public policy goals.<sup>29</sup>

According to SBA data, women-owned businesses do not appear to fare quite as well in this program compared with the 7(a) program. Participation rates and funding amounts are somewhat favorable between women-owned businesses in the two programs when women are the majority owners, but when women represent minority owners, these businesses have struggled to receive funding through the 504/CDC program, garnering less than 1 percent year after year until 2016, when they finally received 1 percent of the total funding and represented 1 percent of participants. However, research did not reveal any data about loan application rates. Therefore, it is unclear if the participation rates are low because women business owners are not applying for these loans, are not typically meeting the program's standards, or are not getting approved after applying. Tables 4 and 5 show the breakdown of 504/CDC program funding and participation for women- and men-owned businesses.

<sup>27</sup> Dilger, *SBA Assistance*, 12.

<sup>28</sup> Dilger and Lowry, *Small Business Administration*, 12.

<sup>29</sup> Dilger, *SBA Assistance*, 12, 13.

**Table 4. SBA 504/CDC Program Funding, 2011–16**

Year	Total Funding	Women-Owned (>50%)		Women-Owned (≤50%)*		Men-Owned	
		Funding	Share of Funding	Funding	Share of Funding	Funding	Share of Funding
2011	\$4.8 billion	\$624.3 million	13%	\$12.2 million	<1%	\$4.2 billion	87%
2012	\$6.7 billion	\$764.4 million	11%	\$28.9 million	<1%	\$5.9 billion	88%
2013	\$5.2 billion	\$699.4 million	13%	\$20.9 million	<1%	\$4.5 billion	86%
2014	\$4.2 billion	\$561.7 million	13%	\$8.5 million	<1%	\$3.6 billion	86%
2015	\$4.3 billion	\$598.8 million	14%	\$11.6 million	<1%	\$3.7 billion	86%
2016	\$4.7 billion	\$614.3 million	13%	\$32.4 million	1%	\$4.1 billion	86%

*Source:* SBA, "SBA Lending Statistics," 3.

**Table 5. SBA 504/CDC Program Participation, 2011–16**

Year	Total Participants	Women-Owned (>50%)		Women-Owned (≤50%)		Men-Owned	
		Participants	Share of Participants	Participants	Share of Participants	Participants	Share of Participants
2011	7,983	1,219	15%	17	<1%	6,746	85%
2012	9,471	1,337	14%	40	<1%	8,094	85%
2013	7,708	1,249	16%	36	<1%	6,423	83%
2014	5,885	962	16%	9	<1%	4,914	84%
2015	5,787	963	17%	17	<1%	4,807	83%
2016	5,938	995	17%	50	1%	4,893	82%

*Source:* SBA, "SBA Lending Statistics," 4.

The SBA's microloan program was first authorized as a demonstration program in 1991, became operational in 1992, and was made permanent in 1997. Its stated purpose is, in part, "to assist women, low-income, veteran . . . and minority entrepreneurs and business owners and other individuals possessing the capability to operate successful business concerns; to assist small business concerns in those areas suffering from a lack of credit due to economic downturns."<sup>30</sup>

The program is open to all small businesses but targets new and early-stage businesses in underserved markets: borrowers with little to no credit history, low-income borrowers, and women and minority entrepreneurs in both rural and urban areas, who generally do not qualify for conventional loans or larger SBA-guaranteed loans.<sup>31</sup> The SBA currently provides direct loans to 140 active nonprofit intermediary microloan lenders who then provide microloans of up to \$50,000 to small business owners, entrepreneurs, and nonprofit child care centers. In FY2016, the program disbursed \$60.8 million in microloans to small businesses.<sup>32</sup>

<sup>30</sup> Dilger, *SBA Assistance*, 13–14.

<sup>31</sup> Dilger and Lowry, *Small Business Administration*, 14.

<sup>32</sup> Dilger, *SBA Assistance*, 12.

The SBA's capital investment programs include the Small Business Investment Company (SBIC) Program and the New Market Venture Capital Program. The SBIC Program is the organization's flagship venture capital effort and works to enhance small business access to venture capital by stimulating and supplementing "the flow of [the] private equity capital and long-term loan funds which small-business concerns need for the sound financing of their business operations and for their growth expansion, and modernization, and which are not in adequate supply."<sup>33</sup> The SBA licenses 316 privately owned and managed SBICs that provide financing to small businesses with private capital the companies have raised and with SBA-guaranteed funds borrowed at favorable rates.<sup>34</sup> The SBICs provide equity in various ways: they can purchase small business securities, make loans, purchase debt securities, or provide small businesses a guarantee of monetary obligations to creditors not associated with the companies. The SBICs pursue investments in a broad range of industries, geographic areas, and stages.<sup>35</sup>

In 2016, John Paglia of Pepperdine University and David T. Robinson of Duke University investigated the gender and racial diversity of the SBIC Program, looking at the funds themselves and the portfolio companies receiving SBIC funding, as well as how investment performance differs according to the diversity of the funds in question. They found that "granting SBIC licenses to well-qualified gender-diverse and racially diverse funds increases the rates of investment into other women-led, women-owned, minority-led, and minority-owned companies while also producing returns that are comparable to their non-diverse counterparts."<sup>36</sup>

The SBA has also been experimenting with an early-stage debenture SBIC initiative, but it remains unclear whether the Trump administration intends to continue this past FY2017. Over the past five years, the SBA has held annual calls for venture capital fund managers to apply to become licensed early-stage debenture SBICs. Of the 63 investment funds that have applied to participate, five have been granted an early-stage SBIC license. As of September 2016, those five licensees had raised \$246.9 million in outstanding commitments and had invested \$160.7 million in 62 small businesses. In FY2016 alone, they invested \$66.2 million in 45 small businesses.<sup>37</sup>

The New Market Venture Capital (NMVC) Program is very small, disbursing just \$1.65 million to four small businesses in FY2015; no new financing was available in FY2016 and it is no longer accepting applications. Funds that were approved as NMVC companies continue to operate, but do not actively seek to make new investments.<sup>38</sup> The program's objective is to serve the unmet equity needs of entrepreneurs in low-income areas through the provision of developmental venture capital investments and technical assistance. It operates through public-private partnerships between the SBA and NMVC companies, as well as existing specialized small business investment companies that operate under the SBIC Program.<sup>39</sup>

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<sup>33</sup> Dilger, *SBA Assistance*, 17; Dilger and Lowry, *Small Business Administration*, 25.

<sup>34</sup> Dilger and Lowry, *Small Business Administration*, 25.

<sup>35</sup> Dilger, *SBA Assistance*, 18.

<sup>36</sup> John Paglia and David T. Robinson, *Measuring the Representation of Women and Minorities in the SBIC Program* (Washington, DC: Library of Congress, Federal Research Division, October 2016), 15, 36, <https://www.sba.gov/sites/default/files/article-files/SBIC-Diversity-Report.pdf>.

<sup>37</sup> Dilger, *SBA Assistance*, 20.

<sup>38</sup> Dilger, *SBA Assistance*, 17; SBA, "New Markets Venture Capital Program," accessed October 5, 2017, <https://www.sba.gov/category/lender-navigation/sba-loan-programs/new-markets-venture-capital-companies>.

<sup>39</sup> Dilger and Lowry, *Small Business Administration*, 26.

## Federal Regulatory Issues

This section highlights federal rules issued by the agencies charged with regulating some of the aforementioned programs. Because of the complicated nature of financial technology, or “fintech,” this topic has been described in more depth compared with programmatic regulations, with a particular focus on how government agencies are approaching the marketplace lending sector of fintech. This section has been treated in a general sense; that is, impacts specific to women business owners have not been identified due to a lack of literature about regulatory effects on this population.

On April 27, 2012, the SBA published a final rule establishing its \$1 billion early-stage debenture SBIC initiative. Due to the higher risk associated with investments in early-stage small businesses, several new regulatory provisions were necessary to reduce the risk of an SBIC defaulting on its leverage, as well as to improve the SBA’s recovery prospect if a default did occur. Early-stage debenture SBICs are required to raise more regulatory capital than conventional debenture SBICs (at least \$20 million compared to \$5 million) and are subject to special distribution rules requiring a pro rata repayment of the SBA leverage when making profit distributions to investors.<sup>40</sup>

On November 16, 2015, the U.S. Securities and Exchange Commission (SEC) published its final rule implementing Title III of the JOBS Act, known as the CROWDFUND Act. Crowdfunding is the practice of raising funds for a project or venture via small amounts from many people, typically facilitated by the internet. These crowdfunding provisions, which went into effect May 16, 2016, provided some relief from the restrictions that existed under prior security regulations. Prior to the CROWDFUND Act, emerging growth companies relied on Rule 506 of Regulation D, which allowed only accredited investors to participate in securities offerings.<sup>41</sup> The new rule established limits on the amounts of money issuers can raise and individual investors can invest over a 12-month period. The rule also imposed disclosure requirements on issuers’ business and securities offerings. Additionally, it created a regulatory framework for broker-dealers and funding portals that facilitate crowdfunding transactions.<sup>42</sup>

The regulation of fintech is a special case. Multiple agencies are involved in various aspects of marketplace lending and the rapid evolution of fintech makes it an area to watch closely. Marketplace lending is a nonbank lending industry that originated as person-to-person lending, through which individual investors financed loans to consumers. Marketplace lending uses innovative fintech, such as peer-to-peer or online platform lending, to make loans to consumers and small businesses. It operates almost entirely online with no physical retail space and the underwriting is automated and algorithmic. Lenders are funded by issuing equity or selling loans to investors.<sup>43</sup>

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<sup>40</sup> Dilger, *SBA Assistance*, 19.

<sup>41</sup> Elizabeth N. Brandt, “The Crowdfund Act’s Impact on Women-Owned Businesses’ Access to Capital,” *Columbia Business Law Review* 2017, no. 2 (2017): 835, [https://cblr.columbia.edu/wp-content/uploads/2017/08/6\\_2017.2-Brandt-Final.pdf](https://cblr.columbia.edu/wp-content/uploads/2017/08/6_2017.2-Brandt-Final.pdf).

