

# Assembling a Dream Team

## How Gender Diversity Can Strengthen Your Team

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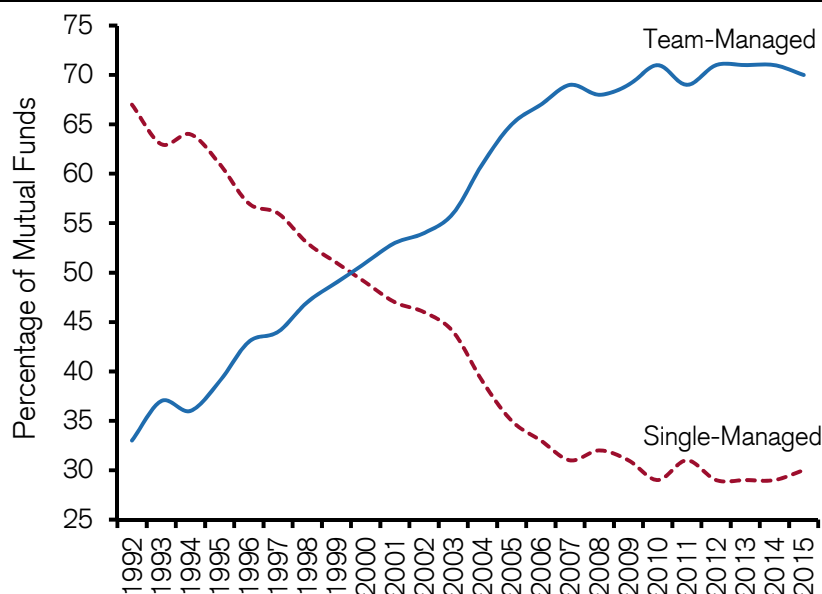
Source: Credit Suisse.

- There has been a substantial shift in investment management from single-to team-managed funds. Teams appear to confer some performance advantage, and teams of three deliver the best results.
- To improve a team's odds of success it is important to be mindful about how you create and manage the team.
- Effective teams have high cognitive diversity, which is valuable because it provides lots of tools for solving problems. The presence of psychological safety and dependability also predict success.
- Women are underrepresented in fund management relative to other cognitively demanding jobs. Both motivation and bias contribute to this lack of representation.
- Experiments that measure collective intelligence show that teams with a large percentage of women perform well and better than teams with a similar percentage of males.

## Introduction: The Big Shift

Consultants believe that the organizational model of a “network of teams,” where the leaders of companies empower teams to deliver results, is on the rise.<sup>1</sup> This is evident in the money management business in the United States, where there has been a meaningful shift from single- to team-managed equity mutual funds in the last quarter century. Exhibit 1 shows that about 70 percent of equity mutual funds had a single manager and 30 percent were run by teams 25 years ago. Today, those figures are reversed.<sup>2</sup> Mutual funds managed by a team have become the norm. This prompts the question as to whether funds managed by teams deliver better results than those run by a single manager.

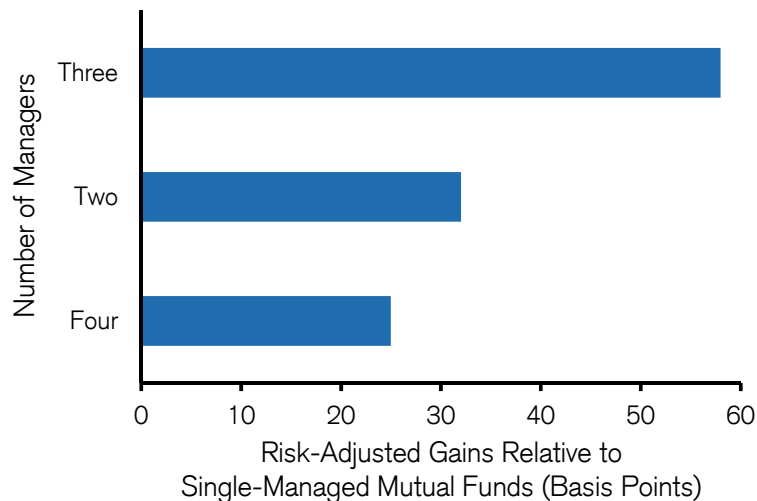
### Exhibit 1: Mutual Fund Management: From Individuals to Teams



Source: Saurin Patel and Sergei Sarkissian, “To Group or Not to Group? Evidence from Mutual Fund Databases,” *Journal of Financial and Quantitative Analysis*, Forthcoming, 2017 and Diamond Wang, “What Does It Mean to Be in a Team? Evidence from U.S. Mutual Fund Managers,” Working Paper, June 17, 2016.

Some studies have shown that funds run by teams have returns that are comparable or slightly lower than those of funds run by individuals.<sup>3</sup> Team-run funds were also found to be less risky in general.<sup>4</sup> Separating funds run by teams from those run by individuals is difficult to do accurately because of the way that performance monitoring groups such as The Center for Research in Security Prices (CRSP) report the data. As a consequence, the CRSP figures understate the results for funds run by teams.

Recent research by Saurin Patel and Sergei Sarkissian, professors of finance, corrects this issue. Upon re-examining the data, they found that teams do outperform individual managers. They further examined the returns of funds run by teams of various sizes relative to those of single-managed funds.<sup>5</sup> Exhibit 2 shows that the highest gains, adjusted for risk, come from teams of three members. There is a substantial drop to two-person teams followed by teams of four.

**Exhibit 2: Team-Managed Funds Relative to Single-Managed Funds (Annual Returns)**

Source: Saurin Patel and Sergei Sarkissian, "To Group or Not to Group? Evidence from Mutual Fund Databases," *Journal of Financial and Quantitative Analysis*, Forthcoming, 2017.

The analysis by Patel and Sarkissian also shows that only the teams in large metropolitan areas, such as New York or Boston, outperformed the single managers.<sup>6</sup> This is because larger cities have more employees with higher skill and productivity than smaller ones do, which creates favorable conditions for team results. There is nothing magical about a team. A team needs the requisite characteristics to succeed.

J. Richard Hackman was a professor of psychology at Harvard University who studied team performance. He emphasized that a team needs certain features to be legitimate. These include a stated task, clear boundaries, authority to manage work processes, and an element of membership stability.<sup>6</sup> Investment teams generally have all of these features.

We commonly use the term team loosely, but a true team exists only when there is interaction among its members. There may be many individuals within a company who have similar responsibilities and report to the same manager. But workers are a co-acting group, not a team, if they do not interact to achieve their goals.

Defining the nature of the task is the first step in determining how best to meet a goal. A task has a specific outcome that an observer can measure and the team must be accountable for that outcome.<sup>7</sup> Lots of tasks are better done by individuals than by teams, including writing and executive leadership.<sup>8</sup> Teams are often better than individuals when the task demands the aggregation of heterogeneous input to solve a problem. However, teams should always have a stated purpose and process.

