WHAT IF

Designing Fair & Equal Financial Access for Women

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Why ask,

What If...?

Women are an economic powerhouse. In the United States, women own millions of businesses, employ millions of people and annually generate over a trillion dollars in sales. Female entrepreneurs and their businesses grow significantly in influence and sales with each passing year.

Yet history shows that women business owners have faced more and greater obstacles compared to men in their quest to obtain credit and secure investment. These obstacles exist because of systemic and individual discrimination, both legacies of the unequal legal standing women had in the past. Inequities in today's financial landscape remain and are often exacerbated by financial institutions in their methods for determining creditworthiness.

We asked,

WHAT IF?

WHAT IF All business owners (regardless of gender, race, or other classification) had fair and equal access to credit, capital, or funding?

WHAT IF The underwriting process were fairer to women and other historically underserved groups?

WHAT IF A more nuanced, data-driven assessment was used in place of traditional metrics to accurately and fairly determine the creditworthiness of women-led businesses?

The data shows these inequities harm not just women business owners, but everyone. Any obstacles restricting such a large segment of our nation's economy have a massive impact on us all.

Further, we believe that these financial disadvantages experienced by half of all productive society members are a problem with global and astronomically negative consequences.

METHODS

To better understand issues surrounding women entrepreneurs, their struggle for success, and problems of unequal access to capital, we reviewed a wide range of the current research papers, databases, and literature on the topics of women's entrepreneurship and financial access in the United States; these dated from the 1960's to 2018. Aggregating data from key surveys and prior research, in this report, we identify and highlight the credit gap between male and female entrepreneurs that persists to this day. We also provide reasons to explain this gap's continued existence.

Our report is based on a curated assemblage of objective and respected research from government, nonprofit and academic sources. These include (but are not limited to): the U.S. Census Bureau, the U.S. Department of Commerce, the U.S. Senate Committee, the Federal Reserve Bank of New York, National Association of Women Business Owners (NAWBO), the National Women's Law Center, the Kauffman Foundation, Urban Institute, the University of New Hampshire, the University of Texas at San Antonio, and the Institute for Women's Policy Research. The report also includes data from recent surveys conducted by Accenture, American Express, and others.

Wherever possible, we gave preference to government sources, followed by sources originating from a nonpartisan nonprofit or an accredited educational institution. Specifically, we concentrated on data collected between 2010-2018.

In this report

Part 1: The Reality for Female Entrepreneurs

We explore challenges that entrepreneurial women have faced in recent history, discuss the realities of running a business as a woman, and survey the roadblocks female business owners must overcome to secure funding.

Part 2: What is Wrong with the System?

We shine a light on the financial gap between businesses owned by men and women. Specifically, we address the ways in which the most common methodologies for data gathering, analysis, and reporting undermine the success of women-owned businesses. We challenge the traditional process for determining creditworthiness, analyzing how it disproportionately shuts out women.

Part 3: How Can We Do Better?

We discuss ways that modern financial firms can and should smash these roadblocks to promote a fairer future benefiting everyone. We also look at how some firms already use innovative technologies, big data, and artificial intelligence to help even the playing field.

PART 1:

The Reality for Female Entrepreneurs

American women have faced well-documented discrimination throughout the previous century. From glaring legal discrimination in decades past, to the more subtle yet persistent forms of bias women still face in 2018, the ways that women have been disadvantaged are demonstrable.

In 2017, there were an estimated 11.6 million women-owned businesses, employing nearly 9 million people, and generating $1.7 trillion in revenues.

However, that hasn't stopped American women from starting businesses and achieving noteworthy success. Between 1997 and 2013 alone, women-owned businesses generated $4.29 trillion in revenue. In 2017, there were an estimated 11.6 million women-owned businesses, employing nearly 9 million people, and generating $1.7 trillion in revenues.[1]

Given all that women entrepreneurs have accomplished and the economic activity they have driven, all while carrying the weight of systemic discrimination, a simple thought experiment seems justified: *How much more could women entrepreneurs contribute in a more equitable environment and business world?*

If women entrepreneurs were treated equitably, the potential economic benefit to the United States is almost incalculably large.

Given the growth rate of women-owned businesses, removing biases against women could potentially mean a multi-trillion-dollar economic windfall.[2] This benefit awaits any nation that provides fair and equal access to credit for women entrepreneurs. If women entrepreneurs were treated equitably, the potential economic benefit to the United States is almost incalculably large.

