ESSAYS ON GENDER AND CAREERS

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ABSTRACT

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Shoshana Schwartz

Matthew Bidwell

My dissertation examines the male-favoring disparities in career outcomes that persist. I use the mutual fund industry as the context for my research, as an abundance of data on individuals, funds, and firms allows me to trace the careers of mutual fund managers as they move across funds and firms. In Chapter 2, I explore whether gender affects the prices that employers charge for work performed by their employees. I hypothesize that because work performed by women is viewed as less valuable than work performed by men, employers will charge lower prices to customers for work performed by female employees than for equivalent work performed by male employees. Results indicate that while there are no gender differences in prices when men and women are first hired into a position, the prices that employers charge for female employees' work decrease over the course of employees' tenure in a job position relative to the prices employers charge for the work of male employees with equal performance and tenure. In Chapter 3, I examine whether gender disparities in advancement differ depending on whether men and women advance through internal mobility or through external mobility. I find that, contrary to expectations, there are no aggregate gender disparities in advancement for both internal mobility and external mobility. However, I find evidence that the relationship between performance and external advancement varies by gender, as women experience decreasing returns to increased performance relative to men over the lower half of the performance spectrum. Overall, these studies increase our understanding of when and how gender affects individuals' careers.

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CHAPTER 1: OVERVIEW

Today, women still fare worse than men on many workplace outcomes. The male-favoring gender pay gap has received substantial attention from academics, practitioners, and policymakers. Over time, the gender pay gap has narrowed substantially with strong progress in the 1980s (Blau & Kahn, 2017). Throughout the 1990s and 2000s, however, further progress in narrowing the gender pay gap has been slower and uneven (Blau & Kahn, 2017). Beyond pay, there are still gender disparities in the levels and types of jobs that women and men hold. In particular, women are still underrepresented in jobs at the highest levels of organizations (Oakley, 2000; Heilman, 2001; Bertrand & Hallock, 2001; Helfat, Harris, & Wolfson, 2006; Haveman & Beresford, 2011; Hoobler, Lemmon, & Wayne, 2011), and they are often siloed into jobs that offer lower pay, less prestige, and less power (Charles & Grusky, 2005). Research has explored gender disparities in a number of factors that may contribute to male-favoring outcomes, including gender disparities in hiring (Olian, Schwab, & Haberfeld, 1988; Gorman, 2005; Fernandez & Mors, 2008), promotions (DiPrete & Soule, 1988; Pekkarinen & Vartiainen, 2006; Blau & Devaro, 2007; Yap & Konrad, 2009; Ibarra, Carter, & Silva, 2010), and performance evaluations (Bartol, 1999; Lyness & Heilman, 2006; Inesi & Cable, 2015).

Many explanations for women's lack of representation in upper-level and high-paying jobs have been put forth. Demand-side explanations posit that male-favoring gender stereotypes lead to discrimination against women (Heilman & Eagly, 2008; Heilman & Caleo, 2018). If gender stereotypes cause employers to view men as more competent than women (Heilman, 1983; Heilman & Stopeck, 1985; Eagly, 1987; Ridgeway, 1997; Schein, 2001; Eagly & Karau, 2002; Heilman, 2012), then employers may be more likely to hire, promote, and award higher pay to men than to similarly qualified women. Gender stereotypes may be particularly harmful to women in male-dominated, male-typed jobs (Heilman et al., 1989; Heilman, Block, & Martell, 1995; Heilman et al., 2004; Heilman & Okimoto, 2007), which is significant as such jobs tend to offer high pay and prestige on average (Baunach, 2002).

 Other explanations focus on supply-side factors, arguing that much of the gender gap in career outcomes reflects differences in men's and women's choices (Loprest, 1992; Becker,

2009a). Women are more likely than men to take time out of the labor force to raise a family, and even when employed women still spend more time on childcare than men (Mincer & Polachek, 1974; Goldin & Polachek, 1987; Becker, 2009a). If women's preferences and/or childcare responsibilities differ from men's on average, they may make decisions that favor flexibility over higher wages and advancement potential when faced with these trade-offs (Loprest, 1992; Becker, 2009a).

Overall, researchers have failed to reach a consensus around the relative contributions of the various supply-side and demand-side factors that may contribute to the gender disparities in career outcomes, which suggests that there is more to be learned. To advance our understanding of gender disparities in careers, I build on the prior research on gender and careers and perform two studies examining whether and how gender disparities manifest in the careers of mutual fund managers. The mutual fund industry is an excellent setting, as there is abundant data on mutual fund managers, the funds that they manage, and the firms that employ them. I am able to match mutual fund managers to the funds that they manage, so that I can observe how their careers unfold as they move both within and across employers. Additionally, the availability of an unbiased measure of performance allows me to rule out the possibility that results are driven by gender differences in performance.

In Chapter 2 of my dissertation (Study 1 – or "my first study"), I explore whether employers charge lower prices for work performed by women than for equivalent work performed by similarly qualified men. I find that while there is no difference in the price of employees' work when women and men are first hired into a job, the relative price charged for work performed by women declines over the course of employees' tenure in a job. Gender disparities in the prices charged for employees' work is an important yet underexplored mechanism that may contribute to gender disparities in career outcomes. If women's work is underpriced, then women would generate less revenue for the firm than otherwise-equivalent men would generate. As the revenue generated by employees directly contributes to the firm's bottom line, if women generate less revenue due to their gender, then they may be viewed as contributing less to the firm and therefore be less likely to advance and to earn high pay. Additionally, examining whether gender

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affects the price of work has implications for strategic human resources. If a firm charges less for work performed by some employees due to their gender, then the firm is bringing in less revenue than it otherwise would.

If women generate less revenue, then they may be viewed as contributing less to their employer's bottom line. This implies that firms may be reluctant to advance women, which would result in male-favoring disparities in career outcomes such as pay and advancement. Further, existence of gender disparities in pricing serves as evidence of bias against women. If women experience gender-related bias, then one may assume that this bias would manifest not just in the pricing of work, but also in a variety of outcomes, such as career advancement. Thus, the potential that gender disparities in advancement follow from gender disparities in prices motivates my second study.

In Chapter 3 (Study 2), I continue to explore whether gender affects employees' labor market experiences by examining whether there are gender differences in how male and female employees' careers develop through internal and external mobility. Specifically, I examine whether gender disparities in advancement differ depending on whether employees advance by moving within their current employer, known as internal mobility, or advance by moving to a new employer, known as external mobility. Counter to expectations, I find that there are no aggregate gender disparities in advancement regardless of whether individuals are moving internally or externally. However, I do find evidence that the relationship between performance and advancement differs by gender when individuals move through external mobility. When advancing externally, women with low levels of performance are advantaged relative to men with low levels of performance, while women with average to high levels of performance are disadvantaged relative to similarly performing men.

It is important to better understand whether gender affects how employees' advance in their careers through both internal and external mobility, because today employees' careers are increasingly likely to involve external mobility rather than unfold within a single organization (Cappelli, 1999; Farber, 2008; Cappelli, 2019). Prior research on gender disparities in advancement has focused more on examining whether there are gender disparities in

advancement within employees' current organization (e.g., DiPrete & Soule, 1988; Spilerman & Petersen, 1999; Ginther & Hayes, 2003; Petersen & Saporta, 2004; Ransom & Oaxaca, 2005; Blau & Devaro, 2007; Smith, Smith, & Verner, 2013) than whether there are gender differences in how employees advance by moving across organizations. Given that external mobility now plays a large role in employees' careers (Farber, 2008; Cappelli, 2019), I expand our understanding of gender and advancement by bringing in a consideration of advancement through external mobility.

My two studies provide complementary lenses for examining issues around gender and careers in the mutual fund industry. The result of my first study – that employers charge lower prices for women's work – suggests that in my second study I would find that women are less likely than men to advance. In my second study, however, contrary to expectations, I find that there are no gender disparities in advancement through internal mobility nor in advancement through external mobility, although women are more likely than men to exit the mutual fund industry.

In the remainder of Chapter 1, I first provide an overview of relevant literature on gender and careers. As I will subsequently discuss, a review of the literature on gender and careers indicates clear evidence that substantial gender disparities in outcomes persist, yet there is a lack of consensus around the relative magnitude of various factors that contribute to gender disparities in outcomes. Next, as I seek to advance our understanding of gender and careers in the context of the mutual fund industry, I will provide an overview of the mutual fund industry context, noting a number of key features that make it an excellent setting for my research. Subsequently, I will discuss the literature on the careers of mutual fund managers, as studying gender disparities in mutual fund managers' careers requires understanding how mutual fund managers' careers are structured and what constitutes career advancement in their occupation. Finally, I will introduce the methodological approach and data that will be used in my research.

A Selective Review of the Literature on Gender Disparities in Careers

As discussed above, there are still male-favoring gender disparities in career outcomes including pay (Blau & Kahn, 2017) and representation at the highest levels of organizations (Cappelli & Hamori, 2004; Helfat, Harris, & Wolfson, 2006; Mitchell, 2014; Dezső, Ross, & Uribe, 2016; Bonet, Cappelli, & Hamori, 2020). Gender disparities in outcomes have served as the motivation for a large academic literature seeking to understand the root causes of women's persistent labor market disadvantage. Despite abundant research, however, academic researchers have failed to reach a consensus around the relative contribution of various demand-side and supply-side factors affecting the gender pay gap. Overall, I make the argument that, as gender disparities in career outcomes are still substantial, and as we still do not know the relative magnitude of the various factors that contribute to gender disparities in outcomes, further research is needed. Below, I first provide an overview of gender disparities in career outcomes, focusing on pay and representation in the upper levels of organizations. Then I outline some of the key demand-side and supply-side factors that have been cited as contributing to the gender pay gap.

Outcomes

It is important to study gender disparities in careers because there is evidence that men and women still systematically fare differently in the workplace (Blau & Kahn, 2017). In particular, as I review below, there is ample evidence that gender affects how people are paid and the types of jobs that people hold (Blau & Kahn, 2017).

Pay

Perhaps the most notable workplace outcome is pay, with the gender pay gap receiving widespread coverage in both academic research and the popular press. Although women have made great advances in labor force participation and in narrowing the gender wage gap, gender earnings disparities still exist. As of 2019, women employed full-time had median weekly earnings of only 81% of men's median earnings (Bureau of Labor Statistics, 2020). Among college graduates, the gender gap starts soon after graduation and grows over time, with the

average woman employed full-time earning 80% as much as the average man employed full-time one year after graduation, but only 60% as much 10 years after graduation (Dey & Hill, 2007). While factors such as control over fertility due to access to birth control (Goldin & Katz, 2000), changes in expectations regarding future labor force participation (Goldin, 2006), and increased educational attainment (Summ et al., 2003; Bobbitt-Zeher, 2007) all have contributed to the increase in women's labor force participation and the decrease in the gender wage gap, further narrowing of the gender wage differential slowed markedly in the 1990s, and essentially has been stalled since the early 2000s (Blau & Kahn, 2017; Bureau of Labor Statistics, 2020).

While women are paid less than men on average, recent evidence challenges the notion that the gender pay gap subjects all women to a uniform disadvantage. In fact, recent research has found that some women perceived as having the highest potential may actually receive a pay premium relative to men perceived as having the highest potential (Leslie, Manchester, & Dahm, 2017). This effect was likely driven by organizations' adoption of diversity goals (Leslie, Manchester, & Dahm, 2017), which I will discuss later.

Representation at Upper Levels of Organizations

The second outcome that has received major focus both from academics and in the public discourse is representation. It is clear that women are underrepresented in the highest levels of organizations. However, the literature on promotions, which I will discuss below, is more complicated than might be expected.

Today women work in lower-level positions than men on average, resulting in persistent vertical segregation, also known as occupational inequality (Hakim, 1979; Powell, 1999). Women are particularly underrepresented in jobs at the highest levels of organizations (Cappelli & Hamori, 2004; Helfat, Harris, & Wolfson, 2006; Mitchell, 2014; Dezső, Ross, & Uribe, 2016; Bonet, Cappelli, & Hamori, 2020). For example, despite women now making up 46% of the workforce (World Bank, 2019), as of December 2019 only 30 out of the 500 CEO's of Fortune 500 companies are female (Catalyst, 2020). Women hold only 15% of the top ten highest-ranking executive jobs at Fortune 100 companies (Bureau of Labor Statistics, 2017; Bonet, Cappelli, & Hamori, 2020). As one moves up the organizational hierarchy, the percentage of jobs that are

held by women declines: Among S&P 500 companies, women are 44.7% of total employees, 36.9% of first- and mid-level officials and managers, 26.5% of executive- and senior-level officials and managers, and 5.8% of CEOs (Catalyst, 2020).

One reason that has received much examination as a potential explanation for women's lack of representation at the top is the possibility of male-favoring gender disparities in promotions. Prior research has failed to reach a consensus around whether there are gender disparities in promotions, with some studies finding that women are disadvantaged in promotions (DiPrete & Soule, 1988; Ginther & Hayes, 2003; Ransom & Oaxaca, 2005; Blau & Devaro, 2007; Smith, Smith, & Verner, 2013), others finding that women are disadvantaged at some levels of the organization but not at other levels (Jones & Makepeace, 1996; Gorman & Kmec, 2009; Yap & Konrad, 2009; Zheng, 2011; Smith, Smith, & Verner, 2013), and still others finding that at least in some contexts women may advance more quickly than men (Spilerman & Petersen, 1999; Petersen & Saporta, 2004; Bonet, Cappelli, & Hamori, 2020).

A number of researchers have found evidence suggesting that women are less likely to be promoted than otherwise-equivalent men (e.g., DiPrete & Soule, 1988; Ginther & Hayes, 2003; Ransom & Oaxaca, 2005; Blau & Devaro, 2007; Smith, Smith, & Verner, 2013). In a cross-sectional employer survey, women were found to have a lower probability of promotion even with the inclusion of numerous controls (Blau & Devaro, 2007). Women in humanities academia were less likely than men to be promoted to tenure even when controlling for productivity and other demographic characteristics, which translated into gender disparities in salary (Ginther & Hayes, 2003). Gender disparities were also found in federal civil service job promotions; these disparities were greatest for promotions between the lower- and upper-tier-grades, but no differences existed within the upper-tier-grades (DiPrete & Soule, 1988).

A number of studies on promotions have focused on whether women face particular disadvantages at being promoted into upper-level jobs, which would support the existence of a glass ceiling. Some authors have found evidence in support of the existence of a glass ceiling, finding that women were most disadvantaged at being promoted at the highest levels of the organization (Gorman & Kmec, 2009; Smith, Smith, & Verner, 2013). For example, Gorman and

Kmec found that law firms were more likely to hire women for entry-level positions than to promote them to partner (2009). Smith, Smith, and Verner found that female vice presidents of companies in Denmark were less likely than male vice presidents to be promoted to CEO, even after controlling for family-related variables and firm characteristics (2013).

Other researchers, however, found evidence against the existence of a glass ceiling, finding that women suffered disadvantages at lower organizational levels but not at the upper levels (Jones & Makepeace, 1996; Yap & Konrad, 2009; Zheng, 2011). Zeng's (2011) study of scientists and engineers, as well as Jones and Makepeace (1996)'s and Yap and Konrad (2009)'s single-firm studies found that women did not experience any gender disadvantage at the highest organizational levels, after having experienced disadvantages at lower organizational levels.

Several studies have even found evidence that under some circumstances at least some women may be advantaged relative to men, particularly in higher-level positions, which tend to be more visible than lower-level positions. Recent research found that among the ten highest executives in each Fortune 100 company, female executives advanced to their positions faster than did otherwise-identical male executives (Bonet, Cappelli, & Hamori, 2020). Studies of a large U.S. service firm and a large U.S. insurance firm found that women had a net advantage relative to men at the highest levels, as the organizations responded to institutional pressures around gender diversity (Spilerman & Petersen, 1999; Petersen & Saporta, 2004).

Overall, the studies on gender disparities in promotions have not reached a consensus about the extent and nature of any male-favoring disparities in promotions. These prior studies have primarily focused on advancement through internal mobility, examining whether men and women have different likelihoods of advancing within their current employer. However, as I will discuss in more detail in Chapter 3, individuals today are increasingly likely to advance through external mobility (Cappelli, 1999; Farber, 2008; Cappelli, 2019). My study in Chapter 3 contributes to the conversation on gender and advancement by considering the possibility of advancement through external mobility, in addition to advancement through internal mobility.

Causes of Gender Disparities

While it is clear that gender disparities in outcomes persist, there is less clarity around the causes of these persistent disparities. This lack of clarity implies that there is more to be learned. Recall that my dissertation research aims to advance our understanding of the causes of gender disparities in career outcomes, first by exploring gender disparities in how employers price work performed by female and male employees as a previously underexplored factor that may contribute to gender disparities in career outcomes, and then by exploring whether internal and external mobility may differentially contribute to gender disparities in career outcomes. Next I outline what we know and what we do not know about the causes of gender disparities in careers.

Gender inequality in the workplace is complex, and there are numerous mechanisms which contribute to this inequality (Castilla, 2008; Castilla, 2012). Both demand-side and supply-side mechanisms may contribute to gender disparities in career outcomes (England, 1992; Reskin, 1993). Demand-side explanations focus on how the behaviors of employers – whether intentional or unintentional – contribute to gender disparities in the workplace (Reskin, 1993). One demand-side argument that has received much focus is that gender stereotypes and biases may cause employers to engage in male-favoring discrimination (Heilman & Eagly, 2008; Heilman & Caleo, 2018). More recently, studies of demand-side factors have included corporate diversity goals and policies (Kalev, Dobbin, & Kelly, 2006; Leslie, Manchester, & Dahm, 2017; Leslie, 2019). Supply-side explanations include explanations that women and men may have different preferences on average, and that women and men may make different choices around how to balance work and family (Mincer & Polachek, 1974; Goldin & Polachek, 1987; Loprest, 1992; Becker, 2009a). Below, I provide an overview of some key demand-side explanations for gender disparities in labor market outcomes, followed by an overview of supply-side explanations.

Demand-Side Explanations

Discrimination Caused by Gender Stereotypes and Biases

Male-favoring gender stereotypes are notable, because they are one mechanism that leads to the persistent gender disparities in labor force outcomes that disadvantage women (Heilman, 2012; Heilman & Caleo, 2018). While extensive research has documented the

existence of male-favoring gender stereotypes (Ridgeway, 1997; Heilman, 2001; Ridgeway, 2011; Heilman, 2012; Heilman & Caleo, 2018), there has been less exploration of whether gender stereotypes affect the prices that employers charge for work performed by their male and female employees. Additionally, there has been less exploration of whether gender stereotypes have differential impacts on women's advancement depending on whether women are advancing within their current employer or by moving to a new employer. Before discussing how I will address these underexplored questions, I first review what we already know about gender stereotypes and how such stereotypes affect women's workplace outcomes.

Gender discrimination is when employees or job applicants receive different treatment due to their gender (Heilman & Caleo, 2018). Gender bias and gender stereotypes, which I will subsequently discuss, are thought to be at the root of gender discrimination (Heilman & Caleo, 2018). Perceptions subject to gender bias can be the basis for subsequent discrimination (Heilman & Caleo, 2018).

Discrimination can be conscious or subconscious in nature. First-generation gender discrimination, meaning discrimination that intentionally excludes based on gender, has not been entirely eliminated, but it has been significantly reduced as a result of formal laws (Sturm, 2001). As changes to the law and to formal organizational practices have failed to fully eliminate gender disparities in the workplace, however, there has been increased interest in second-generation gender discrimination – discrimination that may be unintentional and sometimes is subconscious but that results in differential gender outcomes (Sturm, 2001).

Gender Stereotypes and Biases

Stereotypes disadvantaging women are at the root of gender discrimination. Male-favoring gender stereotypes cause people to perceive women as less competent than men (Heilman, 1983; Eagly, 1987; Ridgeway, 1997; Schein, 2001; Eagly & Karau, 2002; Heilman, 2012) and to view women and men as suited for different types of jobs (Heilman, 2012).

Stereotypes are defined as cognitive schemata that influence how people process information about other people (Bodenhausen, Macrae, & Garst, 1998). In intergroup stereotypes, cognitive processes cause people to form impressions about individuals based on

their membership in a group (Tajfel, 1982). Stereotypes, including gender-based stereotypes, can be subconscious and habitual, so people may not realize how stereotypes affect their perceptions and behavior (Bielby, 2000). Stereotypes can be either descriptive (describing what group members are like) or prescriptive (describing what group members should be like) in nature (Heilman, 2012).

Gender stereotypes and gendered cultural beliefs depict men and women differently. Men are depicted as agentic in nature, and women are depicted as communal (Eagly & Steffen, 1984; Diekman & Eagly, 2000; Heilman & Parks-Stamm, 2007; Dimitriadis et al., 2017). Attributes of agency include assertiveness, orientation toward achievement, competitiveness, dominance, and risk-taking (Eagly & Steffen, 1984; Diekman & Eagly, 2000; Heilman & Parks-Stamm, 2007; Dimitriadis et al., 2017). Attributes of communality include selflessness, caring, and consideration for others (Eagly & Steffen, 1984; Diekman & Eagly, 2000; Heilman & Parks-Stamm, 2007; Dimitriadis et al., 2017). Traditionally, women's roles have involved caring for children and family, causing women to be stereotyped as socially oriented rather than self-oriented (Eagly & Mladinic, 1989). These gender stereotypes are oppositional in nature; this means that women are not only viewed as communal but also as lacking in agency and that men are not only viewed as agentic but also as lacking in communality (Heilman & Parks-Stamm, 2007). Both men and women hold gender stereotypes (Heilman & Parks-Stamm, 2007; Parks-Stamm, Heilman, & Hearns, 2008). Additionally, gender stereotypes are pervasive across cultures and have been persistent over time (Heilman & Parks-Stamm, 2007; Parks-Stamm, Heilman, & Hearns, 2008).

These stereotypes also depict women as less competent than men (Heilman, 1983; Eagly, 1987; Ridgeway, 1997; Schein, 2001; Eagly & Karau, 2002; Heilman, 2012), so that people expect women to have worse performance than men (Ridgeway, 2011). Additionally, they bias people's capacity to infer ability from performance; women must achieve a higher level of performance in order to be perceived as having as high ability as men (Ridgeway, 2011). Further, managers are more likely to attribute women's good performance to luck and men's to ability and effort (Igbaria & Baroudi, 1995).

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These gender stereotypes are a key demand-side mechanism contributing to gender disparities in career outcomes, because they influence perceptions of whether male and female employees are suited for different types of jobs (Heilman, 2012). Both descriptive and prescriptive stereotypes can be harmful to women's career advancement. Descriptive stereotypes can bias evaluators, causing them to have negative expectations about women's performance and to conclude that women are a poor fit or unlikely to succeed in traditionally male positions and occupations (Heilman, 2012). Prescriptive stereotypes can also be harmful to women, as women who violate prescriptive gender stereotypes engage in counter-normative behavior that can be viewed negatively resulting in social penalties (Heilman, 2012).

In addition to people having gender identities, occupations and activities also have gender identities (Kirkham & Loft, 1993). An occupation is male-typed if characteristics stereotypically associated with men are viewed as necessary to succeed (Heilman, 2001; Eagly & Karau, 2002; Heilman & Parks-Stamm, 2007). Factors such as occupational sector, professional subfield, and functional area can all affect the gendered association of a job (Heilman & Parks-Stamm, 2007). Further, when a job is predominately held by men, male-typed characteristics are assumed due to the job's gender representation (Heilman & Parks-Stamm, 2007), and high correlations have been found between ascribed gender types of jobs and the gender representation in the jobs (Cejka & Eagly, 1999).

Gender-based stereotypes can result in a perceived "lack of fit" between women's characteristics and the characteristics perceived as being necessary for success in traditionally male organizational positions and occupations (Heilman, 1983). Upper-level positions, including executive and top management jobs, are perceived as requiring male-typed rather than female-typed characteristics (Heilman et al., 1989; Gaucher, Friesen, & Kay, 2011). For example, agentic qualities, which epitomize the masculine stereotype, are believed necessary to be successful in managerial and executive positions (Schein, 2001). The view that the characteristics of a successful manager are more congruent with the characteristics stereotypically associated with men rather than women was identified by Schein in the 1970s (Schein, 1973; Schein, 1975), and is still prevalent today (Heilman, 2012). Research has also

found that masculine terms are used to describe good managers (Dennis & Kunkel, 2004), and that masculine-stereotyped qualities are considered necessary to succeed as a manager or executive (Martell, Parker, Emrich, & Crawford, 1998).

Heightened Stereotypes Faced by Women in Male-Dominated, Male-Typed Careers

In addition to the aforementioned challenges, women experience heightened challenges in male-dominated careers (Heilman, 1983; Heilman & Stopeck, 1985; Heilman et al., 1989; Heilman et al., 1995; Snipes, Oswald, & Caudill, 1998; Heilman et al., 2004; Heilman & Okimoto, 2007). Such gender stereotypes may be particularly strong in my study context, the mutual fund industry, as it is a male-dominated, male-typed context. Considering the heightened stereotypes that occur in male-typed contexts is necessary for understanding the career challenges that women may face in the mutual fund industry. Additionally, understanding how gender stereotypes may vary depending on the gendered nature of the context and the gender composition of employees is important, because it has implications for the generalizability of my work. As stereotypes are heightened in male-typed contexts, any gender disparities in my context that arise from gender stereotypes could potentially be interpreted as an upper-bound, as the existence of increased stereotypes in male-type contexts implies that gender stereotypes would be larger in the mutual fund industry than in gender-balanced and female-dominated industries.

Due to heightened stereotypes around gender, women in male-dominated careers are particularly likely to have their competence questioned (Heilman, 1983; Heilman & Stopeck, 1985). In the absence of clear evidence of individual performance in context of male-gendered work, women are assumed to be less competent than men (Heilman, 1983; Heilman & Stopeck, 1985). A lab study in which only the applicant's gender and the gender orientation of the job were varied found that rater participants were less likely to hire women, especially for male-typed jobs (Snipes, Oswald, & Caudill, 1998). The substantial disparity in participant raters' perception of the applicants' future job performance was larger than the disparity in hiring, with participants having lower performance expectations for women (Snipes, Oswald, & Caudill, 1998).

While evidence of past success reduces the impact of stereotypes depicting women as lacking competence (Heilman, 1983; Heilman & Stopeck, 1985), in male-dominated careers evidence of past success can be a double-edged sword for women (Heilman et al., 1989; Heilman et al., 1995; Heilman et al., 2004; Heilman & Okimoto, 2007). When women succeed in male-dominated careers, they may be viewed negatively and successful women may be less well-liked on average than successful male counterparts (Heilman et al., 1989; Heilman et al., 1995; Heilman et al., 2004; Heilman & Okimoto, 2007). When research participants were told that female managers were successful, they viewed these managers as possessing negative interpersonal traits, such as being lacking in communality and being selfish, deceitful, cold, and manipulative (Heilman et al., 1989; Heilman et al., 1995; Heilman et al., 2004; Heilman & Okimoto, 2007).

Research on self-promotion provides an example of this double-edged sword that women face. While self-promotion may be necessary to establish competence, it violates the prescriptive gender norm that women should be modest (Rudman, 1998). Women who engaged in self-promotion were viewed as more competent, but were punished by being viewed as less socially attractive and less hirable by many perceivers (Rudman, 1998).

Further research found that successful women were not punished in all domains, but rather that the dynamic of women being "punished" for demonstrating success and competence was unique to male-gendered domains (Heilman et al., 2004). Successful female managers did not experience negativity when succeeding in stereotypically female or gender-neutral domains (Heilman et al., 2004).

For insights into why women are punished for success in male-gendered domains we can look to theory around prescriptive gender stereotypes and norms violation. As described above, gender stereotypes contain both a descriptive component, which aims to describe how women are, and a prescriptive component, which aims to describe how women should be (Fiske & Stevens, 1993). The prescriptive content of gender stereotypes is a highly specific and widely shared view of how men and women should be (Fiske & Stevens, 1993).

Women who exhibit agentic behavior, or behavior involving competitiveness, dominance, and a focus on achievement, are viewed as violating the prescriptive stereotype of how women should behave (Burgess & Borgida, 1999; Heilman, 2001; Heilman & Okimoto, 2007). Further research exploring mechanisms found that women were penalized due to violating the prescriptive component of gender stereotypes (Heilman & Okimoto, 2007). This is an example of the broader finding that counter-normative behavior is viewed negatively (Cialdini & Trost, 1998).

Research has found that it is not just competence, but also likeability, that matters for career success. Participants in a lab-based study were more likely to recommend likable employees for special workplace opportunities than equally competent but less likable employees (Heilman et al., 2004). Women may experience a catch-22 as they must disconfirm female stereotypes to be viewed as competent, but disconfirming female stereotypes engenders negative reactions threatening likability (Rudman & Phelan, 2008).

Diversity Goals & Programs

While women have historically been disadvantaged in labor market outcomes, employers today are increasingly likely to face diversity pressures (Dobbin, Kim, & Kalev, 2011; Leslie, Manchester, & Dahm, 2017). These diversity pressures often focus on representation of women among the firm's employees, with a particular focus on high-level visible positions. Understanding the diversity pressures that firms may face is important because – while women may generally be disadvantaged – in some cases diversity pressures may reduce or reverse gender-related disadvantage, at least for some groups of women.

Today, diversity initiatives are widespread (Leslie, Manchester, & Dahm, 2017), with a majority of employers having diversity initiatives (Bartels, Nadler, Kufahl, & Pyatt, 2013; Leslie, 2019). Corporate best practices for managing diversity have proliferated since the 1990s (Kalev, Dobbin, & Kelly, 2006). Many firms have diversity as a strategic goal (Bartels, Nadler, Kufahl, & Pyatt, 2013), and the majority report aiming to have a reputation for diversity (Bartels, Nadler, Kufahl, & Pyatt, 2013). While diversity goals may target a number of underrepresented groups, they have most frequently focused on women (Society for Human Resource Management, 2009).

However, despite the proliferation of diversity initiatives, there is not yet a research

consensus around the effectiveness of these initiatives. Diversity initiatives may often be ineffective, and some diversity efforts may actually increase gender stereotyping against women by making gender more salient (Heilman & Welle, 2006). However, at least some women may sometimes benefit from these initiatives. Recent research has found that diversity pressures may benefit women in upper-level positions perceived as having the highest potential relative to otherwise-similar men, while other women remain disadvantaged relative to comparable men (Leslie, Manchester, & Dahm, 2017).

Supply-Side Explanations

Gender disparities in career outcomes may result not only from employers treating male and female employees differently, but also from male and female employees making different choices. In order to avoid inaccurately attributing disparities in outcomes to demand-side forces, it is necessary to also consider how gender disparities in choices may contribute to gender disparities in career outcomes.

Lifestyle Choices and Preferences

Men and women may differ on average in their preferences regarding how many hours to work and how to balance work and family life, which may subsequently affect their labor market outcomes. Systematic differences in preferences between men and women despite equal opportunities could also result in disparate outcomes even in the absence of employer discrimination (Polachek, 2014). On average women are more likely to take time out of the labor market to raise a family and couples are more likely to prioritize the husband's career over the wife's career when deciding where to live (Mincer & Polachek, 1974; Goldin & Polachek, 1987; Becker, 2009a). Constraints that limit individuals' career choices may include factors such as anticipated time out of the labor market to raise a family or limitations on employment opportunities due to geographic preferences. Jobs often involve trade-offs between wages and non-pecuniary aspects of the job such as flexible schedules or lower hours (Loprest, 1992). If women's preferences differ from men's on average, they may make decisions that favor flexibility over higher wages when faced with trade-offs (Loprest, 1992). Additionally, they may choose jobs with lower skill atrophy if they anticipate labor force interruptions (Polachek, 1981). Further,

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gender differences in preferences for flexibility and/or time out of the labor market can affect decisions that individuals make regarding the level and type of human capital to accumulate, as I will discuss in the subsequent Human Capital section.

Gender differences in preferences have been found to affect individuals' career outcomes even among highly educated individuals with high earnings potential. Barbulescu and Bidwell's study of gender disparities in career outcomes among students at a top MBA program found gender differences in how individuals evaluate jobs' rewards, as women preferred jobs with greater work-life balance (2013). Gender differences also stemmed from identity as women identified less with male-typed jobs. Furthermore, women believed they were less likely to be successful when applying to male-typed jobs (although this belief was not supported by evidence). These differences in preferences and beliefs shed insights into why women, relative to men, were more likely to apply for general management jobs and less likely to apply for finance and consulting jobs.