Properly constructed teams have defined boundaries, which means it is clear who is on the team and who is not. Most professionals interact with lots of people inside and outside of their organizations, so they do not always know which teams they belong to. Teams operate in the context of larger organizations and must maintain and manage relations in that social system. You want your team to be defined clearly but also to be part of the broader organization.

That a team has clear authority is also critical. This means that team members understand which decisions are theirs to make. Generally speaking, management is most effective at setting a task and building a team, and team members are better suited at figuring out the work process and executing on the ground. Meeting the definition of a team is relatively straightforward in active investment management as the goal is to select securities and construct a portfolio that generates excess returns.

Finally, the research shows that stable teams tend to perform better than teams that have members who rotate constantly. For example, analysis by the National Transportation Safety Board found that 73 percent of aircraft “incidents” occur on a crew’s first day of flying together.<sup>9</sup> Stability is valuable because team members learn about one another’s strengths and weaknesses, figure out how to work together, and appreciate their shared goals.

We discuss how to build an effective team in the investment industry. We then turn our attention to the specific issue of women in the business. Women are underrepresented in fund management relative to other cognitively demanding jobs such as being a doctor or lawyer. We explore some potential explanations for this and provide some ideas about how to attract more women to the field in the appendix.

## **Building an Effective Team**

Teams are common in the investment industry and appear to confer some performance advantage. But to improve your odds of success you must be mindful about how you create and manage a team. To make a quality decision, an effective team must identify and vet alternatives and select the one that makes the most sense. This requires having a team of the proper size and composition that you manage effectively. Many organizations, including investment firms, can improve how they work in teams.

The size of a team can have a big impact on its effectiveness. While the size will vary based on the nature of the task, studies indicate there is an optimal range. Hackman studied this in detail and found that there is a trade-off between size and productivity.<sup>10</sup> Large teams promise greater potential productivity because the more members there are, the greater the variety of skill and information. However, the size advantage is offset by a loss of productivity, which is the result of a decrease in individual motivation, coordination difficulties, and lack of communication. So you should add team members until the cost of the incremental member outstrips the benefit. Hackman found that four to six is the ideal size for most teams. Further, smaller is better than larger. You would rather have a team of three than one of seven or more.

Patel and Sarkissian’s results are consistent with the conclusions from Hackman’s research. Investment management is a task of problem solving, and the professors show that teams tend to outperform individuals for that type of task. Teams of three appear to be most effective. The numbers for teams of five or more are similar to those of three, but the researchers found they could draw no sound conclusions because the sample size was too small. What is noteworthy is that the best results appear to come from teams that have an odd number. This allows for a tie-breaker if there is no clear consensus.

Team composition is the second aspect of constructing an effective team. Diversity is the most important concept in team construction. There are a number of aspects of diversity that are crucial to understand and consider. These include what type of diversity is most conducive to quality decisions and why diversity can lead to bad results. Many leaders do not understand diversity well and fail to manage it effectively even when it exists.

It is common to understand and report on diversity based on social categories. These categories include gender, age, ethnicity, and religion. Another way to consider diversity is based on cognitive capabilities (see exhibit 3). Examples include training, education, personality, and functional knowledge.

A team solving problems should strive for high cognitive diversity. This equips the team with a wide range of tools and information that it uses to make effective decisions and solve thorny problems. Think of each task as requiring a specific type of tool. A cognitively diverse team has lots of tools in the toolbox, allowing it to match the proper tool to the task.

### Exhibit 3: Examples of Social Category and Cognitive Diversity

| <u>Social Category Diversity</u> | <u>Cognitive Diversity</u> |
|----------------------------------|----------------------------|
| Race                             | Information or expertise   |
| Ethnicity                        | Functional knowledge       |
| Gender                           | Heuristics                 |
| Age                              | Representations            |
| Religion                         | Mental models              |
| Sexual orientation               | Categorization             |

Source: Elizabeth Mannix and Margaret A. Neale, "What Differences Make a Difference? The Promise and Reality of Diverse Teams in Organizations," *Psychological Science in the Public Interest*, Vol. 6, No. 2, October 2005, 36.

Scott E. Page, a professor of complex systems, political science, and economics at the University of Michigan, is one of the leading researchers on diversity. Page emphasizes that people who look different may think the same way and that people who look the same may think differently. But our sense of the situation is generally correct: social category diversity tends to lead to cognitive diversity. Page also shows the math of how cognitive diversity improves a team's results.

Page describes specific tools that make up cognitive diversity and that allow an individual to contribute to collective problem solving:<sup>11</sup>

- **Information** consists of facts about the world that you can represent as pieces or objects. Information is not simply data. For data to be information the user must be able to interpret it and it must be meaningful. You amass information throughout your life. You gather it from school, work, and family and friends. We all have different information.
- **Knowledge** refers to structural comprehension. Examples include the ability to read, write, speak a language, or prepare financial statements in advance of an audit. While information is mostly about facts, knowledge entails a theoretical or empirical understanding of patterns or how things work.
- **Heuristics** are the methods or techniques that you can use to solve problems and generate ideas. A heuristic is a rule of thumb that efficiently gets you to a solution. Having access to a diverse set of heuristics contributes to group results because not all heuristics work for all problems. They are non-cumulative so you can learn them in any order, and you can apply heuristics across fields.
- **Representations** capture the perspectives and categorizations you use when you think about or look at a subject. Two people with different perspectives, or points of view, will not approach a problem in the same way. For example, if you ask someone to list the largest countries in the world, the response would depend on the perspective of the person answering. One might draw a list based on land mass, another based on population, and yet a third based on gross domestic product. Varied perspectives can yield insights.

Categorizations allow you to make inferences. For example, you might classify Tiffany and Wal-Mart as retailers and Maserati and Volkswagen as automobile manufacturers. Someone with a different categorization might put Tiffany and Maserati together as premium brands and Wal-Mart and Volkswagen together as low-cost brands. When members have different categorizations, teams can do a better job of assessing alternatives and anticipating outcomes.

- **Mental models** are simple but systematic frameworks that allow you to capture the essential features of a problem you are trying to understand. Mental models are cognitive tools that are powerful because they simplify the complex. But a mental model can also cause an individual to miss or reject relevant information. A team helps reduce that risk.

Page argues that these components of cognitive diversity contribute to a team's ability to innovate, solve problems, predict, evaluate, verify, and ultimately make strategic decisions. A high level of cognitive diversity means the team has a large repertoire of cognitive tools. The more challenging the task, the more valuable cognitive diversity becomes.