The Path to Equal Access

Women have fought against a strong current of ingrained biases and legal obstacles throughout six tumultuous decades. Despite those biases, these female entrepreneurs have generated millions of jobs and trillions in revenue, as we will show below.

Here is a brief overview highlighting some of the major milestones American women (and equality advocates and allies) have achieved, alongside some of the mountains we have yet to climb.

1963

Congress passes the Equal Pay Act which promises equitable wages for the same work, regardless of the race, color, religion, national origin or sex of a worker. Still, women continue the fight to attain these equal wages.[3]

1969

California introduces no-fault divorce; other states soon follow.[4] No-fault divorce laws make it easier for women to leave unhappy marriages marking a step forward for women's rights. Without husbands, however, many women found themselves without access to credit cards or unable to purchase homes. Laws requiring that women must be given equal access to credit did not exist until 1974.

1974

The Equal Credit Opportunity Act makes it illegal for any lender to discriminate on the basis of race, ethnicity, religion, marital status, age, or gender.[5]

1976

The first article on women's entrepreneurship, "Entrepreneurship, A New Female Frontier," authored by Eleanor Brantley Schwartz, appears in print. In her article, Schwartz concludes that, though there were few differences in the personal attributes of male and female entrepreneurs, women report experiencing credit discrimination.[6]

1987

By 1987, the number of women-owned businesses in the U.S. rises to 10.6 million, demonstrating the power of their increasing share of small business contributions to U.S. economic growth.[7]

1988

H.R. 5050, the Women's Business Ownership Act, is passed with the help of the National Association of Women Business Owners (NAWBO).[8]

Among other things, this Act eliminates discriminatory state laws that had required women to have a male signature in order to receive a business loan. It also requires that the U.S. Census Bureau include C-corporations when collecting and reporting on data about women-owned businesses. This later resulted in a more accurate picture of the contribution that women's businesses were making to the economy since previously, many women-owned businesses were not being officially counted.

2000

Women own close to 40% of all US businesses.[9]

2009

The Lilly Ledbetter Fair Pay Restoration Act is signed into law. The Act, intended to help address the male/female wage gap, allows victims of pay discrimination to file a complaint against the employer within 180 days of their last paycheck.[10]

2017

Over 11.6 million firms are owned by women, generating $1.7 trillion in sales. They contribute 8% of total U.S. employment and 4.2% of revenues.[11]

Women Entrepreneurs Facing Discrimination

For as long as the Census Bureau has tracked revenue and other data related to women-led businesses, women have experienced systematic discrimination. In her pioneering 1976 paper, “Entrepreneurship, A New Female Frontier”, Eleanor Brantley Schwartz examined attributes of male and female entrepreneurs, and presented data and firsthand accounts of institutionalized credit discrimination.[12]

Before 1974, a married woman could only receive a credit card if her husband was willing to sign for it.

Unmarried women in particular faced serious obstacles to obtaining credit. Into the 1970’s, banks were allowed to deny these female entrepreneurs’ applications solely based on their marital status. During this period, a married woman typically would only receive a credit card if her husband was willing to sign for it.

There were no legal protections in place to eliminate this discriminatory practice until 1974, with the passage of the Equal Credit Opportunity Act. This law made it illegal for financial institutions to deny women a credit card on the basis of their gender.

The Results

Decades of Discrimination

Decades of bias against women have accumulated, forming a mass of discriminatory effects which continue to reverberate throughout the U.S. economy and the entire global financial system. A result of these pernicious effects is a measurable gap between male and female business owners in terms of their wealth and access to credit. Two primary contributing factors are gender stereotypes and unequal pay.

Gender Stereotypes

Research indicates that the effects of gender stereotypes are significant, and those effects persist over time. In 1988, researchers found bank loan officers more frequently attributed the characteristics of successful entrepreneurs to men than to women, suggesting that gender stereotypes may influence bank lending.[13]