Notably, it can be difficult to disentangle innate gender differences in choices and preferences from differences in choices resulting from anticipated discrimination and from past differential gender socialization. Women may invest less in human capital if they anticipate that they will experience discrimination (Mincer & Polachek, 1974; Becker, 2009a). For example, they may anticipate that the attainment of a certain level of skills would be discounted in the labor market or that they would be unwelcome at a particular employer, occupation, or industry due to their gender or race (Mincer & Polachek, 1974; Becker, 2009). Gender disparities may perpetuate if lower-level female employees observe the lack of women in upper-level positions and conclude that obtaining such a position is not possible (Hoobler, Lemmon, & Wayne, 2011). Anticipated discrimination that causes individuals to make different choices may result in gender disparities in outcomes even in the absence of actual discrimination.

Additionally, gender differences in behavior and lifestyle choices can result from gender-differential socialization that starts from childhood, long before men and women enter the labor force. Women and men may face pressures to make decisions and pursue career paths that are considered typical of their gender (Jacobs, 1989; Morgan, Gelbgiser, & Weeden, 2013). Women

may face greater normative expectations to serve as caregivers than men, and thus to make career choices that are viewed as compatible with family caregiving roles (Hakim, 2002; Morgan, Gelbgiser, & Weeden, 2013). Thus, as behaviors and choices may be influenced by socialization and anticipated discrimination, innate gender differences are not prerequisite for there to be gender differences in choices.

Human Capital

Men and women may also differ in the levels of human capital that they possess. Considering the potential for gender differences in human capital is important, because the level of human capital that an individual possesses affects one's labor market outcomes. If men and women possess different levels of human capital on average, it is necessary to ensure that one is comparing the outcomes of men and women with similar levels of human capital to avoid attributing differences to gender bias when differences are actually due to differences in levels of human capital. The mutual fund industry allows me to control for a number of indicators of human capital, including individuals' educational background, professional qualifications, and work experience. Given the availability of human capital-related data on mutual fund managers, I am able to rule out the possibility that results are driven by gender differences in human capital.

Human capital is a key supply-side factor that has historically explained gender disparities in career outcomes and that more recently has explained the narrowing of disparities in outcomes (Blau & Kahn, 2017). Human capital is a stock variable that consists of the knowledge and characteristics of a worker that allow him or her to be productive in the labor market (Becker, 1962; Becker, 2009b). Historically, gender differences in human capital variables explained part of the gender wage gap.

Under Becker's human capital model (1962), workers make investments in their human capital, such as by obtaining education, training, and experience. These investments are costly, but are undertaken with the expectation that they will generate future returns in the labor market. An individual invests in human capital in a way that is expected to maximize returns (income relative to the costs of investment) over the individual's lifecycle in the labor market subject to any constraints that the individual may face.

Human capital may be constrained by individuals' preferences and lifestyle choices (Mincer & Polachek, 1974; Goldin & Polachek, 1987; Becker, 2009a). If women anticipate more time out of the labor force and/or working fewer hours, they would have a shorter period of time over which to earn returns on their human capital, which could cause women to invest less in human capital. Similarly, if women are less able to relocate for work, they may be less likely on average to invest in human capital appropriate for jobs that require location flexibility.

There is a broad consensus that women's increased human capital acquisition has been a significant factor in improving women's access to jobs and in narrowing the gender pay gap (Olsen & Sexton, 1996). By 2010, however, in the aggregate, the traditional human capital variables explained little of the remaining gender wage gap in most occupations (Blau & Kahn, 2017). The only exception was highly skilled occupations, in which women's shorter hours and increased workforce interruptions were still important in explaining the gender wage gap (Blau & Kahn, 2017).

Components of Human Capital: Labor Force Participation and Education

As the entirety of an individual's human capital cannot be observed, researchers try to identify the relevant measurable components. Education and work experience are the main measurable components of human capital that have received the most focus in the literature (Mincer, 1974; Blau & Kahn, 2017). Understanding the measurable components of human capital is essential, as obtaining data on and controlling for the measurable components of human capital allows researchers to ensure that they are comparing men and women with similar levels of human capital.

Given that men and women may differ in their human capital attainment, and human capital affects individuals' career opportunities, it is necessary that a study of careers is able to account for potential gender differences in human capital. The mutual fund industry is an excellent context, as the availability of data on mutual fund managers allows me to control for indicators of human capital. Specifically, I am able to control for education, professional qualifications, and work experience, which increases my confidence that my results are not biased by gender differences in human capital.

Historically, women substantially lagged men in labor force participation and thus gained less cumulative work experience. A rapid gender convergence in labor force participation started post WWII, but slowed in the 1990s (Blau & Kahn, 2017). Over their lifecycles, women are still more likely to experience work force interruptions (Goldin, 2014) and still spend more time out of the labor force than men (Polachek, 1981; Gayle & Golan, 2011). Additionally, employed men and women still differ in hours worked; in 2018 employed men worked an average of 7.88 hours on a typical work day relative to 7.31 hours for women (Bureau of Labor Statistics, 2019). Limiting the comparison to those employed full-time, men worked an average of 8.23 hours and women worked an average of 7.93 hours (Bureau of Labor Statistics, 2019). This results in women accumulating less experience-based human capital than men on average (Polachek, 1981; Gayle & Golan, 2011). Further, the time out of the workforce also allows the value of human capital to depreciate (Polachek, 1981; Gayle & Golan, 2011). Gender differences in labor market experience still account for a portion of the gender wage gap, although the contribution of differences in labor market experience to the gender pay gap has decreased over time as the gender gap in labor force participation has also decreased (Blau & Kahn, 2017).

Although women still lag men in terms of experience, they now surpass men in terms of educational attainment. Women now graduate from high school, enroll in college, and graduate from college at higher rates than men (Summ et al., 2003; Peter & Horn, 2004; Bobbitt-Zeher, 2007). Women caught up to men in bachelor's degree obtainment around 1980 and have since surpassed men, earning 57% of bachelor's degrees and over half of graduate degrees in 2011 (Blau, Ferber, & Winkler, 2014). The increasing educational attainment of women has been a significant factor in the narrowing of the gender wage gap. By one estimate women's higher level of educational attainment has lowered the gender wage gap by 6% relative to what it would otherwise be (Blau & Khan, 2017). Additionally, changes not only in the levels of education attained by women but also in women's grades and women's fields of study relative to men have contributed to narrowing the gender gap in earnings (Loury, 1997; Bobbitt-Zeher, 2007). For example, changes in women's grades and fields of study in college were the largest factors in explaining the gender wage gap's 6 percentage-point decrease between 1979 and 1986 (Loury,

1997; Bobbitt-Zeher, 2007). While college majors have become less gender segregated over time, substantial gender differences in majors remain (Blau, Ferber, & Winkler, 2014), with progress in gender integration in majors having mostly plateaued since the 1980s (England & Li, 2006). In particular, women still lag behind men in STEM fields, especially in those fields that are math intensive (Ceci, Ginther, Kahn, & Williams, 2014).

Next, I consider to what extent supply-side factors may contribute to gender disparities in my study context. While I cannot fully rule out the possibility of male and female mutual fund managers making different choices in my study, a number of features of my context allow me to reduce the potential for results to be driven by gender disparities in choices. As I am studying men and women within the same occupation, my study examines how careers progress contingent on men and women making the same initial choice of occupation, rather than comparing men and women in different occupations. Additionally, as I have a wide variety of data on mutual fund managers – including their educational credentials, their employment histories, the types of funds that they manage, and several measures of investment styles – I am able to reduce concerns that results are driven by men and women making different choices about education and employment. Further, as I am able to control for performance, I am able to rule out the possibility that results are driven by women having worse performance due to choosing to exert less work effort. Still, while a number of features of my data allow me to minimize the influence of gender differences in choices, it is important to consider potential gender differences in mutual fund managers' choices as a possible influence on men's and women's outcomes.

Conclusion of Literature Review on Gender and Careers

As discussed above, women continue to have worse labor market outcomes than men, as they receive lower pay than men on average (Blau & Kahn, 2017) and hold jobs at lower levels of organizations than men on average (Cappelli & Hamori, 2004; Helfat, Harris, & Wolfson, 2006; Mitchell, 2014; Dezső, Ross, & Uribe, 2016; Bonet, Cappelli, & Hamori, 2020). While numerous mechanisms have been identified as contributing to the gender gap in outcomes – including demand-side outcomes such as discrimination and supply-side outcomes such as men and

women making different choices – there is no consensus around all of the factors that contribute to the persistent gender disparities in outcomes. Thus, I seek to advance our understanding by shedding more light on the factors that contribute to women's labor market disadvantage. As I will discuss in more detail, I am motivated to first identify a previously underexplored mechanism that may disadvantage women – gender disparities in the prices of employees' work. Second, I am motivated to bring in consideration of external mobility to build on prior studies of internal promotions to gain a clearer picture of whether there are gender disparities in advancement and whether any potential gender disparities differ between internal mobility and external mobility. Taken together, I aim to advance the conversation on gender and careers by providing new insights into the factors that may contribute to women's disadvantage in labor market outcomes.

Study Context – Mutual Fund Industry

My research on gender disparities in careers utilizes the mutual fund industry as a context, as I study the labor market outcomes of female and male mutual fund managers. In order to understand what constitutes career advancement in the mutual fund industry, it is necessary to understand how the mutual fund industry operates, the job responsibilities of mutual fund managers, and how the careers of mutual fund managers are structured. To this aim, I provide an overview of the mutual fund industry, discuss the features that make it an excellent context for my research, and discuss what we know so far about careers and advancement in the mutual fund industry.

A mutual fund is a pool of money from many investors that is invested in stocks, bonds, and/or other assets (Securities & Exchange Commission, 2010). The fund's total holdings are known as a portfolio, and each investor owns shares in the fund, which represent ownership of a portion of the portfolio. Mutual funds are open-ended, meaning that shares are bought and sold on continuous, on-demand availability at the fund's net asset value (the value of the fund's underlying assets minus liabilities). Most mutual funds are managed by professional SEC-registered managers. Over $16 trillion is invested in mutual funds globally, in more than 8,000 mutual funds with over 25,000 share classes (Investment Company Institute, 2017).

Mutual fund managers are responsible for managing the fund's portfolio by investing in stocks, bonds, and other assets in accordance with the fund's strategy. A career as a mutual fund manager is generally viewed as a desirable, high-paying career. While mutual fund firms do not typically disclose their managers' salaries, a 2001 survey from Russell Reynolds Associates found that mutual fund manager salaries were typically around $140,000 to $436,500 depending on the type of mutual fund provider (Russell Reynolds Associates, 2001). This is far above the $36,104 median earnings for full-time workers in the U.S. during the corresponding 2001 year (Census Bureau, 2019).

Mutual Fund Corporate Structure

Knowledge of the corporate structure of mutual funds informs my understanding of mutual funds' price-setting process; this knowledge is necessary for studying whether there are gender disparities in the prices charged for employees' work, as studied in Chapter 2. Additionally, knowledge of the corporate structure of mutual funds is necessary to understand the work that mutual fund managers do and how their employment is structured, so that I can carry out my research on whether there are gender disparities in mutual fund managers' careers in Chapter 3.

As discussed in Tufano and Sevick (1997), mutual fund corporate structure differs from that of the typical corporation, as mutual funds are legal entities that do not have employees. Mutual funds receive money from investors, who become shareholders in the mutual fund. A board of directors oversees the fund, and outsources the activities necessary to manage the fund to the mutual fund sponsor company. The mutual fund sponsor company is responsible for operating the mutual fund. This includes selecting employees who will carry out the work involved with operating the mutual fund and assigning them to roles, including as mutual fund managers, and for compensating these employees.

Mutual fund managers of actively managed mutual funds are the employees of the mutual fund sponsor company who are tasked with managing a mutual fund by selecting assets such as stocks and bonds in which the fund will invest, as detailed by the SEC (2017). Mutual fund managers seek to maximize returns for investors in accordance with the fund's investment

objective and risk tolerance. Actively managed mutual funds charge a fee for the mutual fund manager's stock selection work. These funds aim to outperform the market, although performance depends on the mutual fund manager's skill at asset selection. Note that the word "manager" in the mutual fund manager title refers to managing investment assets. It does not indicate responsibilities involving managing subordinate employees.

Mutual fund sponsor companies are also tasked with determining the fees that the mutual fund will charge to investors, subject to approval from the board of directors. One key type of fee that mutual funds charge is the management fee. The management fee is the revenue that the mutual fund sponsor company receives for providing mutual fund management services. It is used to cover the mutual fund's operating expenses, including compensating employees, and to make a profit. The management fee is generally set by the mutual fund sponsor company's upper management above the mutual fund manager subject to board approval, rather than by the mutual fund manager him/herself.

Thus, this leads to the summary of the context presented in Table 1.1. In my context, mutual fund managers are employees. Mutual fund managers work for the mutual fund sponsor company, which is the employer. Mutual fund managers are assigned to manage mutual funds. Mutual funds sponsor companies charge investors (who are the customers) a management fee, which covers the costs of the fund management services provided by the mutual fund manager. The management fee represents the price that the employer charges for the mutual fund manager's services. The management fees are generally set by mutual fund employers (upper management), subject to board approval (i.e., not by the mutual fund managers themselves).

This summary of the context is substantiated by interviews that I conducted in fall 2018 and winter 2019 with nine mutual fund managers, as well as with an academic expert on the mutual fund industry. To ensure that my findings would not be limited to a particular type of experience, I interviewed mutual fund managers who differed in their demographics as well as in the types of funds that they had experience managing. The mutual fund managers I interviewed included both male and female mutual fund managers. Collectively, their experiences included working at large established firms, working for smaller newer funds, and establishing their own

mutual funds. Interviews were approximately 20 to 45 minutes. Interview participants consisted of individuals who listed themselves as a mutual fund manager in the alumni directory of a top U.S. business school and/or on LinkedIn, and who responded affirmatively to my request to conduct an interview. Key areas of inquiry in the interview included how mutual fund fees are set for my study in Chapter 2 and how individuals' careers developed and progressed for my study in Chapter 3.

Attributes of Context

The mutual fund industry is an excellent context for my studies for a number of reasons. I identify the following attributes of the mutual fund industry that make it an appropriate setting: data on employees' jobs and the price of employees' work over time is available; there is an unbiased and comprehensive measure of performance; performance is very visible and individual; the organizational product is attributable to a particular person, and that particular person is visible to customers; and individual mutual funds are priced differently, so that the people can be viewed as the product. A current broad trend in the economy is an increase in jobs in which people are the product, which makes the mutual fund industry a particularly apt and timely context. I will discuss each feature of my setting below.

A key empirical justification of my context is that the data necessary for my studies are available. The mutual fund industry has an abundance of data on individual managers, the funds that they manage, and the firms for which they are employed. Due to SEC regulations, mutual funds are legally required to disclose data on performance, fees, and managers (Securities and Exchange Commission, 2004; Securities and Exchange Commission, 2014). The fact that disclosure is mandatory is a substantial advantage of the context, as it precludes concerns that firms that disclose are non-representative, which would potentially result in biased data.

To carry out my research, I am able to match the data on mutual fund managers to the funds that they manage and the mutual fund management companies that employ them. Data on the fees charged by funds under a given mutual fund manager's management then indicate the price charged for the mutual fund manager's services, necessary for my first study (Chapter 2).

As data indicate the dates for which a given mutual fund manager managed a given mutual fund, I am able to construct a time series of each mutual fund manager's history. By mapping mutual funds to the management companies that sponsor the mutual funds, I am able to determine the management company that employs the given mutual fund manager, and determine whether a move to a different mutual fund is an internal or external career move. This is for my second study (Chapter 3).

Another necessary feature of my context is that it has a measure of performance that is both unbiased and comprehensive, so that I can rule out the possibility that any gender disparity in management fees and/or in career outcomes are due to gender differences in performance. An unbiased measure of performance is one in which two individuals will have the same performance outcome if they simultaneously perform the same actions, regardless of gender and other ascriptive characteristics (Botelho & Abraham, 2017). The market return, the measure of mutual fund performance, is one such measure, as few processes are as unbiased as market performance (Botelho & Abraham, 2017). Further, the mutual fund industry is a setting with a comprehensive measure of performance, or a measure that captures the totality of relevant dimensions of performance. Mutual fund returns contingent on risk are a comprehensive measure of performance, as returns relevant to performance are generally the entirety of what mutual fund investors care about. In contrast, in many settings, there are numerous different dimensions to performance, not all of which can easily be quantified. In such cases it may be unclear whether the chosen metrics fully capture individuals' performance.

A further key attribute of the mutual fund industry as a context is that the organizational product of mutual funds is attributable to a particular person – the fund manager – and the fund manager is visible to customers. According to the SEC, mutual funds are required to disclose the names of their fund manager(s) in the fund's prospectus (2004). Mutual funds with single managers have been required to disclose the names of their managers since the Securities Act of 1933, the Securities Exchange Act of 1934, and the Investment Company Act of 1940. Mutual funds managed by a team of managers were not required to disclose the names of the managers on their team prior to 2004, although many voluntarily disclosed prior to 2004. In addition to the

legally required disclosures in the funds' prospectuses, it is common for the names of mutual fund managers to be listed on their fund's profiles on the mutual fund providers' websites. Additionally, mutual fund websites sometimes display the mutual fund managers' photos, making gender even more salient.

An additional attribute of the mutual fund industry is that performance is very visible and individual. In the mutual fund industry, the fund's returns are a clear measure of performance. SEC regulation requires mutual funds to disclose returns, using a standardized format, annually in the fund's prospectus (Securities and Exchange Commission, 2014). SEC regulation also requires a fund's prospectus to display data on total returns as well as a table showing how $10,000 invested one, three, five, and ten years ago would have performed. Additionally, investment research firms, such as Morningstar Inc., provide ratings based on a fund's performance history (Barron & Ni, 2015).

A variety of evidence supports the view that mutual funds' performance is visible and salient to investors, and that investors consider a fund's performance when making investment decisions. The Investment Company Institute's 2006 survey found that more than two-thirds of mutual fund investors considered mutual funds' performance history before selecting funds in which to invest (West & Leonard-Chambers, 2006). Prior research has found that performance history has a positive relationship with net asset inflows, as investors are more likely to invest in funds with better performance history (Del Guercio & Tkac, 2002).

In addition to being visible, a mutual fund's performance is attributable to the specific individual or several specific individuals who manage the fund: mutual funds are managed either by an individual or by a (generally small) team of managers. Figure 1.1 shows the proportion of individually managed and team managed mutual funds over time. Notably, the proportion of mutual funds that are individually managed has decreased over time, as the proportion that are team managed has increased.

Careers of Mutual Fund Managers

In order to use the mutual fund industry as a context in which to study gender disparities in careers, it is necessary to understand how careers develop and what constitutes advancement in the mutual fund industry. I review the literature on mutual fund managers' careers in order to ascertain how to measure mutual fund managers' career advancement. Additionally, reviewing the literature on mutual fund managers' careers allows me to determine what factors may affect mutual fund managers' fees as studied in Chapter 2 and career outcomes as studied in Chapter 3, so that I can control for factors other than gender that may affect the outcome variables in my studies.

The literature on the careers of mutual fund managers indicates that the performance of mutual fund managers affects mutual fund managers' career outcomes, with better performers more likely to be promoted (Hu, Hall, & Harvey, 2000; Evans, 2009) and worse performers more likely to be demoted (Hu, Hall, & Harvey, 2000; Evans, 2009) or terminated (Khorana, 1996; Hu, Hall, & Harvey, 2000; Evans, 2009). Mutual fund employers have an incentive to replace poor-performing managers, as they are associated with lower net asset inflows into the fund. However, performance is not all that matters, as very recent research has also indicated that gender affects mutual fund managers' career outcomes, with female mutual fund managers more likely to exit the industry and less likely to be promoted than otherwise-similar male mutual fund managers (Barber, Scherbina, & Schlusche, 2017).

A relationship between mutual fund performance and manager replacement was first established by Khorana (1996), who found that mutual fund managers of poorly performing funds were more likely to be replaced than managers of better-performing funds. Khorana's subsequent research (2001) found net inflows into mutual funds significantly decreased before poorly performing managers were replaced. Given that mutual fund employers want to increase their assets under management, this indicates that mutual fund employers would be incentivized to replace poorly performing managers. Khorana (2001) also found that mutual fund performance increased after poor performers were replaced, and that performance decreased after overperformers were replaced. Chevalier and Ellison (1999) found that age moderates the

relationship between mutual fund performance and career outcomes, with termination more likely to follow poor performance for younger managers than for older managers.

While earlier research had focused on studying mutual fund manager termination, Hu, Hall, and Harvey's (2000) research was notable for expanding the study of mutual fund managers' careers to include consideration of promotions and demotions and demonstrating that promotions and demotions could be measured in a standardized way across different mutual fund management companies. They found further evidence that performance matters for mutual fund managers' career outcomes, finding that mutual fund managers with worse performance were more likely to be demoted or terminated and less likely to be promoted. Building on this research, Evans (2009) found that higher risk-adjusted returns were associated with promotions and lower risk-adjusted returns with demotions, but that total returns were unrelated to either outcome.

While the aforementioned research demonstrates that mutual fund managers' performance affects their career outcomes, recent research indicates that – in addition to performance – mutual fund managers' gender also matters. Possible gender bias in investor (customer) preferences and in career outcomes involving mutual fund managers has only been studied very recently. Barber, Scherbina, and Schlusche (2017) found that female mutual fund managers have worse career outcomes than otherwise-similar male mutual fund managers, as women were less likely to get promoted and more likely to exit the mutual fund industry than men were. Niessen-Ruenzi and Ruenzi (2019) found that customers may be biased against female mutual fund managers, finding that investors invest less in female-managed mutual funds than male-managed mutual funds, despite no gender difference in average performance.

Mutual Fund Managers and Fund Performance

As I will examine gender disparities in the careers of mutual fund managers, it is important to understand whether the skill of the particular mutual fund manager affects fund performance. If there is a relationship between mutual fund managers' past performance and future performance, then it may be rational for customers to invest and for employers to promote

on the basis of past performance. Recent research shows that there is some persistence of

mutual fund manager performance, although the persistence in performance is not huge.

A number of researchers have found evidence that mutual fund managers have skill and

that the particular mutual fund manager in charge of a fund matters. Grinblatt and Titman (1992)

found persistent differences in fund performance over time, which is consistent with mutual fund

managers' ability to earn abnormal returns. Bollen and Busse (2001) used daily tests rather than

the monthly tests that were used in prior studies to test mutual fund managers' timing

ability. They found that when daily tests are used, mutual fund managers may possess greater

ability to time the market than prior research using monthly tests had found. Berk and Green

(2004) derived a model that is consistent with high average skill levels and considerable

heterogeneity in skill levels across managers. Baker et al. (2010) found that the recent buys of

mutual funds outperform the recent sells of mutual funds around the next earnings

announcement, which explains a large portion of mutual funds' abnormal returns. They

concluded that mutual fund managers are skilled at forecasting earnings-related fundamentals.

Additionally, several studies found evidence that mutual fund managers are skilled at stock

selection, but not at timing the market (Chang & Lewellen, 1984; Chen, Jegadeesh, & Wermers,

2000).

Other research found evidence that – while some mutual fund managers are skilled –

skilled managers are in the minority. One study using a bootstrap technique concluded that only

a sizable minority of mutual fund managers were skilled enough at selecting stocks to more than

cover their management costs (Kosowski et al., 2006). A study of UK equity mutual funds found

that a small number of top-performing mutual fund managers have stock-picking ability, and that

most poor performing managers have "bad skill" rather than bad luck (Cuthbertson, Nitzsche, &

O'Sullivan, 2008). They found that performance is persistent for poor-performing funds, but not

for top-performing funds. Another study found that stocks that mutual funds buy have higher

returns than stocks that mutual funds sell, and that growth-oriented funds are better at stock

selection than income-oriented funds (Chen, Jegadeesh, & Wermers, 2000). However, evidence

that funds with better past performance have better stock-selection skills is weak. Another study

classified funds as unskilled, zero-alpha, or skilled, and found that net of expenses, 75% of funds are zero-alpha (Barras, Scaillet, & Wermers, 2010).

Overview of Two Studies and Contributions

In an effort to advance our understanding of gender and careers, I perform two studies examining potential gender disparities in the mutual fund industry.

In my first study (Chapter 2), I examine whether gender affects the prices that employers charge for work performed by their female and male employees. Gender disparities in the prices charged for employees' work are important, because the revenue that an employee generates directly affects how much the employee contributes to the employer's bottom line. If female employees' work is underpriced on average, they may be viewed as contributing less to the firm's bottom line. Thus, I examine gender disparities in how employees' work is priced, as a previously underexplored mechanism that may contribute to gender disparities in pay and other workplace outcomes.

My first study posits that the same basic factors that affect gender disparities in pay and other career outcomes also affect the prices charged for employees' work. Taken together, prior research that women possess lower status than men (Broverman et al., 1972; Ridgeway 1997; Ridgeway & England, 2007; Ridgeway, 2011) and that the characteristics of workers affect the perceived value of work (England, 1992; Cejka & Eagly, 1999) lead to the conclusion that work performed by women is perceived as less valuable than equal work performed by men. I hypothesize that because work performed by women is viewed as less valuable than work performed by men, employers will charge lower prices to customers for work performed by female employees than for equivalent work performed by male employees. My results indicate that while there are no gender differences in prices when men and women are first hired into a position, the prices that employers charge for female employees' work decrease over the course of employees' tenure relative to the prices employers charge for the work of male employees with equal performance and tenure.

In my second study (Chapter 3), I examine the relationship between gender and career advancement. Prior research on advancement has primarily focused on gender disparities in promotions within an employee's current employer (e.g., DiPrete & Soule, 1988; Spilerman & Petersen, 1999; Ginther & Hayes, 2003; Petersen & Saporta, 2004; Ransom & Oaxaca, 2005; Blau & Devaro, 2007; Smith, Smith, & Verner, 2013). As today employees' careers often involve moves across organizations rather than unfolding within a single employer (Cappelli, 1999; Farber, 2008; Cappelli, 2019), limiting studies of advancement to within-organization advancement does not provide a full picture of individuals' careers. I expand the conversation beyond just internal advancement by also including advancement via external mobility in my analysis. Specifically, I examine whether gender disparities differ depending whether employees are advancing within their current employer or advancing by moving to a new employer.

My second study considers that gender stereotypes lead to discrimination harming women's advancement, and hypothesizes that women's disadvantage is greater in the case of external mobility, when there is less individuating information to potentially reduce stereotypes. However, diversity pressures may also have a counterbalancing effect on gender disparities, if employers face pressure to hire women into visible positions to demonstrate a commitment to gender equity. Counter to expectations, I fail to find aggregate gender disparities for advancement through internal mobility as well as for advancement through external mobility. I do, however, find gender differences in the relationship between performance and advancement through external mobility.

Taken together, my studies contribute to the literature on gender and careers first by examining prices as a potential source of women's disadvantage, and then by examining whether there are gender disparities in both internal and external advancement in my context. These studies also have implications for practitioners such as managers and human resource professionals interested in better understanding whether their workplace is providing equitable opportunities to women and men.

CHAPTER 2: GENDER DISPARITIES IN THE PRICES THAT EMPLOYERS CHARGE FOR WORK PERFORMED BY THEIR EMPLOYEES

Introduction

As discussed above, women still fare worse than men on many workplace outcomes. Women still hold lower-paying jobs than men on average (Blau & Kahn, 2017), and are still less likely than men to work in the upper levels of organizations (Oakley, 2000; Heilman, 2001; Bertrand & Hallock, 2001; Helfat, Harris, & Wolfson, 2006; Haveman & Beresford, 2011; Hoobler, Lemmon, & Wayne, 2011).

While numerous explanations for the gender gap in pay and other workplace outcomes have been put forth, a common theme across a number of explanations has been that work performed by women is valued less than work performed by men due to women's lower social status. Due to status beliefs around gender, men are viewed as more competent and higher-status than women (Broverman et al., 1972; Ridgeway 1997; Ridgeway & England, 2007; Ridgeway, 2011). Workers' status is relevant because research has found that the perceived value of work reflects not only the characteristics of the work itself, but also the characteristics of the workers (England, 1992; Cejka & Eagly, 1999). Thus, jobs that are predominately filled by women are viewed as less valuable due to the lower status of women, and are paid less accordingly.

Although there has been much research on the gender pay gap as well as research on other workplace outcomes, there has been less exploration of whether an employee's gender also affects the prices that employers charge for work performed by the given employee. In today's increasingly knowledge-based economy, employers often have to determine how much to charge customers for work performed by their employees. The prices that employers charge customers for individuals' work reflects characteristics of the work such as difficulty and complexity as well as characteristics of the employees performing the work such as experience and skill. If employers view work performed by women as less valuable than work performed by men, then employers would charge customers less for work performed by female employees than for equivalent work performed by equally skilled male employees.

Additionally, while prior research on gender disparities in pay has primarily focused on the relationship between workers and employers, when considering prices customers also play a role. While workers perform work for employers in exchange for wages, the work ultimately flows from employers to customers in exchange for prices.

Thus, the beliefs and actions of both customers and employers may contribute to gender disparities in prices. Male-favoring status beliefs may cause customers to have lower willingness-to-pay for work performed by women. Employers may themselves believe that work performed by female employees is less valuable than equal work performed by male employees, and they may thus set lower prices for the work. Additionally, even if employers themselves can accurately perceive the value of work, they may still charge lower prices for work performed by women if they believe that customers are biased and have lower willingness-to-pay for work performed by women.

Determining whether employers charge customers less for work performed by women than for equivalent work performed by men is significant for a number of reasons. First, in some jobs, employees' salaries as well as performance evaluations and promotions are affected by the revenue that the employee generates for the company. When an employer earns revenue by charging for employees' services, the value created for the employer is a direct product of how much the employer charges for the employees' work. Under competitive economic models, when a worker produces more value for the firm, the employer has an incentive to provide the worker with higher pay in order to retain the worker. Thus, the amount that the employer charges for the employee's services sets an upper bound on pay. If employers charge more for male employees' services, then the upper bound for male employees' pay is higher. If female employees generate less revenue due to employers underpricing their services, then they may receive lower performance evaluations, be less likely to be promoted, and receive lower pay. Therefore, gender disparities in the prices of individuals' services may contribute to the persistent gender pay gap. Examining a previously underexplored mechanism that may contribute to the gender pay gap would thus be of interest to the academic literature.

Second, studying whether prices reflect gender-bias helps us learn more about who gains and who loses from discrimination. As salary is an expense for firms, gender bias that causes employers to pay women lower salaries may be in line with firms' profit maximization when firms can get away with it. If, however, employers' gender biases also affect how employers price their employees' services, then employers may be reducing their own revenues and harming firms' profitability. By underpricing female employees' work, firms may be leaving money on the table. Alternatively, if employers charge less for female employees' work than for male employees' work because of customers' lower willingness-to-pay for women's work, then the ultimate locus of discrimination may be with the customers. Thus, customers purchasing work performed by female employees, who are then able to pay less than if the work had been performed by a man, may be the ones who benefit from gender bias in prices, rather than employers.

I study the phenomenon of whether gender affects how employers price employees' services by examining prices in the mutual fund industry, which is an excellent setting for both theoretical and empirical reasons. It is a setting in which performance is very visible and individual; the organizational product is attributable to a particular person, and that particular person is visible to customers; and individual mutual fund managers are priced differently, so that the people can be viewed as the product. Additionally, the mutual fund industry is a choice setting due to the ability to control for individuals' performance, as mutual fund returns are an objective measure of performance, free from bias from employees' ascriptive characteristics.

A strength of my methodology is that I am able to examine funds that have had both male and female managers. By comparing men and women who have managed the same fund, I have an empirical method that uses fund fixed effects to implicitly control for characteristics of funds that are difficult to observe and/or measure. Additionally, as I have a measure of performance – mutual fund returns contingent on risk – that is both comprehensive and objective, I am able to rule out the possibility that any gender differences in the price of individuals' services are due to gender differences in performance.

My research contributes to the literatures on gender and careers, prices and status, and devaluation theory. I join the conversation on gender and careers by shedding light on a mechanism that may contribute to the gender pay gap. I engage the literature on prices and status by examining how status differences based on employees' ascriptive characteristics may affect employers' pricing decisions. Additionally, I contribute to the literature on devaluation by examining an underexplored implication of devaluation theory, and by proposing a method of testing devaluation theory that overcomes some limitations of prior empirical research. Finally, my research has implications for firm performance, as underpricing work due to the gender of the employee who performed it may result in the firm generating lower revenues than it otherwise would.