<sup>42</sup> Dilger, *Small Business*, 14–15.

<sup>43</sup> David W. Perkins, *Marketplace Lending: Fintech in Consumer and Small-Business Lending*, CRS Report to Congress R44614 (Washington, DC: Library of Congress, CRS, September 6, 2016), Summary, ProQuest Congressional; U.S.

The industry has developed to include investors like hedge funds and financial institutions and a market for the securitization of marketplace lending loans has emerged. Small businesses use it to access short- and fixed-term loans, lines of credit, merchant cash advances, and other products to finance business expenses and expansions, among other activities.<sup>44</sup> In October 2016, the Federal Reserve Bank of Cleveland published a report investigating how marketplace lending is used by small businesses, but did not specify “women-owned businesses” in its demographics, although it did include the category “minority-owned businesses.”<sup>45</sup>

Current federal laws and regulations applicable to marketplace lending “generally apply to consumer loans and not small business loans or other commercial loans.” For instance, although small business loans under \$100,000 share common features with consumer loans, they do not offer the same protections. The regulation of marketplace lenders depends on the lender’s business model and the type of loan it issues. For example, marketplace lenders that provide services through an arrangement with a federally regulated depository institution may be subject to examination as a third-party service provider by one of the four federal prudential regulators (i.e., those that regulate safety and soundness: the Federal Deposit Insurance Corporation, the Federal Reserve, the National Credit Union Administration, or the Office of the Comptroller of the Currency). The lender may also be subject to federal consumer protection laws enforced by the CFPB and the Federal Trade Commission (FTC), depending on the types of activities being performed. All of these agencies have engaged in activities to better understand and monitor the fintech industry and the marketplace lending subsector. For example, the U.S. Department of the Treasury issued a white paper on marketplace lending in May 2016; the SEC hosted a fintech forum where industry representatives and regulators discussed capital formation and related investor protections in November 2016; and the Office of the Comptroller of the Currency announced its intent to make special-purpose national bank charters available to fintech companies, including marketplace lenders, in December 2016.<sup>46</sup>

Under the Securities Acts of 1933 and 1934, the SEC requires issuers that make public offerings of securities to register with the commission and to fulfill ongoing reporting requirements about their financial condition. Because marketplace lenders raise funds by selling loan notes or issuing equity to the public, they are subject to SEC requirements, with some exceptions. For example, certain marketplace lenders can forgo registration if they meet criteria that exempts them, such as having restricted funding sources (they sell only to institutional investors or high-net-worth individuals), or they meet a size threshold. A lender can also get an exemption by qualifying as an “emerging growth company.” Securities issued by marketplace lenders are backed by single assets, meaning they are not considered asset-backed securities and therefore are not subject to certain reporting requirements and risk-retention rules set out by the Dodd-Frank Act.<sup>47</sup>

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Government Accountability Office (GAO), *Financial Technology: Information on Subsectors and Regulatory Oversight*, GAO-17-361 (Washington, DC: GAO, April 2017), What GAO Found, 1, 3, <http://www.gao.gov/assets/690/684187.pdf>.

<sup>44</sup> GAO, *Financial Technology*, 3, 6.

<sup>45</sup> Ann Marie Wiersch, Barbara J. Lipman, and Brett Barkley, *Click, Submit: New Insights on Online Lender Applicants from the Small Business Credit Survey* (Cleveland, OH: Federal Reserve Bank of Cleveland, Community Development Department, October 12, 2016), <https://www.clevelandfed.org/en/newsroom-and-events/publications/special-reports/sr-20161012-click-submit.aspx>.

<sup>46</sup> GAO, *Financial Technology*, 8, 11, 12, 17.

<sup>47</sup> Perkins, *Marketplace Lending*, 13, 14.

The CFPB, which was authorized by the Dodd–Frank Act in response to the 2007–8 financial crisis, has the authority to enforce federal consumer protection laws and nonbank lenders, such as marketplace lenders, are generally subject to that authority. The bureau also has rulemaking authority over consumer lending in order to prohibit unfair, deceptive, and abusive acts or practices.<sup>48</sup> In March 2016, the CFPB announced it would begin accepting consumer complaints about marketplace lenders; however, the complaint system does not categorize complaints for such lenders.<sup>49</sup> Additionally, in July 2017, it issued a 60-day extension of its Request for Information to gather data about the small business lending market and to support its rulemaking process for implementing Section 1071 of the Dodd–Frank Act. Section 1071 authorizes the CFPB to collect information from financial institutions that will assist it in enforcing fair lending practices.<sup>50</sup>

The FTC also has enforcement authority over certain consumer protection statutes and, like the CFPB, has regulations in place to prohibit abusive terms in credit contracts.<sup>51</sup> It has authority under Section 5 of the Federal Trade Commission Act to protect small businesses (such as those owned by women) that are consumers of marketplace lending products or services. The FTC encourages consumers to file complaints if they believe themselves to be victims of fraud, identity theft, or other unfair or deceptive business practices, but fintech is not a category in their consumer complaint database. Instead, marketplace lending complaints are generally categorized as consumer loan complaints.<sup>52</sup>

### **Role of the SBA's Office of Advocacy**

The mission of the SBA's Office of Advocacy is to encourage policies that support the development and growth of small businesses. To fulfill this mission, the office produces research to inform policymakers and others of the regulatory impact on small businesses, and documents the vital role of small business in the economy.<sup>53</sup> It is responsible for monitoring and reporting on federal agency compliance with the Regulatory Flexibility Act of 1980, as amended, and Executive Order 13272, Proper Consideration of Small Entities in Agency Rulemaking.<sup>54</sup>

Economic research is a core mission of the Office of Advocacy. To fulfill this mandate, its Office of Economic Research (OER) is responsible for:

- Examining the role of small business in the U.S. economy and the contribution small business can make in improving competition;
- Measuring the direct costs and other effects of government regulation on small business;
- Determining the impact of the tax structure on small business;

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<sup>48</sup> Perkins, *Marketplace Lending*, 14.

<sup>49</sup> GAO, *Financial Technology*, 13.

<sup>50</sup> Request for Information Regarding the Small Business Lending Market.

<sup>51</sup> Perkins, *Marketplace Lending*, 14.

<sup>52</sup> GAO, *Financial Technology*, 13.

<sup>53</sup> Dilger and Lowry, *Small Business Administration*, 28.

<sup>54</sup> Robert Jay Lowry, *SBA Office of Advocacy: Overview, History, and Current Issues*, CRS Report to Congress R43625 (Washington, DC: Library of Congress, CRS, June 27, 2017), 8, ProQuest Congressional.

- Studying the ability of financial markets and institutions to meet small business credit needs;
- Determining the availability of financial resources and alternative means to deliver financial assistance to minority enterprises;
- Identifying and describing the measures that create an environment in which all businesses have the opportunity to compete effectively;
- Providing information on the status and potential for development and strengthening of minority and other small business enterprises; and
- Determining the common reasons for small business success and failure.<sup>55</sup>

To accomplish these elements of the Office of Advocacy's mission, the OER staffs ten positions and includes women-owned businesses among its specializations. This team works with other agencies to collect and analyze data, performs in-house research, and coordinates contracted research projects. OER economists also work closely with the legal team in Advocacy's Office of Interagency Affairs to assess the costs of proposed federal rules and mitigation strategies.<sup>56</sup>

Four regulatory economists are closely involved in the regulatory review process, working to improve policies for small business. They engage federal agencies during the rulemaking process in order to evaluate the economic impact of regulations on small businesses and to develop cost-effective alternatives when needed. If there is substantial disagreement with an agency about the impacts of a rule that cannot be resolved through the interagency comment process, the Office of Advocacy issues a public comment letter citing its concerns and suggesting alternatives. OER economists and interagency attorneys work together to produce these letters.<sup>57</sup>

Another of the Office of Advocacy's core missions, primarily carried out through its Office of Interagency Affairs, is the representation of small entities before federal agencies and the related task of monitoring those agencies' compliance with the Regulatory Flexibility Act. In addition to this act and Executive Order 13272, the Small Business Regulatory Enforcement Fairness Act, as amended, mandates duties to Advocacy related to this mission. Together, these laws formalize Advocacy's role in "ensuring that small business concerns are considered in the rulemaking process."<sup>58</sup>

The Regulatory Flexibility Act "established in law the principle that government agencies must analyze the effects of their regulatory actions on small entities and consider alternatives that would be equally effective in achieving their regulatory objectives without unduly burdening these small entities." Under this law, agencies must submit their regulatory agendas to the Office of Advocacy, as well as their initial regulatory flexibility analyses and certifications of rules

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<sup>55</sup> SBA, Office of Advocacy, *Background Paper on the Office of Advocacy 2009–2016* (Washington, DC: SBA, Office of Advocacy, October 2016), 23–24, <https://www.sba.gov/sites/default/files/advocacy/Complete-Advocacy-Background-Paper-and-Appendixes-2009-2016FINAL.pdf>.

<sup>56</sup> SBA, Office of Advocacy, *Background Paper*, 24.

<sup>57</sup> SBA, Office of Advocacy, *Background Paper*, 36, 37.

<sup>58</sup> SBA, Office of Advocacy, *Background Paper*, 39.

without significant effects; agencies are required to respond to any comments from Advocacy with a final regulatory flexibility analysis. The Small Business Regulatory Enforcement Fairness Act provides for the judicial review of agencies' compliance with the 1980 law, which has helped to focus their attention on the need to consider the impact on small businesses early in the rulemaking process. Executive Order 13272 provides that each agency will establish procedures and policies to promote compliance with the Regulatory Flexibility Act, as amended, and that the Chief Counsel for Advocacy is available to advise agencies performing reviews of their draft rules. These reviews take into account the potential impacts of the proposed rules on small businesses, small governmental jurisdictions, and small organizations.<sup>59</sup>

## ECONOMIC FACTORS

This section highlights current research that investigates the differences in how men and women raise capital for their businesses and the differences in how men and women inject capital at different points in their businesses after startup. The findings show that women business owners typically raise different forms of capital, as well as smaller amounts, than their male counterparts. Significantly, women business owners are much more likely than men to face greater unmet credit needs.