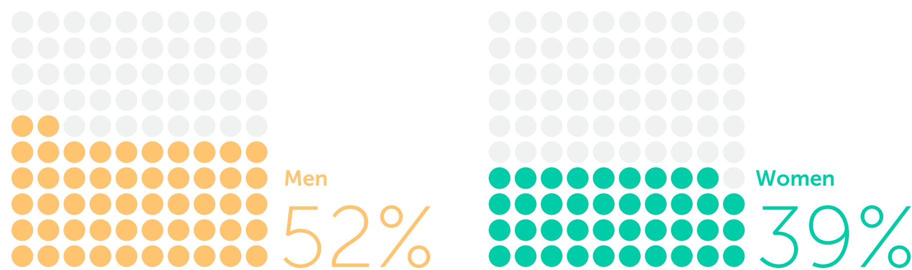
While we might be tempted (and erroneously comforted) to dismiss these findings as out of date, we cannot. Studies as recent as 2017 show these beliefs persist: this same research demonstrates that lenders consistently treat men and women differently (even when they exhibit similar work qualities) when seeking investment for their businesses.[14, 15]

Unequal Pay

Though Congress passed the Equal Pay Act in 1963, American women's struggle for wage equality is far from over. Women's wages, having risen steadily throughout the '80s and '90s, have not yet reached parity with those of men. According to the Institute for Women's Policy Research, in 2017, the ratio of female to male median weekly full-time earnings was only 81.8%. In the period between 2008 and 2017, the weekly gender wage gap narrowed by just 2 percentage points. This small change indicates progress toward wage parity has likely hit a plateau.[16]

The matter of unequal pay must be an important factor in discussions of business credit: lower wages ultimately lead to women accumulating fewer assets, and could be a reason for displaying more debt avoidance, as we discuss below. These factors plus historic and current wage disparities could affect personal credit scores, making borrowing difficult.

THE FUNDING GAP



Established female-owned firms looking to expand are at a disadvantage

Though they apply in similar rates to men, only 39% of women-owned firms had a conventional bank loan, while 52% of male-owned firms received conventional bank loans.

Women face a funding gap today, in part due to gender stereotypes and unequal pay. Established female-owned firms looking to expand are at a disadvantage: though they apply in similar rates to men, only 39% of women-owned firms had a conventional bank loan. By comparison, 52% of male-owned firms received conventional bank loans.[17]

Small women-owned firms are more likely to stay small—only 3% had receipts over $1 million, compared to 9% of all businesses.[18] Further, the level of start-up capital available to these firms in the early stage of growth is a strong predictor of business success. For those women-owned companies which do manage to thrive despite (nearly) universal early financial obstacles and undercapitalization, we find funding gaps persist into later growth stages across almost all industries.[19]

In 2017, the ratio of female to male median weekly full-time earnings was only 81.8%.

The exception to this start-small, stay-small trend for women-owned businesses seems to be those in the construction, warehousing and transportation sectors. Studies indicate that 9% of women-owned businesses in construction reach revenues of $500,000 or more; this figure is somewhat higher than the 8% figure achieved by all firms in construction. In the warehousing and transportation segment, female-owned businesses reached a level of near-parity with male-owned counterparts. 6% topped the half-million dollar mark compared to 7% of men-owned companies.[20]

As a whole, women business owners face more rejections than men do. Multiple studies indicate that women are more likely to be turned down for loans than men, and frequently receive loans with "less favorable terms" than men.[21]

women are more likely to be turned down for loans than men, and frequently receive loans with "less favorable terms" than men.

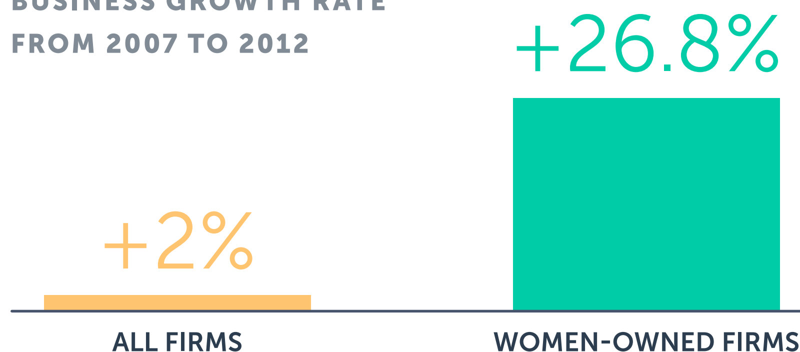
As a result, women start their firms with a smaller pool of funding available, averaging only 77% of the capital of similar ventures headed by men. Up to 64% experience a shortfall early, discouraging growth and dampening revenues. Even among successful firms accumulating high earnings, women-owned firms received smaller loans than those with men at the helm. Though it's not possible to say definitely based on the available data, this may be due to a combination of both discrimination and self-selection, or preference. Whatever the reasons, men-owned firms earning $1M or more sought and received financing in the $250k-$1M range—a rate double that of their women-owned counterparts.[22]

Finding Other Ways

Women rely on private sources to fund their businesses

The 2014 report produced by U.S. Senator Maria Cantwell reported that 44% of female entrepreneurs use private sources, such as personal savings, or loans from family and friends.