The discussion so far has emphasized the upside of diversity, or what Page calls the "diversity bonus." But diversity also has a downside. Indeed, many studies show that teams with high social category diversity perform worse than teams with low diversity. The simple reason is that diversity can lead to social division, which stymies communication and encourages conflict. This limits the ability to capture the diversity bonus.

Social scientists examined the impact of social category and cognitive diversity on the results for teams that manage U.S. equity mutual funds.<sup>12</sup> The scientists developed proxies for each type of diversity as neither is easy to measure. They chose gender and age to represent social category diversity and education level and industry tenure to capture cognitive diversity.

Using these proxies, the researchers examined the portfolio returns for more than 2,200 investment teams over 8 years. Investment teams are ideal for testing diversity because the task is clear, there are a large number of decisions that go into managing a portfolio, and the environment is consistent. They found that cognitive diversity added value and that social category diversity had a modestly negative influence. Age had no significant impact on results, which means the drag was due to gender diversity. Specifically, the researchers found that a single-gender team would outperform a team consisting of three men and one woman by 122 basis points per year.

Our take is that this result likely reflects ineffective team management. Indeed, even if you get the size and composition of the team right, you have to manage it properly to capture the value of diversity. The psychologists Elizabeth Mannix and Margaret Neale make this point even more dramatically when they write: "to implement policies and practices that increase the diversity of the workforce without understanding how diverse individuals can come together to form effective teams is irresponsible."<sup>13</sup>

Alphabet, Inc., the parent of Google, is a fairly young and highly analytical company. Members of the firm's people analytics group examined the performance of 180 teams to determine what leads to success. They found that who was on the team was less important than how the team interacted. In particular, they found that effective teams shared five qualities: psychological safety, dependability, structure/clarity, meaning, and impact.<sup>14</sup>

Psychological safety is the most foundational of these qualities. Members of a team that has psychological safety are engaged, feel free to share their points of view, and are open-minded and inclusive. Perhaps the single biggest downfall of an ineffective team is that members do not say what they think. The main reason for that is hierarchy. Individuals commonly defer to the highest paid person's opinion (HIPPO).<sup>15</sup> Another reason is that members worry that others will dismiss or, worse, make fun of their points of view. This discourages intellectual risk-taking. An environment of psychological safety encourages varied views to surface and allows for vigorous but constructive debate. A substantial body of research shows that a failure to share unique information leads to poorer decisions.<sup>16</sup>

Dependability is also important. This means that team members show up on time, are prepared, and that others can count on them. Structure and clarity means there is a process to achieve the team's clear goals. Finally, doing meaningful work that has impact is essential, along with autonomy and mastery, for creating intrinsic motivation.<sup>17</sup>

Psychologists use general intelligence ( $g$ ) to represent an individual's cognitive ability. The variable  $g$  measures the positive correlation across a range of cognitive tasks. Individuals who score well on tests of general intelligence are consistently good at different types of problems, including those based on memory, math, and language. Intelligence quotient (IQ) and  $g$  are closely related.

Anita Woolley, a professor of organizational behavior at the Tepper School of Business at Carnegie Mellon University, and some collaborators created a test of collective intelligence ( $c$ ) for teams that is akin to a test of general intelligence for individuals. The question is whether teams exhibit varied levels of  $c$  just as individuals do for  $g$ . The answer is yes.<sup>18</sup>

The researchers then determined what was behind a high  $c$ . Neither the average IQ of the group members nor a member of the team with a high IQ explained the results. Three factors emerged. First, effective teams have balanced communication. Specifically, teams that have members who listen, share their points of view, offer constructive criticism, maintain open minds, and have a balanced flow of conversation perform better than teams that defer to the most intelligent or dominating members. In other words, these groups exhibited psychological safety.<sup>19</sup>

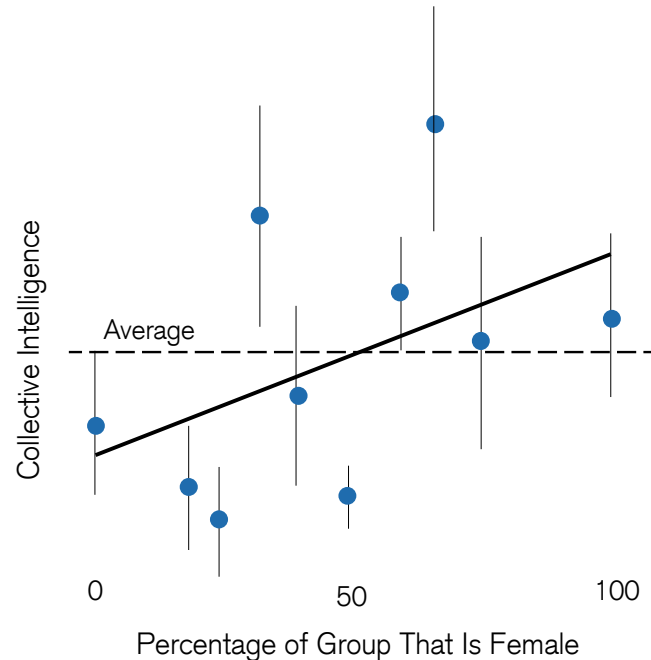
Second, teams with a high  $c$  scored well in the test of "Reading the Mind in the Eyes."<sup>20</sup> Developed by the psychologist Simon Baron-Cohen, this test measures the ability to understand the mental states of others. This fits into a concept that psychologists call "theory of mind," which entails understanding the mental state of others and recognizing how that state might be different from yours. Additional tests showed that groups that scored well on tests of theory of the mind did well even when team members collaborated online versus face to face.

Finally, teams with a higher percentage of women tend to have higher collective intelligence than teams with a higher percentage of men (see exhibit 4). Women, on average, tend to be more balanced in their interaction than men are. Women also do better than men, on average, on tests of theory of mind. These basic findings were true of the subjects in these tests. But it is important to emphasize that for many psychological traits, the differences within each sex are larger than the differences across the sexes. As a result, there is little you can say about any individual.

Exhibit 4 also shows that the correlation between the percentage of women in the group and collective intelligence is not perfect. For example, the collective intelligence for groups of all men is higher than that of groups with a low percentage of women. This is consistent with research that supports the notion that the majority will often marginalize the contribution of a token member of a minority group.<sup>21</sup> This also fits with the results for mutual funds managed by teams with social category diversity.



#### Exhibit 4: Percentage of Women in a Group and Collective Intelligence



Source: Anita Woolley and Thomas Malone, "What Makes a Team Smarter? More Women," Harvard Business Review, June 2011.