### Investment Trends: Comparing Women with Men

One aspect in which men and women differ in raising capital is the forms of capital they tend to use. The six main categories of financial capital, according to economist Alicia Robb, founder and CEO of Next Wave Ventures, and University of Hartford finance professor Susan Coleman, are:

- *Owner Equity.* Equity invested by the owner of the firm;
- *Insider Equity.* Equity invested by the owner's family members;
- *External Equity.* Equity invested by informal investors, venture capitalists, businesses, government agencies, or other individuals (e.g., angel investors);
- *Owner Debt.* The owner's loans to the business or debt on personal credit cards;
- *Insider Debt.* Personal credit extended by the owner's family members or employees, or business credit provided by owner's family members or employees; and
- *External Debt.* Debt on business credit cards, personal bank loans, business bank loans, business credit lines, or business loans from the government, nonbank sources, individuals, and others.<sup>60</sup>

Across multiple studies, Robb and Coleman found that, compared to men overall, women raise smaller amounts of capital to finance their firms and are more reliant on personal sources of financing. Citing their own research using data from a 2014 survey of *Inc.* magazine's annual list

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<sup>59</sup> SBA, Office of Advocacy, *Background Paper*, 41, 47, 51.

<sup>60</sup> Robb and Coleman, "Financing High-Growth," 9.

of 500 and 5,000 fastest-growing private firms, Robb and Coleman highlight the different financing strategies of men- and women-owned high-growth businesses:

- Women founders are three times less likely to access equity financing through angel investors or venture capitalists;
- Men are more likely than women to tap networks of close friends and business acquaintances; and
- Men and women are equally likely to use bank financing, with roughly half of each using it.<sup>61</sup>

To take a deeper look at these differences, Robb and Coleman used data from the Kauffman Firm Survey, which tracked a cohort of 5,000 firms founded in 2004, to examine the financing behavior of growth-oriented, women-owned firms over an eight-year period.<sup>62</sup> After controlling for credit risk, industry, and other factors that influence the demand and supply of credit, they found that, compared with men, women business owners injected significantly lower levels of financial capital in multiple years. In terms of the sources of the capital, women were more reliant on owner equity and insider financing than men, with further analysis confirming that women use significantly lower levels of outsider equity, even after controlling for education and experience, credit scores, and firm characteristics. Robb and Coleman found that the same was true for the ratio of outside debt to total financial capital injected, with women using a lower percentage of external debt than men in all years.<sup>63</sup>

Looking at bank loans, Robb and Coleman found that although women had a similar loan application rate as men, results showed a greater unmet credit need among women business owners because they were more likely to not apply when they needed credit. The researchers performed univariate and multivariate analyses on actual loan approvals, both of which confirmed a lower rate of approval for women, but this was statistically significant within the multivariate analysis in only one of five years. Positive drivers of loan approvals include industry experience and credit scores. Women rank lower than men in both of these. A negative driver of loan approvals is running a home business, which is more prevalent among women than men.<sup>64</sup>

In 2013, Robb published a study that was conducted to improve the understanding of how women-owned and women-led firms access capital, particularly bank loans, and how the 2007–8 financial crisis had affected that access.<sup>65</sup> According to her, data had been inadequate for studying the question of how the financial crisis had affected women business owners' access to bank loans because the primary source of data, the Federal Reserve Survey of Small Business Finances, had ended in 2003. Using the Kauffman Firm Survey, Robb examined the effects of the changing financial environment generally and the economic crisis specifically as it affected women's access to capital over the 2004–10 period.<sup>66</sup>

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<sup>61</sup> Robb and Coleman, "Financing High-Growth," 3, 5.

<sup>62</sup> Additional information about this survey, which was last conducted by the Ewing Marion Kauffman Foundation in 2013, can be found online at <http://www.kauffman.org/what-we-do/research/kauffman-firm-survey-series>.

<sup>63</sup> Robb and Coleman, "Financing High-Growth," 3, 18.

<sup>64</sup> Robb and Coleman, "Financing High-Growth," 18.

<sup>65</sup> Alicia Robb, *Access to Capital Among Young Firms, Minority-Owned Firms, Women-Owned Firms, and High-Tech Firms* (San Rafael, CA: Marin Consulting, April 2013), 2, [https://www.sba.gov/sites/default/files/files/rs403tot\(2\).pdf](https://www.sba.gov/sites/default/files/files/rs403tot(2).pdf).

<sup>66</sup> Robb, *Access to Capital*, 2, 8.

As with other research discussed in this report, Robb found that women-owned businesses exhibit differences in their capital structures relative to men-owned firms. Women-owned businesses, for example, operate with much less capital and with a different mix of debt and equity. Data for women-owned businesses showed a particularly low reliance on outside equity capital. Perhaps most notably, Robb found that the initial disparities in levels of startup capital did not disappear in subsequent years.<sup>67</sup>

Robb identified several characteristics of women-owned businesses that affect their access to bank loans and set them apart from men-owned entities:

- Women business owners are slightly less likely to have high credit scores compared to men;
- Women-owned businesses are less likely to be incorporated;
- Women business owners have fewer years of industry and startup experience;
- Women business owners are less likely to apply for new loans; and
- Women business owners are slightly more likely to not apply for new credit when they need it, ostensibly because of a fear of denial.<sup>68</sup>

Robb found that, except for 2007, women had lower loan approval rates than men between 2004 and 2010. However, after conducting a multivariate analysis that controlled for differences in business quality, industry, and other characteristics, she found that women were no more or less likely to apply for new loans than men were. Instead, factors associated with applying for new loans included whether firms were incorporated and whether firms had teams and owners with higher education levels, both of which increased the likelihood that a business would apply for new loans. Having intellectual property did not play a role, but being home-based lowered the likelihood of applying for a loan.<sup>69</sup>

Overall, Robb found that women-owned businesses do exhibit some differences from men-owned firms in capital structure: They operate with much less capital on average and use a different mix of debt and equity capital, with their reliance on the latter being particularly low. Initial disparities do not disappear in subsequent years, but can be explained in most years by differences in other firm characteristics. Data from 2007 to 2010 show that women are no more or less likely to apply for new loans than men, with the exception of during the financial crisis, when women were more likely to not apply for credit when it was needed for fear of loan denial. These fears were not unwarranted; in 2008, women owners of new businesses were less likely to be approved for loans than men with similar credit profiles. During the years of the financial crisis, women-owned businesses faced greater credit constraints than men-owned businesses.<sup>70</sup>

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<sup>67</sup> Robb, *Access to Capital*, 3.

<sup>68</sup> Robb, *Access to Capital*, 10–12.

<sup>69</sup> Robb, *Access to Capital*, 12, 21.

<sup>70</sup> Robb, *Access to Capital*, 31, 32.

Coleman and Robb published another study in 2014 examining undercapitalization and its effects on women entrepreneurs. Using the Kauffman Firm Survey, they found large gender gaps in the amounts of financing across all firms, with the gap increasing as men- and women-owned businesses grew. For example, they found that men start firms with twice the capital as women, but among high-growth-potential firms, men use more than double the funding. The gap increased even more substantially among the largest firms, with men-owned businesses using six times the amount of capital as women-owned firms in this category.<sup>71</sup>

## Financing Life Cycle

In their 2014 report, Coleman and Robb used the Kauffman Firm Survey to see what happens to a business's capital structure over time for women versus men owners. Not all of the firms that were founded in 2004 survived. Also, as previously mentioned, multiple studies have found that women start their businesses with smaller amounts of capital and are less likely to raise capital from external sources. Additionally, research has found that gender differences in financial strategies and structures exist and researchers have observed a lower predilection for growth among women entrepreneurs.<sup>72</sup> Researchers from Premier Quantitative Consulting, for example, found during their study of undercapitalization that at startup in 2004, 65 percent of women-owned or women-led businesses had liabilities exceeding their equities, compared with 57 percent of men-owned businesses, and that women were more likely than men to access needed capital as debt during their startup year. However, by 2011, these undercapitalization rates were nearly equal between men and women.<sup>73</sup>

In contrast, they discovered that the revenue gap between men- and women-owned businesses increased over time, with the former earning substantially higher profits. The latter had higher operating margins between 2005 and 2011, but significantly less revenue. The researchers also found that the gender revenue gap increased from 32 percent to 42 percent for firms that did not fail between 2004 and 2011. Yet the share of undercapitalized women-owned businesses declined to 39 percent, with fewer undercapitalized than men-owned businesses, marking a reversal of the trend seen at startup. The proportion of firms using excessive amounts of high-cost capital also equalized among gender groups. The total number of undercapitalized firms decreased each year as the firms that did not fail shifted their capital mix away from high-cost sources.<sup>74</sup>

In 2010, Northern Illinois University business professor Lynn Neeley and Iowa State University finance professor Howard Van Auken conducted an empirical study looking at how men and women business owners use bootstrapping (starting a business without external help or capital)

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<sup>71</sup> Susan Coleman and Alicia Robb, *Access to Capital by High-Growth Women-Owned Businesses* (San Rafael, CA: Marin Consulting, April 3, 2014), 27, 28, [https://www.nwbc.gov/sites/default/files/Access%20to%20Capital%20by%20High%20Growth%20Women-Owned%20Businesses%20\(Robb\)%20-%20Final%20Draft.pdf](https://www.nwbc.gov/sites/default/files/Access%20to%20Capital%20by%20High%20Growth%20Women-Owned%20Businesses%20(Robb)%20-%20Final%20Draft.pdf). *Author's Note:* This research was funded by the National Women's Business Council (NWBC).

<sup>72</sup> Coleman and Robb, *Access to Capital*, 7.

<sup>73</sup> Premier Quantitative Consulting, *Research on Undercapitalization as a Contributor to Business Failure for Women Entrepreneurs* (Orlando, FL: Premier Quantitative Consulting, 2014), 33, <https://www.nwbc.gov/sites/default/files/Undercapitalization%20as%20a%20Contributor%20to%20Business%20Failure%20for%20Women%20Entrepreneurs.pdf>. *Author's Note:* This research was funded by the NWBC.