With limited access to funding through conventional financial channels, women have found other ways to fund their ventures. The landmark 2014 study and report produced by U.S. Senator Maria Cantwell reported that 44% of female entrepreneurs use private sources, such as personal savings, or loans from family and friends, while 11% use personal bank loans.[23]



Women are growing businesses at a rate outpacing the population as a whole

According to U.S. Census data, "the number of women-owned firms rose 26.8 percent from 2007 to 2012, from 7.8 million to 9.9 million businesses. In contrast, the number of all firms increased 2.0 percent during the same period, from 27.1 million to 27.6 million."

In the face of these challenges, the number of women-owned firms nevertheless continues to grow. According to the most recent U.S. Census data, "the number of women-owned firms rose 26.8% from 2007 to 2012, from 7.8 million to 9.9 million businesses. In contrast, the number of all firms increased 2.0% during the same period, from 27.1 million to 27.6 million."[24]

In other words, though women have had a large number of factors holding them back, they still grew businesses at a rate outpacing the population as a whole. These observations make us wonder again: *how much* ***more*** *could female entrepreneurs accomplish if they encountered less structural bias?*

PART 1: NOTES

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PART 2:

What is Wrong with the System?

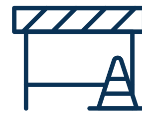
The work has not been easy, but advocates for fairness and equality have achieved significant legislative steps toward a more level playing field for women (and, indeed all types of business owners). Our current financial system, however, built as it is on many incomplete assumptions, simply does not promote fair and equal access to credit.

Many factors beyond gender discrimination work against some types of business owners more than others. Many of these factors are subtle and insidious, both in our ability to recognize them as well as in the damage they ultimately cause. In Part 2, we'll examine some of these.

WHAT HOLDS FEMALE ENTREPRENEURS BACK?

A cumbersome and frequently biased underwriting process still prevails, which disproportionately and negatively affects women business owners.

The paradigm and language in which women's businesses are analyzed and discussed perpetuates a legacy of discrimination against women.



The dominant method for assessing and understanding creditworthiness is imprecise, placing many women at a disadvantage.

In the following pages, we'll examine the factors impeding the success of women-owned businesses.

The Underwriting Process is Broken

Traditional underwriting processes are slow and cumbersome. Worst of all, they may continue to perpetuate systemic bias against women business owners. Creditworthiness is generally defined as the likelihood that any borrower will pay their debts on time. Traditional definitions and calculations of creditworthiness—the kind most banks use—lack nuance because they base much of their scores on a limited set of measurements. Many of the current models that determine creditworthiness contribute to a system where women entrepreneurs have a harder time than necessary when they attempt to secure the financing they need to start, operate, and grow their businesses.

The traditional systems of underwriting to determine creditworthiness and loan approvals, together with the potential for inaccurate or incomplete methods of reporting on women-owned businesses, place women at a disadvantage. Perhaps some women are statistically more likely to avoid the application process because they are aware of and avoid these biases.[25] When they do apply for credit, according to a University of Texas at San Antonio research study focused on the racial and gender interest rate gap, women typically receive lower lines of credit while paying higher interest rates than men for the credit they receive, regardless of their level of financial literacy.[26]

Credit scores, based on a limited-data model and baked into our current systems for reporting credit data, serve to perpetuate discrimination against women based on the biases discussed in Part 1. The historical burdens women have faced (gender stereotypes, income disparities, unequal protection under the law), come into play because they have a negative impact on legacy credit-scoring and underwriting methodologies. Women bear a greater burden than men from a credit system that judges them based on a discriminatory past without taking these factors into consideration.

Credit scores from one of the three major credit bureaus—Equifax, Experian, and TransUnion—can make or break one's chances of getting approved for financing. Those scores vary slightly depending on the credit bureau, but are generally calculated based on the number of accounts one has, the types of accounts, one's ratio of used credit to available credit, the length of one's credit history, and the applicant's debt payment history.

However, some of these calculations used to define a credit score have historically been at odds with the financial realities of women business owners and entrepreneurs. While credit scores do not directly take into account income, the indicators used by lenders to calculate creditworthiness are typically directly influenced by how much a person earns. This reality puts women seeking access to credit at a distinct disadvantage because of the persistent gender pay gap.