The combination of Google's analysis of teams in the real world and the experiments run by psychologists in the lab point to the essential elements of effective team management. After management creates the team and defines the mission, great leaders do three things. To start, leaders commonly suppress their own point of view and share it at the end of a discussion, if at all. Because the team leader commonly holds the HIPPO, expressing a view early in a deliberative or problem-solving context can quash the process of surfacing alternative points of view.

Great leaders keep the team on track. We have all been to meetings, or been on committees, that veer from the task at hand. Effective leaders steer the team back on course. Finally, great leaders solicit the points of view of all team members. For instance, extroverts and introverts commonly have different styles. Extroverts often hash things out by speaking. This can be effective but fills the airwaves of the meeting. Introverts may turn an idea in their head until they feel it is fully formed before they share it. As a result, the introverts may fail to contribute to the discussion unless the leader draws out their point.

We now turn to our core topic: women in investment management. Today, roughly one in five funds has at least one woman manager.<sup>22</sup> Exhibit 5 shows the wide range of women fund managers by country, with a high of 30 percent in Singapore and a low of 7 percent in a few countries including Brazil. Women are only 10 percent of the fund managers in the United States, the largest market in the world. The exhibit also examines the percentage of doctors and lawyers that are women. All of these jobs require substantial skill and provide relatively high remuneration. In France, for example, women represent 21 percent of the fund managers compared to 43 percent of the doctors and a slight majority of the lawyers. In the U.S., roughly one in three doctors and lawyers are women but only one in ten run money.

Women and teams of women only manage about two percent of the industry's assets and open-end funds. Men and teams of men run 74 percent of the assets and 78 percent of funds. Teams with mixed genders manage the balance.<sup>23</sup> Women have better representation among index funds and funds of funds than they do in active funds.



**Exhibit 5: Women Fund Managers, Lawyers, Doctors, and CFA Charterholders by Country**

| Country                 | Fund Managers | Lawyers (%) | Doctors (%) | CFA                |
|-------------------------|---------------|-------------|-------------|--------------------|
|                         | (%)           |             |             | Charterholders (%) |
| Singapore               | 30            | --          | --          | 29                 |
| Portugal                | 28            | --          | --          | 16                 |
| Spain                   | 26            | 40          | 52          | 21                 |
| Hong Kong               | 26            | 47          | 31          | 26                 |
| France                  | 21            | 52          | 43          | 22                 |
| Israel                  | 19            | --          | --          | --                 |
| Italy                   | 17            | 42          | 40          | 20                 |
| Chile                   | 16            | --          | --          | --                 |
| Mexico                  | 15            | --          | --          | 9                  |
| Luxembourg              | 14            | 47          | 34          | 19                 |
| United Kingdom          | 13            | --          | 47          | 20                 |
| Denmark                 | 13            | --          | 48          | 10                 |
| Belgium                 | 13            | 45          | 39          | 9                  |
| Finland                 | 13            | --          | 47          | 17                 |
| Bermuda                 | 13            | --          | --          | --                 |
| Sweden                  | 12            | --          | 47          | 12                 |
| Norway                  | 12            | --          | 46          | 21                 |
| Netherlands             | 12            | --          | 52          | 14                 |
| Canada                  | 11            | 37          | --          | 20                 |
| Ireland                 | 11            | --          | 43          | 19                 |
| Australia & New Zealand | 11            | --          | 43          | 16                 |
| South Africa            | 11            | --          | --          | 17                 |
| Switzerland             | 10            | --          | 40          | 21                 |
| United States           | 10            | 36          | 33          | 16                 |
| Germany                 | 9             | 32          | 45          | 12                 |
| Brazil                  | 7             | --          | --          | 11                 |
| India                   | 7             | --          | --          | 11                 |
| Poland                  | 7             | --          | 56          | 12                 |

Source: Madison Sargis and Laura Pavlenko Lutton, "Fund Managers by Gender: The Global Landscape," Morningstar, November 28, 2016.

Note: Data as of December 31, 2015; CFA stands for chartered financial analyst.

**Why Are There So Few Women Fund Managers?**

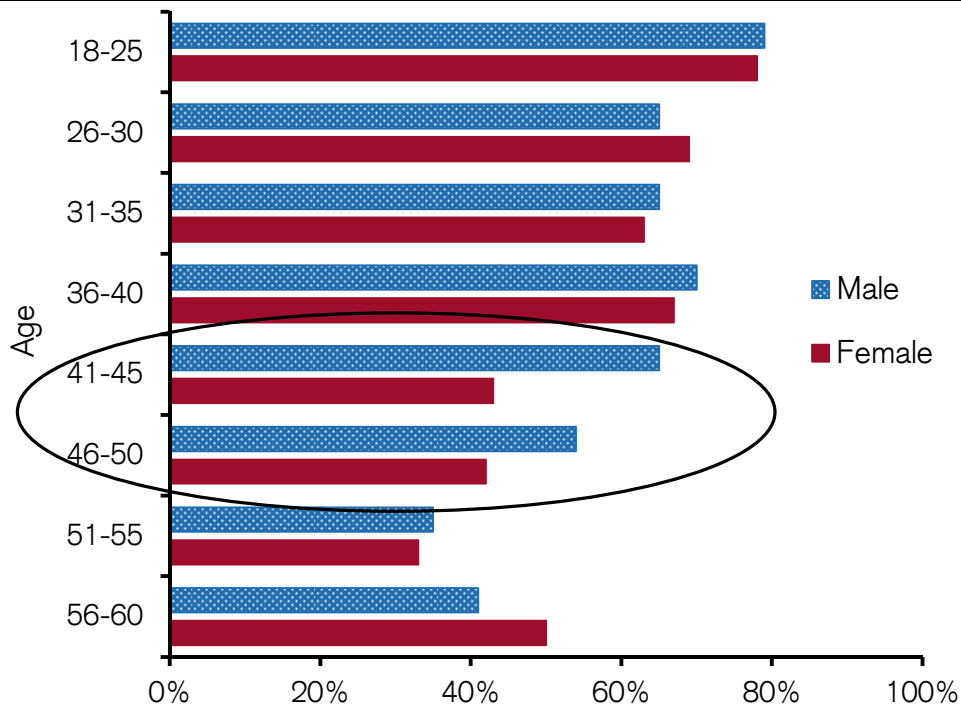
There are three possibilities as to why women are underrepresented in fund management. The first is that women are not as good as men at running money. The second is that women are less motivated than men to run money. Finally, women may face biases that cause discrimination that men do not encounter.