Theoretical Development

Prior literature has documented the existence of male-favoring status beliefs (Broverman et al., 1972; Ridgeway 1997; Ridgeway & England, 2007; Ridgeway, 2011). Additionally, research has found that the ascriptive characteristics of workers affect the perceived value of work (England, 1992; Cejka & Eagly, 1999). Taken together, these two sets of findings lead to the conclusion that work performed by women is perceived as less valuable than equivalent work performed by men. The body of literature on devaluation theory has studied the implications of male-favoring status beliefs for pay. This body of research has argued that because women's work is perceived as less valuable, work predominately performed by women tends to pay less than work predominately performed by men (England, 1992; Kilbourne et al., 1994; Petersen & Morgan, 1995; Tomaskovic-Devey, 1995; Huffman, Velasco, & Bielby, 1996; Cohen & Huffman, 2003; Levanon, England, & Allison, 2009). However, there has been less exploration of how status affects the prices of individuals' work. I argue that if status beliefs cause work performed by women to be viewed as less valuable than work performed by men, there will also be implications for prices. Specifically, employers will charge lower prices for work performed by female employees than for equal work performed by male employees.

I first provide a brief overview of gender differences in pay; then I provide a discussion of devaluation theory, one of the key theoretical explanations for gender disparities in pay which argues that the status of workers affects the value of work; and then I discuss how devaluation theory has been tested in the context of pay. Subsequently I expand upon the prior body of literature by arguing that status beliefs around gender also have implications for gender disparities in the prices that employers charge customers for work performed by their male and female employees.

Devaluation Theory

While there are a wide range of explanations for why women's jobs pay less than men's jobs, a common theme across explanations has been that work performed by women is valued less than work performed by men due to women's lower status. One body of research examining how status affects the relationship between the gender composition of workers and pay is devaluation theory. The theory of devaluation posits that occupations with a greater proportion of women are valued less than otherwise-equivalent occupations with a greater proportion of men, *because* work performed by women is valued less (England, 1992). The theory of devaluation requires two key factors to hold (Levanon, England, & Allison, 2009). First, the theory of devaluation requires the existence of gendered cultural beliefs in which women are portrayed as possessing lower status and less competence than men (Ridgeway, 1997; Ridgeway & England, 2007). Second, the perceived value of work across occupations must be affected by the characteristics of the workers in that occupation (Cejka & Eagly, 1999).

Regarding the first factor necessary for the devaluation theory to hold, due to gendered cultural beliefs, women are perceived as lower status and less competent than men (Eagly, 1987; Ridgeway, 1997). Status value beliefs are beliefs in which people possess different states of a characteristic (e.g., male and female are different states of the characteristic of gender) (Ridgeway, 1991). Different levels of social worth and competence are then assigned to the different states (Berger, Cohen, & Zelditch Jr., 1972; Berger, 1977; Ridgeway, 1997; Ridgeway & Correll, 2006). Status beliefs around gender cause people to expect women to have worse

performance than men (Ridgeway, 2011). Additionally, these status beliefs bias people's capacity to infer ability from performance (Ridgeway, 2011). This means that women must achieve a higher level of performance in order to be perceived as having as high ability as men (Ridgeway, 2011). It is notable that for status value beliefs to exist, beliefs around which category is higher in status must be widely shared across people in both categories (Ridgeway & Correll, 2006). Both men and women perceive men as the higher-status category, possessing higher levels of social worth and competence (Ridgeway, & Correll, 2006). (This conflicts with social identity theory's in-group bias, in which people are biased in favor of their own category [Tajfel & Turner, 1979]).

Second, in addition to the existence of male-advantaging status beliefs around gender, for devaluation theory to hold, the characteristics of workers carrying out work must affect the perceived value of the work. Research indicates that people view masculine characteristics as more essential for success in male-dominated occupations, and these occupations have higher earnings (Cejka & Eagly, 1999). A variety of research also indicates that wage penalties are experienced by occupations requiring characteristics viewed as feminine (e.g., nurturance) (England, 1992; England, 1994; Kilbourne et al., 1994). Lab research has also found that experimental participants assign lower salaries to jobs situated in a traditionally feminine domain relative to jobs situated in a traditionally masculine domain, even when the actual duties and responsibilities are the same (Alksnis, Desmarais, & Curtis, 2008).

Empirical Research on Wages and Salaries Testing Devaluation Theory

A variety of types of studies have been used to empirically test devaluation theory. While devaluation theory is not a theory that is specific to occupations, gender segregation across occupations has been one context conducive to empirically testing devaluation theory. Originally, researchers studied the potential devaluation of women's work by comparing pay in occupations dominated by women to pay in occupations dominated by men, after accounting for other factors that affect pay such as education and skill. A number of studies found that occupations that employ a greater proportion of women pay less on average than occupations that employ a

greater proportion of men, even after controlling for education and skill, consistent with the theory of devaluation (England, 1992; Kilbourne et al., 1994; Cohen & Huffman, 2003).

In addition to examining devaluation at the occupational level, some studies have examined devaluation of job titles within organizations. A number of studies have found that gender composition at the job level is associated with greater devaluation of women's work than gender composition at the occupation level (Petersen & Morgan, 1995; Tomaskovic-Devey, 1995; Huffman, Velasco, & Bielby, 1996).

A more recent approach to studying devaluation has been to examine the relationship between changes in the gender composition of employees in an occupation and changes in occupational pay over time. Several studies found that increases in the proportion of women in an occupation are associated with pay in the occupation decreasing – consistent with the theory of devaluation (Levanon, England, & Allison, 2009).

Implications for Prices

The aforementioned prior research has focused on the wages that employers have paid employees. Employers face the task not only of deciding how much to pay employees, but also of deciding how much to charge for employees' work. While the prior research has examined how workers' gender affects wages, less is known about how workers' gender affects how employers charge for their work. I contribute to the literature by exploring the question of how gender affects employers' decisions of how much to charge for employees' work.

Drawing on the research on male-favoring status beliefs combined with the research that workers' identities affect the perceived value of work, I hypothesize that employers perceive work performed by women as less valuable than equivalent work performed by men. Just as research on salary argues that employees' identities shape what they are paid, I suggest that employees' identities may also shape how much employers charge for their work. Thus, employers will charge customers lower prices for work performed by women than for work performed by men. During employees' tenure in a specific job, this would result in employers raising the prices charged for work performed by men relative to the prices charged for work performed by women

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as employees gain experience (or equivalently lowering the relative price of work performed by women as employees gain experience).

As discussed earlier, the perceived lower status of women would reduce relative prices for work performed by women. There is also a literature that associates status and prices at the organizational level, as sociological research has argued that one particular factor that affects pricing differences across organizations is status. Firms that produce products may differ in their levels of status, which may then affect the prices that they charge for their products (Podolny, 2005; Beckert, 2011). Different assessments of the quality of different producers' products cause status differences among producers (Podolny, 1993, 2005; Beckert, 2011). However, the perception of producers' quality has been shown to have only a "loose linkage" with actual quality (Podolny, 1993). Thus, actual quality differences may not always explain the greater rewards received by higher-status producers (Podolny, 1993; Beckert, 2011). Other research has found that producers' status offers customers symbolic value for two reasons (Uzzi & Lancaster, 2004). First, associating with a high-status producer may improve the image of customers. Second, through the logic of appropriateness, selecting a higher-status producer may improve the image of the decision makers tasked with selecting the producer and protect them from criticism. Thus, because customers value work from higher-status producers more, these higher-status producers are able to charge higher prices.

More recently, research has examined how status can transfer from individual producers of products to the products themselves, known as status belief transfer (Tak, Correll, & Soule, 2019). Products made by female producers were found to be disadvantaged in male-typed markets, although no such disadvantage was found for products made by male producers in female-typed markets. While this research analyzed how lab participants acting as customers evaluated products, it did not examine whether status affects how employers set prices for their employees' work, which I examine in this paper.

When employers set prices to charge customers, there are two channels by which status may affect prices. One way is through employers' own beliefs about the value of men's and women's work, if employers themselves view work performed by women as of lower quality than

equal-quality work performed by men. A second way is if employers believe that customers will devalue women's work, so employers therefore set lower prices for women's work in anticipation of customers' biased preferences. These two channels are not mutually exclusive, as employers may themselves devalue women's work while also believing that customers will devalue women's work.

Recent research has found that female-managed mutual funds with an individual mutual fund manager received lower net asset inflows than male-managed mutual funds with an individual fund manager, despite having equal performance to male-managed mutual funds (Niessen-Ruenzi & Ruenzi, 2019). Asset flows represent investors' (customers') decision to invest in a particular fund, purchasing the services of the mutual fund manager. Finding that investors invest less in female-managed mutual funds than in equally performing otherwise-equivalent male-managed mutual funds indicates that customers have gender bias against female mutual fund managers.

The finding that customers invest less in female-managed mutual funds is consistent with other research on customer gender bias. Customers have demonstrated gender bias against female service employees, as measured through customer satisfaction evaluations (Hekman et al., 2010). When customers interacted with female (and minority) employees, they rated both the individual employee and the broader organization lower than when they interacted with male (and white) employees. A variety of research has found evidence that students, who are customers in the context of higher education, are biased against female instructors (MacNell, Discoll, & Hunt, 2015; Boring, Ottoboni, & Stark, 2016; Mengel, Sauermann, & Zölitz, 2017). The bias is particularly strong for junior-level women, a time during which individuals' performance may have a particularly substantial effect on subsequent career outcomes (Mengel, Sauermann, & Zölitz, 2017).

For customer bias to affect how employers price their employees' work, it is necessary for employers to believe that customers are biased and to make pricing decisions in anticipation of customer bias. Beyond research indicating that customers are biased, there is also research indicating that individuals may make decisions based on anticipated preferences of customers

and clients. Research on a staffing firm found that first screeners may make decisions that create gender sorting in anticipation of clients' preferences (Fernandez-Mateo & King, 2011). If employers anticipate that customers and clients devalue women's work, employers may assume that customers would have a lower willingness-to-pay for work performed by women than for work performed by men – even if the employers themselves believe the work to be of equal quality. This would result in employers charging customers lower prices for work performed by women than for equivalent work performed by men.

To summarize, given that the aforementioned research has shown that status affects prices at the organizational level (Podolny, 2005; Beckert, 2011) and that status can transfer from individual producers to products (Tak, Correll, & Soule, 2019), it is plausible that status also affects prices at the level of individual employees. While the aforementioned sociological research on pricing examines how status differences affect producer firms, I posit that status not only affects prices charged at the firm level, but also prices charged for individual employees' services. As prices reflect not only economic forces of supply and demand but also sociological factors that influence perceptions of quality and willingness to pay (Beckert, 2011), then employers may set different prices for the same work performed by employees possessing different levels of social status. As discussed earlier, gendered cultural beliefs exist such that men possess higher social status than women and are expected to have better performance (Ridgeway, 2011). Therefore, as workers' identities affect the perceived value of work (England, 1992; Cejka & Eagly, 1999), then employers would charge lower prices for work performed by women than for equivalent work performed by men.

The beliefs and actions of employers as well as the beliefs and actions of customers may contribute to gender disparities in prices. Due to status beliefs around gender, customers' willingness-to-pay may be affected by the gender of the employees who performed the work. Employers charging less for work performed by women could be due to employers themselves viewing women's work as less valuable than equivalent work performed by men. Alternatively, employers may anticipate that customers have gender bias and are less willing to pay for women's work, and therefore may charge lower prices for women's work due to anticipated

customer bias. Both mechanisms would produce the same empirical result, that of employers charging lower prices for work performed by women than for equivalent work performed by men. This is the central hypothesis that I explore in this paper:

Hypothesis: Employers will charge lower prices for work performed by women relative to that of equivalent work performed by men

Study Context

Testing whether employers charge customers lower prices for services performed by female employees than for services performed by male employees requires having data on the price that customers are charged for work performed by similarly qualified male and female employees who perform the same work at the same level of performance. I use male and female mutual fund managers as a group of employees who meet these criteria. An overview of the mutual fund industry was provided in Chapter 1.

As discussed in Chapter 1, I conducted interviews with mutual fund managers to develop my understanding of the context. A key point of inquiry in the interviews was how mutual fund fees are set, and who within the mutual fund is responsible for setting the fees. Interview participants generally stated that the fees were set by upper management above the mutual fund manager subject to board approval, not by the mutual fund manager him/herself. Interviewees stated that mutual fund managers did not negotiate for higher fees with upper management, precluding the possibility that gender disparities in fees reflect gender differences in negotiation behavior. Mutual fund managers generally believed the mutual fund industry to be price-sensitive, and stated that over time the industry has experienced a decrease in fees due to increased competition. They stated that mutual funds had to set fees that were competitive with other similar funds in the market, as otherwise they would experience net asset outflows. Thus, mutual fund managers did not experience an incentive to negotiate with upper management for higher management fees. This point is significant in interpreting my quantitative results. As upper management (above the mutual fund manager) generally set the management fees, any

gender disparities in fees after controlling for factors other than gender that may affect fees can be viewed as gender-based devaluation stemming from upper management.

Methodology

Next, I discuss how I will use the context of the mutual fund industry to test whether gender affects the prices that employers charge customers for their employees' work.

If employers view work performed by female employees as less valuable, then they would charge lower management fees for female managed funds relative to equally performing male managed funds. There are two ways in which this could occur, as gender disparities can either occur at the point of hiring or emerge gradually over one's tenure in a job. One possibility is that employers hire female mutual fund managers to manage funds that charge lower fees on average than the funds which they hire men to manage. Another possibility is that employers lower the fees for female-managed mutual funds relative to those of equivalent male-managed mutual funds after men and women are hired to assume management of a mutual fund.

To test the possibility that employers lower fees for female-managed mutual funds relative to male-managed mutual funds over the course of a mutual fund manager's tenure in a position, it is important to understand the timing at which mutual fund fees are changed. Mutual funds do not update their fees on a continual basis, but rather consider updating their fees periodically. Most commonly, mutual funds tend to update their fees about once a year, although this varies from fund to fund.

When a new mutual fund manager is hired to manage a mutual fund, the management fee reflects the fee that was established prior to the new mutual fund manager assuming management of the mutual fund. If employers devalue female mutual fund managers' work, they would view the fund management services as less valuable when performed by a female mutual fund manager than when performed by a male mutual fund manager. Thus, when fees are considered for a change, mutual fund employers would lower the management fees of female managed mutual funds relative to the fees of equivalent male managed mutual funds subsequent to a female mutual fund manager assuming management of a fund. As fees are anchored on the

fee that was in place prior to the new manager assuming management and changes are typically small, changes to management fees may occur gradually over time in a series of small changes rather than in one singular large change.

Data

Data are from Morningstar ("according to Morningstar Direct") and the Center for Research in Security Prices (CRSP), and cover 2000 through 2014. Figure 1.2 provides a summary of the data. Data on mutual fund managers and mutual funds (excluding fee data) are taken from Morningstar. (Note that data on mutual fund assets is available at the share-class level, and I aggregate this data to the fund level.) CRSP has longitudinal data on mutual fund fees, which I use to measure the price of mutual fund managers' services.

Unit of Analysis

The unit of analysis is the manager-fund-quarter. For my main analysis on individually managed funds, there is one manager associated with each fund at each unit of time. For my expanded analysis which includes both individually managed and team managed funds, each manager has a separate observation during each unit of time for which the manager is at the fund.

Variables

Key variables in my regression analysis include the following:

Dependent variable: *Management Fee* is the price that investors are charged for mutual fund managers' services; it is measured as a percent of the value of assets under management, or total assets invested in the fund. From 2000 through 2014, at the fund-quarter-level the median management fee is 0.62%, the mean management fee is 0.64%, and the standard deviation is 0.41%. In addition, 10% of funds have management fees of 0.21% or below, while 10% have management fees of 1.03% or above. Management fee data is from CRSP.

Independent variables of interest: *Female* indicates the mutual fund managers' gender; it is a binary variable equal to one if the mutual fund manager is female and zero if the mutual fund manager is male. Gender data is from Morningstar.

As shown below, the majority of mutual fund managers are male. Figure 2.1 shows the proportion of mutual fund managers by gender over time. Notably, the proportion of female mutual fund managers increased sharply throughout the 1980s, peaked in the early 1990s, and has been decreasing since.

Tenure at Fund is the mutual fund manager's tenure at the given mutual fund; it is measured in number of quarters that the mutual fund manager has worked at the mutual fund, starting with zero in the quarter during which the person was hired as fund manager. Tenure can also be thought of as fund-specific experience (i.e., the experience at a specific fund), as opposed to total career experience. In my expanded analysis that includes team managed funds, mutual fund managers at team managed funds may assume their positions at different points in time. Thus, observations representing different mutual fund managers at the same team managed funds during the same point in time may have different values for tenure. Tenure is calculated based on data from Morningstar.

Manager Characteristics: *PhD Holder* is a binary variable equal to one if the mutual fund manager has a PhD degree, and zero otherwise. *MBA Holder* is a binary variable equal to one if the mutual fund manager has an MBA degree, and zero otherwise. *CFA Charterholder* is a binary variable equal to one if the mutual fund manager is a CFA charterholder, and zero otherwise. *Manager Age* is the mutual fund manager's age, measured in years. Manager age is calculated based on the mutual fund manager's birthdate. If the manager's birthdate is unavailable, age is calculated by assuming the mutual fund manager earned his or her undergraduate degree at age 22 (consistent with Chevalier and Ellison (1999) and Barber, Scherbina, and Schlusche (2017)). All manager characteristics variables are from Morningstar.

Fund Characteristics: *Number of Managers* is the number of managers managing the fund in the given quarter, and is equal to one for an individually managed fund and two or greater for a team managed fund. At the fund-quarter level, 35% of funds are individually managed, and 65%

of funds are team managed. Among team managed funds, the median team size is 3 managers, and the mean team size is 3.5 managers, with a standard deviation of 2.6 managers. In all, 42% of teams consist of a pair of managers, while the largest 10% of teams consist of 6 or more managers.

Fund Size is the size of the fund, and is equal to the assets invested in the fund in millions of dollars. Funds in my sample have a median of $171 million in assets and a mean of $1.05 billion in assets, with a standard deviation of $4.62 billion. Fund age is the number of years since the fund was established. Socially Responsible Fund is an indicator equal to one if the fund is classified as socially responsible, and zero otherwise. Fund of Funds is an indicator equal to one if the fund is classified as a fund of funds, and zero otherwise. (A fund of funds is a fund that invests in other funds rather than in individual securities such as individual stocks and bonds.) Objective is the mutual fund's investment objective category. It is a categorical variable with 38 categories. (See Appendix Table A.1 for objective categories.) Investment Turnover is a measure indicating the percentage of the fund's assets that have been replaced (have "turned over") during a one-year period; it is measured as a percentage of total assets in the fund. Funds have lower investment turnover if they buy and hold assets for long periods of time, and higher investment turnover if they trade more frequently. Funds in my sample have a median investment turnover of 54% (indicating that 54% of assets are replaced in a year), and a mean investment turnover of 93.9%, with a standard deviation of 223%. The bottom 5% of funds have investment turnover of 12% or below, while the top 5% of funds have investment turnover of 282% or above.

All fund characteristics variables are from Morningstar.

Management Company Characteristics: *Management Company Number of Funds* is the number of funds offered by the management company that offers the given mutual fund. The number of funds offered by a management company varies greatly, with some offering a single fund and others offering hundreds of funds. Management companies in my data offer a median of 4 funds and a mean of 35 funds, with a standard deviation of 89 funds. In total, 25% of

management companies offer a single fund, while the top 10% of management companies offer

92 or more funds, and the top 5% of management companies offer 209 or more funds.

Fund performance: *Risk-Adjusted Returns Rank Scaled* is a measure of performance that

assesses a fund's returns relative to the fund's level of risk and relative to other funds in the same

investment objective category. This measure of performance incorporates the risk-return trade-

off. The risk-return tradeoff in finance is the concept that investments that are riskier have the

potential to earn higher returns, but also have the potential to have higher losses, than

investments that are less risky (Ghysels, Santa-Clara, & Valkanov, 2005). When evaluating

mutual funds and other investments, it is therefore appropriate to evaluate returns that are

adjusted for risk rather than to evaluate absolute returns. First, I calculate risk-adjusted returns

by using the capital asset pricing model (CAPM) to risk-adjust the returns. Betas, or systematic

risk, are calculated using a 12-month window. In calculating betas, I use the following market

indices: CRSP Equities Market Index Value-Weighted Return for Equity Funds, Bloomberg

Barclays US Corporate Total Return Value Unhedged USD for corporate bond funds, and

Bloomberg Barclays USD Treasury Total Return Value Unhedged USD for government bond

funds. I use the estimated betas to calculate alphas, as a measure of risk-adjusted returns.

Next, following the approach of Barber, Scherbina, and Schlusche (2017), risk-adjusted returns

are ranked and scaled from one to ten within an objective category to adjust for differences

across objective categories. Returns data used in calculations are from Morningstar; market

indices data are from CRSP and Bloomberg, L.P.

　　　　Net Asset Inflows is a measure of the assets invested into the fund net of the assets

withdrawn from the fund, as a percentage of the fund's total assets. Specifically, net asset

inflows for fund *i* during time *t* are given by:

$$\text{Net asset Inflows}_{i,t} = \frac{\text{total net assets}_{i,\,t} - \text{total net assets}_{i,t\text{-}1} * (1 + \text{return}_{i,t})}{\text{total net assets}_{i,t\text{-}1}}$$

Funds in my sample have a median quarterly net asset inflow of 0%, and a mean quarterly net

asset inflow of 4.8%, with a standard deviation of 21%. *Objective Net Asset Inflows* is a measure

of the net asset inflows, as defined above, into the given fund's objective category. This variable

is used to control for economic and other factors that may affect the demand to invest in funds in a given objective category during a period of time. *Management Company Net Asset Inflows* is a measure of the net asset inflows, as defined above, into the given fund's management company. This variable is used to control for management company-level factors that may affect the demand to invest in funds offered by a given management company during a period of time. All net asset inflows are calculated based on data from Morningstar.

Empirical Strategy

Next, I begin my empirical analysis. I examine the relationship between mutual fund managers' gender and the management fees that the funds under their management charge. I examine whether there are gender disparities in the management fees of funds that hire men versus women, and whether and how any gender disparities in fees change over the course of mutual fund managers' tenure at a fund. The main method of analysis is econometric, with a mutual fund's management fee during a given unit of time as the dependent variable and the mutual fund manager's gender as the independent variable of interest.

Note that as discussed earlier, mutual fund managers may manage a single fund or multiple funds at a time. Additionally, a fund may have a single manager ("individually managed") or multiple managers ("team managed") at any point in time.

My analysis covers the time period of 2000 through 2014. The unit of analysis is the manager-fund-quarter level, i.e., fund i managed by manager j during time t. This means that if a manager manages multiple funds during a given unit of time, then each fund would be represented by a separate observation. For example, if a manager managers two funds, one for five years (20 quarters) and the second for three years (12 quarters), then there would be 20 + 12 = 32 observations for that manager. My main analysis excludes team managed funds. In my expanded analysis, which includes team managed funds, each manager of a given fund has a separate observation. For example, if there are three managers j, k, and l for fund i during time t, then there are three observations for the given fund during the given unit of time: fund i – manager j – time t, fund i – manager k – time t, and fund i – manager l – time t.

As discussed earlier, my main analysis is limited to individually managed funds, as this allows for the cleanest attribution of performance to a specific manager and as the individual manager's identity is most salient. I then expand the analysis to also include team managed funds to check whether results hold for a larger sample size.

I limit the analysis to actively managed mutual funds, or those funds in which the mutual fund manager chooses which stocks, bonds, and/or other assets to invest in. I exclude index funds, or funds investing in assets that correspond to an underlying index, as the mutual fund manager lacks discretion around asset selection for these funds. Thus, the performance of index funds primarily reflects the performance of the underlying index and not the mutual fund manager's ability.

I am able to control for a variety of fund, manager, and management-company characteristics. Notably, I control for performance, as measured by risk-adjusted returns rank scaled, a measure of performance that is both objective and comprehensive. As an even stronger analysis than using the numerous control variables, I am able to use fund fixed effects to compare the management fees charged by male and female mutual fund managers who managed the same mutual fund. This allows me to examine how the trajectory of management fee levels changes depending on the mutual fund manager's gender at funds that have hired both male and female mutual fund managers. Fund fixed effects allay concerns about whether – even after extensive use of control variables – there are differences in the funds that hire male versus female mutual fund managers, by comparing male and female mutual fund managers at the exact same fund.

Descriptive Statistics

Next, I present an overview of my data. Table 2.1 presents means, standard deviations, and correlations of the main variables in my analysis for my primary sample of individually managed funds. Table 2.2 presents basic T-tests of whether the key variables of interest differ by gender for individually managed funds. As shown in Table 2.1 and Table 2.2, women manage funds that charge slightly lower management fees than the funds managed by men on average.

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Men and women also differ in other ways. Women have slightly shorter tenure at their current funds, are less likely to have MBA degrees, are more likely to be CFA charterholders, and manage slightly older funds, among other differences. Women have slightly higher fund returns, as measured by risk-adjusted-returns rank scaled, although the difference is quite small in magnitude. Additionally, men and women differ in their distributions across 38 mutual fund objective categories for which data is available. Men are disproportionately likely to manage growth, aggressive growth, real estate, and technology funds. Women are disproportionately likely to manage national municipal bond, state municipal bond, and health funds. Thus, it is not yet clear whether gender differences in management fees are due to gender or are due to other factors that may vary by gender.

Results

Gender disparities could occur at the point of hiring if men and women are hired to manage funds with different management fees on average. Thus, I begin by examining whether there are gender differences in the management fees of funds that hire women and the management fees of funds that hire men when individuals are first hired to assume the position of mutual fund manager of a given fund.

In this analysis, the unit of observation is the manager-fund pair, at the time when the manager is first hired into a given mutual fund. I regress the fund's management fee when mutual fund managers are first hired on an indicator for the manager's gender and on controls. The dependent variable is the fund's management fee. To avoid simultaneity bias, the management fee is lagged one quarter, i.e., the management fee is for the quarter before the quarter during which the mutual fund manager was hired. The independent variable of interest is an indicator for the mutual fund manager's gender. Control variables include time dummies; manager characteristics such as education and age; fund characteristics such as the number of managers, size, age, category classification, objective, risk, and investment turnover; management company characteristics such as the number of offered funds; and performance given by risk-adjusted-returns rank scaled and net asset inflows.

I begin by examining whether there are gender disparities in management fees when male and female mutual fund managers are first hired to manage a mutual fund for the sample of individually managed funds only. As shown in Table 2.3, I find that there is no significant difference in the management fees of the funds that hire men and the management fees of the funds that hire women. This result is robust to controls for a variety of manager and fund characteristics.

Next, I expand the sample to include team managed funds as well as individually managed funds, and again examine whether there are gender disparities in management fees when mutual fund managers are first hired to assume a position as mutual fund manager. As shown in Table 2.4, I again find that there is no significant gender difference in management fees at the time of hiring, and that this result is robust to controls for a variety of manager and fund characteristics. It is also robust to fund fixed effects, i.e., when comparing men and women who were hired to manage the same mutual fund, which precludes the possibility of unobservable fund characteristics biasing results. (Due to an insufficient number of individually managed funds that hire both male and female mutual fund managers, I do not include a specification with fund fixed effects in the individually managed funds hiring analysis.)

Note that hiring can be divided into two categories, hiring new mutual fund managers to manage their initial mutual funds and hiring experienced mutual fund managers to manage subsequent or additional mutual funds. Table 2.3 and Table 2.4 below includes all hires, both new and experienced. I also examine hiring new mutual fund managers and experienced mutual fund managers separately for the expanded sample of all individual and team managed funds, as detailed in the Appendix and shown in Table A.2 and Table A.3, respectively. Again, I find that there are no gender disparities in the management fees of the initial funds that hire new mutual fund managers nor in the management fees of the funds that hire experienced mutual fund managers. (The sample of individually managed funds only does not have sufficient observations to split the sample into new hires and experienced hires, so I run the split sample analysis for the expanded sample only.)

Overall, the analysis of management fees when individuals are hired to manage mutual

funds – both at the start of their careers and later in their careers – fails to find any gender disparities in management fees. This provides evidence that there is no management fee-related gender selection when mutual fund managers are hired into mutual funds, both for initial hires at the start of individuals' careers and when experienced mutual fund managers are hired to manage subsequent mutual funds later in their careers. Note that although I fail to find evidence of gender disparities in management fees at this point, I am unable to definitively rule out gender discrimination at the point of hiring, as I am only able to observe who is hired as a mutual fund manager and am unable to observe the pool of applicants who were not selected. If there are qualified women who were not hired due to their gender, there still could be gender bias at the point of hiring, even though there is no difference in fees for those women and men who are hired.

The next part of my analysis examines whether there are gender disparities in changes in management fees over time during mutual fund managers' tenure managing a given fund. If the management fees of female-managed funds decrease relative to the management fees of similar male-managed funds with equal performance, then I would find evidence that male-favoring gender bias affects how employers price their employees' work.

Next, I examine whether a gender disparity in management fees develops over the course of mutual fund managers' tenure at a given fund. I regress mutual funds' management fees on an indicator variable for gender (one if female), tenure in position as mutual fund manager at a specific fund measured in quarters (i.e., one quarter equals three months), and the interaction of gender and tenure. The interaction of gender and tenure indicates whether there is a differential change in management fees by gender as individuals' tenure at a specific mutual fund increases.

I examine whether there is a gender differential change in management fees as mutual fund managers' tenure increase. First, I examine this question for individually managed funds only. As shown in Table 2.5, I find that the coefficient on the interaction of female and tenure is negative. As mutual fund managers' tenure increases, management fees of female mutual fund managers' funds decrease relative to the management fees of male mutual fund managers'

funds. These results are robust to the inclusion of numerous controls including performance, indicating that decreases in women's management fees are not due to women having worse performance than men, and are also robust to fund fixed effects.

Subsequently, as shown in Table 2.6, I expand my analysis to include team managed funds as well as individually managed funds. Again, I find that the management fees of female mutual fund managers decrease over time relative to the management fees of otherwise-equivalent male mutual fund managers. This supports my hypothesis by demonstrating that over the course of employees' tenure employers come to charge relatively lower prices for work performed by female employees.

Note that the magnitude of this gender disparity is larger for the sample of individually managed mutual funds than for the sample of all mutual funds. This result is in line with the view that results may be smaller in magnitude at team managed funds, as the fees at team managed funds reflect the aggregate of all mutual fund managers, rather than just the focal mutual fund manager, and teams may have both men and women.

Subsequently, as shown in Figure 2.2, I present the predictive margins to visualize how the management fees evolve during mutual fund managers' tenure at a fund. I plot margins for gender differences in mutual fund management fees for the sample of individually managed funds only and utilizing fund fixed effects and all controls including performance. (This corresponds to the model in Table 2.5 – Regression 3.) Shown below are the margins for gender for t = 0 through t = 100 quarters (0 through 25 years) of experience as mutual fund manager at a given fund. At t = 0, when individuals begin their tenure at a given mutual fund, women have higher management fees than men, but the confidence intervals overlap, so there is no significant gender difference. By t = 30 (30 quarters or 7.5 years), the point estimate for men's management fees is higher than the point estimate for women's management fees and the confidence intervals are non-overlapping. The point estimates of funds' management fees when the fund is male-managed increase over time throughout the course of managers' tenure relative to when the same fund is female-managed, indicating that women's work is increasingly devalued over time. While male mutual fund managers' management fees increase significantly as they increase in

tenure as manager of a fund, female mutual fund managers' management fees actually decrease with tenure.

Next, I examine the magnitude of gender disparities in management fees over the course of mutual fund managers' tenure managing a fund. Table 2.7 shows the average management fee for male mutual fund managers (in percent), the average management fee for female mutual fund managers (in percent), the margin as a difference in levels (male minus female), and the margin as a difference in percent ((male – female) / female). Comparing men and women who managed the same fund and who were also equivalent on performance and all other controls (corresponding to Table 2.5 – Regression 3) shows a disparity of 1.4% at 5 years, 5.0% at 10 years, and 16.8% at 25 years.