Women bear a greater burden than men from a credit system that judges them based on a discriminatory past.

In 2016, credit score and analysis firm Credit Sesame reviewed a subset of the company's 7 million members and concluded that men continue to have higher credit scores than women overall.[27] The company listed several factors that continue to influence women's lower credit scores including the persistent gender pay gap and the fact that men carry more revolving credit debt than women.

The same survey also noted that, on average, men's credit limits are higher. This enables them to use more credit at a lower rate of utilization, where they either carry lower balances or can pay down their debt faster. Because women continue to endure lower credit limits, they are systematically pushed into greater credit utilization (using credit to the limit, paying off only the monthly minimums, and so forth) which negatively affects their credit scores. While systemic bias continues to negatively influence women entrepreneurs' ability to access credit, evidence suggests that many women-owned businesses are more creditworthy than their men-owned counterparts.[28] The financial services industry just doesn't acknowledge it.

How the Financial Industry Gets the Story Wrong

Women-owned businesses are frequently discussed as a single, monolithic group. This fundamental error leads to widespread misunderstandings about the persistence of bias against women today. This contributes to negative social perception as well as fueling negative self-perceptions among women business owners, which then has myriad negative consequences such as discouraging them from even attempting to get credit.

Current methods for the analysis of women's businesses are incomplete, without nuance, and serve to perpetuate a legacy of discrimination against women. New information, combined with a closer look at existing data (such as income and business transactional data), can help lenders to better serve women by incorporating more data sources into the valuation of their businesses, ultimately painting a more holistic picture of those businesses and connecting more of them with financing.

When discussing women-owned firms, many reports include smaller businesses alongside larger ones when the only common factor is that they are all owned by women. According to a survey published by the Federal Reserve, women-owned firms are "more likely to report being medium or high credit risk" compared with men-owned firms; further women own a disproportionate number of firms with sales equal to or below $25,000 when compared with men.[29, 30] Taken together, data like these tend to paint a picture of female business owners as less creditworthy.

Differences in credit risk seem to disappear when analysts compare firms five years of age and older.

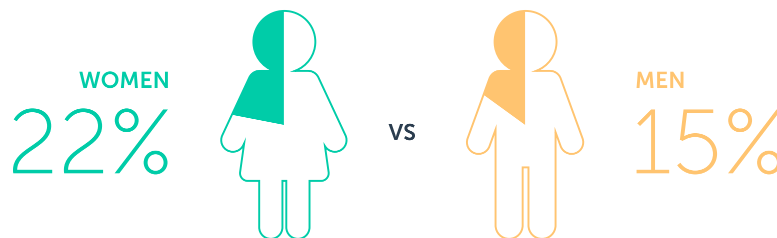
This picture, however, is not a reliable one. While it is true that there are more majority women-owned businesses in the $100,000-and-under revenue category, differences in credit risk seem to disappear when analysts compare firms five years of age and older. According to a study published by the Federal Reserve Bank of New York, credit risk comparisons among women- and men-owned firms that have been in business for a mere 5 years are "indistinguishable by owner's gender."[31]

The negative and inaccurate perception of women-owned businesses as a group may be a contributing factor in women's self-selection out of applying for credit. A wealth of data suggests women owners are more debt-averse than men. Women-owned firms have smaller amounts of debt than men-owned firms, even when controlling for the revenue size of firms. Similar percentages of women- and men-owned firms hold debt in the $100k to $250k range (17% and 19%, respectively), yet above that range, women-owners hold significantly less debt.[32]

The negative and inaccurate perception of women-owned businesses as a group may be a contributing factor in women's self-selection out of applying for credit.

For firms with annual revenues of over $1M, only 12% of women owners had over $1M in debt, while 22% of male owners had that much debt. Among this segment of larger firms that have successfully scaled, 55% of women-owned firms hold $250,000 or less debt, compared with 44% of men-owned firms in the same segment.[33]

FEAR OF BEING TURNED DOWN



Women business owners are discouraged from applying for credit

Women-owned firms report having decided not to apply for financing in the past, for fear of being turned down, at a higher rate than men (22% vs 15%).