We can dismiss right away the possibility that women do not run money as well as men. Let's first use armchair logic. If markets are broadly efficient, we would not expect any particular group to persistently generate excess returns. There is some evidence that among individual investors, men generate lower returns than women after costs because men trade more frequently than women do. But the returns from stock picking are comparable.<sup>24</sup>

Careful and comprehensive studies of the difference in performance by sex for institutional money managers support the view that there is little difference. Analysis of U.S. equity mutual funds found “no difference in average performance based on factor alphas or raw returns and no significant difference in average risk” whether the fund is run by a woman or a man.<sup>25</sup> A study of 20 years of hedge fund returns concluded, “Funds with all female managers perform no differently than all male-managed funds and have similar risk profiles.”<sup>26</sup> An examination of the performance and investment behavior of fixed income mutual fund managers determined that women and men had no significant differences in performance, risk, or other fund characteristics.<sup>27</sup>

Separating motivation and bias is difficult, as they both play a role in the dearth of money managers who are women. In the financial services industry, women and men start out with comparable levels of ambition to reach a senior position (see exhibit 6).<sup>28</sup> However, there is a marked shift from the ages of 41 to 50. For example, while 65 percent of men aged 41-45 aspire to a position of senior management, only 43 percent of women of the same age do. Only after the age of 50 do the rates realign.

**Exhibit 6: Motivation to Reach a Senior Position in an Organization by Gender**



Source: *Women in the Financial Services Industry*, Oliver Wyman, 2016

Surveys suggest that women in their 30s and 40s are less willing to withstand the sacrifices they have to make in their private lives than men are. When researchers asked financial services professionals to respond to the statement, “I am willing to make sacrifices in my private life,” fewer women than men answered “agree” or “strongly agree” in all age groups except for the 51-55 year olds.

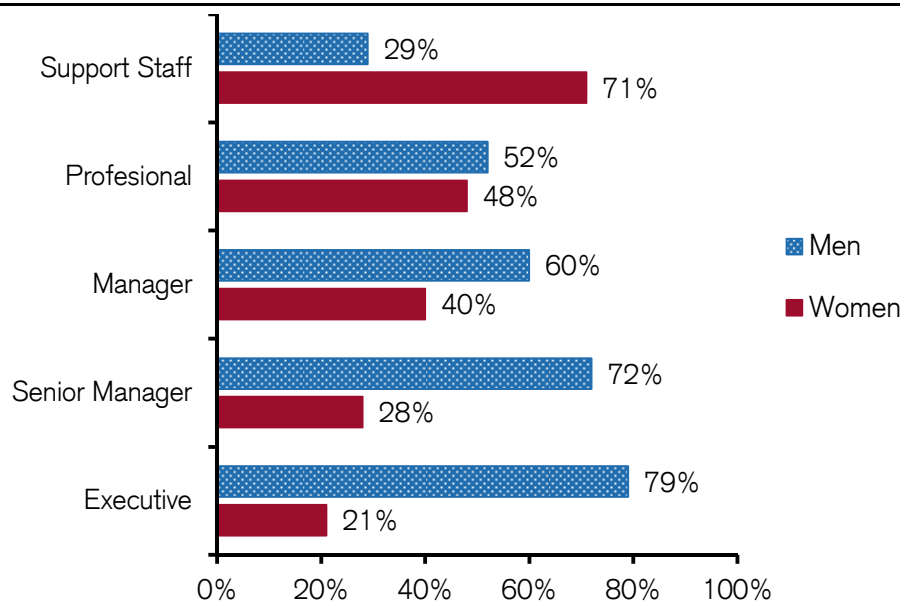
Oliver Wyman, a consulting firm, found that many women in financial services face mid-career conflict. Essentially, many women conclude that the cost to their personal lives exceeds the benefit of continuing with their career. Factors that contribute to the negative cost-benefit ratio include the following:<sup>29</sup>

- Work options that are too rigid and a sense of stigma for using those options;
- Insufficient support for family responsibilities, a sense shared by women and men;
- Promotion processes that are not as predictable, transparent, and equitable as they could be;
- Unequal pay;
- Unconscious biases and traditional assumptions, which make the culture less attractive for women.

Performance evaluation and compensation in the financial services industry is commonly based on long hours, which is especially difficult for women with children. Flexibility is greater for jobs at a lower level. Women also struggle because of the perpetuation of traditional role models and cultural expectations.

Women exit the financial services industry in the middle of their careers at a rate that is higher than that of their male colleagues and significantly higher than that of other industries. Managers, senior managers, and executives in financial services who are women are 20 to 30 percent more likely to leave their employer than their peers in other industries. So while one-half of all financial services employees are women, they comprise only 28 percent of senior management positions and 21 percent of executive positions.<sup>30</sup> As you go up the corporate ladder, the ratio of female to male employees goes down (see exhibit 7).

#### Exhibit 7: Financial Services Internal Labor Market



Source: *Women in the Financial Services Industry*, Oliver Wyman, 2016.

Women are less likely than men to be promoted at nearly all levels. The promotion rate for women and men is equivalent from senior manager to executive. But that rate is only six percent.

Pay is also an issue. Nearly 20 years ago, Jane Waldfogel, a professor of social work at Columbia University, noted that while the wage gap between men and women had narrowed, the gap between women with children and women without children had widened.<sup>31</sup> Some jobs in the financial services industry demand employees to put in consistent and long hours. In those cases, women on average earn less than men. For example, women who are financial analysts earn 72 percent as much as men, and women who are financial advisors earn 56 percent as much as men. This disparity means that some women may prefer to spend time with their families or may pursue a career where compensation between the genders is more equal.

The culture of financial services appeals to some women more than others. Eighteen percent of the 135,000 Chartered Financial Analyst (CFA) charterholders in the world are women. A survey found that women who are CFA charterholders are more focused on achievement and less oriented toward tradition and conformity than women in the general population and men who are CFA charterholders. Women in finance are less risk averse and have more testosterone than women who choose not to go into finance.<sup>32</sup> Many women and men shy away from finance because they are risk averse and feel the need to conform to social norms.

Men and women are also known to have different attitudes toward competition.<sup>33</sup> In one experiment, men and women both solved problems in a noncompetitive setting and received money for every problem they solved. Their performance was about the same. They then solved problems in a competitive setting, where pay was based on the relative performance of all the participants. Men worked harder and did better. When given the choice between the noncompetitive or competitive setting for the next round, around three-quarters of the men selected the competitive environment while roughly one-third of the women did. Results relative to peers is an important and visible aspect of investment management.