Role of Customer Bias

Next I explore whether customers' gender biases play a role in employers' devaluation of female mutual fund managers. As discussed earlier, devaluation could originate from employers if they – rather than customers – are biased, or it could originate from customers if customers have gender bias and employers take customers' gender bias into consideration when setting prices. In the context of the mutual fund industry, the identity of mutual fund managers is visible to investors, which means that devaluation could potentially occur at two levels, that of employers and that of customers.

One empirical challenge is that for the root cause of gender disparities in management fees to be customer bias, it is necessary not only for customers to have gender bias but for employers to be aware of and act in response to customers' gender bias. Demonstrating empirically that customers have gender bias does not prove that employers are aware of customers' gender bias and are considering customers' gender bias when deciding how to set management fees. Further, even if customers do not have gender bias, it could still be the case that employers believe that customers have gender bias.

In order to provide context for mutual fund customers' possible bias, I will first provide an overview of who mutual fund customers are based on statistics from the Investment Company

Institute (2017). Mutual funds are primarily held by retail investors (individuals and households), who hold 89% of the assets invested in mutual funds, while institutional investors hold 11% of the assets invested in mutual funds. Mutual funds are owned by 56 million households, constituting 44.5% of U.S. households. Of households owning mutual funds, 81% own mutual funds inside of employer-sponsored retirement plans and 64% own mutual funds outside of employer-sponsored retirement plans. (Numbers sum to greater than 100% as some households own mutual funds in both categories.) Saving for retirement is the most common goal among households owning mutual funds, reported by 92% of mutual fund-owning households. Regarding risk tolerance, 47% of mutual fund-owning households reported their risk tolerance as average, 33% as above average, and 20% as below average.

Next, I will discuss what I mean by customer gender bias in the context of mutual funds. I define mutual fund customer gender bias as mutual fund customers being more likely to invest in male-managed funds than female-managed funds with equivalent risk-adjusted performance history.

My analysis finds that customers invest less in female-managed mutual funds, consistent with Niessen-Ruenzi and Ruenzi (2019). I first examine whether there is a gender disparity in net asset inflows for individually managed mutual funds by examining the relationship between net asset inflows and the gender of the mutual fund manager. I then examine whether there is a gender disparity in net asset inflows for the expanded sample of all mutual funds by examining the relationship between net asset inflows and the percentage of the mutual fund's managers who are female.

As shown in Table 2.8, I find that mutual funds managed by a single female mutual fund manager receive lower net asset inflows than mutual funds managed by a single male mutual fund manager. This result is evidence that customers are biased against female mutual fund managers, as they invest less in a mutual fund when it has a female manager than when it has an equally performing male manager. When expanding the analysis to also include team managed funds as shown in Table 2.9, I find that mutual funds with a higher proportion of female mutual

fund managers experience lower net asset inflows. This result is robust to the inclusion of a variety of controls, as well as to fund fixed effects.

Discussion

My research examines whether employees' gender affects the prices that employers charge customers for their employees' work. Specifically, I hypothesized that employers would charge less for work performed by female employees due to perceiving their work as less valuable than equal work performed by men. I examined this question in context of the mutual fund industry, examining potential gender disparities in mutual funds' management fees, which represent the price of mutual fund managers' work.

I find strong evidence that employers are subject to male-favoring gender bias when determining how to charge customers for work performed by their male and female employees. There is no gender disparity at the point of hiring: Initially, men and women are hired to manage mutual funds that charge the same management fees on average. However, over the course of employees' tenure a gender disparity emerges as employers decrease the prices that they charge for female-managed mutual funds relative to the prices that they charge for equivalent male-managed mutual funds. Examining the trajectory of gender disparities in management fees shows that gender disparities emerge gradually over time and become larger over the course of mutual fund managers' tenure at a given mutual fund.

A strength of my context is that I am able to ensure that I am comparing men and women who performed the same job by comparing men and women who served as mutual fund managers of the same fund. This allows me to rule out the possibility that gender disparities are due to unobserved differences in the jobs performed by men and women. Additionally, by having a measure of performance that is both unbiased and comprehensive, I am able to rule out the possibility that gender disparities in management fees that emerge over time are due to gender differences in performance.

Another strength of my setting is that I am able to examine the timeframe over which gender disparities in prices emerge. By examining the prices of mutual funds immediately prior to

a new mutual fund manager being hired, I am able to rule out the possibility that gender differences in management fees are due to gender sorting, i.e., due to women being hired into funds that charge lower management fees. Instead, I am able to conclude that gender disparities in prices are due to employers lowering the prices charged for female-managed funds relative to the prices charged for male-managed funds over the course of employees' tenure.

I consider why gender disparities in management fees emerge gradually over time, as opposed to occurring in a singular change soon after a new mutual fund manager is hired. One reason for a gradual emergence is that when mutual fund employers decide how to change management fees, the fund's current management fee serves as an anchor, influencing the subsequent fee levels. Anchoring, originally proposed by Tversky and Kahneman in 1974 and explored in numerous other papers since then, is a phenomenon whereby an initial value influences people's subsequent estimates (Tversky & Kahneman, 1974; Epley & Gilovich, 2006; Furnham & Boo, 2011). People make estimates by starting from an initial value, the "anchor," and making adjustments to result in a final estimate. Adjustments are biased toward, or "anchored on," the initial value. As these adjustments are generally incomplete, the initial value affects the subsequent estimates.

In the context of mutual funds, the management fee prior to the start of a given mutual fund manager's tenure serves as an anchor. If mutual fund employers undervalue work performed by female mutual fund managers, they will charge lower management fees for their work than for otherwise-equivalent work performed by male mutual fund managers. However, the fund's current management fee will anchor subsequent management fees. Changes to the management fee will be incomplete adjustments biased toward the prior management fee. Thus, lowering the prices charged for a female mutual fund manager's work relative to equivalent work of a male manager occurs over time in a series of smaller changes as the management fee adjusts, rather than in one discrete complete change.

Additionally, many other factors including the fund's performance, the fund's objective category, and general market trends affect the management fees that a fund charges. Employers may not consciously choose to charge lower fees for female managers' work, but rather

subconsciously view the female mutual fund manager's work as slightly less valuable relative to a male mutual fund manager's work for an equivalent fund with equivalent performance. This subtle subconscious bias may also contribute to employers gradually setting slightly lower fees for female-managed funds over a longer course of time, so that the reduction of prices for female mutual fund managers' work becomes apparent only over a longer period of time.

Another reason that employers may be more likely to reduce relative prices for women's work in a series of small changes rather than in one large change is that immediately lowering management fees by a substantial amount after a female mutual fund manager replaces a male mutual fund manager would be clearly detectable as gender bias. Gender disparities in fees that emerge slowly over a longer period of time would be more challenging to detect as obvious gender bias. Prior research is consistent with the notion that gender discrimination is greater when it is harder to detect than when it can be more obviously detected (Petersen & Saporta, 2004).

Implications

This research sheds light on a previously unexplored way in which gendered status beliefs manifest. While a vast literature examines how status beliefs lead to gender disparities in wages and salaries, prior research has not examined whether status beliefs also cause gender disparities in the prices that employers charge for their employees' work. Examining this is both interesting in its own sake, and also serves as an additional way of testing devaluation theory that circumvents some of the limitations of prior research examining the topic.

One reason that finding gender disparities in the prices charged for employees' work is noteworthy is because it is a mechanism that likely contributes to gender disparities in pay. There is substantial interest in gender disparities in outcomes among academics, as a vast academic literature has examined gender disparities in pay and other workplace outcomes. However, there is still a lack of clarity and consensus around the mechanisms that lead to these persistent gender disparities in outcomes.

Over time, firms have increased the use of merit-based systems to allocate promotions

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and pay, awarding higher pay and more promotions to employees with better performance (Cappelli, 1999). In many contexts awarding pay based on the revenue that an employee generates for the firm may on the surface seem fair, but may actually perpetuate gender bias if the factors that affect employees' ability to perform themselves contain gender bias. For example, research on gender disparities in earnings of stock brokers found that female stock brokers were assigned inferior accounts, relative to male stock brokers (Madden, 2012). The female stock brokers then received lower pay *because* they were assigned worse accounts than men, even though there was no gender difference in performance when controlling for the quality of the assigned account.

In some jobs, an employee's salary as well as other outcomes such as performance evaluations and promotions are affected by the revenue that the employee generates for the company. Employees who generate more revenue for the company may be viewed as better performers. On the surface, allocating promotions and pay based on metrics such as revenue generated by the given employee may appear fair relative to methods that allow more room for managers' subjective decision-making, which may be subject to biases. However, if employers underprice work performed by women relative to work performed by men, then female employees may generate less revenue for the firm than male employees. If the prices of employees' work contain gender bias, then compensating based on revenue generated – even if intended to be meritocratic – may perpetuate gender bias in pay.

In addition to contributing to the academic literature, these results would likely be of interest to practitioners, as firms are under increasing pressure to address gender disparities in pay. Underpricing the work of female employees may contribute to the gender pay gap, and may also threaten firm profitability. By identifying when women's work is underpriced and increasing the price when necessary, managers can potentially increase firms' profitability, while simultaneously reducing gender disparities in outcomes for their firm's employees.

Further, my research serves as a novel way of empirically examining devaluation theory, as it circumvents some of the empirical limitations of prior research on devaluation theory. Historically, women's increased participation in the labor force has been shown to drive down

wages in some areas due to increasing the supply of labor (Acemoglu, Autor, & Lyle, 2004). If women disproportionately enter certain occupations – increasing the labor supply in those occupations – but not others, then an alternative explanation to devaluation theory for the lowering of wages in such occupations is that the increased supply of labor lowers wages in the given occupations. In contrast, such supply-side factors do not affect gender differences in prices at the individual provider level within a job or occupation.

Additionally, by examining prices rather than wages and salaries, I am able to circumvent some of the potential supply-side differences that may confound demand-side bias. Prior research has tested devaluation theory by examining gender differences in wages and salaries (e.g., England, 1992; Kilbourne et al., 1994; Huffman, Velasco, & Bielby, 1996; Cohen & Huffman, 2003; Levanon, England, & Allison, 2009). This prior research has had threats to validity due to concerns that gender differences in salary may reflect supply-side factors rather than just demand-side devaluation (Grönlund & Magnusson, 2013), and that salary comparisons of men and women in different jobs may be biased if there are some factors such as skills demands that vary across and/or within jobs over time that affect salary that aren't captured in the models (Levanon, England, & Allison, 2009).

One potential supply-side factor that may bias prior research on devaluation theory is if there are gender differences in negotiation, as employees have an incentive to attempt to bargain up wages and salaries to increase their earnings. Prior research has found that women are less likely to negotiate than men (Babcock & Laschever, 2003). Negotiating on behalf of oneself (rather than on behalf of others) as in salary negotiation is viewed as stereotypically masculine, and thus incongruent with gender expectations for women (Amanatullah & Morris, 2010). Due to having to simultaneously balance gendered expectations for social approval and economic outcomes, women engage in different behavior when negotiating, as they concede more value in self-advocating negotiations (Amanatullah & Morris, 2010). Gender differences in salary negotiations due to gendered expectations likely contribute to the gender wage gap. Prior research evidencing gender devaluation of salary and wages may be biased if gender differences in wages reflect not only employers' devaluation of women's work but also gender differences in

negotiations. In my context, mutual fund managers do not have an incentive to negotiate management fees upward. As discussed previously, management fees are generally set by mutual fund employers. In interviews that I conducted, mutual fund managers expressed that they would not consider attempting to negotiate fees upward, as they believed that investors are price sensitive so that pushing fees upward would result in net asset outflows.

Limitations

One limitation of this research is that while I find consistent evidence of gender disparities in management fees, I am not able to definitively determine the root cause of these gender disparities. As I discussed earlier, customers demonstrate gender bias against female mutual fund managers, as female-managed mutual funds experience lower net asset inflows than equally performing male-managed mutual funds. Employers may set lower fees for female-managed funds than for equally performing male-managed funds because they themselves view the work performed by female fund managers as less valuable, or they may set lower fees for female-managed funds because they believe that customers have gender bias against female fund managers and therefore have lower willingness to pay for female-managed funds. Both of these scenarios would produce the same empirical results. Future research involving experimental work and/or interviews may seek to determine the root causes of employer devaluation of women's work.

One possible approach to exploring whether gender disparities in prices are due to employers' perceptions of the value of women's work or due to employers' perceptions that customers have gender bias and thus lower willingness to pay for women's work is to conduct a lab experiment. The experiment would involve participants acting as employers. Participant "employers" would be tasked with setting the price for work performed by a worker. Participants would be randomly assigned to either a condition in which the gender of the worker who performed the work *is* visible to customers or a condition in which the gender of the worker who performed the work *is not* visible to customers. The gender of the employee whose work is being priced would be indicated to participants, and would be randomized to be male or female. This yields a 2 by 2 design: Gender of employee who performed work is visible to customers (*yes* or

no) x Gender of employee who performed work (*female* or *male*). A between-subjects design would be used to reduce the likelihood of participants gaining awareness of the manipulation. The mean difference in prices between respondents in the female employee condition and respondents in the male employee condition would be calculated for each of the two gender visibility conditions. If participants set lower prices when the employee is female than when the employee is male only in the condition in which the employee's gender is visible to customers, it would indicate that gender disparities in pricing may be because employers believe that customers have lower willingness to pay for women's work due to gender bias. If participants set lower prices when the employee is female in both conditions (employee's gender visible to customers, employee's gender not visible to customers), then the ultimate locus of discrimination may be employer bias. While the limitation of this experiment is that realism would be much lower than in the field, it would allow for a cleaner attempt of isolating the root source of gender bias. Ideally, participants in the experiment would be individuals who have had prior work experience setting prices.

Another limitation of this research is that I study individuals in a single job. Gender disparities in prices in my study's context may be larger than in the average industry due to the male-typed, male-dominated nature of the mutual fund industry. In particular, women are especially disadvantaged as they face heightened stereotypes in male-typed occupations (Heilman, 2012). When a job's responsibilities are stereotypically associated with men and when the majority of workers are male, women are viewed as not fitting with the job and experience negative stereotypes (Cejka & Eagly, 1999; Guacher, Frisen, & Kay, 2011). Thus, if women not only are perceived as having lower social status in general but also are perceived as not fitting in with the male-dominated, male-typed mutual fund industry, the results in my context may be larger than in a gender-neutral or female-typed job.

An experimental study could also be used to examine whether gender disparities in prices differ depending on the gendered nature of the industry or occupation. In this study, participant "employers" would be asked to set the price of an employee's work in an industry with varying gender composition. A between-subjects design would be used. Each participant would

be asked to set the price of work performed by either a female employee or a male employee in either a predominately male, predominately female, or gender-balanced industry or occupation. Thus, the study would have a 2 by 3 design: employee gender (*female* or *male*) x gender composition of context (*predominately male*, *predominately female*, or *gender balanced*). The difference in prices that respondents set for female versus male "employees" in the three gender composition of context settings would then be compared to determine whether participants set lower prices for work performed by women across all settings, or whether such gender disparities are a feature of predominantly male, male-typed contexts.

Additional Future Research

In addition to the aforementioned lab experiments, it is possible to conduct further analysis of the existing archival data. One direction for future research is to examine whether there is cross-firm variation in gender disparities in prices. It may be the case that certain characteristics of firms predict larger gender disparities in prices, while other characteristics of firms may be associated with smaller or non-existent gender disparities in prices. Potential firm characteristics to explore include the size of the firm, the gender composition of the firm's mutual fund managers, the gender composition of the firm's upper management, and the type of clients investing in the firm's mutual funds.

It would be fruitful to consider whether the size of the firm affects gender disparities in prices by affecting female employees' ability to compare the prices charged for their work with the prices charged for other employees' work. On the one hand, when there are fewer mutual fund managers it is easier for managers to compare salaries, which may cause firms with fewer mutual fund managers to have smaller gender disparities in prices. However, when there are fewer mutual fund managers, there is also a greater chance that a manager may find a lack of other managers similar to herself, which may preclude comparisons. It may be the case that the degree of gender disparities is affected by the number of similar managers – similar on dimensions such as tenure and type of funds managed – as similar managers may form a comparison set for a focal manager's expectations around prices. Mutual fund managers at larger firms may be more likely than those at smaller firms to identify mutual fund managers at

their firms who are similar other than gender, who would serve as a comparison set. Learning more about the types of firms that have greater or lesser gender disparities may provide insights into better understanding the ultimate locus of gender disparities in prices.

Conclusion

While there has been much research examining whether male-favoring status beliefs reduce wages and salaries for women (England, 1992; Kilbourne et al., 1994; Petersen & Morgan, 1995; Tomaskovic-Devey, 1995; Huffman, Velasco, & Bielby, 1996; Cohen & Huffman, 2003; Levanon, England, & Allison, 2009), there has been less exploration of whether and how gender bias manifests in the context of price-setting. I contribute to the literature by finding evidence that employers lower the prices charged to customers for work performed by women relative to the prices charged for equivalent work performed by men. As prices are anchored when a new mutual fund manager assumes a position, this gender-based disparity emerges gradually over an employee's tenure in a job rather than as a large immediate change. I am able to rule out a number of alternative explanations for gender disparities in prices such as the possibility that gender disparities are explained by women having lower performance or women being hired into lower-fee funds. By examining differences in prices for different mutual fund managers who managed the same mutual fund at different points in time, I am also able to rule out the possibility that results are driven by unobserved factors that differ across mutual funds and to confirm that I am comparing men and women who are performing the exact same job.

My findings are notable for a number of reasons. Conceptually, I am able to identify a previously overlooked mechanism that may contribute to gender disparities in pay in some employment contexts. Empirically, I am able to test devaluation theory in a context that circumvents some of the limitations of prior work. Finally, my research raises questions about who benefits from gender-based devaluation. While employers may sometimes benefit from gender bias if they are able to pay lower wages thereby lowering their expenses, employers may be undermining their own profitability by charging lower prices for work performed by women, with customers instead benefitting.

CHAPTER 3: AN EXAMINATION OF GENDER AND ADVANCEMENT THROUGH INTERNAL AND EXTERNAL MOBILITY

Introduction

As discussed in Chapter 1, women are still less likely than men to hold jobs in the highest levels of organizations (Cappelli & Hamori, 2004; Helfat, Harris, & Wolfson, 2006; Mitchell, 2014; Dezső, Ross, & Uribe, 2016; Bonet, Cappelli, & Hamori, 2020). Understanding the reasons for women's relative lack of advancement has been a persistent challenge for researchers and practitioners. One way to understand gender disparities in career advancement is to consider the ways in which workers can advance in their careers. While historically workers primarily pursued advancement within a given employer, today workers are increasingly likely to have careers that involve moving not only within – but also across – organizations (Cappelli, 1999; Farber, 2008).

From the post-World War II period through the 1970s, approximately 90% of job vacancies were filled by promoting or laterally transferring employees from within (Cappelli, 2019). Within the past 30 years or so, however, employers have reduced their focus on internal labor markets, as they moved toward making greater use of external hiring (Cappelli, 1999; Farber, 2008; Cappelli, 2019). Today, employees' careers are increasingly likely to span numerous organizations, rather than to unfold within a single organization (Cappelli, 1999; Farber, 2008). Between ages 18 and 52, individuals now hold an average of 12 jobs (Bureau of Labor Statistics, 2019). Around half of job vacancies are filled by external hiring (SilkRoad, 2017).

The increasing frequency of career moves across organizations calls into focus another type of mobility, external mobility, in which employees move across employers. In the current era of interorganizational careers, workers seeking to advance may do so either by moving within or across organizations. Thus, it is important that – when considering how employees advance in their careers – both internal and external mobility are considered.

Considering both internal mobility and external mobility in the context of gender leads to the question of whether the barriers to advancement that women face may be greater or lesser

depending on the type of mobility. If women face barriers to advancement, are they more easily able to advance through internal or external mobility?

Conceptually, there are a number of reasons why the magnitude of gender disparities may differ depending on whether employees seek to move through internal or external mobility. A number of factors differ between internal and external mobility, including the amount of information that is available about current and potential employees (Landy, 2008), the feasibility of discrimination in internal and external hiring (Petersen & Saporta, 2004), and potentially the degree of diversity-related pressures associated with the two types of mobility. As these factors likely affect the barriers that women may face in seeking employment, gender disparities may differ depending on whether individuals seek to advance through internal or external mobility.

There are a handful of papers on gender disparities in mobility in an interorganizational context, but more remains to be examined. Studies by Gorman and Kmec (2009) and Fernandez and Abraham (2011) provide some insights into gender disparities in an interorganizational context, but there is still more to learn about whether women face greater or lesser challenges in advancing through internal versus external mobility. While Gorman and Kmec's study of lawyers finds that women are disadvantaged in internal advancement but not in upper-level external moves, the individuals who moved externally in their study generally already held upper-level jobs (2009). Thus, their results indicate that once women reach the upper levels of organizations, they do not face any additional barriers when making lateral external moves. Their study does not, however, examine whether there are gender disparities in external advancement. As women may overcome stereotypes around competence when moving laterally across upper-level jobs as they have already demonstrated an ability to do the job, the question of how women get into progressively more advanced jobs still remains unanswered.

Fernandez and Abraham examine gender disparities in hiring rates relative to the gender composition of the applicant pool for jobs filled internally and externally at different levels of the organizational hierarchy (2011). They find that the probability of being hired relative to the pool of applicants is greater for women than for men for both jobs filled internally and jobs filled externally. This advantage experienced by women declines at upper levels of the organization for

jobs filled internally, but does not decline for jobs filled externally. However, this study has some

limitations in terms of examining whether there are gender disparities in how individuals advance.

The study lacks data on the prior job positions of both external hires and internal movers. Thus, it

is not possible to assess to what extent career moves constitute advancement versus lateral

moves. Additionally, as the study lacks measures of the quality of job applicants, it is not possible

to rule out the possibility that the results are affected by gender differences in the quality of male

versus female applicants. In particular, a study of internal mobility found that female job

applicants tended to be more qualified than male job applicants (Keller, 2015). This finding

suggests that the quality of male and female candidates may differ if there are gender differences

in whether individuals consider themselves qualified to apply for a job.

I build on this prior literature by examining whether there are gender differences in

employees' likelihood of advancing via an internal promotion at their current employer or via an

external move to a new employer. Examining the relative magnitude of any gender disparities

when employees move internally or when employees move externally allows me to better

understand whether there are gender disparities in how employees advance in today's era of

interorganizational careers.

My setting is the mutual fund industry, which is ideal for both theoretical and empirical

reasons. The availability of industry-wide data allows me to track how mutual fund managers'

careers unfold as they move both within and across organizations, as opposed to being limited to

studying employees associated with a single organization. The mutual fund industry is a unique

context in that it allows for a way of measuring the level of a position that is standardized across

firms in the industry. Thus, I am able to determine whether a given career move provides

advancement as individuals move both within and across employers. I then use regression

analysis to compare women's and men's rates of advancement through both internal and external

mobility. The ability to determine whether a given career move provides advancement is notable

as in most industries idiosyncratic organizational charts make it hard or impossible to determine

whether extraorganizational career moves constitute advancement. Additionally, the mutual fund

industry is a choice setting due to the ability to control for individuals' performance, as mutual

fund returns are an objective measure of performance, free from bias from employees' ascriptive characteristics. This allows me to ensure that my findings are not biased due to gender disparities in performance.

Counter to expectations, I fail to find gender disparities in advancement for both internal mobility and external mobility. I consider that while theory around stereotypes and discrimination predicts that women would be less likely to advance, particularly in the case of external mobility, diversity pressures may cause firms to make efforts to hire and promote women. In particular, as the identities of mutual fund managers are publicly visible, female mutual fund managers may serve as a symbol of a firm's commitment to gender equity. Thus, a variety of forces, some such as male-favoring stereotypes that disadvantage women but others such as diversity pressures that advantage women, could result in an overall lack of gender disparities.

These findings have both theoretical and practical implications. I contribute to the literature on internal versus external mobility by examining whether there are differences in the level of advancement that each type of mobility provides women and men and showing that despite predictions otherwise, there are no gender disparities in advancement for both internal mobility and external mobility. As for implications for practitioners, knowing whether internal promotions and external hiring contribute to gender disparities in career outcomes would allow managers and human resource professionals to better understand whether their workplaces are providing equitable opportunities for women and men.

Theory

The scarcity of women in upper levels of organizations is evidence that women are less likely to advance in their careers than men are (Cappelli & Hamori, 2004; Helfat, Harris, & Wolfson, 2006; Mitchell, 2014; Dezső, Ross, & Uribe, 2016; Bonet, Cappelli, & Hamori, 2020). However, there is still a debate around the exact nature of the barriers to advancement that women face and the reasons for this persistent disparity in career outcomes. In Chapter 1, I discussed the somewhat inconclusive literature on gender and promotions, which has been a primary focus of scholars interested in understanding gender disparities in advancement.

While the above body of literature has focused on promotions, promotions are not the only way that men and women can advance in their careers. Workers can also advance through external mobility. As I will subsequently discuss, there are a number of significant differences between internal hiring and external mobility, which may cause gender disparities in advancement. In particular, the amount of information that an employer has about current employees (internal mobility) differs from the amount of information that an employer has about external job applicants (external mobility). Additionally, the feasibility of male-favoring discrimination may be greater when applicants outside the organization apply for a job than when employees within the organization seek to advance internally. Finally, diversity pressures may vary between internal hiring and external mobility. I address all three in more detail below.

Stereotypes and Information

As discussed in Chapter 1, stereotypes that depict women as less competent and less suited for work than men are a key source of disadvantage for women, as they may lead to labor market discrimination against women (Heilman & Caleo, 2018). I consider whether the barriers to advancement that women face due to stereotypes may differ depending whether employees are advancing through internal mobility or through external mobility.

One key difference between internal and external mobility is the *amount of information* about the current or potential employee that is available to the employer. In the case of internal mobility, the employer has a greater amount of information about the current employee, as the employer has had the opportunity to observe the employee over the course of his or her job tenure thus far. In contrast, in the case of external mobility, the employer has less information about prospective employees, as the employer has not yet had the opportunity to work with those employees.

The amount of information on current and prospective employees available to employers is relevant to gender disparities, because individuating information reduces stereotypes (Kunda & Sherman-Williams, 1993; Rubinstein, Jussim, & Stevens, 2017). Women may, therefore, face greater challenges in external career moves as information available to the prospective employer

is more limited than in internal career moves. In the absence of individuating information, decision-makers are more likely to rely on stereotypes (Fiske & Neuberg, 1990; Kunda & Thagard, 1996; Jussim, 2012; Monroe et al., 2017; Rubinstein, Jussim, & Stevens, 2018) that may favor men (Heilman, 2012). On the other hand, when individuating information is available, decision-makers will reduce reliance on stereotypes, as their decisions incorporate the available individuating information.

The amount of information that an employer has about individual employees changes over the course of the employment relationship (Landy, 2008). When prospective employees first apply for a job, the amount of information that the employer has about the individuals generally is limited. However, after an individual begins employment, the information available to the employer increases, and indeed supervisors often get to know their subordinate employees quite well (Landy, 2008).

As individuating information reduces stereotypes (Fiske & Neuberg, 1990; Kunda & Thagard, 1996; Jussim, 2012; Monroe et al., 2017; Rubinstein, Jussim, & Stevens, 2018) and as individuating information increases over the course of the employment relationship (Landy, 2008), the impact of male-favoring stereotypes on gender disparities in advancement may differ depending on whether individuals are moving within or across organizations. Specifically, as employers have a greater amount of individuating information about current employees than about external applicants, male-favoring stereotypes may more greatly disadvantage women in the case of external mobility than in the case of internal mobility. When an employer is considering a current employee for an internal promotion, while gender stereotyping still exists, the degree of stereotyping would generally be lower as the employer would have increased individuating information about the employee to consider in the decision-making process. Thus, the magnitude of such stereotyping is greatest at the point of initial hire, when employers have the lowest amount of information about individuals, suggesting that gender disparities in advancement would be larger when individuals move externally than when employees move internally.

Feasibility of Discrimination

Another factor that may differ between internal and external career moves is the employer's ability to discriminate. Prior research on the opportunity structure for discrimination argues that employers have greater ability to discriminate at the point when external applicants apply for a job than in subsequent treatment after an employee has been hired into the organization (Petersen & Saporta, 2004). If employers either consciously or subconsciously seek to discriminate against women and discrimination against external job applicants is more feasible than discrimination against current employees seeking internal advancement, then gender disparities in external mobility may be larger than gender disparities in internal mobility.

Gender discrimination is when applicants for jobs or employees receive different treatment due to their gender (Heilman & Caleo, 2018). Gender bias and gender stereotypes, as discussed earlier, are thought to be at the root of gender discrimination (Heilman & Caleo, 2018). Perceptions subject to gender bias can be the basis for subsequent discrimination (Heilman & Caleo, 2018). Discrimination in assigning individuals to jobs, both when individuals are initially hired into an organization and in subsequent promotions and transfers, is known as allocative discrimination (Petersen & Saporta, 2004).

As the structural conditions around initial hiring and subsequent promotions differ, the feasibility of discriminating differs as well (Petersen & Saporta, 2004). Petersen and Saporta outline how the feasibility of discrimination differs between external hiring and internal promotions (2004). Three factors make discrimination more feasible in initial hiring of external candidates than in subsequent promotions of current employees: (1) the level of difficulty of gathering information, (2) the degree of ambiguity in information that can be gathered, and (3) the likelihood of a plaintiff or complainant to speak up when discrimination is detected. (Similar arguments about why discrimination is more feasible at the point of initial hiring into an organization are also presented in Petersen, Saporta, and Siedel (2000)).

In the case of external hiring, it is often difficult to gather sufficient information to determine whether discrimination has occurred (Petersen, Saporta, & Siedel, 2000; Petersen & Saporta, 2004). The recruitment process for external candidates often involves referrals and

informal networks (Hanson & Pratt, 1991; Topa, 2011). While men may be advantaged due to gender homophily in networks (McPherson, Smith-Lovin, & Cook, 2001; McDonald, Lin, & Ao, 2009; McDonald, 2011), the informal nature of the recruitment process makes it difficult to track everyone who was contacted. Additionally, external hiring is often marked by a lack of information on the entire applicant pool (Petersen, Saporta, & Siedel, 2000; Petersen & Saporta, 2004). Often, the only information available to outsiders is who was hired, which makes it impossible to compare those who were not hired with those who were hired (Petersen, Saporta, & Siedel, 2000; Petersen & Saporta, 2004). When it is difficult to gather information, individuals may not realize that they have faced discrimination.

Additionally, the information that can be assembled about job candidates in external hiring is often ambiguous (Petersen, Saporta, & Siedel, 2000; Petersen & Saporta, 2004). When information is ambiguous, different people may interpret the same information differently. Decisions about whom to hire are rarely made solely on formal qualifications such as educational credentials and experience; rather, they involve a large subjective component including factors such as applicants' personality and fit (Petersen, Saporta, & Siedel, 2000; Petersen & Saporta, 2004). Thus, applicants who were not hired generally will not know why. Further, when information is ambiguous, employers who discriminate are protected from external parties and the legal system, as well as from internal parties within a firm who might oppose discrimination (Petersen & Saporta, 2004).

Further, even when there is evidence that discrimination has likely occurred, in the case of external hiring there often is not a plaintiff or complainant willing to file a discrimination case (Petersen, Saporta, & Siedel, 2000; Petersen & Saporta, 2004). As job applicants often have found a job with a different employer in the meanwhile, they may lack incentives to file a complaint (Petersen & Saporta, 2004). Additionally, due to the aforementioned issues around availability and ambiguity of information, potential complainants may decline to file cases if there is a lack of evidence (Petersen & Saporta, 2004). This leads to anti-discrimination laws being harder to enforce when discrimination occurs during initial hiring into the organization than when discrimination occurs subsequent to the point of initial hire (Jencks, 1992).

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In contrast, relative to external hiring, employers have stronger incentives to avoid discriminating against current employees (Petersen & Saporta, 2004). As current employees generally know each other and are able to compare the identities of those who were promoted with those who were not promoted, it is more feasible for current employees to detect discrimination when it occurs (Petersen & Saporta, 2004). While there is still a subjective element to promotion decisions, relative to initial hiring it is easier to compare those who were passed over for promotion with those who were promoted, as identities and qualifications are known (Petersen & Saporta, 2004). Additionally, whether through internal grievance systems if not through the legal process, employees are more likely to complain once they are in an employer's system (Petersen & Saporta, 2004).