<sup>74</sup> Premier Quantitative Consulting, *Research on Undercapitalization*, 32, 33.

to finance their firms. They surveyed a stratified random sample of 1,498 independently owned Illinois firms with fewer than 100 employees. The sample contained a wide range of industries, including arts and entertainment, building and construction, hotel and restaurant, information, real estate, retail, manufacturing, wholesale, and transportation enterprises.<sup>75</sup>

Neeley and Van Auken found several differences between men and women business owners when it comes to bootstrapping. For example, while age had no impact on men's use of bootstrap capital, they found a negative correlation between age and women's use of such financing. Education level had a positive correlation with both men's and women's use of bootstrap capital, but this was the only significant relationship found for men. As for the impact on the businesses, the researchers found that changes in sales were negatively correlated with women owners' use of bootstrap capital, but no such relationship was found for men; the same was true for the availability of overdraft privileges.<sup>76</sup>

These results suggest that more factors are at play in women business owners' use of bootstrap financing, perhaps illustrating the impact of the barriers to capital that women face in general. For instance, men appear to have more options available to them since almost none of the factors causing women-owned businesses to increase capital affect men-owned businesses. In fact, Neeley and Van Auken found that a key difference between men and women regarding bootstrapping is that "women choose bootstrapping instead of overdrafts and men choose bootstrap finance to supplement overdrafts."<sup>77</sup>

## SOCIAL FACTORS

Social factors affecting women business owners' access to capital include the roles of networks and business support organizations, social conditioning, and investor behavior. Additionally, a woman's motivation for owning or leading a business will inform which types of capital she pursues. Research has identified several gender differences in social networking; for example, women's networks often contain less entrepreneurial and managerial knowledge than men's, which places them at a disadvantage from a resource standpoint. Social conditioning has also disadvantaged women, tying women in business to an unconscious association with less credibility and a lack of legitimacy. With regard to their motivations, women make some financing decisions based upon how those decisions will affect their level of control or the level of risk they expect or desire to take on.

### Social Networks

The composition and quality of social networks has a direct impact on a business's outcome, making networks critically important to the entrepreneurial process and central to a business's success.<sup>78</sup> Insufficient or inadequate networks can be devastating for a business as they prevent

<sup>75</sup> Neeley and Van Auken, "Differences," 24.

<sup>76</sup> Neeley and Van Auken, "Differences," 30.

<sup>77</sup> Neeley and Van Auken, "Differences," 31.

<sup>78</sup> Lee O. Upton III, Emma J. Broming, and Rebecca L. Upton, *Research on Women Entrepreneurs' Social Networks* (Orlando, FL: Premier Quantitative Consulting, 2014), i, 5, <https://www.nwbc.gov/sites/default/files/Womens%20Social%20Networks.pdf>. *Author's Note*: This research was funded by the NWBC.

entrepreneurs from reaching optimal sources of capital.<sup>79</sup> Therefore, a body of research has developed studying the structure of social networks, the gender differences in networks, and how networks affect a business's access to resources.

Consultants Lee O. Upton III, Emma J. Broming, and Rebecca L. Upton, for example, describe the positive indicators associated with well-functioning networks, such as size, density, diversity, the balance between strong ties (multi-layered, emotional relationships) and weak ties (relationships that are tapped for specific purposes), and the bridges between gaps.<sup>80</sup> However, networks are not static; instead, they develop alongside a business and their relative importance changes as a business grows.

Citing research from the 1990s and early 2000s, the researchers suggest that social networks are especially critical during the pre-startup phase because, at this time, the founder needs access to the largest network and relies most heavily on weak ties to access financial and human capital.<sup>81</sup> Similarly, citing work conducted by Mark S. Granovetter, Seon-Mi Kim of the Ramapo College of New Jersey and Margaret Sherraden of the University of Missouri note that weak ties can be more important than strong ties because it is the weak ties that help a business owner reach outside their social circle, meeting others who may have information and resources not available within their immediate network. Pointing to multiple studies published in the early 2000s that looked at gender differences in social networks, Kim and Sherraden found that most support the observation that women are less likely to have sufficient weak ties in their networks.<sup>82</sup>

The research has also revealed notable gender differences in the composition of social networks. Upton, Broming, and Upton describe women business owners as having less diverse networks, which poses a greater challenge to accessing and deploying them. For example, citing the work of Sherry Robinson and Hans Anton Stubberud, they describe men's networks as more likely to include lawyers, accountants, and other professionals as their most important supporters, whereas women typically identify spouses and close friends as the source of their best support.<sup>83</sup>

Upton, Broming, and Upton further investigated the structural differences in the networks of men and women entrepreneurs in an effort to determine "to what extent these differences manifest disparities in effective development and success of female entrepreneurs." To better understand the dynamics of individuals within a network, the researchers assigned each owner, key non-owner, and helper<sup>84</sup> with a social capital score. They defined social capital as a combination of education and industry, startup, and work experience. The team also assigned

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<sup>79</sup> Upton, Broming, and Upton, *Research on Women Entrepreneurs' Social Networks*, 3.

<sup>80</sup> Upton, Broming, and Upton, *Research on Women Entrepreneurs' Social Networks*, 5.

<sup>81</sup> Upton, Broming, and Upton, *Research on Women Entrepreneurs' Social Networks*, 5.

<sup>82</sup> Seon-Mi Kim and Margaret Sherraden, "The Impact of Gender and Social Networks on Microenterprise Business Performance," *Journal of Sociology & Social Welfare* 41, no.3 (2014): 52, <http://scholarworks.wmich.edu/jssw/vol41/iss3/4>.

<sup>83</sup> Upton, Broming, and Upton, *Research on Women Entrepreneurs' Social Networks*, 1–2.

<sup>84</sup> Upton, Broming, and Upton split owners into two categories, primary and secondary. The primary owner is the leading owner of the business, while the secondary owner is an equity holder. As for key non-owners and helpers, neither owns an equity stake in the business, but a key non-owner is someone who made a distinctive contribution to founding the business, and a helper provides significant support on a regular basis (*Research on Women Entrepreneurs' Social Networks*, 16).

a network number score to compare the number of secondary owners, key non-owners, and helpers to determine the quantity and quality of individuals in a network. Their findings suggest that the quality of network connections is more important than the quantity (women need to network better, not necessarily more) and agree with existing research—that gender differences do exist in social networking, especially in the nascent phase of creating a business.<sup>85</sup>

More specifically, the research conducted by Upton, Broming, and Upton found that secondary owners “are key to the entrepreneurial process and provide key insights into the operation of the business as well as equity funding.” Looking at data from the *Panel Study of Entrepreneurial Dynamics II*, which began screening firms in 2005, the researchers noted that among women-owned businesses, only 20 percent of their secondary owners were women, compared with 52 percent in men-owned businesses. The research also showed that men secondary owners have more experience generally and more startup experience in particular. This was the case for men key non-owners and helpers as well. The role of secondary owners also differed in men-owned versus women-owned businesses. Upton, Broming, and Upton found that women-owned entities were less likely to receive financial assistance from secondary owners than men-owned businesses and were more likely to get financial support from helpers and key non-owners.<sup>86</sup>

Gender differences like those highlighted above can have a significant effect on how women business owners access capital. Kim and Sherraden, for example, note that women’s networks have fewer viable economic resources than men’s. Men are also more likely to develop affiliations with organizations that provide access to more information and resources, such as economic institutions, whereas women tend to gravitate toward smaller, more peripheral organizations typically associated with domestic or community affairs. Therefore, even when women develop networks with weak ties, those ties are less likely to deliver economic returns than they are among men-owned businesses. Citing research by Nan Lin, Kim and Sherraden point out that it is not just the weakness of ties that should be considered, but the embedded resources in those ties that may or may not convey benefits.<sup>87</sup> Women have fewer weak ties to help them connect with resources like financial capital, but even when they do have networks with weak ties, those ties are not necessarily beneficial in the way that men’s networks are more likely to be.

Upton, Broming, and Upton also point out the resource constraints found in women’s social networks. Citing research by Christina M. Diaz Garcia and Sara Carter, as well as data from the U.S. Department of Commerce’s Economics and Statistics Administration, they note that women’s networks provide fewer contacts to clients, and less entrepreneurial and managerial knowledge, which places women at a disadvantage from a resource standpoint.<sup>88</sup>

However, business support organizations like incubators and accelerators have the potential to influence women-run ventures in a positive way. In particular, they can create access to funding, either providing connections or providing capital by taking an equity stake. According to a

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<sup>85</sup> Upton, Broming, and Upton, *Research on Women Entrepreneurs’ Social Networks*, ii, vi.

<sup>86</sup> Upton, Broming, and Upton, *Research on Women Entrepreneurs’ Social Networks*, 23–26.

<sup>87</sup> Kim and Sherraden, “The Impact of Gender and Social Networks,” 54.