Women business owners are noticeably discouraged from applying for credit. Women-owned firms report having decided not to apply for financing in the past, for fear of being turned down, at a higher rate than men (22% vs 15%).[34]

These female entrepreneurs' fears seem well-founded, since 64% of women-owned firms reported a funding gap. Those firms reported receiving only part (or none) of the financing they sought. By comparison men-owned firms failed to receive full funding only 56% of the time.[35]

Without credit, women business owners are at a disadvantage.

Given the credit challenges that women have historically faced, the Department of Commerce report noted it is "difficult to distinguish preferences from constraints," regarding women entrepreneurs' debt aversion.[36]

Regardless of the reason (by choice or not) that women-owned businesses have less credit than men-owned businesses, there is a correlation between credit and successful businesses.[37] Without credit, women business owners are at a disadvantage.

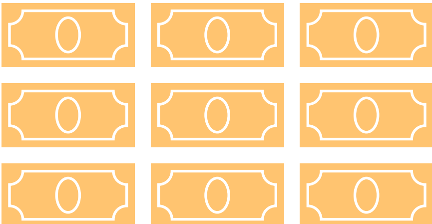
The Right Loan Size is Elusive

Often, the key to getting the right funding at the right time depends on finding the right-sized loan. Most women-owned businesses (over two-thirds) seek less than $100,000 in financing, despite traditional lenders offering much larger loans. Traditional bank loans for

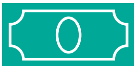
As of August 2017, the average business loan provided by a bank was $663,000.

business owners are not typically designed with small businesses in mind; as of August 2017, the average business loan provided by a bank was $663,000.[38]

MEN RECEIVE



WOMEN RECEIVE



80% LESS

Women seek and receive less funding

Women seeking first-year business financing receive about 80% less capital than men in similar situations

Not only do women business owners typically seek less funding, they also receive less funding than their male counterparts. The denial rate for white women-owned firms is twice the rate for white male-owned firms. Women seeking first-year financing to get their companies off the ground receive about 80% less capital than men in similar situations.[39]

Women-owned Firms May Be More Profitable

Despite the fact that women business owners appear to struggle with getting access to credit, that does not necessarily mean that they are less creditworthy in an objective sense. In fact, the opposite may even be true.

We would like to be able to accurately compare the profitabilities of women-owned and men-owned companies, however due to a lack of research in this area, we cannot quite do that—at least not yet. We need more information, particularly data found in longitudinal studies, to be able to nail this position down. We hope that our work contributes to this line of inquiry and certainly want to encourage other organizations in this direction as well.

There does appear to be a virtual trail of breadcrumbs to follow in the existing body of knowledge. One study that appeared in the Journal of Small Business Management in 2007 concluded that, "women-owned firms were actually more profitable and demonstrated a higher growth rate in sales."[40]

There is data available to support a positive correlation between greater gender diversity and company performance.

There is also data available to support a positive correlation between greater gender diversity and company performance. A more recent study of almost 22,000 publicly traded international companies found that higher numbers of women in a company's executive roles, "improve firm performance" and were positively correlated with the company's "size, as well as some national characteristics, such as girls' performance on math assessments, the relative absence of discriminatory attitudes toward female executives, and the availability of paternal leave, among others."[41]

While this data does not speak directly to women-owned businesses, it does support the notion that diversity and equitable treatment of women in businesses of all sizes can benefit company performance and the economy as a whole. These lines of inquiry have uncovered a path for improving the situation for female entrepreneurs by establishing a "supporting

ecosystem” in which they can thrive. Businesses which foster these conditions do so in three essential ways: “They have the highest levels of management commitment, they monitor women’s representation carefully, and they seek to address men’s and women’s mindsets the better to support gender diversity.”[42]

We agree that this strategy is well-suited to lighting the way forward, a path towards unleashing the tremendous potential of women-owned businesses by improving their access to capital. Even though we cannot yet definitively prove women-owned companies are just as profitable as those owned by their male counterparts if not more so, the data seems to indicate this is likely the case.