Additional studies consistent with Peterson and Saporta's (2004) argument and empirical finding that discrimination is more likely to occur in initial hiring than in subsequent promotions include Zeng's (2011) study of scientists and engineers, and Jones and Makepeace's (1996) and Yap and Konrad's (2009) single-firm studies. These studies found that women were disadvantaged at lower organizational levels, but not at higher organizational levels. However, there also is some research that contradicts the notion that discrimination is greater at the point of initial hiring. Gorman and Kmec found that law firms were more likely to hire women for entry-level positions than to promote them to partner (2009).

Diversity Pressures

The majority of research on gender disparities and careers has focused on examining factors that disadvantage women. However, more recent research has raised the possibility that certain women may sometimes benefit in the labor market relative to otherwise-equivalent men. Recent research on diversity pressures has found that – while women are still disadvantaged relative to men on average – women perceived as having the highest potential may actually be advantaged if they bring "diversity value" to their employer (Leslie, Manchester, & Dahm, 2017). Given that fewer women reach the upper levels of organizations, those who do are relatively

scarce, and thus – if employers demand gender diversity in their upper-level employees – may actually be in greater demand relative to upper-level men (Leslie, Manchester, & Dahm, 2017).

Organizations may value diversity if they view it as a moral imperative, as well as if they view it as conducive to firm performance (Leslie, Manchester, & Dahm, 2017). They may also engage in diversity initiatives due to social pressures from stakeholders within the organization, as well as from external stakeholders (Dobbin, Kim, & Kalev, 2011). Today, representation – how many employees from the target group are employed and at what levels – has received the greatest focus when assessing whether diversity initiatives are effective (Leslie, 2019). Representation of women in upper-level positions has received particular attention, as women tend to be particularly underrepresented in upper-level positions and as these positions are particularly visible (Leslie, Manchester, & Dahm, 2017).

Organizations may engage in diversity practices as a way of symbolizing legitimacy (Blum, Fields, & Goodman, 1994). According to institutional theory, organizations engage in practices not only to achieve operational objectives, but also to symbolize legitimacy (Meyer & Rowan, 1977). The three major types of pressure identified by DiMaggio and Powell (1983) – coercive, normative, and mimetic – may induce organizations to hire and promote women (Blum, Fields, & Goodman, 1994). Coercive pressure may cause organizations to hire and promote women in order to demonstrate that their hiring and promotion practices are responsive to stakeholder support for gender equity and are in compliance with civil rights laws. Normative pressure may cause organizations to hire women to increase the legitimacy of the occupation. Mimetic pressure may cause organizations to hire and promote women – especially those in visible positions – to have symbols that convey legitimacy to employees as well as to resource providers.

In the context of gender and careers, employers are facing increasing pressure around diversity and hiring women (Leslie, 2019). These pressures may be especially salient in the mutual fund industry and the finance industry more broadly, as there are few women in finance. Due to the industry being male-dominated, mutual fund companies may have a smaller pool of potential female mutual fund managers. Mutual fund management companies are particularly

likely to face diversity-related pressure to hire women as mutual fund managers due to the visibility of the position. Mutual fund managers' identities are visible, as SEC regulations require that funds disclose the identities of their managers in the fund's prospectus (Securities and Exchange Commission, 2004). In addition to the legally mandated fund disclosures, mutual fund companies generally highlight the identities and backgrounds of their fund managers on their websites and in fund brochures. Thus, given the visibility of mutual fund managers, firms may be especially likely to face diversity pressure to hire women. While I am examining advancement across jobs rather than pay for a given job, it is plausible that the same effect that Leslie, Manchester, and Dahm (2017) identified as applying to pay would also apply to advancement across jobs. If firms face diversity pressures, they may be more likely to hire women into visible upper-level positions. This provides evidence that – if firms in male-dominated industries face pressure to employ a diverse workforce – women may sometimes be at an advantage, which could negate the effect of male-favoring stereotypes.

Less is known about whether the effect of diversity pressures on employees' advancement differs between internal mobility and external mobility. Representation has received the greatest focus when assessing whether diversity initiatives are effective (Leslie, 2019). By hiring women externally, employers can most directly increase the representation of women in their firm. In the case of female mutual fund managers, if a firm hires a woman externally, the number of female mutual fund managers increases. In contrast, if the firm offers advancement to a female mutual fund manager already employed by the firm, the number of female mutual fund managers need not increase. Thus, if firms are most concerned about representation of women, and the number of women in visible positions serves as a symbol of the firm's commitment to diversity, then women may receive greater advantage when advancing through external mobility than when advancing through internal mobility.

Are Gender Differences in Advancement Greater When Individuals Move Internally or Externally?

As discussed, there are a number of key factors that differ when individuals seek to advance within their current employer versus when individuals seek to advance by taking a job at a different employer. The increased availability of individuating information about employees in internal moves, which may reduce stereotypes, as well as the decreased feasibility of discrimination in internal moves imply that male-favoring gender disparities would be larger in advancement via external mobility than in advancement via internal promotion. However, diversity pressures may benefit women more in external hiring than in internal advancement, implying that male-favoring gender disparities would be larger in advancement via internal promotion than in advancement via external mobility. Thus, given that the aforementioned factors point in different directions, it is not a priori clear whether gender disparities in advancement through internal mobility or gender disparities in advancement through external mobility are larger.

This leads to the main question that I will empirically test in this paper.

Question 1: Are gender disparities larger in advancement through internal mobility or in advancement through external mobility?

Effect of Experience

Subsequently, I consider how an employee's length of experience in the industry affects gender disparities in advancement through internal and external mobility. I argue that stereotypes around gender will cause the greatest gender disparities in career advancement for employees with a shorter duration of experience in the industry. I also argue that the potential of increased industry experience to reduce gender disparities is stronger in the case of external mobility than in the case of internal mobility.

As discussed earlier, employers may doubt the competence of female employees due to gender stereotypes (Heilman, 1983; Eagly, 1987; Ridgeway, 1997; Schein, 2001; Eagly & Karau, 2002; Heilman, 2012), and these stereotypes may be especially strong in the case of external

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mobility, when there is less individuating information available about an individual (Landy, 2008). Individuating information about an employee is generated over the course of the employee's tenure in the industry. For example, as a mutual fund manager's tenure in the industry increases, the length of his or her performance history, which is a type of individuating information about the mutual fund manager, increases.

As the amount of individuating information about an employee increases with increased experience in the industry, employers would be less likely to make career decisions based on stereotypes when employees have more experience. In contrast, when employees have less experience in the industry, less information is available about the given employees, so that employers' hiring and promotion decisions would be more likely to be affected by stereotypes. Thus, as an employee's length of experience in the industry increases, gender disparities decrease as the increased availability of information reduces stereotypes. As stereotypes are greatest when individuals move through external mobility due to the lesser availability of information, the potential of increased experience in the industry to reduce stereotypes and thereby reduce gender disparities is greater for external mobility than for internal mobility.

This leads to the following hypotheses:

- **Hypothesis 2a: Male-favoring gender disparities in advancement are larger for employees with shorter tenure in the industry than for employees with longer tenure in the industry.**

  Hypothesis 2b: The relationship between experience in the industry and male-favoring gender disparities in advancement is stronger in the case of external mobility than in the case of internal mobility.

Effect of Performance

Next, I consider how gender disparities in advancement through internal versus external mobility may differ across the spectrum of performance. I will argue that stereotypes around gender cause the greatest gender disparities in career advancement at intermediate levels of

performance, and lower levels of gender disparities at both low and high levels of performance. I will also argue that the curvilinear relationship between gender disparities and performance is stronger in the case of external mobility than in the case of internal mobility.

As discussed earlier, stereotypes around gender depict women as less competent than men (Heilman, 1983; Eagly, 1987; Ridgeway, 1997; Schein, 2001; Eagly & Karau, 2002; Heilman, 2012). Additionally, these beliefs bias people's capacity to infer ability from performance; women must achieve a higher level of performance in order to be perceived as having as high ability as men (Ridgeway, 2011). These stereotypes are heightened in male-dominated, male-typed careers (Heilman, 1983; Heilman & Stopeck, 1985; Heilman, 2012). In the absence of clear evidence of individual performance in context of male-gendered work, women are assumed to be less competent than men (Heilman, 1983; Heilman & Stopeck, 1985; Heilman, 2012). A lab study in which only the applicant's gender and the gender orientation of the job were varied found that rater participants were less likely to hire women, especially for male-typed jobs (Snipes, Oswald, & Caudill, 1998). The substantial disparity in participant raters' perceptions of the applicants' future job performance was larger than the disparity in hiring, with participants having lower performance expectations for women (Snipes, Oswald, & Caudill, 1998). Thus, because women's competence is likely to be questioned in the absence of evidence, women in male-dominated careers face a heighted burden to demonstrate their competence.

I consider how these aforementioned stereotypes depicting women as less competent may cause gender disparities in internal and external mobility to vary across the performance spectrum of low, medium, and high performers. First, I consider men and women with a history of low performance. At a low level of performance, the performance records of female low performers would confirm stereotypes depicting women as lacking competence. However, gender disparities would be lower at lower levels of performance, because – even though men would not generally be stereotyped as lacking competence – a record of low performance would cause employers to question low-performing men's competence as well.

Next, I consider medium-performing men and women. At intermediate levels of performance, gender disparities would be heightened. While intermediate-performing women's

performance is better than that of low-performing women, it is not high enough to overcome negative gender-related stereotypes that cause women's competence to be questioned. For men, because stereotypes presume men as competent, intermediate performance should be sufficient to avoid raising doubts about competence.

At high levels of performance, the performance record of women should be high enough to overcome doubts about women's competence, as women are able to overcome doubts of competence with clear evidence of high performance. The track record of high-performing men reaffirms men's presumption of competence. Thus, because a record of high performance provides women with evidence of ability to overcome gender-related stereotypes, the gap in gender disparities narrows for high performers. Additionally, as discussed earlier, the highest-performing women may be in particular demand if firms have diversity goals (Leslie, Manchester, & Dahm, 2017).

Subsequently, I consider how the effect of performance on gender disparities may differ depending on whether an employee is moving through internal or external mobility. As I hypothesized earlier, gender-related stereotypes should play a larger role when employers evaluate potential external employees than when employers evaluate internal candidates, for whom they have greater individuating information. Thus, as stereotypes are larger in external mobility and the effect of stereotypes differs depending on the level of performance, the aforementioned effect of different levels of performance on gender disparities in advancement would be larger in the case of external mobility than in the case of internal mobility.

This leads to the following hypotheses:

- o **Hypothesis 3a: Male-favoring gender disparities in advancement are larger for employees with intermediate levels of performance, and smaller for employees with both lower and higher levels of performance.**

- o **Hypothesis 3b: The curvilinear relationship between gender disparities in advancement and performance is stronger in the case of external mobility than in the case of internal mobility.**

Study Context

The study context is the mutual fund industry. I examine the careers of female and male mutual fund managers as they move within and across employers. The context is as described in detail in Chapter 1.

Methodology

Morningstar provides data on the start and termination dates of each mutual fund manager at each mutual fund. This allows me to match mutual fund managers to the funds they managed to construct each mutual fund manager's career history.

Each mutual fund is associated with a management company. A mutual fund manager is thus employed by the management company that offers the fund(s) that the given mutual fund manager manages.

I define a career move as a change in the funds under a mutual fund manager's management. A career move is defined as an internal career move if the mutual fund manager remains at the same management company. A career move is defined as an external career move if the mutual fund manager assumes management of funds offered by a different mutual fund management company.

I create multiple measures of career advancement in order to ensure that empirical results are robust to a variety of indicators of advancement:

1. Total Assets Across Funds (Sum of Assets per Manager): Assuming management of a greater amount of total assets across all of the mutual fund manager's funds under management indicates career advancement (Chevalier & Ellison, 1999; Hu, Hall, & Harvey, 2000; Evans, 2009). As funds differ in their number of managers and a greater number of managers means less responsibility per manager, I measure the manager's total assets across funds as each fund's assets divided by the number of managers for the given fund, summed across all of the given manager's funds in the given month.

2. Average Fund Size (Average Assets per Manager): Assuming management of larger funds indicates career advancement (Hu, Hall, & Harvey, 2000). To account for the fact

that funds have different numbers of managers, I calculate average fund size as each fund's assets divided by the number of managers for the given fund, averaged across all of the given manager's funds in the given month.

3. Total Revenues (Sum of Revenues per Manager): Assuming an increase in total revenues of funds under management denotes career advancement, as revenues generated contribute directly to the firm's bottom line. I measure the manager's total revenues across funds as each fund's revenues divided by the number of managers for the given fund, summed across all of the given manager's funds in the given month.

4. Total Number of Funds: Assuming management of a greater number of funds denotes increased responsibility and career advancement (Barber, Scherbina, & Schlusche, 2017). I measure the manager's total funds as the inverse of the number of managers for each fund, summed across all of the given manager's funds in the given month.

5. Total Individually Managed Funds: Assuming management of a greater number of individually managed funds denotes increased responsibility. As responsibility is not shared with colleagues, individually managed funds may be associated with greater responsibility than team managed funds. I measure the manager's total individually managed funds as the number of individually managed funds managed by the given manager.

Data

Data are from Morningstar ("according to Morningstar Direct") and the Center for Research in Security Prices (CRSP), and cover years 2000 through 2014. Data on mutual fund managers and mutual funds (excluding fee data) are taken from Morningstar. (Note that data on mutual fund assets is available at the share-class level, and I aggregate this data to the fund level.) CRSP has longitudinal data on mutual fund fees.

Unit of Analysis

The unit of analysis is the manager-month, as I construct a monthly time-series of mutual fund managers' careers.

Variables

Next, I provide an overview of the key variables in my regression analysis. Variables include the following:

Dependent variable: The dependent variable, *Career Advancement*, indicates whether a career-advancing move has occurred; it is categorical variable with four categories equal to zero if the mutual fund manager continues as a mutual fund manager without a career-advancing move in the given month, one if the mutual fund manager advances through an internal career move in the given month, two if the mutual fund manager advances through an external career move in the given month, and three if the mutual fund manager's employment in the mutual fund industry terminates in the given month.

An internal career move is defined as a change to the funds under a mutual fund manager's management while the mutual fund manager remains at the same management company. An external career move is defined as a change to the funds under a mutual fund manager's management as the mutual fund manager assumes management of a fund or funds at a new management company. A terminating career move is defined as the mutual fund manager no longer managing any mutual funds for any mutual fund company. Details on how I determine what constitutes advancement were provided in the *Methodology* section.

Independent Variables

Independent Variable of Interest: *Female* indicates the mutual fund managers' gender; it is a binary variable equal to one if the mutual fund manager is female and zero if the mutual fund manager is male. Gender data is from Morningstar.

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Manager Education: *PhD Holder* is a binary variable equal to one if the mutual fund manager has a PhD degree, and zero otherwise. *MBA Holder* is a binary variable equal to one if the mutual fund manager has an MBA degree, and zero otherwise. *CFA Charterholder* is a binary variable equal to one if the mutual fund manager is a CFA Charterholder, and zero otherwise.

Manager Experience: *Career Experience* is the length of the mutual fund manager's experience as a mutual fund manager; it is measured in months that the mutual fund manager has worked in the mutual fund industry, starting with one in the month during which the individual was first hired as a mutual fund manager.

Tenure at Fund is the mutual fund manager's tenure at the given mutual fund; it is measured in number of months that the mutual fund manager has worked at the mutual fund, starting with one in the month during which the person was hired as a mutual fund manager at the given fund. Tenure can also be thought of as fund-specific experience (i.e., the experience at a specific fund), as opposed to total career experience. For mutual fund managers managing multiple funds simultaneously, tenure at a fund is a weighted average across funds, weighted by each fund's assets per manager.

Manager Performance: *Risk-Adjusted Returns Rank Scaled* is a measure of performance that assesses a fund's returns relative to the fund's level of risk and relative to other funds in the same investment objective category. First, I first calculate risk-adjusted returns by using the capital asset pricing model (CAPM) to risk-adjust the returns. Betas, or systematic risk, are calculated using a 12-month window. In calculating betas, I use the following market indices: CRSP Equities Market Index Value-Weighted Return for Equity Funds, Bloomberg Barclays US Corporate Total Return Value Unhedged USD for corporate bond funds, and Bloomberg Barclays US Treasury Total Return Value Unhedged USD for government bond funds. I then use the estimated betas to calculate alphas, as a measure of risk-adjusted returns. Next, following the approach of Barber, Scherbina, and Schlusche (2017), risk-adjusted returns are ranked and scaled from one to ten within an objective category to adjust for differences across objective categories. For managers managing multiple funds simultaneously, performance is a weighted average across funds,

weighted by assets per manager. Returns data used in calculations are from Morningstar; market indices data are from CRSP and Bloomberg, L.P.

This measure of performance incorporates the risk-return tradeoff. The risk-return tradeoff in finance is the concept that investments that are riskier have the potential to earn higher returns, but also have the potential to have higher losses than investments that are less risky (Ghysels, Santa-Clara, & Valkanov, 2005). When evaluating mutual funds and other investments, it is therefore appropriate to evaluate returns that are adjusted for risk rather than to evaluate absolute returns.

Characteristics of Mutual Fund Manager's Funds Control variables for characteristics of the mutual fund manager's funds include fund size, fund age, fund number of managers, objective net asset inflows, socially responsible fund indicator, fund of funds indicator, investment turnover, and risk. For managers who manage multiple funds in a given month, these variables are averaged across the given manager's funds, weighted by assets per manager. Data on fund characteristics are from Morningstar.

Fund Size is the size of the fund, and is equal to the assets invested in the fund in millions of dollars. Funds in my sample have a median of $171 million in assets and a mean of $1.05 billion in assets, with a standard deviation of $4.62 billion. *Fund Age* is the number of months since the fund was established. *Socially Responsible Fund* is an indicator equal to one if the fund is classified as socially responsible, and zero otherwise. *Fund of Funds* is an indicator equal to one if the fund is classified as a fund of funds, and zero otherwise. (A fund of funds is a fund that invests in other funds rather than in individual securities such as individual stocks and bonds.) *Objective* is the mutual fund's investment objective category. It is a categorical variable with 38 categories. (See Appendix Table A.1 for objective categories.) *Investment Turnover* is a measure indicating the percentage of the fund's assets that have been replaced (have "turned over") during a one-year period; it is measured as a percentage of total assets in the fund. Funds have lower investment turnover if they buy and hold assets for long periods of time, and higher investment turnover if they trade more frequently. Funds in my sample have a median investment turnover of 54% (indicating that 54% of assets are replaced in a year), and a mean

investment turnover of 93.9%, with a standard deviation of 223%. The bottom 5% of funds have

investment turnover of 12% or below, while the top 5% of funds have investment turnover of

282% or above.

     Net Asset Inflows is a measure of the assets invested into a fund net of the assets

withdrawn from the fund, as a percentage of the fund's total assets. Specifically, net asset

inflows for fund *i* during time *t* are given by:

$$\text{Net asset Inflows}_{i,t} = \frac{\text{total net assets}_{i,t} - \text{total net assets}_{i,t-1} * (1 + \text{return}_{i,t})}{\text{total net assets}_{i,t-1}}$$

Funds in my sample have a median quarterly net asset inflow of 0%, and a mean quarterly net

asset inflow of 4.8%, with a standard deviation of 21%. *Objective Net Asset Inflows* is a measure

of the net asset inflows, as defined above, into the given fund's objective category. This variable

is used to control for economic and other factors that may affect the demand to invest in funds in

a given objective category during a period of time. All net asset inflows are calculated based on

data from Morningstar.

Characteristics of Mutual Fund Manager's Management Company (Employer) *Management*

Company Number of Funds is the number of funds offered by the management company that

employs the given mutual fund manager. This variable is calculated based off of data from

Morningstar. *Management Company Net Asset Inflows* is a measure of the net asset inflows, as

defined above, into the management company that employs the given mutual fund manager.

This variable is used to control for management company-level factors that may affect the

demand to invest in funds offered by a given management company during a period of time. All

net asset inflows are calculated based on data from Morningstar. *Management Company*

Number of Managers is the number of managers employed at the given management company.

This variable is calculated based off of data from Morningstar.

Descriptive Statistics

Next, I present an overview of my data. Table 3.1 gives means, standard deviations, and correlations for the main variables in my analysis. Table 3.2 presents basic T-tests of whether key variables of interest differ by the mutual fund manager's gender.

As shown in Table 3.1 and Table 3.2, women have slightly lower career experience and slightly lower tenure at their current fund(s) on average. Women are also less likely to have an MBA, have slightly more co-managers on average, and are more likely to manage socially responsible funds, among other differences.

Subsequently, in Table 3.3, I present counts of career moves by gender. Career moves included in Table 3.3 are those in which a mutual fund manager assumes management of at least one new mutual fund. Note that when a mutual fund manager assumes management of a new mutual fund(s), he or she may either cease management of his or her prior mutual fund(s), or may continue to manage the prior mutual fund(s) concurrently with the new mutual fund(s).

As shown in Table 3.3, in my data there is a total of 6,020 internal career moves, or moves in which the mutual fund manager assumes management of at least one new mutual fund at his or her current management company. There is a total of 5,043 external career moves, or moves in which the mutual fund manager moves to a different management company, assuming management of at least one mutual fund at the new management company. Men in my data have a total of 9,858 career moves, 5,366 of which are internal and 4,492 of which are external. Women in my data have a total of 1,205 career moves, 654 of which are internal and 551 of which are external.

In Table 3.4a and Table 3.4b, I perform chi-square tests to examine whether there are differences in career outcomes by gender. Outcomes are continuing as a mutual fund manager without advancing, advancing by moving internally, advancing by moving externally, and terminating employment as a mutual fund manager. Table 3.4a shows chi-square tests of differences in career outcomes by gender with outcomes displayed as counts, and Table 3.4b shows the same data but with outcomes displayed as percentages. The results of the chi-square tests indicate that there are statistically significant gender differences in outcomes.

Results

First, I examine Question 1, whether gender disparities differ depending on whether men and women are advancing within their current employer or by moving across employers. I begin by using multinomial logit models to examine how men and women advance through internal and external mobility.

In this analysis, the unit of observation is the manager-month. I run multinomial logit models of the mutual fund manager's career outcome in the given month. As described above, the dependent variable, career outcome, is a categorical variable that is one if the mutual fund manager advances via internal mobility in the given month, two if the mutual fund manager advances via external mobility in the given month, and three if the mutual fund manager experiences a termination in the given month. The dependent variable's omitted base category is zero if the mutual fund manager continues as a mutual fund manager without experiencing a career-advancing move in the given month.

I run five different specifications of advancement, as defined earlier. Advancement is measured as a career move resulting in an increase in the following: 1) Total Assets Across Funds, 2) Average Fund Size, 3) Total Revenues, 4) Total Number of Funds, and 5) Total Number of Individually Managed Funds. Control variables include time dummies; mutual fund manager characteristics, such as the mutual fund manager's education and length of experience; characteristics of the mutual fund manager's funds, such as the number of funds, size of funds, age of funds, socially responsible fund classification, fund of funds classification, investment turnover, risk, and number of co-managers; and characteristics of the management company at which the given mutual fund manager is employed, such as the management company's number of funds offered, the management company's total assets under management, and the management company's number of mutual fund managers employed.

I begin by examining whether there are gender disparities in advancement for the average male mutual fund manager and the average female mutual fund manager without inclusion of controls other than time dummies.

As shown in Table 3.5, there are no gender disparities in rates of advancement through internal mobility, nor in rates of advancement through external mobility. Male mutual fund managers and female mutual fund managers advance at the same rate when moving internally, as well as when moving externally. This result holds for all five of my measures of advancement. However, women are more likely than men to terminate their employment as a mutual fund manager. (This is consistent with recent work from Barber, Scherbina, and Schlusche, which found that women have shorter tenures as mutual fund managers than men [2017].)

Next, I examine whether there are gender disparities in advancement for men and women who are similar on many characteristics other than gender by controlling for a variety of characteristics of mutual fund managers, characteristics of funds managed by the given mutual fund manager, and characteristics of the management company at which the given mutual fund manager is employed.

As shown in Table 3.6, most evidence indicates that there are no gender disparities in rates of advancement, whether via internal mobility or via external mobility, but that women are more likely than men to terminate their employment as a mutual fund manager. When measuring advancement as an increase in the number of funds under the mutual fund manager's management, women are marginally statistically significantly less likely to advance through internal mobility than men. There are no significant gender differences in advancement through internal mobility for the other four measures of advancement, and there are no significant gender differences in advancement through external mobility for all five measures of advancement.

Overall, results indicate that whether I am comparing the average man and average woman (Table 3.5) or men and women who are similar on many attributes (Table 3.6) there are no significant gender disparities in advancement. Regardless of whether individuals are moving through internal mobility or through external mobility, women generally advance at the same rates as men. (The one exception is the marginally statistically significant result that women are less likely than men to advance through internal mobility as measured by the number of funds under one's management when comparing otherwise-similar men and women.) Women, however, are more likely than men to end their employment as a mutual fund manager.

Next, I examine Hypotheses 2. In Hypothesis 2a, I hypothesized that male-favoring gender disparities in advancement would decrease as experience as a mutual fund manager increases. In Hypothesis 2b, I hypothesized that the aforementioned effect would be greater in the case of external mobility than in the case of internal mobility.

Table 3.7 below presents an examination of Hypothesis 2a and Hypothesis 2b. For the first four measures of career advancement, results indicate an absence of any gender disparities in career advancement through both internal mobility and external mobility. The main effect of female as well as the interaction of female and career experience and the interaction of female and career experience-squared are all statistically insignificant. For the last measure of career advancement, which defines career advancement as an increase in the number of individually managed funds, the coefficient on the interaction of female and career experience is positively associated with internal advancement, and the coefficient on the interaction of female and career experience-squared is negatively associated with internal advancement. When examining the coefficients and restricting the range to the range in my data, increased experience is associated with an increased likelihood of advancing through internal mobility to manage a higher number of individually managed funds for women than for men. Overall, Hypothesis 2a is mostly unsupported, as only the model for the fifth measure of advancement produces results consistent with Hypothesis 2a. Hypothesis 2b is rejected across all five measures of advancement.

Subsequently, I examine Hypotheses 3. In Hypothesis 3a, I hypothesized that male-favoring gender disparities in advancement are higher at intermediate levels of performance, and lower at both low and high levels of performance. In Hypothesis 3b, I hypothesized that the aforementioned effect would be greater in the case of external mobility than in the case of internal mobility.

As shown in Table 3.8 below, Hypotheses 3a and 3b are partially supported. There are no gender disparities in the relationship between performance and advancement for internal mobility. When examining external mobility, however, for three of the five measures of advancement there is a curvilinear relationship between performance and gender disparities in advancement, with gender disparities favoring men at intermediate levels of performance and

gender disparities favoring women at both lower and higher levels of performance. Results indicate that at both low levels and high levels of performance, women are more likely than men to advance externally to manage increased total assets, increased total revenues, and an increased number of individually managed funds, while for these same three measures of advancement men are more likely than women to advance externally at intermediate levels of performance.

Next, I perform a 50% spline regression to further explore Hypotheses 3a and 3b. I divide performance into two halves, the lower half of the performance range and the upper half of the performance range. I then run the multinomial logit model estimating the effect of performance and the effect of the interaction of gender and performance on advancement separately for the two halves of the spline. (In addition to the 50% spline regression, I also performed a one-thirds spline regression. As the one-thirds spline regression, the more complex model, was not a substantially better fit than the 50% spline regression, the simpler model, I focus my analysis on the 50% spline regression.)

Table 3.9 presents the results of the spline multinomial logit model. First, I examine whether the relationship between performance and advancement through internal mobility differs by gender. Consistent with the prior set of regressions with the linear and squared terms of performance, I fail to find evidence that men and women experience a differential relationship between performance and advancement through internal mobility.

Next, I examine whether the spline multinomial logit regression shows gender differences in the relationship between performance and advancement through external mobility. The main effect of the indicator for female on external advancement is positive for all five measures of advancement. For the lower 50% of the performance spline, the interaction of performance and the indicator for female is negative for all five measures of advancement through external mobility. This indicates that over the lower half of the performance range, women experience a decreasing return to increasing performance relative to men.

Next I examine whether there are gender disparities in external advancement over the upper half of the performance range as indicated by the 50% spline multinomial logit model. Over

the upper half of the performance range, the relationship between the interaction of performance and the indicator for female has an insignificant relationship with advancement through external mobility. This means that over the upper half of the performance range, there is no gender difference in the relationship between performance and external advancement. The exception to the lack of gender differences in advancement through external mobility over the upper performance spline is for the fifth specification, advancement measured as an increase in the number of individually managed funds, for which the interaction of performance and the indicator for female is positive and marginally significant. This result indicates that the highest-performing women may have an advantage over the highest-performing men in advancing externally to manage an increased number of individually managed funds. However, as the result is borderline-significant, this result should be interpreted as tentative.

Overall, I conclude that there is a non-linear relationship between performance, gender, and advancement through external mobility. Women experience an advantage relative to men at the lowest levels of performance. As performance increases, women become disadvantaged relative to men, so that men are advantaged relative to women at middle and upper levels of performance. The regression analysis originally indicated that the interaction of gender and performance has a non-linear quadratic relationship with external advancement, with women advantaged at both lower levels and upper levels of performance while disadvantaged at intermediate levels of performance. However, a closer examination using the spline analysis showed that the non-linear relationship was limited to the lower half of the performance spline, and that women are advantaged relative to men at lower levels of performance, while disadvantaged at middle and upper levels of performance.

Discussion

My research examines how men and women advance both by moving within their current employer as well as by moving across employers. The key question that I explore is whether any gender disparities in career advancement differ depending on whether women and men advance through internal mobility or through external mobility. I also examine the effect of employees'

experience and performance on gender disparities. I hypothesize that due to stereotypes around gender, male-favoring gender disparities in advancement would be larger for employees with intermediate levels of performance than for employees with lower and higher levels of performance, and that this relationship would be stronger for internal mobility than for external mobility. I also hypothesize that gender disparities would be larger for employees with less industry experience than for employees with more industry experience, with a stronger effect in the case of external mobility than in the case of internal mobility.

Surprisingly, I fail to find aggregate gender differences in advancement, both in the case of internal mobility and in the case of external mobility. Regardless of whether I compare the average male and the average female mutual fund manager, or male and female mutual fund managers who are similar on many characteristics and with a similar performance history, there is no gender difference in overall rates of advancement. The only exception to a lack of gender differences in aggregate advancement that I find is that when comparing similar men and women, women are marginally less likely than men to advance through internal mobility when advancement is measured as an increase in the total number of funds managed. Consistent with Barber, Scherbina, and Schlusche (2017), I find that women are more likely than men to terminate their employment as mutual fund managers.

I also fail to find that the relationship between career experience and advancement differs by gender, for both internal advancement and external advancement. The one exception is when measuring advancement as an increase in the number of individually managed funds under one's management (my fifth measure of advancement), I find that women experience greater returns to experience than men, consistent with Hypothesis 2a. However, this finding is only for internal mobility, and therefore is inconsistent with Hypothesis 2b, which predicted that women's increased returns to experience would be greater for external mobility than for internal mobility.

Notably, however, I find that when employees advance through external mobility, the relationship between performance and advancement differs by gender. Results indicate that men are more likely than women to advance among those with intermediate and high levels of

performance, but women are more likely than men to advance among those with low levels of performance.

These findings around the non-linear relationship between performance, gender, and external advancement indicate that male-favoring stereotypes disadvantage women most at medium to high levels of performance, as low performance may serve as evidence of lack of competence for men, eliminating men's advantage. A question then is why for external advancement men's advantage is not only eliminated but actually reversed so that women are advantaged at the lowest levels of performance. One possibility is that as only around 10% of mutual fund managers are female, if firms face diversity pressures, they may sometimes offer external advancement to lower-performing women if there is a scarcity of available female job applicants. However, this potential manifestation of diversity pressures would be inconsistent with a study of gender and salary by Leslie, Manchester, and Dahm (2017), who found that diversity pressures advantaged women perceived as having the highest potential relative to similar men, while other women were disadvantaged relative to similar men. As I am studying gender disparities in advancement rather than gender disparities in salary, it is possible that diversity pressures would manifest differently than in Leslie, Manchester, and Dahm's study (2017). Further research could explore in more detail why low-performing women may be advantaged in external advancement relative to low-performing men.