<sup>88</sup> Upton, Broming, and Upton, *Research on Women Entrepreneurs’ Social Networks*, 2.

report published in May 2016 by JPMorgan Chase and the Initiative for a Competitive Inner City, incubators may be more effective at funding women entrepreneurs because they are more likely to have women participating than private accelerators.<sup>89</sup>

Yet women are not participating in high-tech incubators and accelerators at the same rate as their white, male counterparts. Recruitment into these types of organizations is somewhat dependent on the managers' networks, which may help explain the lower participation rates among women; anecdotal evidence suggests that high-tech accelerators have few women managers, but diversity in incubator management may be higher. Additionally, the one-size-fits-all design of such organizations fails "to address the specific needs of women," making the programs less attractive to women business owners. The limited hours of operation and evening programming especially deter women with children. Another deterrent is the lack of women on the program delivery teams or serving as mentors and trainers.<sup>90</sup>

### **Social Conditioning and Gender Bias**

Gender bias exists subconsciously in both men and women, but it is women who are suffering from its effects. For example—citing research from Helene Ahl, a Swedish professor known for her work on entrepreneurship, and Sarah Thébaud, a sociology professor at the University of California, Santa Barbara—the report published by JPMorgan Chase and the Initiative for a Competitive Inner City notes that women in business are often tied to an unconscious association with less credibility and a lack of legitimacy. While Ahl's work is highly theoretical, Thébaud's research includes lab experiments and analysis. She refers to multiple survey and experimental studies showing that men are often believed to be more competent and as having more agency than women. Likewise, the work of Susan Fiske, Amy J.C. Cuddy, Peter Glick, and Jun Xu showed that diverse groups of U.S. respondents rated men higher than women on perceptions of competence, intelligence, confidence, competitiveness, and independence. Additionally, the work of Shelley J. Correll and Cecilia Ridgeway and Lisa S. Rashotte and Murray Webster Jr. revealed that gender cues a person's expectations of competence in task-oriented situations even after they express gender-egalitarian beliefs and intentions.<sup>91</sup>

Thébaud in particular developed and empirically tested the theoretical argument that widely shared cultural beliefs about men's and women's abilities in entrepreneurship "systematically influence the social interactions during which an entrepreneur, particularly an innovative entrepreneur, seeks support from potential stakeholders for his or her new organization." To test this theory, she carried out three experiments and found that across all three studies, the participants held lower expectations for the abilities of women entrepreneurs and the viability of their business plans than for men entrepreneurs' abilities and plans in general. However, Thébaud also found that innovation is more strongly and positively associated with performance expectations for women than men. Rather than exacerbating a woman's disadvantage,

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<sup>89</sup> JPMorgan Chase & Co. and Initiative for a Competitive Inner City (ICIC), *Creating Inclusive High-Tech Incubators and Accelerators: Strategies to Increase Participation Rates of Women and Minority Entrepreneurs* (Boston, MA: ICIC, May 2016), 14, [http://icic.org/wp-content/uploads/2016/05/ICIC\\_JPMC\\_Incubators\\_post.pdf](http://icic.org/wp-content/uploads/2016/05/ICIC_JPMC_Incubators_post.pdf).

<sup>90</sup> JPMorgan Chase & Co. and ICIC, *Creating Inclusive High-Tech Incubators and Accelerators*, 1, 5, 7.

<sup>91</sup> Sarah Thébaud, "Status Beliefs and the Spirit of Capitalism: Accounting for Gender Biases in Entrepreneurship and Innovation," *Social Forces* 94, no. 1 (2015): 63, 64, 10.1093/sf/sov042.

"innovation mitigates gender bias by counteracting to some extent, lower expectations for women's abilities in entrepreneurship." That is, women have less to lose but more to gain by introducing an innovative business model.<sup>92</sup>

In 2013, Alison Wood Brooks, Laura Huang, Sarah Wood Kearney, and Fiona E. Murray of Harvard Business School published findings from their research investigating how gender and physical appearance influence investors during pitch sessions. In this study, both professional investors and nonprofessional evaluators, who were men and women, preferred pitches presented by men, even when the content was exactly the same. Interestingly, pitches by attractive men were particularly persuasive, but physical attractiveness did not matter among women entrepreneurs.<sup>93</sup> University of Toronto professor Sarah Kaplan and investment strategist Jackie VanderBrug note in an article about the rise of gender capitalism that the pitch process is biased against women who have been socialized to be less comfortable pitching and that, moreover, "we have all been socialized to perceive women less favorably in those contexts."<sup>94</sup>

This gender bias not only disadvantages women in the pitch process, but also affects how women fare in accelerators. According to Kaplan, "if you have equal numbers of women and men applying to accelerators, you get fewer women through the door . . . And then once women are in the accelerators, they're not getting funding . . . partly because it's pitch-based, partly because funders have particular views of who is a high-tech entrepreneur."<sup>95</sup> Ultimately, gender bias could be holding women back in many respects. For example, referring to many studies dating back to the 1990s, Brooks, Huang, Kearney, and Murray observed that "compared with men, women in male gender-typed positions are more likely to have their performance devalued, less likely to receive opportunities for career advancement, and more likely to encounter challenges and skepticism in starting and running ventures."<sup>96</sup>

Gender bias plays a significant role in general investor behavior. As noted earlier in this report, women are at a disadvantage from the very start, beginning their companies with much less capital than their male counterparts. In the realm of venture funding, Jason Greenberg of New York University and Ethan Mollick of the University of Pennsylvania cited numerous studies showing that "women historically receive venture funding at much lower rates than men."<sup>97</sup> In fact, it is not just that they receive funding at lower rates, but they access a tiny piece of the pie overall. For example, women entrepreneurs received just 7 percent of all venture funds in 2014, according to a report put out by the U.S. Senate's Committee on Small Business and Entrepreneurship.<sup>98</sup> That same year, researchers published an update to the Diana Project study, providing the first comprehensive analysis of venture capital investments in women entrepreneurs since the original Diana Project research was conducted in 1999. Based at Babson

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<sup>92</sup> Thébaud, "Status Beliefs," 61, 79, 80.

<sup>93</sup> Alison Wood Brooks et al., "Investors Prefer Entrepreneurial Ventures Pitched by Attractive Men," *Proceedings of the National Academy of Sciences* 111, no. 12 (2014): 4429, doi: 10.1073/pnas.1321202111.

<sup>94</sup> Sarah Kaplan and Jackie VanderBrug, "The Rise of Gender Capitalism," *Stanford Social Innovation Review* (Fall 2014): 38, [https://ssir.org/articles/entry/the\\_rise\\_of\\_gender\\_capitalism](https://ssir.org/articles/entry/the_rise_of_gender_capitalism).

<sup>95</sup> JPMorgan Chase & Co. and ICIC, *Creating Inclusive High-Tech Incubators and Accelerators*, 6.

<sup>96</sup> Brooks et al., "Investors Prefer," 4427.

<sup>97</sup> Jason Greenberg and Ethan Mollick, "Activist Choice Homophily and the Crowdfunding of Female Founders," *Administrative Science Quarterly* 62, no. 2 (2017): 345, doi: 10.1177/0001839216678847.

<sup>98</sup> U.S. Senate, Committee on Small Business and Entrepreneurship, "21<sup>st</sup> Century Barriers," 3.

College, the Diana Project was established in partnership with a Swedish organization in an effort to lead the global research agenda in women's entrepreneurship. In 2014, the researchers found that businesses with women on the executive team received 15 percent of all venture capital funding from 2011 to 2013. However, during this same time period, only 2.7 percent of companies with venture capital funding had a female CEO.<sup>99</sup> Dan Marom, Alicia Robb, and Orly Sade point to a number of articles highlighting "women's lack of access to angel investor or venture capital networks as a constraint that reduces their likelihood of securing external equity."<sup>100</sup>

In their work exploring homophily—the tendency to associate with others similar to oneself—in the realm of crowdsourcing, Greenberg and Mollick suggest that "female founders seeking funding will be less likely to have an opportunity to access venture capital networks that are historically dominated by male investors."<sup>101</sup> However, female investors are also biased to favor men, so the gender gap in funding is not likely to narrow simply by more women becoming venture capitalists. In their June 2017 article in the *Harvard Business Review*, for example, Dana Kanze, Laura Huang, Mark A. Conley, and E. Tory Higgins showed that both men and women evaluating startups displayed the same bias in questioning. In particular, venture capitalists asked male and female entrepreneurs different questions: men were asked about the potential for gains, but women were asked about the potential for losses. In fact, 67 percent of questions posed to men were promotion-oriented (e.g., hopes, achievements, advancement, and ideals), but 66 percent of questions posed to women were prevention-oriented (e.g., responsibility, safety, security, and vigilance). This distinction is extremely important because the promotion-type questions correlated with twice as much funding as the prevention-type questions. The researchers determined that as this cycle of bias is perpetuated, the funding disparity is aggravated. When male entrepreneurs answered the promotion questions, it reinforced their association with the "favorable domain of gains," whereas women answering prevention questions "unwittingly penalize their startups by remaining in the realm of losses."<sup>102</sup>

## Motivations

Various research studies have attempted to identify distinctions in the motivations of women and men about starting and running businesses to help clarify growth expectations and sources

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<sup>99</sup> Candida G. Brush et al., *Women Entrepreneurs 2014: Bridging the Gender Gap in Venture Capital; Executive Summary* (Babson Park, MA: Babson College, Arthur M. Blank Center for Entrepreneurship, September 2014), 7, <http://www.babson.edu/Academics/centers/blank-center/global-research/diana/Documents/diana-project-executive-summary-2014.pdf>. It should be noted that different studies can produce different statistics depending on they define "leadership roles." For example, the 2014 Diana Project counted a business as being "women-led" if it included a woman in any of the following positions: Chair, Chief Executive Officer, Chief Operating Officer, Chief Revenue Officer, Chief Scientific Officer, Chief Strategy Officer, Chief Technology Officer, Chief Marketing Officer, Chief Medical Officer, Founder/Co-Founder, Head/Co-Head, Owner/Co-Owner, Partner/Co-Partner, Creative Director, Executive Chairman, Executive Managing Director, Executive Officer, President, or General Manager. In contrast, the 1999 Diana Project (which found only 4 percent of venture capital going to women-led businesses) defined a business as being "women-led" if it included a woman in one of only three positions: Chairman, Chief Executive Officer, or President.

<sup>100</sup> Dan Marom, Alicia Robb, and Orly Sade, "Gender Dynamics in Crowdfunding (Kickstarter): Evidence on Entrepreneurs, Investors, Deals, and Taste-Based Discrimination," February 23, 2016, 22, doi: 10.2139/ssrn.2442954.

<sup>101</sup> Greenberg and Mollick, "Activist Choice Homophily," 345.