There is a fine line between motivation and bias. Bias may lead to fewer women money managers, which may make the job appear to be less attractive and hence reduce the motivation for a woman to become a money manager. While men commonly exhibit stronger gender biases than women, it is important to note that both men and women show bias. For instance, both men and women associate leadership more with men than with women.<sup>34</sup>

Bias against women money managers shows up in a few ways. Actively-managed funds run by women tend to get fewer inflows than funds with similar performance run by men. One study of all U.S. equity mutual funds run by a single manager over a decade and a half found that the growth rates of the funds run by women were one-third lower than those run by men as a result of lower inflows.<sup>35</sup> Jane Buchan, founder and chief executive officer of PAAMCO, a large fund of funds, suggests that women have to outperform their male counterparts by as much as 200 basis points to achieve similar inflows.<sup>36</sup>

Funds generally need to reach a certain scale to be viable. The inability to attract capital leads to a higher rate of failure for funds with at least one female manager than comparable funds run by men.<sup>37</sup> As a consequence, generally only the highest-performing funds managed by women survive. To the degree that bias limits success, it diminishes the motivation to enter into investment management.

Bias also shows up in media mentions. Researchers studying the topic conclude, "The proportion of mentions of women in hedge funds to the total mentions of hedge funds is even smaller than the proportion of women-managed hedge funds to the total number of hedge funds."<sup>38</sup> Women may take this to suggest that there is little room for women in leadership positions at hedge funds.

Both motivation and bias contribute to gender inequality in the investment industry. Enlightened organizations recognize that teams are becoming more prominent in the workplace and can perform at a high level if they are properly constructed and managed. Organizations that embrace these ideas have the opportunity to simultaneously embrace diversity and improve business results.

## Conclusion

There has been a substantial shift in investment management from individual portfolio managers to teams running a fund. Teams do better than individuals on average, and teams of three deliver the best results.

Teams should be diverse. Cognitive diversity is the key to solving problems although most organizations dwell on social category diversity. Cognitive diversity is valuable because it provides more tools for solving problems. This is the diversity bonus. There is reason to believe there is a positive correlation between social category and cognitive diversity, but there is little hard evidence to support the claim. The downside to diversity is if people feel too different from one another, they may fail to engage each other to surface and vet alternatives. Often the voice of a token member, one woman among a group of men, for example, is unheard.

Research by Google suggests that managing the team is even more important than assembling the perfect one. The presence of psychological safety and dependability are two of the strongest predictors of success. Psychology experiments show that teams with a substantial percentage of women perform well and better than teams with a similar percentage of males.

\* \* \*

We offer special thanks to our summer intern, Julia Feldstein, who is a student at Yale University. Julia made a substantial contribution to this piece, including reviewing research papers, linking the findings back to the practical implications, creating a presentation, and writing an early version of the report. We appreciate your work, Julia.

## Appendix: Best Practices for Attracting Women into Investment Management

Teams, rather than a single manager, are running more money than ever. A cognitively diverse team that is managed properly is the key to good decisions. While social category and cognitive diversity are distinct, there is good reason to believe they are positively correlated. If so, the goal of encouraging more participation by women in the investment management industry is not only socially desirable, it makes business sense.

Addressing the underrepresentation of women in finance should focus on entrance, retention, and mitigation. The goal is a more gender equality that captures the diversity bonus without corroding group dynamics.

The pipeline of applicants is the place to start. Job descriptions, interview methods, and media representation are all important. One way to reduce interview bias is through “evaluation nudging.”<sup>39</sup> Iris Bohnet, a professor of behavioral economics at the Kennedy School at Harvard University, likes to tell the story of how orchestras reduced bias. Starting in the 1970s, the Boston Symphony Orchestra started to hold auditions where the musician was behind a screen and the evaluators had only auditory evidence of skill. Other orchestras quickly followed suit. When the evaluators had no visual cues, including gender, and could only rely on sound to assess the musician, the proportion of orchestras made up of women soared by 30 percentage points.<sup>40</sup>

Investment firms should seek to create job descriptions that use wording that is neutral rather than masculine or feminine. Most people have a subconscious bias that favors adjectives that support their gender's stereotypes. Since most employers seek to attract the best applicants from the labor pool, creating neutral job descriptions is particularly useful.<sup>41</sup>

If the survey of women who are CFA charterholders is representative of the women in the industry, there would appear to be bias that deters some women from entering the field. These women cared little about tradition but a lot about achievement. Those attitudes are not the norm for the larger population of women in the workforce. Since the data reveal that women are as good at running money as men are, hiring firms should describe opportunities in a way that is neutral and hence more likely to appeal to women.

Institutional investors generally assess the people, process, and performance when they hire a money manager. There does not appear to be the equivalent to an audition behind a screen, but starting an evaluation with process and performance may be a step toward reducing bias.

Conducting interviews properly is another part of evaluation nudging.<sup>42</sup> Research shows that people, including those in finance, prefer to hire someone like themselves. Further, we tend to vastly overestimate our ability to identify worthy candidates. Not surprisingly, male bankers hire male bankers and female teachers hire female teachers. Sociologists call this “homosocial reproduction.” If your industry is dominated by men or women, homosocial reproduction means you will get more of the same.

One solution is to do a structured interview. This requires crafting questions that will reveal whether the candidate has the necessary skill to succeed, asking all of the questions in the same order to each candidate, and keeping track of how well the candidate answers the questions in real time. Make sure the questions are as free from bias as you can. This allows you to compare answers and to create an overall score. Structured interviews require more upfront time and effort but lead to better hiring decisions.

Having successful and visible women in investment management can also play a role in encouraging women to enter the industry.<sup>43</sup> Bohnet describes how a change in the law in India demonstrated the power of visibility. In the early 1990s, India changed its constitution to require that one-third of the seats in village councils be reserved for women. Further, one-third of the council leaders had to be women.

This created a natural experiment, as social scientists could compare the results for villages led by women to those led by men. Villages run by women invested more in public services, heard their women speak up more than before, saw more crimes reported, and realized a reduction in corruption. Seeing women in leadership roles changed the narrative and led to many positive outcomes.

Financial services companies hire more men than women at all levels within the organization. But the dearth of women in the senior rates also reflects the fact that women are promoted at a lower rate, and have a higher rate of attrition, than men. So retaining women may be as important as hiring well. As the example from India shows, younger women assess their chances of success as higher when they see more women in visibly powerful positions. Seeing other women succeed in reaching their goal of attaining a position in senior management suggests the benefit of a career in financial services may exceed the costs.

Claudia Goldin, a professor of economics at Harvard, distinguishes between jobs where pay grows linearly with time and those where pay grows nonlinearly.<sup>44</sup> More formally, nonlinearity means that pay grows as a convex function of time, so the more hours an employee works, the more money he or she makes per unit of time invested. Goldin notes that women are underrepresented relative to men in jobs that have nonlinear pay. Nonlinear pay also explains the wage gap between women with children and women without children in finance. Women without children can maintain a continuous schedule and therefore earn more than women with less flexible schedules.

The problem can extend beyond the need to work lots of hours to the need to maintain appearances. In many areas of finance, including investment banking, some professional cultures value face time more than output. The need to have your boss see you work is more important than the ability to actually produce work.