These results are particularly robust given that mutual fund returns serve as an objective measure of performance that is reported in a standardized manner for mutual fund managers across different employers. Mutual fund returns are an unbiased measure of performance, meaning that if any two individuals make the same investments over the same period of time, they will earn the same returns, regardless of their gender or other ascriptive characteristics. This allows me to rule out the possibility that results are affected by gender differences in performance. An unbiased measure of performance is notable, as in most contexts performance is measured using employer-specific performance evaluations. As these evaluations differ across employers, comparing the performance of employees from different employers is precluded. Additionally, research has found that performance evaluations may be subject to gender bias,

although results are somewhat mixed (Hamner et al., 1974; Bigoness, 1976; Hall & Hall, 1976; Frank & Drucker, 1977; Pazy, 1986; Sackett, Dubois, & Noe, 1991; Robbins & DeNisi, 1993; Giannantonio, Olian, & Carroll, 1995; Woehr & Roch, 1996; Bartol, 1999). If performance evaluations are subject to gender bias, they would not be a suitable control for a study examining potential gender disparities as an outcome.

While having an unbiased measure of performance is essential to having confidence that my results are not biased by gender disparities in performance, the existence of an unbiased measure of performance may limit the generalizability of my findings. Specifically, as discussed earlier, gender stereotypes exist such that women are more likely than men to have their competence questioned (Heilman, 1983; Eagly, 1987; Ridgeway, 1997; Schein, 2001; Eagly & Karau, 2002; Heilman, 2012). However, individuating information can reduce stereotypes (Fiske & Neuberg, 1990; Kunda & Thagard, 1996; Jussim, 2012; Monroe et al., 2017; Rubinstein, Jussim, & Stevens, 2018). In the mutual fund industry, a manager's performance history, as indicated by the returns generated by the fund(s) under the mutual fund manager's management, serves as individuating information. It may be the case that the availability of an unbiased measure of performance provides sufficient individuating information about employees such that gender stereotypes are greatly reduced. In contrast, gender stereotypes may be greater in other industries that lack a standardized unbiased measure of performance. This would serve as one possible explanation for a failure to find aggregate gender disparities in advancement.

Another possible explanation for the lack of aggregate gender disparities in advancement is that a number of mechanisms may exist and may affect gender disparities in opposite directions, essentially cancelling each other out. As discussed earlier, due to stereotypes around gender women are viewed as less competent than men (Heilman, 1983; Eagly, 1987; Ridgeway, 1997; Schein, 2001; Eagly & Karau, 2002; Heilman, 2012). If employers view women as less competent than men, they may discriminate against women and prefer to hire men for higher-level jobs offering advancement. However, diversity pressures may offer a countervailing force. If companies experience pressures around gender diversity, they may prefer to hire women over men. If the effects of gender stereotypes and diversity pressure on hiring are roughly equal in

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magnitude, then the overall result may be that men and women have similar likelihood of advancing.

While mutual fund managers are not considered upper management of firms, a job as a mutual fund manager is a fairly high-level position in a male-dominated occupation. Additionally, mutual fund manager positions are very visible, due to SEC-required disclosure of mutual fund managers' identities, as well as firms' tendency to highlight information about mutual fund managers when advertising the mutual funds under their management. If diversity pressures are greater when visibility is greater (Leslie, Manchester, & Dahm, 2017) and diversity pressures reduce or eliminate gender disparities due to stereotyping, then the results of this analysis may generalize to employers that are likely to experience diversity pressures and may not generalize to employers that are less likely to experience diversity pressures.

Overall, this research presents a nuanced picture of gender disparities in the mutual fund industry. While there are no gender differences in aggregate rates of advancement among mutual fund managers whether through internal mobility or through external mobility, examining gender differences in the relationship between performance and external advancement presents a more complex picture. The finding that among average and high performers men are more likely than women to advance through external mobility is consistent with the argument that employers discriminate against women. However, among low-performers, women may actually be preferred, which is consistent with the argument that firms face diversity pressures.

Another point to note is that female mutual fund managers are less likely than male mutual fund managers to have advanced degrees and to have become CFA charterholders. This serves as additional evidence consistent with the argument that at least some women benefit from diversity pressures; if firms face diversity pressures to hire women, then firms may hire women with lower levels of education and certifications than men on average.

Limitations

One limitation is that I am unable to control for potential gender differences in behavior and preferences. While I control for some supply-side characteristics such as education and

experience, I am unable to observe individuals' choices. Thus, while my analysis focuses on potential demand-side explanations, men and women's career outcomes could also be affected by gender differences in behavior. Jobs often involve trade-offs between wages and non-pecuniary aspects of the job such as flexible schedules or lower hours (Loprest, 1992). If women's preferences differ from men's on average, they may make decisions that favor flexibility over career advancement when faced with trade-offs (Loprest, 1992). Gender differences in preferences have been found to impact individuals' career outcomes even among highly educated individuals with high career potential. For example, Barbulescu and Bidwell's study of gender disparities in career outcomes among students at a top MBA program found gender differences in how individuals evaluate job rewards, as women preferred jobs with greater work-life balance than men on average (2013).

Another limitation is that as my study focuses on whether gender affects how mutual fund managers advance subsequent to obtaining their first job as a mutual fund manager, I do not observe whether or not gender bias affects individuals' entry into their first position as a mutual fund manager. There are fewer women than men who enter the mutual fund manager profession, and it is unclear whether women may experience barriers earlier on that preclude them from obtaining a first position as a mutual fund manager.

Future Research

There are a variety of ways that future research could expand on this study. Possibilities include interviews examining why women are more likely than men to leave the mutual fund industry, interviews examining why women and men choose to switch employers, examination of whether some women face gender-related barriers that preclude them from obtaining a first position as a mutual fund manager, and quantitative research exploring whether there is between-firm variance in gender disparities in promotions. Additionally, research could connect Study 1 and Study 2 by examining whether there is any firm-level association between gender disparities in prices (Study 1) and women's relative likelihood of advancement (Study 2).

As discussed earlier, although for both types of mobility I did not find any gender disparities in aggregate rates of advancement, I did find that female mutual fund managers were more likely than male mutual fund managers to exit the industry. (The finding that female mutual fund managers are relatively more likely to exit the industry is consistent with Barber, Scherbina, and Schlusche, 2017.) One possibility for future research is to conduct qualitative research to better understand why female mutual fund managers are more likely than male mutual fund managers to leave the mutual fund industry. Interviews could explore mutual fund managers' reasons for leaving the industry. For example, is the perception that one is not likely to advance a factor that causes mutual fund managers to exit the industry? Are female mutual fund managers more likely than male mutual fund managers to report leaving the industry due to a perceived lack of advancement opportunities?

Interviews could also explore in more detail the circumstances that cause mutual fund managers to switch employers. Employees could either be motivated by push factors if they feel dissatisfied with their current employer and are motivated to leave, or by pull factors if they come across a particularly enticing external opportunity despite generally being satisfied with their current employer. In particular, one could explore whether a perceived lack of advancement opportunities at one's current employer is a factor that causes employees to seek to advance through external mobility. One could also examine whether reasons for switching employers differ by gender.

Another topic for future research is to examine whether and how gender affects individuals' likelihood of obtaining a first job as mutual fund manager. I analyze how mutual fund managers advance in their careers, but I do not explore how individuals first become mutual fund managers. An absence of gender disparities in career advancement among mutual fund managers could indicate that women do not face gender-related disadvantages in the industry. Alternatively, it could indicate that women face disadvantages earlier on in their careers that reduce their likelihood of obtaining a first job as mutual fund manager. As my research examined career advancement contingent on having obtained a first job as a mutual fund manager, any obstacles faced by women in obtaining the first job as a mutual fund manager would have gone

undetected in my study. Even in the absence of actual gender discrimination, it may be the case that women choose not to pursue careers as mutual fund managers due to expectations that they will face gender-related discrimination. If women face greater barriers than men earlier on or if some women select out due to expectations around facing gender-related barriers, it may be the case that the women who do manage to become mutual fund managers differ from men who become mutual fund managers. While my research controlled for performance to rule out the possibility that results are biased by gender disparities in performance, it still may be the case that if women face greater barriers earlier on preventing many women from becoming mutual fund managers, those who do make it could differ from men on characteristics that are not measured in my data – for example, tenaciousness.

Further future research could involve additional quantitative analysis to examine whether there is between-firm variance in gender disparities in advancement. While there are no aggregate gender disparities in advancement, it may be the case that women are more likely than men to advance at some types of firms while men may be more likely than women to advance at other types of firms. To examine this possibility, one would examine whether there are gender disparities in advancement for certain types of firms. Firm characteristics that could be examined include the size of the firm, the amount of media attention received by the firm, whether the firm is publicly traded, the gender composition of the firm's upper management, and the gender composition of the firm's mutual fund managers. For example, if firms face diversity pressures, it may be the case that firms that are larger and/or that receive more media attention are more likely to hire and promote women if such firms are more likely to attract public scrutiny regarding whether they have sufficiently diverse employees. If diversity pressures cause some firms to advantage women over men while firms that are less subject to diversity pressures advantage men over women, one could still find an aggregate lack of gender disparities in advancement by examining firms at the aggregate level. It would also be worthwhile to examine how the gender composition of the firm's upper management and the gender composition of the firm's existing mutual fund managers affect the firm's likelihood of hiring and promoting female mutual fund managers. It may be the case that firms with few or no women in upper management and as

mutual fund managers are more likely to hire female mutual fund managers if such firms are more likely to face scrutiny and pressure around the lack of gender diversity in their workforce. However, it may also be the case that firms with few or no women lack women *because* they are biased against women, in which case these firms would be less rather than more likely to hire and promote women.

Finally, future work could examine the relationship between gender disparities in prices and gender disparities in career advancement at the firm level. In particular, one could examine whether women have relatively worse career outcomes and are relatively less likely to advance at firms with greater male-favoring gender disparities in prices than at firms with lesser or no gender disparities in prices. There are two potential reasons for such a relationship: 1) Greater male-favoring gender disparities in prices would mean that women face greater disadvantage at generating revenue. Generating less revenue may directly harm women's career advancement. 2) Existence of greater male-favoring gender disparities in prices could indicate that the employer has a relatively higher degree of gender bias and is less committed to gender equity than firms with smaller or no gender disparities in prices. If a firm has a relatively higher level of gender bias, it may be less likely to offer women advancement opportunities than it would in the absence of gender bias.

Conclusion

While there have been many studies on gender disparities in promotions (e.g., DiPrete & Soule, 1988; Spilerman & Petersen, 1999; Ginther & Hayes, 2003; Petersen & Saporta, 2004; Ransom & Oaxaca, 2005; Blau & Devaro, 2007; Smith, Smith, & Verner, 2013) that provide insights into how women and men advance within their current employers, less had been explored about whether there are gender disparities in how employees advance through external mobility. I contribute to the literature by examining whether any gender disparities in advancement differ depending on whether employees are advancing through internal mobility or external mobility. I find that there are no gender differences in aggregate rates of advancement, regardless of whether employees are advancing through internal mobility or through external

mobility. Additionally, I fail to find evidence that the relationship between experience and advancement differs by gender, for both internal advancement and external advancement. However, I do find evidence of gender disparities in the relationship between performance and advancement when employees advance through external mobility. At intermediate and high levels of performance men are advantaged relative to women when advancing through external mobility, but at low levels of performance women are advantaged relative to men.

CHAPTER 4: CONCLUSION

Gender disparities in career outcomes are still pervasive. Despite women now making up almost half the labor force (World Bank, 2019), women still earn lower pay and occupy jobs at lower levels of organizations than do men on average (Blau & Kahn, 2017). While a number of reasons for women's persistent labor market disadvantage have been cited in the extant literature, including gender-based stereotypes leading to discrimination, research has failed to produce a consensus around all of the factors contributing to the gender disparity in labor market outcomes.

In my dissertation, I seek to provide a better understanding of some of the factors that may contribute to women's persistent labor market disadvantage. First, in Chapter 2, I examine whether gender affects the prices that employers charge for work performed by their female and male employees. I demonstrate that employers charge lower prices for work performed by female employees than for equivalent work performed by similarly qualified male employees. Next, in Chapter 3, I examine whether women and men experience different rates of career advancement depending on whether they move through internal mobility or through external mobility. In both studies the context is the mutual fund industry. I demonstrate that while there are no aggregate gender disparities in advancement, when advancing through external mobility women at intermediate and high levels of performance are disadvantaged relative to similarly performing men, while women with low levels of performance experience an advantage relative to similarly performing men.

Together, Study 1 and Study 2 provide complementary lenses on how gender affects work and careers in the mutual fund industry. In Study 1, I identify the price of work as a mechanism that may contribute to gender disparities in career outcomes. If the work of female employees is underpriced, then women would generate less revenue than men on average. As revenue generated is an employee's direct contribution to the employer's bottom line, one may expect that if women generate less revenue, they would be less likely to advance in their careers.

In Study 2, however, I fail to find evidence that women are less likely than men to advance. One possible explanation is that women's higher turnover precludes the detection of

gender disparities in advancement. If women's turnover is higher at least in part due to women choosing to leave the industry at higher rates than men due to experiencing barriers to advancement, then I may not find gender disparities in advancement if – rather than staying without advancing – those women who encounter barriers to advancement leave the industry.

Another possibility is that gender disparities in revenue generated stemming from gender disparities in management fees affect employees' salary rather than employees' career advancement. Mutual fund managers who participated in my interviews indicated that compensation was generally proportionate to the revenues that the manager generated. If women generate lower revenues due to their work being underpriced, then it may be the case that the difference in revenues generated causes women to have lower salaries.

A further consideration is whether and how diversity pressures may differentially affect different workplace outcomes. Representation, and in particular representation of women in upper-level jobs, has received substantial recent attention from stakeholders concerned with diversity (Leslie, Manchester, & Dahm, 2017; Leslie, 2019). In contrast, there has been less focus on gender equality in pricing. If stereotypes cause employers to be biased against women, diversity pressures may constrain employers' gender bias in cases when the employer's gender equity (or lack thereof) is salient. If stakeholders concerned with diversity focus on representation of female employees, then employers may be less inclined to discriminate against women in hiring and promotions, as doing so may be visible and may attract criticism from stakeholders concerned with diversity. In contrast, if firms consider any gender disparities in pricing as unlikely to attract the attention of stakeholders, then firms may be less likely to make efforts to ensure gender equity in pricing. Further, due to the lack of attention to potential gender disparities in pricing, firms may themselves not be aware of the potential for gender disparities in pricing, and may instead focus their gender-equity efforts on areas – such as representation and advancement – of which they are aware.

While the general trend toward using data to manage people has much potential to reduce gender disparities, my research shows that it is essential to ensure that the data that employers are using to make decisions about employees' careers are not subject to gender bias.

As discussed earlier, today employers are increasingly likely to use merit-based systems when making personnel decisions, such as whom to hire and promote (Cappelli, 1999). While making decisions based on data has much potential to reduce bias, data may contain biases that are subtle and difficult to detect. For example, compensating employees in part based on how much revenue they generate may on the surface sound equitable and gender neutral. However, if women's work is underpriced, then women have less potential to generate revenue, and may be disadvantaged due to their gender. Thus, I demonstrate that it is not sufficient for employers to merely increase their reliance on data when making personnel decisions, but rather employers must ensure that gender bias is not baked into their data.

I also demonstrate that one must go beyond examining aggregate differences when seeking to understand whether there are disparities in how women and men advance. Merely assessing whether there are aggregate differences in women's and men's rates of advancement may conceal subtle but significant disparities in how women and men with different levels of performance advance. As mentioned earlier, while I found that women actually were advantaged relative to men at low levels of performance, women with average and high levels of performance were still disadvantaged relative to men with equal levels of performance.

This implies that when employers are considering diversity and gender equity, they must ensure that they are treating all women and men equally, rather than concentrating diversity efforts only on certain women. A recent study from Leslie, Manchester, and Dahm (2017) found that diversity pressures allowed women perceived as having the highest potential to command a pay premium. The results of my study differed from their work, as I found that women were advantaged relative to men at low levels of performance. Despite these differing conclusions, both were similar in the sense of finding that a limited group of women were advantaged over men while many other women remain disadvantaged. Thus, this implies that employers' diversity efforts must focus on ensuring that all women and men – rather than just some groups of women and men – are treated equally.

This research lays the groundwork for future work. For example, a key question is to what extent results from the mutual fund industry may generalize to other settings. While

research has found evidence that gender bias is pervasive, existing across a wide range of industries and occupations with different characteristics, as discussed earlier, women may face heightened stereotypes around gender in male-typed settings (Heilman, 1983; Heilman & Stopeck, 1985; Heilman et al., 1989; Heilman et al., 1995; Heilman et al., 2004; Heilman & Okimoto, 2007). If stereotypes around gender are greatest in male-typed settings, then gender disparities may be greater in the mutual fund industry than in gender balanced or female-dominated industries. However, the availability of mutual fund returns as an objective measure of performance may serve to reduce gender disparities, as returns may serve as individuating information which reduces employers' reliance on stereotypes. In contrast, employers in most other industries have less unambiguous information on which to make decisions, as most industries lack an objective measure of performance. Hence employers in most other industries may make decisions that are subject to greater bias than employers in the mutual fund industry. Overall, some attributes of the mutual fund industry predict greater gender bias than in other settings, while other attributes predict lesser gender bias than in other settings. Thus, a question for future research is to what extent the findings from this dissertation generalize to other settings.

Taken together, the results of this dissertation indicate that gender disparities may be subtle and hard to detect. While academics and practitioners have considered a variety of factors that may contribute to gender disparities in outcomes, the potential existence of gender disparities in the price of employees' work has generally been overlooked by both academics and practitioners. Additionally, the absence of aggregate gender disparities in advancement may conceal gender bias that persists for some groups of women. Overall, I hope that this dissertation has advanced the conversation on gender and careers by providing data-driven insights into how and when women experience workforce disadvantage using the mutual fund industry as a context.

APPENDIX

Mutual Fund Objective Categories

Table A-1 summarizes the 38 mutual fund objective categories in my data.

Management Fees and Hiring

I perform additional analyses to examine whether there are gender disparities in the management fees of mutual funds that hire men and women for the expanded sample of both individually managed and team managed funds. I disaggregate initial hiring (hiring into an individual's first position as a mutual fund manager) and subsequent/experienced hiring (hiring to manage subsequent or additional funds later in one's career as a mutual fund manager) into separate analyses.

First, I examine whether there are gender disparities in management fees when a mutual fund manager is hired to manage an initial mutual fund at the start of his or her career as a mutual fund manager. As shown in Table A.2, I find that there is no significant difference in the management fees of the initial funds that hire men and the management fees of the initial funds that hire women at the start of their careers as mutual fund managers. This result is robust to controls for a variety of mutual fund manager characteristics, fund characteristics, firm characteristics, and fund fixed effects.

Next, I examine experienced hires rather than initial hires, as shown in Table A.3. The observations in this analysis are the manager-fund pairs at the time of hiring when managers who have at least one year of prior experience as a mutual fund manager are hired to manage subsequent or additional funds. Note that as discussed previously, mutual fund managers may manage either a single fund or multiple funds at a time. Therefore experienced hires include cases in which the mutual fund manager assumes management of a subsequent mutual fund while departing his or her prior mutual fund(s), as well as cases in which a mutual fund manager assumes management of an additional fund while also retaining management of his or her prior mutual fund(s).

Similarly, as shown in Table A.3, I find that there is no significant gender difference in management fees when experienced mutual fund managers are hired to manage subsequent and additional funds. This result is robust to controls for a variety of manager and fund characteristics, as well as to fund fixed effects.

Figure 1.1: Proportion of mutual funds that are individually managed versus team managed

1970 - 2014

—— Team Managed   —— Individually Managed
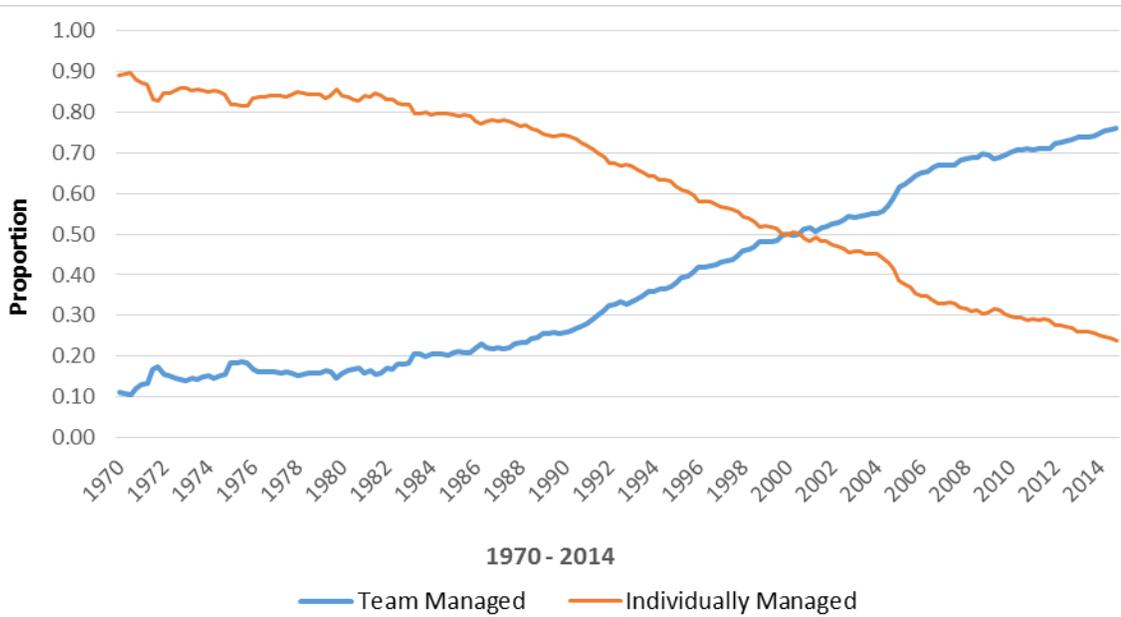
Source: Based on data from Morningstar Direct.

Figure 1.2: Overview of data
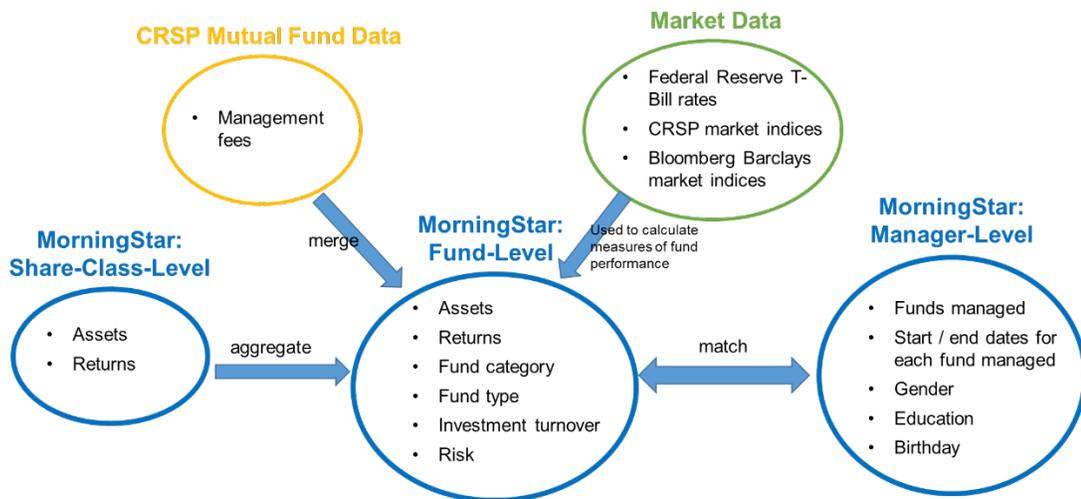
Figure 2.1: Gender composition of mutual fund managers

Source: Based on data from Morningstar Direct.
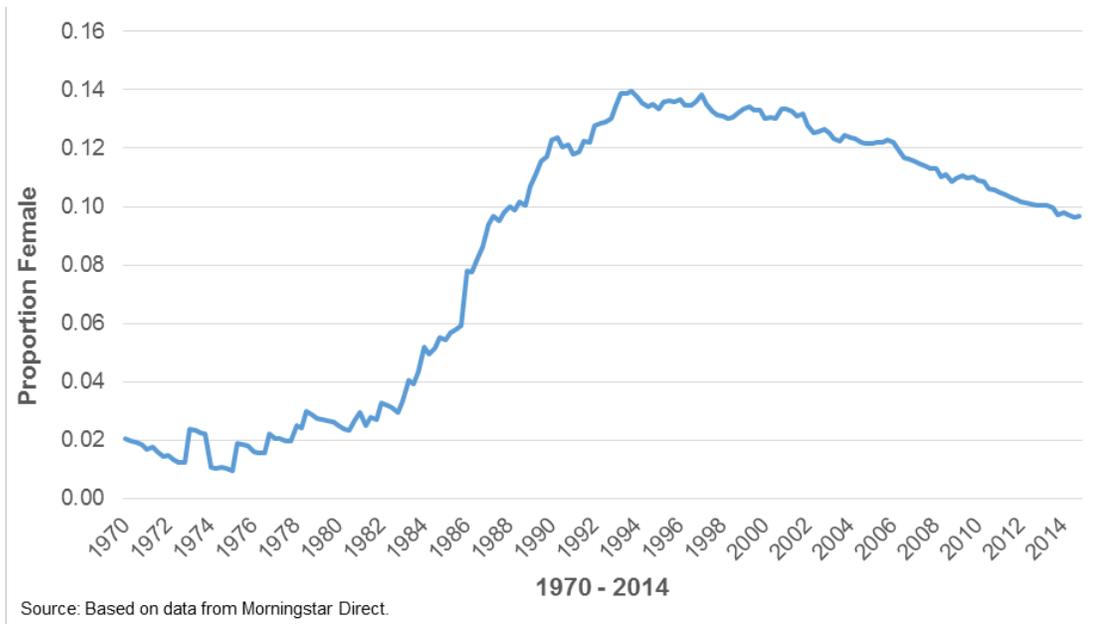
Figure 2.2: Predictive margins of management fees over mutual fund managers' tenure at fund – individually managed funds (model: all controls and fund fixed effects)
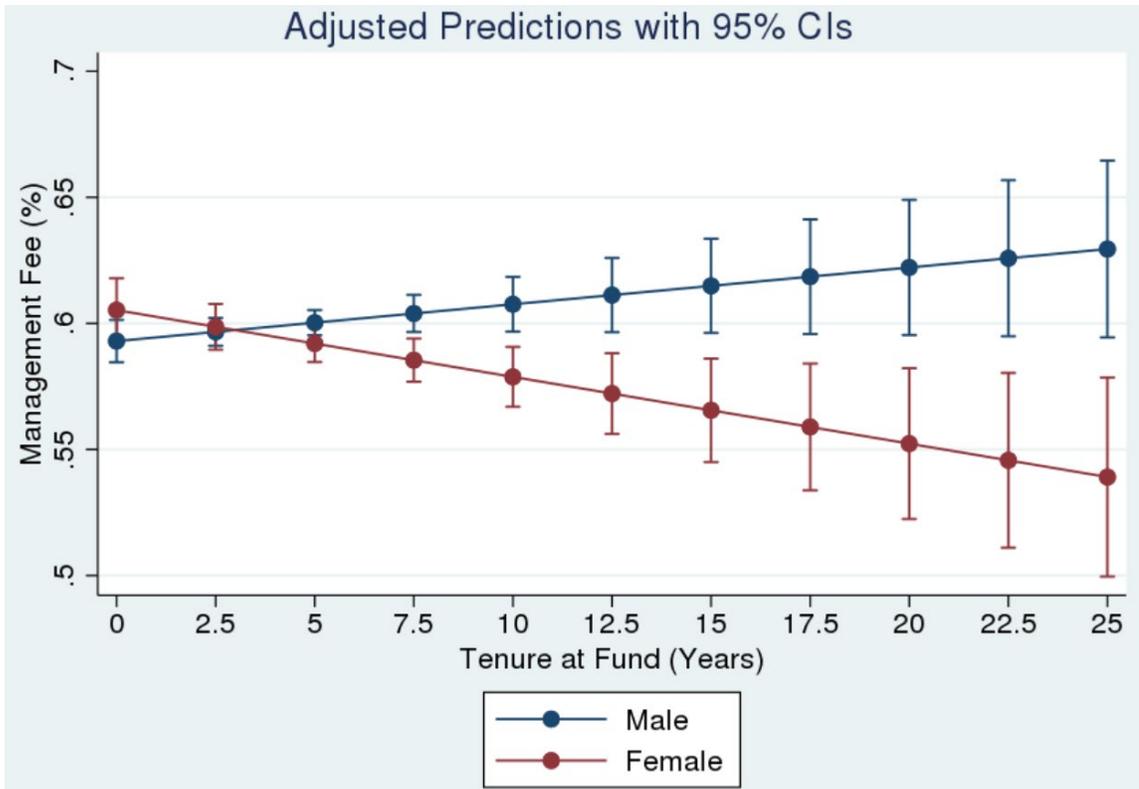
Table 1.1: Summary of context

	General Case	In Mutual Fund Industry Context
	employer	mutual fund sponsor company
	employee	mutual fund manager
	customer	investors
Chapter 2	price of employee's work	management fee
	sets price of employee's work	mutual fund sponsor company's upper management (subject to approval from board of directors)
Chapter 3	internal career move	move within same mutual fund sponsor company
	external career move	move to different mutual fund sponsor company

Table 2.1: Descriptive statistics – individually managed funds

Group	#	Variable	Sample Size	Mean	S. D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Fund Manager's Gender	1	Female	125,424	0.10	0.30	1																	
Price of Services	2	Management Fee (%)	92,608	0.64%	0.33%	-0.1	1																
Tenure	3	Manager's Tenure at Fund (Years)	132,869	5.44	5.11	-0	0.01	1															
Manager Characteristics	4	PhD Degree	132,869	0.01	0.11	-0	0.04	-0	1														
	5	MBA Degree	132,869	0.22	0.41	-0	-0	0.05	-0	1													
	6	CFA Charterholder	132,869	0.40	0.49	0.04	0.03	0.03	-0	0.15	1												
	7	Manager Age (Years)	62,572	48.28	9.16	-0.1	0.09	0.44	0.07	0.01	-0.1	1											
Fund Characteristics	8	Fund Size ($M)	125,767	$999	$4,700	-0	-0.1	0.14	-0	0.02	-0	0.05	1										
	9	Fund Age (Years)	132,869	11.63	10.34	0.03	-0.1	0.42	-0	0.03	0.04	0.17	0.18	1									
	10	Objective Net Asset Inflows (%)	113,451	0.01%	0.01%	-0	0.05	-0.1	-0	-0	0	-0	0.03	-0.1	1								
	11	Socially Responsible Fund	131,706	0.02	0.15	0.04	0.01	-0	0.02	-0.1	-0	0.06	-0	-0	0.01	1							
	12	Fund of Funds	131,706	0.08	0.27	-0	-0.2	-0.1	0.02	-0.1	-0.1	-0	0	-0.2	0.06	0.01	1						
	13	Investment Turnover (%)	92,978	99%	226%	-0	0.17	-0.1	0.01	-0	-0	0.01	0	-0.1	0.08	-0	-0.1	1					
	14	Risk	132,191	4.45	1.59	0.02	0	-0.1	0	0.01	-0	-0.1	-0	-0.1	-0	0.01	-0	0.03	1				
Mgmt. Company Characteristics	15	Management Company Number of Funds	103,841	205.70	250.40	0.01	-0.2	-0.1	-0	0.04	-0.1	-0.1	0.15	0.19	-0	-0.1	0	-0	-0.1	1			
	16	Management Company Net Asset Inflows (%)	108,704	0.01%	0.01%	-0	0.02	-0.1	0.02	-0	0.02	-0.1	-0	-0.1	0.08	0	0.01	0.08	0	0.02	1		
Performance	17	Risk-Adjusted Returns Rank Scaled	106,852	5.17	1.38	0.01	-0	0.01	-0	0.02	0	-0	-0	-0	-0	-0.1	-0	0.03	-0	0.02	1		
	18	Net Asset Inflows (%)	113,451	0.01%	0.04%	-0	0.01	-0.2	0.01	-0	-0	-0.1	-0	-0.2	0.19	0.02	0.13	0.05	0.01	-0	0.22	0.09	1

Notes:
Observations are defined at the fund-quarter level.
Investment turnover is fiscal year total.
Risk is annual moving average.
Risk-adjusted returns rank scaled are annual moving average.
Net asset inflows are winsorized 0.5% on each tail.
Net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average.