<sup>102</sup> Dana Kanze et al., "Male and Female Entrepreneurs Get Asked Different Questions by VCs—and It Affects How Much Funding They Get," *Harvard Business Review*, June 27, 2017, <https://hbr.org/2017/06/male-and-female-entrepreneurs-get-asked-different-questions-by-vcs-and-it-affects-how-much-funding-they-get>.

of capital sought. For example, in a law review article discussing their research on the sources of funding for new women-owned firms, Coleman and Robb cited work from the late 1990s that found men to be more likely to be motivated by firm growth and profits, while women, on the other hand, were more motivated by personal fulfillment, flexibility, or a sense of control over their destiny.<sup>103</sup> Similarly, Upton, Broming, and Upton found that women were statistically less likely to start a business for the purpose of increasing their status, or achieving personal goals, or for financial gain. Instead, they were more likely to start a business to increase their personal and professional autonomy.<sup>104</sup> Coleman and Robb also noted that some research has tied the desire for control and higher level of risk aversion among women to why women business owners are more likely to keep firms small and manageable. This view suggests that women are more likely to avoid external sources of financing because it leads them to give up control or take on higher levels of risk.<sup>105</sup>

Sociologist Amy E. Davis and psychologist Kelly G. Shaver of the College of Charleston School of Business published research in 2012 that examined gender and business growth intentions across the life course, comparing the intentions of men and women business owners at different phases of their lives.<sup>106</sup> Using data from the *Panel Study of Entrepreneurial Dynamics I and II*, Davis and Shaver carried out telephone and mail surveys of business owners in order to investigate how the dynamic between entrepreneurship and family develops for men and women over the life course, rather than trying to understand why and whether women have lower growth intentions than men. They conducted descriptive analyses on gender, career stage, and growth intentions, followed by multivariate analyses using weighted logistic regression analyses, to determine how gender, life course, personal preferences, human capital, and industry characteristics influence the likelihood of expressing high-growth intentions.<sup>107</sup>

Davis and Shaver observed that women-owned businesses typically show lower levels of growth, thus remaining smaller than men-owned businesses. They cite earlier research showing that these growth differences may emerge from differences in intentions. For example, if women do have a lower tolerance for risk than men, then this places upper limits on their maximum desirable size of business.<sup>108</sup>

Overall, Davis and Shaver found that young men had the highest propensity to report high-growth intentions. Among women, high-growth intentions occurred most often at young ages, declined at the career stage, and overall were lower than those of men. The lowest rate of expressing high-growth intentions for men occurred at the launching stage, but for women it was at the midcourse stage, when they were preparing for retirement.<sup>109</sup>

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<sup>103</sup> Susan Coleman and Alicia Robb, "Sources of Funding for New Women-Owned Firms," *Western New England Law Review* 32, no. 3 (2010): 501, <http://digitalcommons.law.wne.edu/lawreview/vol32/iss3/4>.

<sup>104</sup> Upton, Broming, and Upton, *Research on Women Entrepreneurs' Social Networks*, 34.

<sup>105</sup> Coleman and Robb, *Sources of Funding*, 501–2.

<sup>106</sup> According to life course theory, the four life stages are: the anticipatory stage, when a person is often finishing education, gaining employment experience, and sometimes becoming married or a parent; the launching stage, when a person is expected to have settled in their career, become married, and become a parent; the establishment stage, when a person is at the highest level of career achievement and involvement; and the midcourse stage, when career development is deemphasized as a person prepares for retirement (Davis and Shaver, "Understanding Gendered Variations," 497–98).

<sup>107</sup> Davis and Shaver, "Understanding Gendered Variations," 495–96, 502–5.

<sup>108</sup> Davis and Shaver, "Understanding Gendered Variations," 496.

<sup>109</sup> Davis and Shaver, "Understanding Gendered Variations," 502.

Across the full model for the entire sample, a business owner's gender, their location in the anticipatory career stage, and their parental status were significantly associated with expressing high-growth intentions. Davis and Shaver noted that the positive association between parenthood and growth intentions for women is contrary to the idea that mothers form home businesses to manage work and family.<sup>110</sup>

Interestingly, women in the launching, establishment, and midcourse stages did not have significantly lower growth intentions than men in those stages. Rather, the gender difference appears to be driven by young men's very high propensity to express high-growth intentions. Emerging from Davis and Shaver's research is the profile of a woman pursuing high-growth entrepreneurship: she is a "highly educated parent with high levels of entrepreneurial intensity." In contrast, the profile of a man pursuing high-growth entrepreneurship is a young person with no experience in the business's industry.<sup>111</sup>

## TECHNOLOGICAL FACTORS

This section explores current research about alternative finance models that are assisted by technology, such as microfinance and crowdfunding. A growing body of research is revealing that these models are enabling women's access to capital, despite the presence of obstacles in the traditional realm of finance. Microfinance can be either peer-to-peer or sourced from a lending model like Kiva. Very little research exists on either peer-to-peer or microlending and virtually none exists examining how U.S.-based women-owned businesses specifically fare with either model. In the realm of crowdfunding, research is revealing that women are more systematically successful than men on these platforms, contrary to the gender inequality that is apparent with traditional fundraising mechanisms. This is the case with conventional donation- or rewards-based crowdfunding; however, equity crowdfunding is a new option made possible with recent regulatory changes. Very little research exists to date about equity crowdfunding, but one study did show that women business owners have yet to seek this avenue of capital raising at rates that are any different from more traditional forms of fundraising.

### **Alternative Finance Models: Peer-to-Peer Lending, Microfinance, and Crowdfunding**

Peer-to-peer lending is an alternative credit market assisted by internet technology that "allows individual borrowers and lenders to engage in credit transactions without traditional banking intermediaries." Individual lenders aggregate small amounts of money to create moderately sized, uncollateralized loans. In order to request funding, borrowers create a loan listing on a website like prosper.com, which displays their desired loan parameters and reports information from the borrower's credit profile. However, unlike traditional loan applications, this format allows for optional and unverified personal information, like images and text descriptions, which provide signals about characteristics that antidiscrimination laws prevent traditional lenders from using (i.e., race, age, and gender).<sup>112</sup>

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<sup>110</sup> Davis and Shaver, "Understanding Gendered Variations," 504–5.

<sup>111</sup> Davis and Shaver, "Understanding Gendered Variations," 507.

<sup>112</sup> Devin G. Pope and Justin R. Sydnor, "What's in a Picture?," *The Journal of Human Resources* 46, no. 1 (January 2011), 54, <http://jhr.uwpress.org/content/46/1/53.full.pdf+html>.

Devin G. Pope of the University of Pennsylvania and Justin Sydnor of Case Western Reserve University examined data from prosper.com to determine whether certain populations experience discrimination on the site—that is, how signals from pictures affect the likelihood of receiving a loan and the interest rates a borrower will pay. Data used spanned the period of August 2011 to July 2014. Pope and Sydnor were looking at racial discrimination in particular, but their research does provide some insight into how well women are able to access credit through this mechanism. Additionally, their work does not distinguish consumer lending from business lending, but their data does reveal that business or entrepreneurship loans accounted for 10 percent of all listings, which led them to describe that loan category as “popular.” However, they found that the market favored listings for borrowers looking to pay down credit card debt over other purposes, like business expansion.<sup>113</sup>

In their discussion of their summary statistics, Pope and Sydnor compared the distributions of variables between the full sample of listings and funded listings. They found that the market modestly favored pictures of men over women and did not react strongly to the stated purpose of the loan. However, they suggested that these characteristics may be highly correlated with other financial markers, which could cause the summary statistics to be misleading. For example, the empirical results showed the fraction of listings funded by credit grade and demographic, finding that gender and age were less conclusive than race, but did suggest that women may be more likely to be funded than men.<sup>114</sup>

Microfinance is different from peer-to-peer lending in that it more resembles traditional financing because it is carried out with the help of more traditional financial institutions. Although much international research has been carried out, almost no current work appears to exist looking at women business owners and access to microfinance even though, according to U.S. Microenterprise Census data, more than half (59 percent) of the recipients are women.<sup>115</sup>

In the early 1990s, a microloan was defined as a loan of \$25,000 or less that was used to start or grow a business. Later, the ceiling was raised to \$35,000. Following the financial crisis of 2007–8, the federal government increased the ceiling to \$50,000 “in response to the practical withdrawal of the banking industry from business lending under that amount.” The Aspen Institute’s Elaine L. Edgcomb and Tamra Thetford examined U.S. Microenterprise Census data to look for the effect of microenterprise development on job creation. Their study does not focus on women, but does provide some interesting data: 37 percent of the 1,198 surveyed business owners reported operating a business at the same time as being employed in a wage job in order to “patch” or create a full-time equivalent for themselves from two sources. Sixty-one percent of these so-called patchers were women, the majority of whom were in the early stages of business formation.<sup>116</sup>

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<sup>113</sup> Pope and Sydnor, “What’s in a Picture?,” 54, 55, 61.

<sup>114</sup> Pope and Sydnor, “What’s in a Picture?,” 65.

<sup>115</sup> Elaine L. Edgcomb and Tamra Thetford, *Microenterprise Development as Job Creation* (Aspen, CO: Aspen Institute, February 2013), 3, <https://www.aspeninstitute.org/publications/microenterprise-development-job-creation/>.

<sup>116</sup> Edgcomb and Thetford, *Microenterprise Development*, 5, 11.