Venture Capital Firms Heavily Favor Men

When it comes to venture capital funding, the situation for women startup founders is grim. As of 2017, of all of the venture capital deployed in the U.S., only 8% goes to women and 1% to African-American women.[43] According to a recent Fortune article, "the actual number of deals involving female-led startups [are] still dismally low (368 compared to 5,588 for all-male teams)", and all-women teams received just $1.9 billion of the $85 billion total invested by venture capitalists in 2017, about 2.2%.[44]

Even women-led startups that do receive that elusive funding get less of it: The average venture capital deal for a woman-led company in 2017 was just over $5 million. For comparison, that number is a little less than $12 million for a man-led company.[45] On the other side of the lending table, women are also underrepresented as venture capitalists. Among the top 100 venture capital firms, only 8% of partners are women.[46]

The Harvard Business Review recently highlighted research that found the questions asked of women seeking venture capital are markedly different than those asked of men. The questions were found to have favored men and disadvantaged women. Specifically, the study differentiated between questions and answers that were either promotion-related or prevention-related. It revealed that, "investors adopted … a promotion orientation when quizzing male entrepreneurs…focused on hopes, achievements, advancement, and ideals. Conversely, when questioning female entrepreneurs they embraced a prevention orientation…concerned with safety, responsibility, security, and vigilance. We found that 67% of the questions posed to male entrepreneurs were promotion-oriented, while 66% of those posed to female entrepreneurs were prevention-oriented."[47]

The research further found that when questions (of either type) were answered with "promotion oriented" answers, entrepreneurs were significantly more likely to receive funding. This fact reveals a useful strategy for improving women entrepreneurs' chances of securing funding.

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PART 3:

How Can We Do Better?

Technology is Fueling Systemic Change

The economic contribution of women business owners continues to grow every year. As we have noted, however, bias built into the current financial system disadvantage women business owners.

The good news? In the financial services industry, we can change things.

In the financial services industry, we can change things.

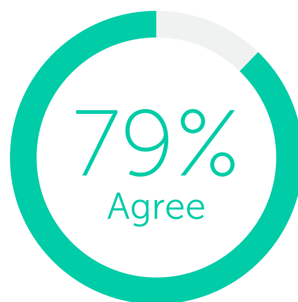
With the help of technology, the landscape is already changing in a positive way. Innovations in machine learning, artificial intelligence, and cloud computing are ushering in a new financial era. Thanks to these technological innovations, business owners can access credit through decisions based on business data that includes more than just their credit scores and income. Financial technologies are emerging to help business owners acquire credit assessments based on a more nuanced understanding of individual business performance.

Cloud Computing and Machine Learning

With the advent of data in the cloud and machine learning, commercial lenders are poised to expand the criteria for which creditworthiness is determined beyond personal credit scores, debt to income ratios, and the ownership of assets and collateral.

With machine learning (ML), companies can analyze huge amounts of customer data that would otherwise require prohibitive amounts of time and expensive manual effort to process. ML algorithms have long been used in fraud detection to uncover information nearly impossible for human analysts to find. An example would be correlations that point to the truthfulness or accuracy of application data.

ML algorithms can also automate many data collection and analysis activities, ultimately shortening the underwriting process and reducing the difficulty associated with applying for and receiving credit. The use of cloud computing and machine learning to process large amounts of business data also allows for ongoing analysis of a business, using more data sources, which means that credit assessments may become more accurate overall.



Machine learning is growing more popular with major financial firms

79% of banks surveyed "agree that AI will revolutionize the way they gain information from and interact with customers.

ML has become increasingly important among major financial institutions with no sign of this trend slowing. According to Accenture, 79% of banks surveyed "agree that AI will revolutionize the way they gain information from and interact with customers."[48]

More Than Your Credit Score

Transactional data (such as accounting, ERP, payroll, invoicing, etc.) accessed via cloud services and software-as-a-service (SaaS) platforms, along with bank APIs, enable companies to create a more accurate financial picture of firms under analysis. With these data and tools in place, financial technology firms are leading the charge.

Artificial intelligence (AI) and machine learning can analyze huge amounts of data in seconds. Using these tools, larger datasets (much larger than those traditionally used) can be incorporated into any credit assessment, while returning credit decisions in mere minutes or even faster.

The emergence of AI has had an impact on all facets of the financial services sector. For example, loan provider Earnest specializes in the student loan refinancing niche and uses multiple alternative data sources alongside credit scores to customize loan amounts and interest rates.

The emergence of AI has had an impact on all facets of the financial services sector.

Another fintech company, Rocket Mortgage, offers an online path for individuals seeking home mortgages, a path paved with data-driven advice. In the realm of smaller personal loans, the Los Angeles-based fintech company ZestFinance provides a new credit platform enabled by big data to serve the unbanked. According to ZestFinance, they assess each borrower they review for 100,000 different data points. The company also applies algorithms specifically designed to test for bias in their system.[49]

These are just a few examples of fintech companies that are innovating around alternative sources of data. Their endgame is to achieve greater customization of loan and credit offerings to individual needs while building an increasingly accurate and fairer concept of "creditworthiness."