In one study, conducted in Australia, women bankers said their male colleagues worked the same number of hours as they did.<sup>45</sup> The difference was the men would take long lunch breaks and go to the gym during working hours and then stay late to make up for the missed hours. The women, especially those with children, got their work done efficiently and left the office at an earlier hour. The productivity was the same, but the extra hours at the office at night garnered more recognition from superiors. This is another example of a bias that favors men, who tend to have flexibility, over women, who are less flexible as they raise a family.

The investment management industry can mitigate this problem, at least for some jobs, by emulating sectors such as healthcare and retail. For example, pharmacists have a fairly linear pay scale and women with children can work part time as they raise their children.

Last, the finance industry can better manage the negative effects of gender diversity. This starts with effective team leadership. One technique is to create a “bridge” between team members based on social ties, common values, or culture.<sup>46</sup> Bridges encourage psychological safety, thus allowing the team to hear and assess a wider range of viewpoints.

Improved management also means detecting and managing bias. Bohnet tells the story of female stockbrokers at the largest firms in the U.S. who earned 60 percent of what their male colleagues did. Since these professionals were paid on commission, the natural conclusion is that the women were not as productive as the men. On closer examination, it became clear that the women were given inferior opportunities, including smaller and less attractive accounts. This is called “performance support bias.” When the women were given better accounts, they performed just as well as their male counterparts. In both finance and academia, women generated the same results as men when the playing field was level.<sup>47</sup>



## Endnotes

- <sup>1</sup> "Global Human Capital Trends 2016: The New Organization: Different by Design," *Deloitte*, 2016. See <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/HumanCapital/gx-dup-global-human-capital-trends-2016.pdf>.
- <sup>2</sup> Diamond Wang, "What Does It Mean to Be in a Team? Evidence from U.S. Mutual Fund Managers," *Working Paper*, June 17, 2016.
- <sup>3</sup> Joseph Chen, Harrison Hong, Wenxi Jiang, and Jeffrey Kubik, "Outsourcing Mutual Fund Management: Firm Boundaries, Incentives, and Performance," *Journal of Finance*, Vol. 68, No. 2, April 2013, 523-558; Michaela Bär, Alexander Kempf, and Stefan Ruenzi, "Is a Team Different from the Sum of Its Parts? Evidence from Mutual Fund Managers," *Review of Finance*, Vol. 15, No. 2, April 2011, 359-396; Larry J. Prather and Karen L. Middleton, "Are N+1 Heads Better Than One? The Case of Mutual Fund Managers," *Journal of Economic Behavior and Organization*, Vol. 47, No. 1, January 2002, 103-120; Eitan Goldman, Zhenzhen Sun, and Xiyu (Thomas) Zhou, "The Effect of Management Design on the Portfolio Concentration and Performance of Mutual Funds," *Financial Analysts Journal*, Vol. 72, No. 4, July/August 2016, 49-61.
- <sup>4</sup> Iordanis Karagiannidis, "The Effect of Management Team Characteristics on Risk-Taking and Style Extremity of Mutual Fund Portfolios," *Review of Financial Economics*, Vol. 21, No. 3, September 2012, 153-158.
- <sup>5</sup> Saurin Patel and Sergei Sarkissian, "To Group or Not to Group? Evidence from CRSP, Morningstar Principia, and Morningstar Direct Mutual Fund Databases," *Journal of Financial and Quantitative Analysis*, Forthcoming, 2017.
- <sup>6</sup> Saurin Patel and Sergei Sarkissian, "Teams, Location, and Productivity," *Working Paper*, April 15, 2016.
- <sup>7</sup> J. Richard Hackman, ed., *Groups That Work (and Those That Don't)* (San Francisco, CA: Jossey-Bass Publishers, 1990). 4.
- <sup>8</sup> Susan Cain, *Quiet: The Power of Introverts in a World That Can't Stop Talking* (New York: Crown Publishers, 2012), 71-94.
- <sup>8</sup> J. Richard Hackman, *Leading Teams: Setting the Stage for Great Performance* (Boston, MA: Harvard Business School Press, 2002), 41-59.
- <sup>9</sup> Hackman, *Leading Teams*, 55.
- <sup>10</sup> J. Richard Hackman and Neil Vidmar, "Effects of Size and Task Type on Group Performance and Member Reactions," *Sociometry*, Vol. 33, No. 1, March 1970, 37-54 and Mallory Stark, "Leading Teams: Setting the Stage for Great Performances – The Five Keys to Successful Teams," *HBS Working Knowledge Series*, July 15, 2002.
- <sup>11</sup> Scott E. Page, "Diversity Bonuses: How Our Differences Make Us Better At What We Do," *Presentation at AGOS Annual Meeting*, October 8, 2016. See <http://agosonline.org/public/PDF/2-ScottePageAGOS-Updated.pdf>. Also, see Karen A. Jehn, Gregory B. Northcraft, and Margaret A. Neale, "Why Differences Make a Difference: A Field Study of Value Diversity, Conflict, and Performance in Workgroups," *Administrative Science Quarterly*, Vol. 44, No. 4, December 1999, 741-763.
- <sup>12</sup> Michaela Bär, Alexandra Niessen, and Stefan Ruenzi, "The Impact of Work Group Diversity on Performance: Large Sample Evidence from the Mutual Fund Industry," *Center for Financial Research Working Paper No. 07-16*, September, 2007. Also, Eric K. M. Tan and Anindya Sen, "Does Educational Diversity of Managers Matter for the Performance of Team-Managed Funds?" *Accounting and Finance*, Forthcoming, 2017.
- <sup>13</sup> Elizabeth A. Mannix and Margaret A. Neale, "What Differences Make a Difference? The Promise and Reality of Diverse Teams in Organizations," *Psychological Science in the Public Interest*, Vol. 6, No. 2, 2005, 31-55.
- <sup>14</sup> See <https://rework.withgoogle.com/blog/five-keys-to-a-successful-google-team/>.
- <sup>15</sup> Deb Gallagher, "The Decline of the HPPO (Highest Paid Person's Opinion)," *MIT Sloan Management Review Blog*, April 1, 2012.
- <sup>16</sup> Garold Stasser and William Titus, "Pooling of Unshared Information in Group Decision Making: Biased Information Sampling During Discussion," *Journal of Personality and Social Psychology*, Vol. 48, No. 6, June

1985, 1467-1478 and Jennifer R. Winkquist and James R. Larson, Jr., "Information Pooling: When It Impacts Group Decision Making," *Journal of Personality and Social Psychology*, Vol. 74, No. 2, February 1998, 371-377.

<sup>17</sup> Daniel H. Pink, *Drive: The Surprising Truth About What Motivates Us* (New York: Riverhead Books, 2009).