As for crowdfunding—a model in which individuals or organizations use contributions from internet users to obtain needed services or ideas—a body of research is developing that shows it partly addresses gender-related constraints in fundraising,<sup>117</sup> with women more systematically successful than men on these platforms.<sup>118</sup> For example, PricewaterhouseCoopers found that “women-led campaigns performed better (in terms of securing their funding goals) than campaigns led by men when we segregate the data for every sector and every territory.” In the United States, which experiences some of the largest volumes of crowdfunding globally, 20 percent of male-led campaigns reached their fundraising goals, but 24 percent of women met theirs.<sup>119</sup> Although the average funding goal for men is typically much higher than the average funding goal for women, the average amount pledged is approximately the same. This may account somewhat for women having higher success rates. However, Marom, Robb, and Sade posit that having lower funding goals is not the only driver of women’s high success rates. In fact, Denis Frydrych of the University of Oxford suggests that stronger social networks may be a strong factor for their higher success rates.<sup>120</sup>

In some ways, crowdfunding levels the playing field. For example, the “herding behavior that occurs on crowdfunding platforms may provide unique benefits for women because it allows them to take full advantage of their social capital.” Crowdfunding can also be particularly helpful for women entrepreneurs located in financially underserved regions because it helps increase their access to financial capital when access to traditional markets is restricted.<sup>121</sup>

In April 2016, Marom, Robb, and Sade published their findings from a study investigating whether crowdfunding reduces the barriers female entrepreneurs face when trying to raise pre-seed capital. They used data from Kickstarter, a popular crowdfunding platform, and custom software to create their dataset. Data covered the period from April 2009 (Kickstarter’s inception) to March 2012. In line with other research, they found that women seek less funding than men (the average goal for women was \$6,300 and for men was \$9,400), but they also found that the higher the goal, the lower the likelihood of success. In this study, women had higher rates of success compared with men (69.5 percent to 61.4 percent), which the authors note was consistent with previous research finding that women are more successful “in settings with flatter, more flexible, network-based organizational structures.” Also notable is the finding that teams of two women raised more than mixed teams or single male-led teams. However, men still raised more funds overall: the mean amount for men was \$5,200 compared to \$4,500 for women.<sup>122</sup>

On the investor side, Marom, Robb, and Sade found that, in general, the majority of crowdfunding investors are men (56 percent). However, women made up a larger percentage of

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<sup>117</sup> A2F Consulting, *Crowdfunding as a Capital Source for Women Entrepreneurs* (Bethesda, MD: A2F Consulting, May 2, 2017), 25, [https://www.nwbc.gov/sites/default/files/Crowdfunding%20as%20a%20Capital%20Source\\_WEBSITE.pdf](https://www.nwbc.gov/sites/default/files/Crowdfunding%20as%20a%20Capital%20Source_WEBSITE.pdf). *Author’s Note:* This research was funded by the NWBC.

<sup>118</sup> Andreea Gorbatai and Laura Nelson, “The Narrative Advantage: Gender and the Language of Crowdfunding,” August 2015, 1, <http://faculty.haas.berkeley.edu/gorbatai/working%20papers%20and%20word/Crowdfunding-GenderGorbataiNelson.pdf>.

<sup>119</sup> PricewaterhouseCoopers (PwC) and Crowdfunding Center, *Women Unbound: Unleashing Female Entrepreneurial Potential* (London: PwC, July 2017), 8, <https://www.pwc.com/gx/en/diversity-inclusion/assets/women-unbound.pdf>.

<sup>120</sup> A2F Consulting, *Crowdfunding*, 15, 19.

<sup>121</sup> A2F Consulting, *Crowdfunding*, 32, 33.

<sup>122</sup> Marom, Robb, and Sade, “Gender Dynamics,” 2–6, 17–19, 28.

investors (44 percent) than they did among entrepreneurs, indicating a much higher level of participation than is found among women in angel investing (20 percent) or venture capital (6 percent). They also found that the more a woman is dominant in a project (that is, two women are greater than one man, and one woman is greater than one man, for example), the share of female investors rises. Overall, the researchers concluded that crowdfunding does not eliminate gender barriers, but, in fact, appears to lead to increased participation of women, both as entrepreneurs and investors. In addition, crowdfunding increases the flow of capital to women-led projects.<sup>123</sup>

Andreea Gorbatai of the Haas School of Business at the University of California, Berkeley and Laura Nelson of the Kellogg School of Management at Northwestern University published research in August 2015 that looked at gender and language in crowdfunding. Using data collected from Indiegogo, another crowdfunding platform, the researchers examined “the relationship between language used in the request for money, gender of founder-entrepreneur and of donor, and campaign success in the technology and small business categories.” Their findings suggest that women’s success on crowdfunding platforms is due in part to linguistic differences between men and women that show a link “between micro-level linguistic choices and macro-level outcomes.” The institution of crowdfunding appears to respond more favorably to female-specific language patterns over male-specific ones, which results in a reversal of the gender inequality with regard to funding. The researchers found that women are more likely to use language related to positive emotion, vividness, and inclusion and are less likely to use money or business terms as men do. In other words, business language negatively correlated with money raised, whereas positive emotion and inclusive language correlated positively with fundraising success. This was the case regardless of whether the participants were men or women (men and women responded similarly to the same to linguistic content). The researchers concluded that the online environment mitigates “interactional gender categorization,” because it frees the participants from physical persona, thus downplaying the prominence of gender.<sup>124</sup>

Because equity crowdfunding is so new, very little research on its effect on the ability of women-owned businesses to raise capital has been published. Elizabeth N. Brandt of Columbia Law School carried out the first quantified examination of the outcome of equity crowdfunding with respect to women-owned businesses. Brandt sought “to determine whether [women-owned businesses] were particularly motivated to take advantage of this new opportunity for securing financing within the first eight months of the changes to the regulation,” finding that women-owned businesses did not take advantage of equity crowdfunding in any meaningful way compared to traditional means of raising capital.<sup>125</sup>

To do her examination, Brandt reviewed regulatory filings in conjunction with each of the securities offerings for each entity. In the first quarter that Title III rules were available, eleven companies closed, none of which were women-owned. For the full eight-month period, Brandt found that of 183 companies that filed offerings and did not withdraw them, 40 companies (22 percent) had at least one female director, officer, or investor, which she described as a similar

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<sup>123</sup> Marom, Robb, and Sade, “Gender Dynamics,” 6, 7, 38.

<sup>124</sup> Gorbatai and Nelson, “The Narrative Advantage,” 3, 11–12, 17, 19, 21.

<sup>125</sup> Brandt, “The Crowdfund Act’s Impact,” 807, 837.

but slightly higher proportion than the 18 percent of companies CrunchBase identified with at least one female founder in 2014. Brandt confirmed only 15 companies, or just over 8 percent of the dataset, as women-owned businesses. Of these findings, she observed that “these numbers are roughly in line with the estimates of the percentage of venture capital and angel investments made in [women-owned businesses.]” Therefore, Brandt concluded that women-owned businesses seem to seek no more equity crowdfunding than they receive in other, more traditional forms of fundraising. This result suggests that equity crowdfunding has not, as of yet, increased the number of women-owned businesses seeking funding.<sup>126</sup>

## GAPS IN RESEARCH

This section summarizes gaps the researcher has noted in their work. These gaps range from issues with data sets to contradictions and inconsistencies to missing or very thin areas of research and, finally, to a study’s own limitation. Each of these gaps provides interesting clues about avenues for future research.

### Problems with Data

Researchers across the studies highlighted in this report cited various issues with data, including insufficient data, a lack of robust data, old data, and no data at all, when attempting to study women’s access to capital. In their study about investors preferring pitches made by attractive men, for example, Brooks, Huang, Kearney, and Murray pointed out that because of the lopsided nature of the venture capital community, which has far fewer women than men, it was difficult to create matched samples, which resulted in them having to use small samples for their research.<sup>127</sup> In another instance of insufficient data, Robb noted that because the Kauffman Firm Survey only began asking questions about new loan applications, fear of denial, and loan application outcomes beginning in 2007, she only had one year of data available on which to base one of her studies about access to capital.<sup>128</sup> Similarly, the authors of the JPMorgan Chase and the Initiative for a Competitive Inner City study about incubators and accelerators reported experiencing a lack of robust data on businesses supported by these types of organizations, which resulted in an inability to quantify the precise participation rates of women entrepreneurs.<sup>129</sup> Likewise, in research about undercapitalization among women business owners, the authors noted that they had attempted to control for industry and geographic differences, but had encountered issues with data robustness at disaggregated levels.<sup>130</sup> And, because of constraints in data that the U.S. Department of Commerce’s Economics and Statistics Administration used, the authors of a report about women-owned businesses noted that it is difficult to distinguish preferences as to whether women encounter less favorable loan conditions than men, or whether they are less willing to take on risk by seeking outside capital.<sup>131</sup>

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<sup>126</sup> Brandt, “The Crowdfund Act’s Impact,” 842, 845–46.

<sup>127</sup> Brooks et al., “Investors Prefer,” 4428.

<sup>128</sup> Robb, *Access to Capital*, 10.

<sup>129</sup> JPMorgan Chase & Co. and ICIC, *Creating Inclusive High-Tech Incubators and Accelerators*, 2.

<sup>130</sup> Premier Quantitative Consulting, *Research on Undercapitalization*, 32.

<sup>131</sup> DOC, Economics and Statistics Administration, *Women-Owned Businesses*, 1.

These data issues even extend to Congress. For example, in 2014, when the U.S. Senate's Committee on Small Business and Entrepreneurship published its report about barriers to women's entrepreneurship, it noted that the most recent government data available were from the 2003 Survey of Small Business Finances and the 2007 U.S. Census Survey of Business Owners, both of which pre-dated the financial crisis. The committee reflected that, "without an official, regularly updated source of data from the federal government, policy is unable to be well-informed on the shifting priorities that best serve women entrepreneurs." To that point, the authors noted that Section 1071 of the Dodd–Frank Act had amended the Equal Credit Opportunity Act to require lending institutions to collect and report data on loans to small, minority- and women-owned businesses. However, the CFPB recently closed a Request for Information in preparation to promulgate the rules and guidance necessary for implementing Section 1071. Therefore, in the absence of a formal rule, data is not yet being collected.<sup>132</sup>

### **Contradictions and Inconsistencies in Research Findings**

Several major issues within the field of women's access to capital continue to result in inconsistent or contradictory findings. For example, in their work investigating crowdfunding as a source of capital for women, the authors noted that the findings on female risk aversion are inconclusive. In addition, laboratory experiments regarding gender differences with respect to investment behavior are less conclusive than the literature on the topic, with enough counter-evidence to warrant caution. The same authors noted that research on equity crowdfunding is still incipient and continues to show contradictory results.<sup>133</sup> Coleman and Robb have likewise highlighted the problem of some researchers attributing the lower percentage of external capital to lower levels of demand, indicating a preference for less or slower growth among women business owners. However, others have found evidence of supply problems, that is, the networks providing access to external equity are typically male-dominated.<sup>134</sup> It also remains unclear how social networks affect a firm's growth and survival. For example, Kim and Sherraden have remarked that "research has produced inconsistent results with respect to the relationship between entrepreneurs' social networks and business growth and survival," citing multiple studies with opposite findings.<sup>135</sup> Although it is now generally recognized and taken for a fact that women entrepreneurs receive less funding than men through traditional channels, agreement has not yet been reached as to whether this is because of bias in traditional financing or "due to supposed factors, such as fewer women being interested in entrepreneurship, or that women were less able than men."<sup>136</sup>

### **Areas in Existing Research That Are Missing or Thin**

Research reviewed for this report has exposed topics across the board that have yet to be fully explored. For example, "participation rates and the factors affecting women's involvement and utilization of incubators and accelerators by women entrepreneurs remain poorly understood," in part because of a lack of comparative research on this topic. This lack of research means that

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<sup>132</sup> U.S. Senate, Committee on Small Business and Entrepreneurship, "21<sup>st</sup> Century Barriers," 7, 11-12.