Table 2.2: Differences in means by gender – individually managed funds

			Means		Difference	T-Stat
			Male **(1)**	**Female** **(2)**	**(3)**	**(4)**
Price of Services	1	Management Fee (%)	0.65%	0.59%	0.06%	15.66
Tenure	2	Manager's Tenure at Fund (Years)	5.62	4.85	0.77	16.33
Manager Characteristics	3	PhD Degree	0.01	0.01	0.01	6.39
	4	MBA Degree	0.23	0.22	0.01	3.20
	5	CFA Charterholder	0.41	0.48	-0.07	-14.06
	6	Manager Age (Years)	48	47	0.58	19.52
Fund Characteristics	7	Fund Size ($M)	$1,080	$621	459	9.96
	8	Fund Age (Years)	11.7	12.7	-0.97	-10.16
	9	Objective Net Asset Inflows (%)	0.01%	0.01%	0.00	5.82
	10	Socially Responsible Fund	0.02	0.04	-0.02	-12.70
	11	Fund of Funds	0.08	0.06	0.01	4.21
	12	Investment Turnover (%)	101%	67%	0.35	14.77
	13	Risk	4.41	4.51	-0.10	-6.83
Mgmt. Company Characteristics	14	Management Company Number of Funds	210	217	-7.11	-2.72
	15	Management Company Net Asset Inflows (%)	0.01%	0.01%	0	0.06
Performance	16	Risk-Adjusted Returns Rank Scaled	5.17	5.23	-0.06	-4.06
	17	Net Asset Inflows Percent (%)	0.01%	0.01%	0.00	8.10

Notes:

Observations are defined at the fund-quarter level.

Investment turnover is fiscal year total.

Risk is annual moving average.

Risk-adjusted returns rank scaled are annual moving average.

Net asset inflows are winsorized 0.5% on each tail.

Net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average.

Table 2.3: Management fees when mutual fund managers are hired to assume management of a mutual fund – individually managed funds

		Dependent Variable: Management Fee	Management Fee
		no controls	all controls
		(1)	(2)
Gender	Female	-0.0328	-0.00994
		(0.0227)	(0.0413)
Manager Controls	PhD Holder		-0.0552
			(0.235)
	MBA Holder		0.0635**
			(0.0291)
	CFA Charterholder		-0.0563
			(0.0358)
	Manager Age		-0.118
			(0.111)
Fund Controls	Fund Size		0.0329***
			(0.0104)
	Fund Age		-0.0409*
			(0.0242)
	Objective Dummies		x
	Objective Net Asset Inflows		-0.746
			(1.046)
	Investment Turnover		-0.000150
			(0.000211)
	Risk		-0.00205
			(0.0932)
Mangement Company Controls	Management Company Dummies		x
	Management Company Number of Funds		0.000138
			(0.000209)
	Management Company Net Asset Inflows		3.697
			(2.424)
Performance Controls	Risk-Adjusted Returns Rank Scaled		-0.00168
			(0.0105)
	Net Asset Inflows		-0.0452
			(0.412)
	Time Dummies	x	x
	Constant	0.574***	0.545
		(0.0339)	(0.688)
	Observations	1,516	285
	R-squared	0.082	0.874

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes:
Management fee (DV) is lagged one quarter.
Manager age is natural log.
Fund size is natural log of assets.
Fund age is natural log.
Investment turnover is fiscal year total, lagged one quarter.
Risk is annual moving average, lagged one quarter.
Risk-adjusted returns rank scaled are annual moving average, lagged one quarter.
Net asset inflows are winsorized 0.5% on each tail.
Net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average, lagged one quarter.

Table 2.4: Management fees when mutual fund managers are hired to assume management of a mutual fund – all funds

	Dependent Variable:	Management Fee	Management Fee	Management Fee
		no controls	all controls	all controls + fund fixed effects
		(1)	(2)	(3)
Gender	Female	-0.00205	0.00556	0.00281
		(0.00649)	(0.00617)	(0.00305)
Manager Controls	PhD Holder		0.0186	0.00983
			(0.0180)	(0.00839)
	MBA Holder		0.000738	-0.00230
			(0.00488)	(0.00241)
	CFA Charterholder		-0.000836	-0.00129
			(0.00409)	(0.00200)
	Manager Age		0.0626***	-0.0279*
			(0.0164)	(0.0145)
Fund Controls	Fund Size		0.0265***	0.0288***
			(0.00173)	(0.00216)
	Fund Age		-0.00261	0.0181**
			(0.00361)	(0.00732)
	Objective Dummies		x	x
	Objective Net Asset Inflows		0.189	0.109
			(0.340)	(0.214)
	Socially Responsible Fund		0.0523**	0.596***
			(0.0208)	(0.133)
	Fund of Funds		-0.419***	1.100***
			(0.0288)	(0.159)
	Investment Turnover		2.45e-05	-4.60e-05***
			(2.15e-05)	(1.75e-05)
	Risk		0.0500***	0.0389***
			(0.0115)	(0.00849)
	Number of Managers		0.00416***	0.00144***
			(0.000519)	(0.000496)
	Fund Fixed Effects			x
Mangement Company Controls	Management Company Dummies		x	x
	Management Company Number of Funds		-8.59e-05***	-4.88e-05**
			(2.79e-05)	(2.27e-05)
	Management Company Net Asset Inflows		-0.307	0.694***
			(0.342)	(0.202)
Performance Controls	Risk-Adjusted Returns Rank Scaled		-0.000428	-0.00434***
			(0.00174)	(0.00127)
	Net Asset Inflows		-0.423***	-0.387***
			(0.0622)	(0.0419)
	Time Dummies	x	x	x
	Constant	0.685***	-0.175*	0.508***
		(0.0158)	(0.0913)	(0.160)
	Observations	22,530	8,556	8,556
	R-squared	0.023	0.648	0.956

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Notes:
Management fee (DV) is lagged one quarter.
Manager age is natural log.
Fund size is natural log of assets.
Fund age is natural log.
Investment turnover is fiscal year total, lagged one quarter.
Risk is annual moving average, lagged one quarter.
Risk-adjusted returns rank scaled are annual moving average, lagged one quarter.
Net asset inflows are winsorized 0.5% on each tail.
Net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average, lagged one quarter.

Table 2.5: Changes in management fees during mutual fund managers' tenure at a mutual fund – individually managed funds

	Dependent Variable:	Management Fee no controls	Management Fee all controls	Management Fee all controls + fund fixed effects
		(1)	**(2)**	**(3)**
	Female	-0.0530***	0.0156	0.00872
		(0.0126)	(0.0123)	(0.0113)
	Tenure at Fund		-0.000269	0.000203
			(0.000184)	(0.000165)
	Female * Tenure at Fund		-0.000586***	-0.000612***
			(0.000212)	(0.000213)
	PhD Holder		-0.0120	-0.00204
			(0.0326)	(0.0326)
	MBA Holder		0.0148*	0.00282
Manager			(0.00805)	(0.00764)
Controls	CFA Charterholder		0.00259	0.0192**
			(0.00840)	(0.00814)
	Manager Age		0.0314	-0.0556**
			(0.0233)	(0.0241)
	Fund Size		0.0341***	0.0354***
			(0.00121)	(0.00130)
	Fund Age		0.0487***	0.0702***
			(0.00376)	(0.00452)
	Objective Dummies		x	x
	Objective Net Asset Inflows		0.0324	0.00943
			(0.0987)	(0.0969)
Fund Controls	Socially Responsible Fund		0.0185	0.624***
			(0.0417)	(0.183)
	Fund of Funds		-0.340***	-0.280***
			(0.0428)	(0.0885)
	Investment Turnover		-1.11e-05	-1.08e-05
			(6.83e-06)	(6.92e-06)
	Risk		0.0329***	0.0475***
			(0.00568)	(0.00552)
	Fund Fixed Effects			x
	Management Company Dummies		x	x
Management	Management Company Number of Funds		-5.03e-05***	-5.05e-05***
Company			(1.04e-05)	(1.02e-05)
Controls	Management Company Net Asset Inflows		0.0984	0.147
			(0.105)	(0.105)
	Risk-Adjusted Returns Rank Scaled		-0.000440	-0.000620
Performance			(0.000533)	(0.000535)
Controls	Net Asset Inflows		-0.124***	-0.103***
			(0.0223)	(0.0224)
	Time Fixed Effects	x	x	x
	Constant	0.617***	-0.670***	-0.599***
		(0.00509)	(0.116)	(0.172)
	Observations	88,421	25,377	25,377
	Number of manager-fund pairs	6,481	2,360	2,360

Standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Notes:
Manager age is natural log.
Fund size is natural log of assets.
Fund age is natural log.
Investment turnover is fiscal year total, lagged one quarter.
Risk is annual moving average, lagged one quarter.
Risk-adjusted returns rank scaled are annual moving average, lagged one quarter.
Net asset inflows are winsorized 0.5% on each tail.
Net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average, lagged one quarter.

Table 2.6: Changes in management fees during mutual fund managers' tenure at a mutual fund – all funds

	Dependent Variable:	Management Fee	Management Fee	Management Fee
		no controls	all controls	all controls + fund fixed effects
		(1)	(2)	(3)
	Female	-0.0151***	0.000922	0.00623***
		(0.00516)	(0.00396)	(0.00153)
	Tenure at Fund		7.62e-05	7.25e-05***
			(5.93e-05)	(2.42e-05)
	Female * Tenure at Fund		-0.000481***	-0.000380***
			(6.13e-05)	(5.21e-05)
Manager Controls	PhD Holder		0.0492***	0.00548*
			(0.00895)	(0.00331)
	MBA Holder		-0.000860	0.000834
			(0.00275)	(0.000971)
	CFA Charterholder		-0.00362	0.00123
			(0.00257)	(0.000878)
	Manager Age		0.00364	0.00349
			(0.00404)	(0.00365)
Fund Controls	Fund Size		0.0289***	0.0300***
			(0.000353)	(0.000354)
	Fund Age		0.0251***	0.0302***
			(0.00111)	(0.00126)
	Objective Dummies		x	x
	Objective Net Asset Inflows		-0.0980***	-0.117***
			(0.0342)	(0.0335)
	Socially Responsible Fund		-0.00579	-0.318***
			(0.0118)	(0.0619)
	Fund of Funds		-0.312***	0.796***
			(0.0136)	(0.0712)
	Investment Turnover		-3.28e-06*	-5.09e-06***
			(1.74e-06)	(1.71e-06)
	Risk		0.0331***	0.0360***
			(0.00195)	(0.00149)
	Number of Managers		0.000551***	0.000468***
			(0.000136)	(0.000131)
	Fund Fixed Effects			x
Management Company Controls	Management Company Dummies		x	x
	Management Company Number of Funds		-2.64e-05***	-2.79e-05***
			(4.31e-06)	(4.13e-06)
	Management Company Net Asset Inflows		0.254***	0.266***
			(0.0289)	(0.0285)
Performance Controls	Risk-Adjusted Returns Rank Scaled		-0.000440**	-0.000375**
			(0.000183)	(0.000181)
	Net Asset Inflows		-0.241***	-0.234***
			(0.00629)	(0.00621)
	Time Dummies		x	x
	Constant	0.635***	-0.321***	-0.985***
		(0.00217)	(0.0358)	(0.113)
	Observations	654,434	279,547	279,547
	Number of manager-fund pairs	41,292	21,522	21,522

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes:
Manager age is natural log.
Fund size is natural log of assets.
Fund age is natural log.
Investment turnover is fiscal year total, lagged one quarter.
Risk is annual moving average, lagged one quarter.
Risk-adjusted returns rank scaled are annual moving average, lagged one quarter.
Net asset inflows are winsorized 0.5% on each tail.
Net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average, lagged one quarter.

Table 2.7: Magnitude of effects – gender disparities in management fees over mutual fund managers' tenure at a mutual fund – individually managed funds (model: all controls and fund fixed effects)

Years:	0	2.5	5	7.5	10	12.5	15	17.5	20	22.5	25
					Experience in Years						
Male	0.593	0.597	0.600	0.604	0.608	0.611	0.615	0.619	0.622	0.626	0.629
Female	0.605	0.599	0.592	0.585	0.579	0.572	0.566	0.559	0.552	0.546	0.539
Margin (Male - Female)	-0.012	-0.002	0.008	0.019	0.029	0.039	0.049	0.060	0.070	0.080	0.090
Margin (% of Female)	-2.0%	-0.3%	1.4%	3.2%	5.0%	6.8%	8.7%	10.7%	12.6%	14.7%	16.8%

Notes:

Manager age is natural log.

Fund size is natural log of assets.

Fund age is natural log.

Investment turnover is fiscal year total, lagged one quarter.

Risk is annual moving average, lagged one quarter.

Risk-adjusted returns rank scaled are annual moving average, lagged one quarter.

Net asset inflows are winsorized 0.5% on each tail.

Net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average, lagged one quarter.

Table 2.8. Net asset inflows – individually managed funds

		Dependent Variable: Net Asset Inflows no controls	Net Asset Inflows all controls	Net Asset Inflows all controls + fund fixed effects
		(1)	(2)	(3)
	Female	-0.00288*** (0.000692)	-0.00557*** (0.00120)	-0.00663*** (0.00165)
	Tenure at Fund		0.000124*** (1.84e-05)	0.000148*** (2.25e-05)
Manager Controls	PhD Holder		-0.00892 (0.00806)	0.0658 (0.0441)
	MBA Holder		0.000691 (0.00178)	0.0223 (0.0153)
	CFA Charterholder		-0.000419 (0.00176)	0.0359** (0.0150)
	Manager Age		0.00316 (0.00270)	-0.00501 (0.00372)
Fund Controls	Fund Fixed Effects		x	x
	Fund Size		-0.0106*** (0.000258)	-0.0167*** (0.000322)
	Fund Age		-0.00282*** (0.000683)	-0.00762*** (0.00112)
	Objective Dummies		x	x
	Objective Net Asset Inflows		0.653*** (0.0248)	0.619*** (0.0250)
	Socially Responsible Fund		-0.00761 (0.00515)	0.0158 (0.0308)
	Fund of Funds		0.00328 (0.00574)	0.0412** (0.0176)
	Investment Turnover		9.74e-06*** (1.73e-06)	3.56e-06* (1.82e-06)
	Risk		-0.00135** (0.000597)	-0.00480*** (0.000711)
Mangement Company Controls	Management Company Dummies		x	x
	Management Company Number of Funds		9.75e-07 (2.34e-06)	4.93e-06** (2.38e-06)
	Management Company Net Asset Inflows		0.681*** (0.0276)	0.660*** (0.0274)
Fund Performance	Risk-Adjusted Returns Rank Scaled		0.00148*** (0.000137)	0.00126*** (0.000139)
	Lagged Net Asset Inflows		0.121*** (0.00540)	0.101*** (0.00553)
Fees	Expense Ratio		0.000748 (0.00175)	0.00438** (0.00203)
	Management Fee		-0.135*** (0.0335)	-0.158*** (0.0338)
	Constant	0.0257*** (0.000919)	0.188*** (0.0170)	0.419*** (0.0419)
	Observations	106,879	20,831	20,831
	Number of manager-fund pairs	5,741	1,553	1,553

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes:
Manager age is natural log.
Fund size is natural log of assets.
Fund age is natural log.
Investment turnover is fiscal year total, lagged one quarter.
Risk is annual moving average, lagged one quarter.
Risk-adjusted returns rank scaled are annual moving average, lagged one quarter.
Net asset inflows are winsorized 0.5% on each tail.
Net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average.
Controls for net asset inflows, objective net asset inflows, and management company net asset inflows are lagged one quarter.

Table 2.9: Net asset inflows – all funds

	Dependent Variable:	Net Asset Inflows no controls	Net Asset Inflows all controls	Net Asset Inflows all controls + fund fixed effects
		(1)	(2)	(3)
	Percent Female	-0.00301*** (0.000474)	-0.00395*** (0.000713)	-0.00423*** (0.000830)
	Tenure at Fund		4.34e-05*** (7.23e-06)	4.15e-05*** (7.63e-06)
Manager Controls	PhD Holder		-0.00739* (0.00438)	0.110 (0.101)
	MBA Holder		0.000532 (0.00115)	0.101*** (0.0224)
	CFA Charterholder		0.00266** (0.00105)	-0.0192 (0.0258)
	Manager Age		0.00595*** (0.00120)	0.00725*** (0.00140)
Fund Controls	Fund Fixed Effects			x
	Fund Size		-0.00997*** (0.000137)	-0.0146*** (0.000163)
	Fund Age		-0.00127*** (0.000342)	-0.00496*** (0.000572)
	Objective Dummies		x	x
	Objective Net Asset Inflows		0.676*** (0.0152)	0.641*** (0.0152)
	Number of Managers		0.000138* (7.77e-05)	9.81e-05 (8.80e-05)
	Socially Responsible Fund		-0.00272 (0.00266)	-0.343*** (0.0442)
	Fund of Funds		-0.00851*** (0.00307)	0.0673*** (0.0180)
	Investment Turnover		7.13e-06*** (8.90e-07)	6.05e-06*** (9.22e-07)
	Risk		-0.00181*** (0.000349)	-0.00358*** (0.000398)
Mangement Company Controls	Management Company Dummies		x	x
	Management Company Number of Funds		2.32e-07 (1.55e-06)	2.83e-06* (1.64e-06)
	Management Company Net Asset Inflows		0.629*** (0.0145)	0.605*** (0.0144)
Fund Performance	Risk-Adjusted Returns Rank Scaled		0.00181*** (8.26e-05)	0.00162*** (8.39e-05)
	Lagged Net Asset Inflows		0.183*** (0.00284)	0.161*** (0.00292)
Fees	Management Fee		-0.00309*** (0.000904)	-0.00287*** (0.00106)
	Expense Ratio		-0.229*** (0.0317)	-0.227*** (0.0351)
	Constant	0.0310*** (0.000666)	0.185*** (0.00875)	0.258*** (0.0489)
	Observations	318,757	86,359	86,359
	Number of funds	11,068	4,212	4,212

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes:
Manager-level variables are team average for team-managed funds.
Manager age is natural log.
Fund size is natural log of assets.
Fund age is natural log.
Investment turnover is fiscal year total, lagged one quarter.
Risk is annual moving average, lagged one quarter.
Risk-adjusted returns rank scaled are annual moving average, lagged one quarter.
Net asset inflows are winsorized 0.5% on each tail.
Net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average.
Controls for net asset inflows, objective net asset inflows, and management company net asset inflows are lagged one quarter.

Table 3.1: Descriptive statistics – mutual fund managers, mutual fund managers' funds, and mutual fund managers' employers

Category	#	Variable	Sample Size	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Manager Gender	1	Female	1,061,397	11.4%	31.8%	1																										
Manager Career Moves	2	Any Move (Internal or External)	1,079,139	1.0%	10.1%	-0.002	1																									
	3	Internal Move	1,079,139	0.6%	7.5%	-0.001	0.7412	1																								
	4	External Move	1,079,139	0.5%	6.9%	-0.001	0.6781	0.0232	1																							
	5	Termination	1,090,282	0.8%	9.1%	0.0099	-0.0085	-0.006	-0.0062	1																					
Manager Experience	6	Career Experience (Years)	1,090,282	7.3	6.3	-0.038	0.0021	0.004	0.001	-0.0025	1																				
	7	Tenure at Fund (Years)	1,046,008	4.8	4.7	-0.031	-0.0391	-0.021	-0.0349	-0.0005	0.7382	1																			
Manager Performance	8	Risk-Adjusted Returns Rank Scaled	770,045	508.7%	115.5%	0.0043	-0.0004	0	-0.0007	-0.0107	-0.024	0.0185	1																		
	9	Net Asset Inflows (%)	826,365	1.3%	3.9%	-0.018	0.0088	0.0059	0.0068	-0.0165	-0.12	-0.14	0.0996	1																	
Manager Characteristics	10	PhD Degree	1,090,282	3.1%	17.3%	-0.003	0.007	0.0047	0.0056	-0.0012	0.0014	-0.01	-0.006	0.0108	1																
	11	MBA Degree	1,090,282	40.7%	49.1%	-0.051	0.0112	0.0047	0.0113	-0.0143	0.1197	0.0571	0.0065	-0.007	-0.075	1															
	12	CFA Charterholder	1,090,282	43.6%	49.6%	-0.023	0.0113	0.0047	0.0111	-0.018	0.0533	0.0065	-0.008	-0.02	-0.038	0.1567	1														
Characteristics of Manager's Funds	13	Number of Funds (Funds Per Manager)	1,090,282	1.12	3.12	-0.018	0.0618	0.07	0.0439	-0.0174	0.1476	0.0533	-0.007	-0.006	0.0092	0.0101	-0.002	1												
	14	Total Assets (Assets Per Manager) (Billion $)	1,090,282	$1.05	$4.36	-0.016	0.0239	0.0299	0.0074	-0.0166	0.1798	0.1576	-0.006	-0.03	0.004	0.0379	-0.022	0.2737	1											
	15	Fund Size (Billion $)	1,046,012	$1.36	$5.87	0.0126	-0.0003	0.0032	-0.0041	-0.0076	0.1195	0.1302	0.0039	-0.038	-0.015	0.004	-0.04	-0.016	0.417	1										
	16	Fund Age (Years)	1,046,008	11.4	8.1	0.0012	0.0062	0.0137	-0.0059	-0.0053	0.3593	0.4209	-0.012	-0.269	-0.017	0.0544	0.0313	0.0393	0.2364	0.3109	1									
	17	Objective Net Asset Inflows (%)	826,198	0.7%	0.7%	0.0008	0.0019	0.0008	0.0023	-0.0003	-0.034	-0.033	0.0023	0.1283	0.0099	-0.013	-0.02	-0.004	0.0062	-0.005	-0.053	1								
	18	Socially Responsible Fund	1,046,008	2.4%	14.6%	0.0436	-0.0073	-0.006	-0.0042	0.0017	-0.005	-0.003	-0.025	0.0072	0.006	-0.005	0	-0.01	-0.031	-0.03	-0.023	-0.013	1							
	19	Fund of Funds	1,046,008	4.2%	19.1%	-0.02	0.0045	0.0082	-0.0023	0.0051	-0.038	-0.06	-0.118	0.0587	0.0319	-0.065	-0.026	0.0874	0.0316	-0.035	-0.131	0.0199	-0.015	1						
	20	Investment Turnover (%)	856,001	96.9%	201.7%	-0.03	0.0028	0.0013	0.0029	0.0077	-0.066	-0.069	-0.031	0.0481	0.0139	-0.028	-0.041	-0.089	0.0363	-0.025	0.0623				1						
	21	Risk	1,046,008	4.20	1.57	0.0118	-0.0106	-0.008	-0.0068	0.0012	-0.051	-0.03	0.0273	-0.012	0.002	0.0101	-0.009	0.0092	-0.035	-0.036	-0.058	-0.011	0.0019	-0.023	0.0251	1					
	22	Expense Ratio	879,705	1.2%	0.8%	-0.015	-0.0073	-0.009	-0.0007	0.0072	-0.094	-0.066	-0.011	0.0484	0.0042	-0.027	-0.041	-0.049	-0.113	-0.103	-0.116	-0.013	0.0154	-0.058	0.0631	0.0142	1				
	23	Fund's Number of Managers	1,046,008	4.1	4.1	0.011	0.0219	0.0045	0.0278	0.0278	-0.052	-0.084	-0.052	-0.01	0.0377	-0.014	-0.012	-0.106	-0.032	0.1461	-0.029	0.0031	-0.021	0.0345	0.009	-0.043	-0.045	1			
Characteristics of Manager's Management Company	24	Management Company Number of Funds	1,046,008	510	793	-0.014	-0.0177	-0.021	-0.0031	0.0021	-0.037	-0.06	-0.021	-0.011	0.0181	-0.001	-0.003	-0.005	-0.028	-0.051	-0.039	0.0193	0.0228	0.0127	0.0336	0.0178	-0.021	0.0573	1		
	25	Management Company Size (Billion $)	1,046,008	$5,080	$4,010	-0.015	-0.0381	-0.028	-0.0268	0.003	0.058	0.0348	-0.057	0.0051	0.0032	-0.001	-0.007	0.0308	0.0299	0.0634	-0.046	0.0055	0.0291	-0.003	-0.231	-0.033	0.0491	0.0316		1	
	26	Management Company Net Asset Inflows (%)	775,625	0.7%	0.7%	-0.013	0.0026	0.0026	0.0009	-0.0061	-0.042	-0.044	0.0063	0.2267	0.0143	0.0058	-0.004	0.0064	-0.015	-0.032	-0.096	0.0593	0.0082	0.0205	0.0497	-0.044	0.0606	-0.012	-0.052	0.0103	1	
	27	Management Company Number of Managers	906,029	43.8	39.8	0.0297	0.0257	0.0228	0.013	0.0077	0.0358	-0.049	-0.019	-0.052	0.0095	-3E-04	-0.027	0.0204	0.1667	0.1584	0.1969	0.0125	-0.095	-0.007	-0.032	-0.065	-0.156	0.1983	0.1033	0.0804	-0.052	1

Notes:

Observations are defined at the manager-month level.

For managers managing multiple funds simultaneously, performance and fund-level variables are average of manager's funds weighted by assets per manager.

Investment turnover is fiscal year total.

Risk is annual moving average.

Risk-adjusted returns rank scaled are annual moving average.

Net asset inflows are winsorized 0.5% on each tail.

Net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving averages.

Table 3.2: Differences in means by gender – mutual fund managers and mutual fund managers' funds and employers

			Means		Difference	T-Stat
			Male	Female		
			(1)	(2)	(3)	(4)
Monthly Probabilities: Career Moves	1	Any Move (Internal or External)	1.04%	0.99%	0.05%	1.65
	2	Internal Move	0.58%	0.55%	0.03%	1.34
	3	External Move	0.48%	0.46%	0.02%	1.09
	4	Termination	0.74%	1.02%	-0.27%	-10.20
Manager Experience	7	Career Experience (Years)	7.46	6.71	0.74	38.97
	8	Tenure at Fund (Years)	4.94	4.48	0.45	31.17
Manager Performance	5	Risk-Adjusted Returns Rank Scaled	5.09	5.10	-0.02	-3.78
	6	Net Asset Inflows (%)	1.28%	1.06%	0.22%	15.91
Manager Characteristics	9	PhD Degree	3.13%	2.95%	0.17%	3.27
	10	MBA Degree	42.12%	34.20%	7.92%	52.80
	11	CFA Charterholder	44.64%	41.04%	3.60%	23.76
Fund Characteristics	12	Number of Funds (Funds Per Manager)	112.34%	103.75%	8.58%	18.18
	13	Total Assets (Assets Per Manager) (Billion $)	$1.09	$0.86	$0.23	16.83
	14	Fund Size (Billion $)	$1.36	$1.60	-$0.24	-12.72
	15	Fund Age (Years)	11.46	11.49	-0.03	-1.16
	15	Objective Net Asset Inflows (%)	0.67%	0.67%	0.00%	-0.68
	16	Socially Responsible Fund	2.18%	4.19%	-2.00%	-44.12
	17	Fund of Funds	4.19%	3.03%	1.16%	19.86
	18	Investment Turnover (%)	98.03%	79.49%	18.54%	27.63
	19	Risk	4.20	4.25	-5.83%	-11.88
	20	Expense Ratio	1.19%	1.15%	0.03%	14.20
	21	Fund's Number of Managers	4.05	4.19	-0.14	-11.12
Management Company Characteristics	22	Management Company Number of Funds	513.5	478.0	35.5	14.39
	23	Management Company Size (Billion $)	$5,100	$4,910	$190	14.73
	24	Management Company Net Asset Inflows (%)	0.73%	0.70%	0.0	11.26
	25	Management Company Number of Managers	43.5	47.2	-3.7	-27.91

Notes:
Observations are defined at the manager-month level.
For managers managing multiple funds simultaneously, performance and fund-level variables are average of manager's funds weighted by assets per manager.
Investment turnover is fiscal year total.
Risk is annual moving average.
Risk-adjusted returns rank scaled are annual moving average.
Net asset inflows are winsorized 0.5% on each tail.
Net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving averages.

Table 3.3: Counts of career moves by gender

		Type of Move		
		Internal	External	All
Gender	Men	5,366	4,492	9,858
	Women	654	551	1,205
	All	6,020	5,043	11,063

Table 3.4a: Chi-square tests of differences in career outcomes by gender – counts

Total Assets

		Gender		
		Male	Female	Total
Career Outcome	Continue Without Advancing	926,335	119,132	1,045,467
	Internal Advancement	3,949	491	4,440
	External Advancement	2,804	337	3,141
	End Career	7,003	1,234	8,237
	Total	940,091	121,194	1,061,285

Pearson chi2(3) = 105.9656 Pr = 0.000

Number of Funds

		Gender		
		Male	Female	Total
Career Outcome	Continue Without Advancing	925,179	119,000	1,044,179
	Internal Advancement	4,644	567	5,211
	External Advancement	3,247	393	3,640
	End Career	7,003	1,234	8,237
	Total	940,073	121,194	1,061,267

Pearson chi2(3) = 106.7325 Pr = 0.000

Average Fund Size

		Gender		
		Male	Female	Total
Career Outcome	Continue Without Advancing	929,845	119,545	1,049,390
	Internal Advancement	2,042	264	2,306
	External Advancement	1,262	156	1,418
	End Career	7,003	1,234	8,237
	Total	940,152	121,199	1,061,351

Pearson chi2(3) = 104.3397 Pr = 0.000

Number of Individually-Managed Funds

		Gender		
		Male	Female	Total
Career Outcome	Continue Without Advancing	932,710	119,917	1,052,627
	Internal Advancement	317	41	358
	External Advancement	154	12	166
	End Career	7,003	1,234	8,237
	Total	940,184	121,204	1,061,388

Pearson chi2(3) = 106.9593 Pr = 0.000□

Total Revenues

		Gender		
		Male	Female	Total
Career Outcome	Continue Without Advancing	926,850	119,172	1,046,022
	Internal Advancement	3,668	466	4,134
	External Advancement	2,571	322	2,893
	End Career	7,003	1,234	8,237
	Total	940,092	121,194	1,061,286

Pearson chi2(3) = 104.3588 Pr = 0.000

Notes:
Observations are defined at the manager-month level.

Table 3.4b: Chi-square tests of differences in career outcomes by gender – percent

Total Assets

		Gender		
		Male	Female	Total
Career Outcome	Continue Without Advancing	98.54%	98.30%	98.51%
	Internal Advancement	0.42%	0.41%	0.42%
	External Advancement	0.30%	0.28%	0.30%
	End Career	0.74%	1.02%	0.78%
	Total	100.00%	100.00%	100.00%

Pearson chi2(3) = 105.9656 Pr = 0.000

Number of Funds

		Gender		
		Male	Female	Total
Career Outcome	Continue Without Advancing	98.42%	98.19%	98.39%
	Internal Advancement	0.49%	0.47%	0.49%
	External Advancement	0.35%	0.32%	0.34%
	End Career	0.74%	1.02%	0.78%
	Total	100.00%	100.00%	100.00%

Pearson chi2(3) = 106.7325 Pr = 0.000

Average Fund Size

		Gender		
		Male	Female	Total
Career Outcome	Continue Without Advancing	98.90%	98.64%	98.87%
	Internal Advancement	0.22%	0.22%	0.22%
	External Advancement	0.13%	0.13%	0.13%
	End Career	0.74%	1.02%	0.78%
	Total	100.00%	100.00%	100.00%

Pearson chi2(3) = 104.3397 Pr = 0.000

Number of Individually-Managed Funds

		Gender		
		Male	Female	Total
Career Outcome	Continue Without Advancing	99.21%	98.94%	99.17%
	Internal Advancement	0.03%	0.03%	0.03%
	External Advancement	0.02%	0.01%	0.02%
	End Career	0.74%	1.02%	0.78%
	Total	100.00%	100.00%	100.00%

Pearson chi2(3) = 106.9593 Pr = 0.000□

Total Revenues

		Gender		
		Male	Female	Total
Career Outcome	Continue Without Advancing	98.59%	98.33%	98.56%
	Internal Advancement	0.39%	0.38%	0.39%
	External Advancement	0.27%	0.27%	0.27%
	End Career	0.74%	1.02%	0.78%
	Total	100.00%	100.00%	100.00%

Pearson chi2(3) = 104.3588 Pr = 0.000

Notes:
Observations are defined at the manager-month level.