Access to new sources of data allows these and other lenders to make more individualized credit assessments. This is especially important when it comes to women and other marginalized groups like immigrants, younger people, or anyone else with a thin credit file who might ordinarily be denied. According to the New York Times, experts and proponents of the new technology say that "better risk analysis...will broaden the lending market and reduce the cost of borrowing."[50]

Collectively, using big data and AI, modern fintech firms can help build a more dynamic and holistic financial picture of any individual or business. This more-complete picture adds an important layer of nuance to the concept of creditworthiness, particularly when it comes to small business credit.

The end result? More customized financial products, more individualized credit offerings, and a greater probability of business owners—regardless of gender or type—finding access to the right financial services and the right credit, at the right time.

Democratizing Access to Credit

One company using a data-centric approach to provide fair and equal access to credit is Fundbox. Based in San Francisco, Fundbox is pioneering the use of machine learning models that analyze copious amounts of transactional data to quickly determine the creditworthiness or risk of small businesses, especially those serving other businesses (also known as SMB2Bs). Founded in 2013, Fundbox began with the mission of helping small business owners across the United States increase their financial power and business independence.

While the company's approach to machine learning underwriting is still evolving, early indicators have shown that this approach is starting to pay off for historically underserved segments of business owners, including women.

To date, there is some indication that Fundbox's dynamic underwriting model has moved the needle in closing the funding gap for women entrepreneurs. According to the 2016 report by the New York Federal Reserve, "[a]mong firms that recently applied for credit, women-owned firms applied for business loans at a similar rate as men-owned firms, but were significantly less likely to receive financing (47% success compared to 61%)."[51] In other words, men and women experienced a 14% credit gap.

In June of 2018, Fundbox initiated an internal research project to determine if the company provides greater access to credit for women business owners when compared with traditional commercial lending institutions. The sample size was 35,000 customers analyzed. This review of Fundbox data reflected no discernible approval gap between male and female applicants. It also showed no discernible gap in the amount of credit extended between male and female applicants.[52]

While the data on the impact of Fundbox's AI models is nascent, the application of AI models did appear to have had an impact, indicating that the combination of data and AI is working to provide more fair and equal access to credit.

With this more holistic understanding of business performance, Fundbox has extended credit to thousands of small businesses with originations totalling almost $1 billion.

PART 3: NOTES

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Conclusion

Female entrepreneurs have experienced more than their fair share of struggles starting businesses, earning recognition for their contributions, and getting the credit and loans necessary to succeed in their business ventures. The good news is, women should not have to put up with this frustrating situation indefinitely.

In recent years, the rise of big data analytics and machine learning has changed the financial world forever. Those innovations, combined with an exploding amount of information available and the ever-accelerating speed at which we can analyse that data, have brought the lending industry to a crossroads.

Financial institutions have possessed much of this data for a very long time. The massive effort involved to analyze that data, however, has precluded institutions from taking these factors into account within the credit and lending application processes. Given advances in technology (big data, artificial intelligence, and the cloud), it is now easier than ever for financial institutions to leverage that more varied and inclusive pool of data to evaluate creditworthiness. While legacy institutions like major banks have been slower to adapt and update their lending criteria, many financial technology startups have emerged and taken up the cause of creatively using technology to reinvent the laborious credit application process.

In recent years, the rise of big data analytics and machine learning has changed the financial world forever.

Female business owners have every right to demand fair and equal access to credit. With the technology and tools now available, women also have every reason to expect it. Responsible and ethical lenders have positive incentives to rise to the level of these demands, provide appropriate credit, and finally bridge the gender gap.

ABOUT THIS REPORT

This research report is respectfully dedicated to those individuals and organizations who have been tireless advocates for change and for the equitable treatment for women. In particular, we wish to recognize the National Association of Women Business Owners (NAWBO). Founded in 1975, NAWBO represents the voices of over 10 million women-owned businesses in the United States.

To learn more about NAWBO, visit nawbo.org.

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Our mission at Fundbox is to help democratize access to business credit. We use technology, data science, and common sense to connect small businesses with previously unattainable financial options. With simple registration and fast underwriting, Fundbox offers credit limits up to $100,000 and can transfer funds as soon as the next business day. We help small businesses across the U.S. gain more control over their finances so they can succeed and grow.

To learn more about Fundbox, visit fundbox.com.

CREDITS:

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