<sup>133</sup> A2F Consulting, *Crowdfunding*, 29, 40.

<sup>134</sup> Coleman and Robb, *Access to Capital*, 7.

<sup>135</sup> Kim and Sherraden, "The Impact of Gender and Social Networks," 56.

<sup>136</sup> PwC and Crowdfunding Center, *Women Unbound*, 18.

it is difficult to identify which specific business practices lead to higher participation rates and better outcomes for women in incubators and accelerators, as well as “how those practices vary between women-focused and gender-neutral incubators and accelerators.”<sup>137</sup>

In a report about women and entrepreneurial ecosystems, the authors observed that existing research is inconclusive about whether barriers to raising capital “could be overcome by demonstrating that more diverse management teams of venture capital firms generate higher performance and lead to greater investment opportunities for women entrepreneurs.”<sup>138</sup> Brooks, Huang, Kearney, and Murray have noted that it remains unclear whether gender imbalance is because of irrational investor behavior.<sup>139</sup> And in the realm of crowdfunding, Marom, Robb, and Sade found that because it is so new, more research efforts are needed to further investigate the impact of these new markets. They also suggested a need to explore the factors that explain female-led projects receiving the bulk of their funding from female investors.<sup>140</sup> Similarly, in their work investigating women’s social networks, Upton, Broming, and Upton noted that systemic knowledge about networks and gender segregation continue to be limited. As a result of their own work, they suggested a future path for research is the dissection of the connection between funding types and the different members of a social network that provide financial assistance.<sup>141</sup>

Coleman and Robb, for their part, have observed that few studies have looked at the financing issues and strategies of growth-oriented, women-owned firms because of a lack of data.<sup>142</sup> Additionally, they encourage further study to help determine why women use the financing sources they do and why they avoid or are discouraged from using others. Further research in this area could help clarify whether women raise smaller amounts of capital because they do not feel they need it, or because they are unable to get it.<sup>143</sup> To that point, Marom, Robb, and Sade suggest that more research into gender-specific risk preferences is warranted.<sup>144</sup>

Coleman and Robb also urge more research examining the link between financing sources, strategy, and business outcomes in the form of sales, profits, growth, and employment to determine whether financing sources and strategies place women at a disadvantage in terms of performance outcomes.<sup>145</sup> Davis and Shaver recommend further research into how motherhood affects business growth, specifically how the impact changes depending on the age of the mother, the age of the children, and the number of children.<sup>146</sup> Neely and Van Auken note that although bootstrapping is an important source of capital, few studies have examined its uses, particularly its different uses according to gender.<sup>147</sup>

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<sup>137</sup> Washington CORE, *Women’s Participation in Business Incubators and Accelerators* (Bethesda, MD: Washington CORE, March 2017), 5, 11, [https://www.nwbc.gov/sites/default/files/Women's%20Participation%20in%20Business%20Incubators%20and%20Accelerators\\_FINAL.pdf](https://www.nwbc.gov/sites/default/files/Women's%20Participation%20in%20Business%20Incubators%20and%20Accelerators_FINAL.pdf). *Author’s Note:* This research was funded by the NWBC.

<sup>138</sup> Washington CORE, *Entrepreneurial Ecosystems and Their Service of Women Entrepreneurs* (Bethesda, MD: Washington CORE, April 2017), 15, <https://www.nwbc.gov/sites/default/files/Entrepreneurial%20Ecosystem%20-%20FOR%20WEBSITE.pdf>. *Author’s Note:* This research was funded by the NWBC.

<sup>139</sup> Brooks et al., “Investors Prefer,” 4427.

<sup>140</sup> Marom, Robb, and Sade, “Gender Dynamics,” 7, 38.

<sup>141</sup> Upton, Broming, and Upton, *Research on Women Entrepreneurs’ Social Networks*, 10, 26.

<sup>142</sup> Coleman and Robb, *Access to Capital*, 2–3.

<sup>143</sup> Coleman and Robb, *Sources of Funding*, 510–11.

<sup>144</sup> Marom, Robb, and Sade, “Gender Dynamics,” 22, 36.

<sup>145</sup> Coleman and Robb, *Sources of Funding*, 511.

<sup>146</sup> Davis and Shaver, “Understanding Gendered Variations,” 507.

<sup>147</sup> Neeley and Van Auken, “Differences,” 23.

## Limitations of Studies

Several studies reviewed in this report called out their own limitations. Brooks, Huang, Kearney, and Murray, for instance, noted that their study focused on one industry type, but the lack-of-fit model suggests that women might be more persuasive if pitching female gender-typed ventures. Their results documented gender discrimination in entrepreneurship, but the discrimination may not represent irrational marketplace behavior. Additionally, the researchers did not ask participants to explain their decision process, for example, how they judged the perceived value of an entrepreneur and their venture.<sup>148</sup> Greenberg and Mollick noted that their study about “activist choice homophily” and crowdfunding opened paths for future research because crowdfunding is not the same as investment.<sup>149</sup>

Robb and Coleman noted that their research into the financing strategies of new technology-based firms did not definitively explain why women are more likely to use external debt and less likely to use external equity. They suggest that this presents an opportunity for qualitative research to clarify why women “appear to gravitate toward some sources of financing while avoiding others.” For example, they ask whether women prefer external debt because it gives them more control, or whether are they discouraged from applying for it.<sup>150</sup>

Neely and Van Auken note that their study investigating bootstrapping was based on a sample limited to firms in Illinois. A national study could provide more comprehensive results and allow for regional comparisons, and a longitudinal study could provide evidence of changing patterns and variables that impact the acquisition of capital over the business life cycle. Additionally, the authors note that the study focused on a limited number of owner characteristics. Future studies could collect more comprehensive information on this topic, thus allowing for a more in-depth examination of the factors associated with the use of bootstrap financing among women small business owners.<sup>151</sup>

## CONCLUSION

Gender bias favoring men is a major factor underpinning the obstacles that women business owners often face. Because of this bias, the perception exists that women have less credibility and lack legitimacy when leading a business. Gender bias extends to physical appearance, as evidenced by investors preferring men over women, particularly attractive men. The perception that women have less credibility likely leads investors (both male and female) to ask questions of women founders that disadvantage them in the pitching process. Although it is unclear to what extent gender bias plays a role, the structure of women’s networks also appears to place women at a disadvantage when compared to men. Women’s business networks are typically less diverse and contain limited viable economic resources.

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<sup>148</sup> Brooks et al., “Investors Prefer,” 4429.

<sup>149</sup> Greenberg and Mollick differentiate activist choice homophily from interpersonal choice homophily and induced homophily, defining it as an “attraction between two individuals [based] not merely [on] similarity between them, but rather [on] perceptions of shared structural barriers stemming from a common social identity based on group membership” (“Activist Choice Homophily,” 341).

<sup>150</sup> Alicia Robb and Susan Coleman, “Financing Strategies of New Technology-Based Firms: A Comparison of Women- and Men-Owned Firms,” *Journal of Technology Management & Innovation* 5, no. 1 (2010): 43, doi: 10.2139/ssrn.1580142.

<sup>151</sup> Neeley and Van Auken, “Differences,” 32.

Women business owners' social disadvantages affect them economically in a number of ways. As previously noted, they often have fewer viable economic resources embedded within their networks. Such limitations contribute to women relying more on personal sources of funding than men, thus raising smaller amounts of capital. Women also face disadvantages when applying for loans. These disadvantages are not necessarily related to explicit gender bias, but women are more likely to run businesses out of their homes than men, they rank lower than men in industry experience, and are more likely than men to have lower credit scores, all of which make accessing debt capital more difficult. Women also access venture capital funding at much lower rates than men, the networks for which are male-dominated. Overall, a large revenue gap exists between women- and men-owned businesses, with men-owned businesses earning higher profits over time.

Some legislative and regulatory measures have been recently implemented that could help mitigate the gender inequality that creates barriers to women's access to capital. These include the JOBS Act's creation of the "emerging growth company" category and Section 1071 of the Dodd-Frank Act, which is intended to facilitate the enforcement of fair lending laws. Research has also shown that technology could be helpful. For example, women are more systematically successful on rewards-based crowdfunding platforms like Kickstarter than men. Women's online social networks appear to be stronger than their offline ones; crowdfunding increases access to capital for women in financially underserved regions where access to traditional markets is often restricted; women are more involved as investors on crowdfunding platforms than they are otherwise; and research has shown that women's communication style is an asset on crowdfunding platforms, unlike in traditional pitch settings. With the creation of emerging growth companies, new regulations have also created the option to raise funds on equity crowdfunding platforms. Women have not used equity crowdfunding at high enough rates yet to determine the extent to which this new platform could help women-owned businesses better access capital, but because of their success on rewards-based platforms, this merits monitoring.

Although the literature on women's access to capital is both broad and deep, gaps in the field remain. More work is warranted in the area of female risk aversion and tolerance. Investor behavior also needs a deeper look because it remains unclear to what extent their behavior is irrational. And though much work has been conducted to evaluate social networks, particularly in a firm's incipient stages, there is room for more research. For example, it remains unclear how social networks affect a firm's growth and survival or access to equity. The reasons underlying the fact that women business owners typically access less funding than their male counterparts also warrants deeper and more conclusive investigation. Finally, while much research has been published that examines funding sources, the preferences behind a woman business owner's capital-raising strategies should be more deeply studied.

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