<sup>18</sup> Anita Williams Woolley, Christopher F. Chabris, Alex Pentland, Nada Hashmi, and Thomas W. Malone, "Evidence for a Collective Intelligence Factor in the Performance of Human Groups," *Science*, Vol. 330, October 29, 2010, 686-688 and Anita Woolley and Thomas Malone, "What Makes a Team Smarter? More Women," *Harvard Business Review*, June 2011, 32-33.

<sup>19</sup> Incentives can also encourage psychological safety. See Richard P. Mann and Dirk Helbing, "Optimal Incentives for Collective Intelligence," *Proceedings of the National Academy of Sciences*, 2017.

<sup>20</sup> Simon Baron-Cohen, Daniel C. Bowen, Rosemary J. Holt, Carrie Allison, Bonnie Auyeung, Michael V. Lombardo, Paula Smith, Meng-Chuan Lai, "The 'Reading the Mind in the Eyes' Test: Complete Absence of Typical Sex Difference in ~400 Men and Women with Autism," *PLoS ONE*, Vol. 10, No. 8, August 27, 2015. Take the test here: [https://well.blogs.nytimes.com/2013/10/03/well-quiz-the-mind-behind-the-eyes/?\\_r=0](https://well.blogs.nytimes.com/2013/10/03/well-quiz-the-mind-behind-the-eyes/?_r=0).

<sup>21</sup> Miriam Schwartz-Ziv, "Gender and Board Activeness: The Role of a Critical Mass," *Journal of Financial and Quantitative Analysis*, No. 52 Vol. 2, April 2017, 751-780.

<sup>22</sup> Madison Sargis and Laura Pavlenko Lutton, "Fund Managers by Gender: The Global Landscape," *Morningstar*, November 28, 2016.

<sup>23</sup> Laura Pavlenko Lutton and Erin Davis, "Fund Managers by Gender," *Morningstar*, June 2015.

<sup>24</sup> Brad M. Barber and Terrance Odean, "Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment," *Quarterly Journal of Economics*, Vol. 116, No. 1, February 2001, 261-292.

<sup>25</sup> Alexandra Niessen-Ruenzi and Stefan Ruenzi, "Sex Matters: Gender and Prejudice in the Mutual Fund Industry," *Center for Financial Research Working Paper*, May 2013.

<sup>26</sup> Rajesh Aggarwal and Nicole Boyson, "The Performance of Female Hedge Fund Managers," *Review of Financial Economics*, Vol. 29, April 2016, 23-26.

<sup>27</sup> Stanley M. Atkinson, Samantha Boyce Baird, and Melissa B. Frye, "Do Female Mutual Fund Managers Manage Differently?" *Journal of Financial Research*, Vol. 26, No. 1, Spring 2003, 1-18.

<sup>28</sup> "Women in the Financial Services Industry," *Oliver Wyman*, 2016.

<sup>29</sup> Oliver Wyman, 6.

<sup>30</sup> Oliver Wyman, 15.

<sup>31</sup> Jane Waldfogel, "Understanding the 'Family Gap' in Pay for Women with Children," *Journal of Economic Perspectives*, Vol. 12, No. 1, Winter 1998, 137-156.

<sup>32</sup> Renée B. Adams, Brad M. Barber, and Terrance Odean, "Family, Values, and Women in Finance," *Working Paper*, September, 2016. See also Renée B. Adams, "Women in Finance," [http://www.dnb.nl/en/binaries/Slides%20Renee%20Adams\\_tcm47-304324.pdf](http://www.dnb.nl/en/binaries/Slides%20Renee%20Adams_tcm47-304324.pdf).

<sup>33</sup> Uri Gneezy, Muriel Niederle, and Aldo Rustichini, "Performance in Competitive Environments: Gender Differences," *Quarterly Journal of Economics*, Vol. 118, No. 3, August 2003, 1049-1074 and Muriel Niederle and Lisa Vesterlund, "Do Women Shy Away from Competition? Do Men Compete Too Much?" *Quarterly Journal of Economics*, Vol. 122, No. 3, August 2007, 1067-1101.

<sup>34</sup> See <http://www.aauw.org/resource/iat/>.

<sup>35</sup> Niessen-Ruenzi and Ruenzi.

<sup>36</sup> Lindsay Fortado, "Hedge Funds Run by Women Outperform," *Financial Times*, March 11, 2017.

<sup>37</sup> Aggarwal and Boyson.

<sup>38</sup> Ibid.

<sup>39</sup> Iris Bohnet, Alexandra van Geen, Max H. Bazerman, "When Performance Trumps Gender Bias: Joint Versus Separate Evaluation," *Harvard Kennedy School Faculty Research Working Paper Series*, March 2012.

<sup>40</sup> Iris Bohnet, *What Works: Gender Equality by Design* (Cambridge, MA: Belknap Press, 2016), 1.

<sup>41</sup> Jane Wild, "Wanted—A Way with Words in Recruitment Ads," *Financial Times*, March 7, 2017.

<sup>42</sup> Iris Bohnet, "How to Take the Bias Out of Interviews," *Harvard Business Review*, April 18, 2016. See <https://hbr.org/2016/04/how-to-take-the-bias-out-of-interviews>. Also Iris Bohnet, "Paying Attention to What You See: How to Design Gender Equality," *Credit Suisse – Proceedings: 2015 Thought Leader Forum*, June 25, 2015.

<sup>43</sup> Rosabeth Kanter, "Some Effects of Proportions on Group Life: Skewed Sex Ratios and Responses to Token Women," *American Journal of Sociology*, Vol. 82, No. 5, March 1977, 965-990 and Vicki W. Kramer, Alison M. Konrad, Sumru Erkut, and Michele J. Hooper, "Critical Mass on Corporate Boards: Why Three or More Women Enhance Governance," *Directors Monthly*, February 2007, 19-22.

<sup>44</sup> Claudia Goldin, "A Grand Gender Convergence: Its Last Chapter," *American Economic Review*, Vol. 104, No. 4, April 2014, 1091-1119.

<sup>45</sup> Carolyn Neck, "Disappearing Women: Why Do Women Leave Senior Roles in Finance?" *Australian Journal of Management*, Vol. 40, No. 3, August 2015, 488-510.

<sup>46</sup> Mannix and Neale. Also, see Deborah H. Gruenfeld, Elizabeth A. Mannix, Katherine Y. Williams, and Margaret A. Neale, "Group Composition and Decision Making: How Member Familiarity and Information Distribution Affect Process and Performance," *Organizational Behavior and Human Decisions Processes*, Vol. 67, No. 1, July 1996, 1-15.

<sup>47</sup> Iris Bohnet, *What Works: Gender Equality by Design* (Cambridge, MA: Belknap Press, 2016), 109-110.

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