Table 3.5: Advancement via internal and external mobility – models without controls

Variables	Total Assets			Average Fund Size			Total Revenues			Number of Funds			Number of Individually-Managed Funds		
	(1) Internal	(2) External	(3) End	(4) Internal	(5) External	(6) End	(7) Internal	(8) External	(9) End	(10) Internal	(11) External	(12) End	(13) Internal	(14) External	(15) End
Female	-0.0334	-0.0717	0.308***	-0.0139	-0.0383	0.309***	-0.0148	-0.0360	0.309***	-0.0517	-0.0730	0.308***	-0.0347	-0.453	0.309***
	(0.0480)	(0.0568)	(0.0311)	(0.0655)	(0.0832)	(0.0311)	(0.0493)	(0.0582)	(0.0311)	(0.0446)	(0.0527)	(0.0311)	(0.166)	(0.279)	(0.0311)
Constant	-5.394***	-5.967***	-4.866***	-5.656***	-6.679***	-4.868***	-5.415***	-6.073***	-4.866***	-5.185***	-5.721***	-4.864***	-7.156***	-7.847***	-4.872***
	(0.0604)	(0.0805)	(0.0454)	(0.0689)	(0.115)	(0.0454)	(0.0610)	(0.0846)	(0.0454)	(0.0546)	(0.0713)	(0.0454)	(0.146)	(0.210)	(0.0454)
Observations	1,061,397	1,061,397	1,061,397	1,061,397	1,061,397	1,061,397	1,061,397	1,061,397	1,061,397	1,061,397	1,061,397	1,061,397	1,061,397	1,061,397	1,061,397

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Model is multinomial logit. Displayed categories are 1) Internal - advancement via internal career move, 2) External - advancement via external career move, and 3) End (Termination) - no longer employed as mutual fund manager. Omitted base category is 0) Continue employment as mutual fund manager without career-advancing move.
Observations are manager-month level.
All models include year dummies to control for time.

Table 3.6: Advancement via internal and external mobility – models with controls for characteristics of mutual fund managers, mutual fund managers' funds, and mutual fund managers' employer

Variables	Total Assets			Average Fund Size			Total Revenues			Number of Funds			Number of Individually-Managed Funds		
	(1) Internal	(2) External	(3) End	(4) Internal	(5) External	(6) End	(7) Internal	(8) External	(9) End	(10) Internal	(11) External	(12) End	(13) Internal	(14) External	(15) End
Female	-0.0580	-0.0481	0.257***	-0.0232	-0.0541	0.258***	-0.0379	-0.0492	0.257***	-0.0969*	-0.0895	0.257***	-0.309	-0.229	0.258***
	(0.0613)	(0.0807)	(0.0500)	(0.0854)	(0.123)	(0.0500)	(0.0622)	(0.0819)	(0.0500)	(0.0574)	(0.0763)	(0.0500)	(0.251)	(0.441)	(0.0500)
Career Experience	0.00602***	0.0117***	0.00266***	0.00620***	0.0151***	0.00264***	0.00628***	0.0115***	0.00266***	0.00430***	0.00908***	0.00265***	0.0109***	0.0140*	0.00263***
	(0.000869)	(0.00130)	(0.000656)	(0.00123)	(0.00197)	(0.000656)	(0.000888)	(0.00130)	(0.000656)	(0.000772)	(0.00116)	(0.000656)	(0.00387)	(0.00716)	(0.000655)
(Career Experience)²	-8.50e-06***	-2.68e-05***	-6.14e-07	-8.25e-06***	-3.42e-05***	-6.12e-07	-8.91e-06***	-2.56e-05***	-6.18e-07	-4.26e-06*	-1.88e-05***	-6.07e-07	-2.77e-05*	-3.35e-05	-6.30e-07
	(2.83e-06)	(4.66e-06)	(1.82e-06)	(4.07e-06)	(7.30e-06)	(1.82e-06)	(2.88e-06)	(4.62e-06)	(1.82e-06)	(2.40e-06)	(4.02e-06)	(1.82e-06)	(1.36e-05)	(2.61e-05)	(1.82e-06)
Tenure at Fund	-0.0152***	-0.0168***	-0.000165***	-0.0184***	-0.0274***	-0.00162***	-0.0151***	-0.0162***	-0.000165***	-0.0117***	-0.0139***	-0.000165***	-0.00702***	-0.0151***	-0.00158**
	(0.000614)	(0.000867)	(0.000452)	(0.000967)	(0.00158)	(0.000452)	(0.000622)	(0.000866)	(0.000452)	(0.000532)	(0.000775)	(0.000452)	(0.00207)	(0.00419)	(0.000452)
Risk-Adjusted Returns Rank Scaled	0.0448**	0.0144	-0.0816***	0.0888***	0.0727***	-0.0816***	0.0513***	0.0267	-0.0816***	0.0377**	0.00412	-0.0817***	0.148**	0.0872	-0.0818***
	(0.0175)	(0.0253)	(0.0166)	(0.0247)	(0.0396)	(0.0166)	(0.0180)	(0.0257)	(0.0166)	(0.0161)	(0.0235)	(0.0166)	(0.0632)	(0.121)	(0.0166)
Net Asset Inflows	4.451***	3.458***	-7.533***	4.296***	3.026***	-7.551***	4.477***	3.542***	-7.535***	4.118***	3.361***	-7.531***	2.598	2.857	-7.566***
	(0.531)	(0.708)	(0.754)	(0.727)	(1.054)	(0.754)	(0.555)	(0.718)	(0.754)	(0.504)	(0.677)	(0.754)	(2.074)	(3.103)	(0.754)
PhD Holder	0.235**	0.374***	0.0868	0.298**	0.395***	0.0860	0.277***	0.375***	0.0869	0.335***	0.370***	0.0878	0.475	0.869	0.0850
	(0.0974)	(0.117)	(0.0993)	(0.132)	(0.174)	(0.0993)	(0.0987)	(0.118)	(0.0993)	(0.0858)	(0.109)	(0.0993)	(0.335)	(0.537)	(0.0993)
MBA Holder	-0.0315	0.213***	-0.136***	-0.00815	0.0975	-0.137***	-0.0269	0.181***	-0.136***	-0.0328	0.225***	-0.136***	0.156	0.170	-0.137***
	(0.0391)	(0.0509)	(0.0379)	(0.0562)	(0.0782)	(0.0379)	(0.0401)	(0.0516)	(0.0379)	(0.0361)	(0.0475)	(0.0379)	(0.147)	(0.266)	(0.0379)
CFA Charterholder	0.0351	0.257***	-0.290***	-0.0218	0.245***	-0.291***	0.0413	0.256***	-0.290***	0.0558	0.214***	-0.290***	0.0933	0.192	-0.291***
	(0.0386)	(0.0509)	(0.0374)	(0.0555)	(0.0784)	(0.0374)	(0.0395)	(0.0516)	(0.0374)	(0.0355)	(0.0473)	(0.0374)	(0.145)	(0.260)	(0.0374)
Manager's Number of Funds	0.107***	0.0856***	-0.498***	0.123***	0.131***	-0.498***	0.106***	0.0907***	-0.498***	0.110***	0.0833***	-0.498***	0.119***	0.211***	-0.498***
	(0.00728)	(0.0124)	(0.0309)	(0.0106)	(0.0226)	(0.0309)	(0.00729)	(0.0123)	(0.0309)	(0.00668)	(0.0107)	(0.0309)	(0.0155)	(0.0403)	(0.0309)
Manager's Total Assets	0	0	-0***	-0*	-0**	-0***	0	0	-0***	0	0***	-0***	0	0	-0***
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Fund Size	-0	-0***	-0***	0***	-0	-0***	-0	-0***	-0***	-0	-0***	-0***	0	-0	-0***
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5.36e-11)	(0)
Fund Age	0.254***	0.000512	0.00457	0.0885**	-0.0636	0.00343	0.299***	0.0200	0.00475	0.266***	0.0275	0.00487	-0.0494	-0.137	0.00326
	(0.0322)	(0.0409)	(0.0313)	(0.0446)	(0.0595)	(0.0313)	(0.0335)	(0.0419)	(0.0313)	(0.0303)	(0.0392)	(0.0313)	(0.123)	(0.203)	(0.0313)
Fund Objective Dummies	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Objective Net Asset Inflows	-10.25***	7.817	0.728	-13.07**	9.661	0.747	-11.91***	7.356	0.722	-7.583**	2.662	0.721	-0.0320	12.17	0.772
	(3.799)	(5.243)	(3.104)	(5.505)	(8.608)	(3.104)	(3.869)	(5.343)	(3.104)	(3.492)	(4.967)	(3.104)	(12.50)	(21.83)	(3.104)
Socially Responsible Fund	-0.454**	-0.520**	0.00312	-0.672**	-0.516	0.00432	-0.546**	-0.677**	0.00289	-0.481***	-0.449**	0.00292	-0.0297	0.0523	0.00581
	(0.188)	(0.246)	(0.131)	(0.306)	(0.368)	(0.131)	(0.203)	(0.267)	(0.131)	(0.175)	(0.224)	(0.131)	(0.627)	(0.894)	(0.131)
Fund of Funds	0.0318	-1.606***	0.732***	0.224	-0.876**	0.734***	-0.0690	-1.507***	0.732***	0.0448	-1.368***	0.732***	0.335	-0.211	0.734***
	(0.137)	(0.318)	(0.132)	(0.176)	(0.372)	(0.132)	(0.146)	(0.307)	(0.132)	(0.126)	(0.266)	(0.132)	(0.453)	(0.984)	(0.132)
Investment Turnover	4.48e-05	-4.10e-05	0.000551***	1.53e-07	-0.000834*	0.000551***	5.26e-05	4.14e-06	0.000552***	0.000144	9.13e-05	0.000552***	0.000379	0.000379	0.000552***
	(0.000138)	(0.000215)	(7.59e-05)	(0.000198)	(0.000437)	(7.59e-05)	(0.000142)	(0.000212)	(7.59e-05)	(0.000118)	(0.000188)	(7.59e-05)	(0.000323)	(0.000687)	(7.59e-05)
Risk	0.248***	0.394***	0.0519	0.186***	0.400***	0.0514	0.267***	0.436***	0.0521	0.189***	0.370***	0.0516	-0.105	-0.348	0.0512
	(0.0390)	(0.0512)	(0.0322)	(0.0591)	(0.0846)	(0.0322)	(0.0399)	(0.0522)	(0.0322)	(0.0367)	(0.0472)	(0.0322)	(0.158)	(0.336)	(0.0322)
Expense Ratio	-3.625	-30.18***	4.554***	0.699	-6.680	4.573***	-5.551	-32.50***	4.554***	-5.134	-30.85***	4.552***	-4.817	4.763	4.572***
	(4.946)	(7.436)	(1.089)	(2.534)	(10.56)	(1.089)	(5.369)	(7.565)	(1.089)	(4.712)	(6.930)	(1.090)	(16.57)	(4.228)	(1.089)
Fund Number of Managers	0.00289	0.0473***	-0.00509	0.0143**	0.0543***	-0.00518	0.00687	0.0479***	-0.00508	0.00922**	0.0462***	-0.00501	-0.470***	-0.194**	-0.00539
	(0.00518)	(0.00442)	(0.00500)	(0.00668)	(0.00620)	(0.00500)	(0.00519)	(0.00443)	(0.00500)	(0.00468)	(0.00406)	(0.00500)	(0.0593)	(0.0749)	(0.00499)
Management Co. Number of Funds	-0.000127***	0.000295***	-0.000409***	-9.66e-05*	0.000290***	-0.000409***	-0.000104***	0.000337***	-0.000409***	-0.000148***	0.000290***	-0.000409***	-0.000101	1.91e-05	-0.000409**
	(3.81e-05)	(4.07e-05)	(4.79e-05)	(5.36e-05)	(6.20e-05)	(4.79e-05)	(3.86e-05)	(4.07e-05)	(4.79e-05)	(3.54e-05)	(3.79e-05)	(4.79e-05)	(0.000143)	(0.000231)	(4.79e-05)
Management Co. Total Assets	0***	0***	-0***	0***	0***	-0***	0***	0***	-0***	0***	0***	-0***	0	0***	-0***
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Management Co. Net Asset Inflows	-2.815	-2.185	-4.685	-2.023	-5.065	-4.674	-2.058	-0.921	-4.680	-2.167	-2.612	-4.688	6.453	-25.49	-4.662
	(2.597)	(3.436)	(2.891)	(3.611)	(5.323)	(2.891)	(2.705)	(3.475)	(2.891)	(2.435)	(3.298)	(2.891)	(8.914)	(19.96)	(2.890)
Management Co. Number of Managers	0.00321***	0.000253	0.00370***	0.00385***	-0.00143	0.00369***	0.00340***	0.000250	0.00370***	0.00294***	0.000492	0.00370***	0.00628***	-0.00390	0.00369***
	(0.000471)	(0.000684)	(0.000474)	(0.000685)	(0.00108)	(0.000474)	(0.000483)	(0.000695)	(0.000474)	(0.000439)	(0.000640)	(0.000474)	(0.00173)	(0.00388)	(0.000474)
Constant	-11.16***	-11.60***	-4.800***	-10.65***	-12.23***	-4.790***	-11.64***	-12.61***	-4.803***	-10.61***	-11.43***	-4.799***	-9.528***	-309.6	-4.787***
	(0.450)	(0.590)	(0.337)	(0.634)	(0.935)	(0.337)	(0.464)	(0.637)	(0.337)	(0.414)	(0.561)	(0.337)	(1.594)	(679.2)	(0.337)
Observations	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Model is multinomial logit. Displayed categories are 1) Internal - advancement via internal career move, 2) External - advancement via external career move, and 3) End (Termination) - no longer employed as mutual fund manager. Continue employment as mutual fund manager without career-advancing move.
Observations are manager-month level.
All models include year dummies to control for time.
For managers managing multiple funds simultaneously, performance and fund-level variables are average of manager's funds weighted by assets per manager.
Risk-adjusted returns rank scaled are annual moving average.
Fund net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average.
Net asset inflows are winsorized 0.5% on each tail.
Risk is annual moving average.
Investment turnover is fiscal year turnover.

Table 3.7: Advancement via internal and external mobility – interactions of gender, experience, and experience-squared

Variables	Total Assets (1) Internal	(2) External	(3) End	Average Fund Size (4) Internal	(5) External	(6) End	Total Revenues (7) Internal	(8) External	(9) End	Number of Funds (10) Internal	(11) External	(12) End	Number of Individually-Managed Funds (13) Internal	(14) External	(15) End
Female	-0.0569	-0.0658	0.374***	-0.0886	0.243	0.375***	-0.0760	-0.110	0.374***	-0.154	-0.0625	0.374***	-3.277**	-1.050	0.375***
	(0.167)	(0.239)	(0.127)	(0.226)	(0.328)	(0.127)	(0.172)	(0.247)	(0.127)	(0.159)	(0.221)	(0.127)	(1.501)	(1.515)	(0.127)
Career Experience	0.00603***	0.0116***	0.00281***	0.00608***	0.0157***	0.00279***	0.00623***	0.0114***	0.00281***	0.00425***	0.00913***	0.00280***	0.00946**	0.0144*	0.00278***
	(0.000900)	(0.00134)	(0.000696)	(0.00128)	(0.00208)	(0.000696)	(0.000919)	(0.00134)	(0.000696)	(0.000795)	(0.00120)	(0.000696)	(0.00383)	(0.00783)	(0.000695)
Female * Career Experience	0.000343	0.00205	-0.00271	0.000224	-0.00601	-0.00272	0.00121	0.00337	-0.00271	0.00194	0.000833	-0.00271	0.0721**	0.00266	-0.00272
	(0.00311)	(0.00464)	(0.00221)	(0.00418)	(0.00631)	(0.00221)	(0.00318)	(0.00478)	(0.00221)	(0.00296)	(0.00423)	(0.00221)	(0.0309)	(0.0226)	(0.00221)
(Career Experience)	-8.43e-06***	-2.62e-05***	-1.18e-06	-8.20e-06*	-3.60e-05***	-1.18e-06	-8.64e-06***	-2.48e-05***	-1.18e-06	-3.94e-06	-1.86e-05***	-1.17e-06	-2.14e-05	-4.00e-05	-1.20e-06
	(2.91e-06)	(4.77e-06)	(1.92e-06)	(4.23e-06)	(7.68e-06)	(1.92e-06)	(2.95e-06)	(4.71e-06)	(1.92e-06)	(2.45e-06)	(4.11e-06)	(1.92e-06)	(1.31e-05)	(2.97e-06)	(1.92e-06)
Female * (Career Experience)	-2.49e-06	-1.38e-05	1.04e-05	3.24e-06	2.12e-05	1.05e-05	-5.81e-06	-2.03e-05	1.04e-05	-9.57e-06	-8.16e-06	1.04e-05	-0.000351**	2.81e-05	1.05e-05
	(1.19e-05)	(1.90e-05)	(7.76e-06)	(1.57e-05)	(2.49e-05)	(7.76e-06)	(1.22e-05)	(1.97e-05)	(7.77e-06)	(1.14e-05)	(1.70e-05)	(7.76e-06)	(0.000151)	(7.51e-05)	(7.76e-06)
Tenure at Fund	-0.0153***	-0.0169***	-0.00161***	-0.0184***	-0.0274***	-0.00157***	-0.0151***	-0.0162***	-0.00161***	-0.0117***	-0.0140***	-0.00161***	-0.00730***	-0.0149***	-0.00153***
	(0.000615)	(0.000868)	(0.000454)	(0.000967)	(0.00158)	(0.000454)	(0.000623)	(0.000867)	(0.000454)	(0.000533)	(0.000776)	(0.000454)	(0.00207)	(0.00422)	(0.000454)
Risk-Adjusted Returns Rank Scaled	0.0448**	0.0146	-0.0814***	0.0887***	0.0730*	-0.0813***	0.0513***	0.0269	-0.0814***	0.0376**	0.00433	-0.0814***	0.145**	0.0858	-0.0815***
	(0.0175)	(0.0253)	(0.0166)	(0.0247)	(0.0396)	(0.0166)	(0.0180)	(0.0257)	(0.0166)	(0.0162)	(0.0235)	(0.0166)	(0.0633)	(0.121)	(0.0166)
Net Asset Inflows	4.451***	3.458***	-7.539***	4.297***	3.034***	-7.557***	4.477***	3.541***	-7.541***	4.119***	3.360***	-7.536***	2.534	3.076	-7.571***
	(0.531)	(0.708)	(0.754)	(0.727)	(1.054)	(0.754)	(0.555)	(0.718)	(0.754)	(0.504)	(0.677)	(0.754)	(2.071)	(3.078)	(0.754)
PhD Holder	0.236**	0.377***	0.0833	0.298**	0.396**	0.0825	0.278***	0.380***	0.0835	0.337***	0.373***	0.0844	0.495	0.832	0.0815
	(0.0974)	(0.117)	(0.0994)	(0.132)	(0.174)	(0.0994)	(0.0987)	(0.118)	(0.0994)	(0.0859)	(0.109)	(0.0994)	(0.335)	(0.537)	(0.0994)
MBA Holder	-0.0319	0.213***	-0.136***	-0.00705	0.0975	-0.136***	-0.0273	0.180***	-0.136***	-0.0334	0.225***	-0.136***	0.151	0.181	-0.136***
	(0.0392)	(0.0509)	(0.0379)	(0.0562)	(0.0782)	(0.0379)	(0.0401)	(0.0516)	(0.0379)	(0.0361)	(0.0475)	(0.0379)	(0.147)	(0.266)	(0.0379)
CFA Charterholder	0.0353	0.258***	-0.290***	-0.0227	0.247***	-0.291***	0.0414	0.257***	-0.290***	0.0559	0.215***	-0.290***	0.0820	0.174	-0.291***
	(0.0386)	(0.0509)	(0.0375)	(0.0555)	(0.0785)	(0.0375)	(0.0396)	(0.0516)	(0.0375)	(0.0355)	(0.0475)	(0.0375)	(0.145)	(0.261)	(0.0375)
Manager's Number of Funds	0.107***	0.0854***	-0.498***	0.123***	0.131***	-0.498***	0.106***	0.0904***	-0.498***	0.110***	0.0832***	-0.497***	0.118***	0.211***	-0.498***
	(0.00728)	(0.0124)	(0.0309)	(0.0106)	(0.0226)	(0.0309)	(0.00729)	(0.0123)	(0.0309)	(0.00668)	(0.0108)	(0.0309)	(0.0154)	(0.0401)	(0.0309)
Manager's Total Assets	0	0	-0***	-0*	-0**	-0***	0	0	-0***	0	0***	-0***	0	0	-0***
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Fund Size	-0	-0***	-0***	0***	-0	-0***	-0	-0***	-0***	-0	-0***	-0***	0	-0	-0***
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5.45e-11)	(0)
Fund Age	0.254***	0.000899	0.00427	0.0884**	-0.0639	0.00314	0.299***	0.0205	0.00446	0.266***	0.0278	0.00458	-0.0473	-0.138	0.00297
	(0.0322)	(0.0409)	(0.0313)	(0.0446)	(0.0595)	(0.0313)	(0.0335)	(0.0419)	(0.0313)	(0.0303)	(0.0392)	(0.0313)	(0.123)	(0.204)	(0.0313)
Fund Objective Dummies	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Objective Net Asset Inflows	-10.24***	7.803	0.732	-13.07**	9.759	0.750	-11.90***	7.330	0.725	-7.564**	2.651	0.724	0.0165	12.18	0.775
	(3.799)	(5.244)	(3.103)	(5.505)	(8.609)	(3.104)	(3.869)	(5.343)	(3.103)	(3.492)	(4.968)	(3.104)	(12.52)	(21.86)	(3.103)
Socially Responsible Fund	-0.456**	-0.528**	0.00680	-0.668**	-0.515	0.00802	-0.548***	-0.687**	0.00657	-0.485***	-0.454**	0.00658	-0.0781	0.118	0.00951
	(0.188)	(0.246)	(0.131)	(0.306)	(0.368)	(0.131)	(0.203)	(0.267)	(0.131)	(0.176)	(0.224)	(0.131)	(0.628)	(0.895)	(0.131)
Fund of Funds	0.0316	-1.609***	0.731***	0.226	-0.877**	0.733***	-0.0686	-1.510***	0.731***	0.0453	-1.370***	0.731***	0.353	-0.185	0.733***
	(0.137)	(0.318)	(0.132)	(0.176)	(0.372)	(0.132)	(0.146)	(0.307)	(0.132)	(0.126)	(0.266)	(0.132)	(0.454)	(0.981)	(0.132)
Investment Turnover	4.48e-05	-4.19e-05	0.000552***	9.22e-05	0.000835*	0.000551***	5.26e-05	2.85e-06	0.000552***	0.000144	9.06e-05	0.000553***	0.000537*	0.000411	0.000552**
	(0.000138)	(0.000216)	(7.59e-05)	(0.000198)	(0.000437)	(7.59e-05)	(0.000142)	(0.000212)	(7.59e-05)	(0.000118)	(0.000188)	(7.59e-05)	(0.000322)	(0.000661)	(7.59e-05)
Risk	0.248***	0.394***	0.0519	0.186***	0.400***	0.0514	0.267***	0.436***	0.0521	0.189***	0.370***	0.0516	-0.106	-0.349	0.0513
	(0.0390)	(0.0512)	(0.0322)	(0.0591)	(0.0846)	(0.0322)	(0.0399)	(0.0522)	(0.0322)	(0.0367)	(0.0472)	(0.0322)	(0.158)	(0.336)	(0.0323)
Expense Ratio	-3.647	-30.27***	4.557***	0.703	-6.563	4.575***	-5.575	-32.62***	4.556***	-5.174	-30.93***	4.554***	-4.535	4.732	4.575***
	(4.951)	(7.437)	(1.091)	(2.523)	(10.55)	(1.091)	(5.371)	(7.567)	(1.091)	(4.716)	(6.931)	(1.091)	(16.46)	(4.196)	(1.091)
Fund Number of Managers	0.00287	0.0472***	-0.00504	0.0143**	0.0543***	-0.00513	0.00683	0.0478***	-0.00502	0.00918*	0.0462***	-0.00496	-0.470**	-0.191**	-0.00533
	(0.00518)	(0.00442)	(0.00500)	(0.00668)	(0.00621)	(0.00500)	(0.00519)	(0.00443)	(0.00500)	(0.00468)	(0.00407)	(0.00500)	(0.0594)	(0.0747)	(0.00499)
Management Co. Number of Funds	-0.000127***	-0.000294***	-0.000408***	-9.53e-05*	0.000288***	-0.000408***	-0.000104***	0.000336***	-0.000408***	-0.000148***	-0.000289***	-0.000408***	-9.79e-05	3.13e-05	-0.000408***
	(3.81e-05)	(4.07e-05)	(4.79e-05)	(5.37e-05)	(6.20e-05)	(4.79e-05)	(3.87e-05)	(4.07e-05)	(4.79e-05)	(3.54e-05)	(3.80e-05)	(4.79e-05)	(0.000143)	(0.000232)	(4.79e-05)
Management Co. Total Assets	0***	0***	-0***	0***	0***	-0***	0***	0***	-0***	0***	0***	-0***	0***	0***	-0***
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Management Co. Net Asset Inflows	-2.808	-2.149	-4.688	-2.050	-5.090	-4.677	-2.047	-0.872	-4.682	-2.150	-2.582	-4.690	6.657	-26.13	-4.665
	(2.597)	(3.437)	(2.891)	(3.611)	(5.327)	(2.891)	(2.705)	(3.475)	(2.891)	(2.435)	(3.299)	(2.891)	(8.922)	(19.94)	(2.891)
Management Co. Number of Managers	0.00321***	0.000261	0.00370***	0.00384***	-0.00144	0.00369***	0.00340***	0.000262	0.00370***	0.00294***	0.000498	0.00371***	0.00637***	-0.00405	0.00369***
	(0.000471)	(0.000684)	(0.000474)	(0.000685)	(0.00108)	(0.000474)	(0.000483)	(0.000695)	(0.000474)	(0.000439)	(0.000640)	(0.000474)	(0.00173)	(0.00388)	(0.000474)
Constant	-11.17***	-11.60***	-4.810***	-10.64***	-12.27***	-4.800***	-11.64***	-12.61***	-4.813***	-10.61***	-11.44***	-4.809***	-9.454***	-317.9	-4.797***
	(0.451)	(0.591)	(0.337)	(0.635)	(0.936)	(0.337)	(0.465)	(0.637)	(0.337)	(0.414)	(0.562)	(0.337)	(1.594)	(684.2)	(0.337)
Observations	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Model is multinomial logit. Displayed categories are 1) Internal - advancement via internal career move, 2) External - advancement via external career move, and 3) Termination - no longer employed as mutual fund manager without career-advancing move.
Observations are manager-month level.
All models include year dummies to control for time.
For managers managing multiple funds simultaneously, performance and fund-level variables are average of manager's funds weighted by assets per manager.
Risk-adjusted returns rank scaled are annual moving average.
Fund net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average.
Net asset inflows are winsorized 0.5% on each tail.
Risk is annual moving average.
Investment turnover is fiscal year turnover.

Table 3.8: Advancement via internal and external mobility – interactions of gender, performance, and performance-squared

Variables	Total Assets			Average Fund Size			Total Revenues			Number of Funds			Number of Individually-Managed Funds		
	(1) Internal	(2) External	(3) End	(4) Internal	(5) External	(6) End	(7) Internal	(8) External	(9) End	(10) Internal	(11) External	(12) End	(13) Internal	(14) External	(15) End
Female	0.333	1.850**	-0.528	1.278*	1.466	-0.528	0.399	1.806**	-0.528	-0.484	1.538**	-0.531	-8.557	7.018**	-0.533
	(0.607)	(0.739)	(0.563)	(0.762)	(1.249)	(0.563)	(0.636)	(0.756)	(0.563)	(0.575)	(0.702)	(0.563)	(5.545)	(2.924)	(0.563)
Risk-Adjusted Returns Rank Scaled	0.102	0.103	-0.0137	0.249*	0.0505	-0.0136	0.194**	0.0978	-0.0134	0.0698	0.0475	-0.0139	-0.362	0.995	-0.0142
	(0.0880)	(0.140)	(0.0871)	(0.128)	(0.214)	(0.0871)	(0.0933)	(0.142)	(0.0871)	(0.0802)	(0.127)	(0.0871)	(0.274)	(0.881)	(0.0871)
Female * Risk-Adjusted Returns Rank Scaled	-0.0925	-0.653**	0.354	-0.399	-0.283	0.355	-0.130	-0.658**	0.354	0.214	-0.522*	0.356	2.737	-2.727**	0.356
	(0.234)	(0.299)	(0.223)	(0.295)	(0.528)	(0.223)	(0.243)	(0.302)	(0.223)	(0.226)	(0.288)	(0.223)	(1.884)	(1.138)	(0.223)
(Risk-Adjusted Returns Rank Scaled)²	-0.00494	-0.00701	-0.00654	-0.0140	0.00584	-0.00655	-0.0135	-0.00553	-0.00657	-0.00272	-0.00241	-0.00653	0.0465*	-0.0798	-0.00651
	(0.00847)	(0.0136)	(0.00868)	(0.0122)	(0.0205)	(0.00868)	(0.00896)	(0.0137)	(0.00868)	(0.00776)	(0.0124)	(0.00868)	(0.0254)	(0.0812)	(0.00868)
Female * (Risk-Adjusted Returns Rank Scaled)²	0.00293	0.0520*	-0.0376*	0.0269	-0.00430	-0.0377*	0.00833	0.0547*	-0.0376*	-0.0257	0.0374	-0.0377*	-0.216	0.238**	-0.0377*
	(0.0226)	(0.0305)	(0.0220)	(0.0286)	(0.0561)	(0.0220)	(0.0232)	(0.0304)	(0.0220)	(0.0223)	(0.0298)	(0.0220)	(0.158)	(0.109)	(0.0220)
Career Experience	0.00602***	0.0117***	0.00263***	0.00619***	0.0152***	0.00262***	0.00625***	0.0115***	0.00263***	0.00429***	0.00910***	0.00263***	0.0111***	0.0141**	0.00261***
	(0.000870)	(0.00130)	(0.000657)	(0.00123)	(0.00198)	(0.000657)	(0.000888)	(0.00130)	(0.000657)	(0.000772)	(0.00116)	(0.000657)	(0.00388)	(0.00715)	(0.000656)
(Career Experience)²	-8.48e-06***	-2.67e-05***	-5.79e-07	-8.17e-06**	-3.41e-05***	-5.77e-07	-8.85e-06***	-2.56e-05***	-5.83e-07	-4.26e-06*	-1.88e-05***	-5.72e-07	-2.82e-05***	-3.33e-05	-5.95e-07
	(2.83e-06)	(4.66e-06)	(1.82e-06)	(4.07e-06)	(7.30e-06)	(1.82e-06)	(2.88e-06)	(4.62e-06)	(1.82e-06)	(2.40e-06)	(4.02e-06)	(1.82e-06)	(1.36e-05)	(2.61e-05)	(1.82e-06)
Tenure at Fund	-0.0152***	-0.0168***	-0.00163***	-0.0184***	-0.0274***	-0.00160***	-0.0151***	-0.0162***	-0.00163***	-0.0117***	-0.0139***	-0.00163***	-0.00712***	-0.0154***	-0.00156***
	(0.000614)	(0.000867)	(0.000453)	(0.000967)	(0.00158)	(0.000453)	(0.000623)	(0.000866)	(0.000453)	(0.000532)	(0.000775)	(0.000453)	(0.00206)	(0.00420)	(0.000453)
Net Asset Inflows	4.459***	3.444***	-7.543***	4.313***	2.973***	-7.560***	4.505***	3.525***	-7.544***	4.132***	3.333***	-7.540***	2.456	2.880	-7.575***
	(0.531)	(0.710)	(0.756)	(0.729)	(1.058)	(0.756)	(0.556)	(0.720)	(0.756)	(0.505)	(0.679)	(0.756)	(2.063)	(3.091)	(0.755)
PhD Holder	0.232**	0.373***	0.0836	0.290**	0.398**	0.0828	0.272***	0.375***	0.0837	0.332***	0.371***	0.0847	0.498	0.835	0.0818
	(0.0974)	(0.117)	(0.0994)	(0.133)	(0.174)	(0.0994)	(0.0988)	(0.118)	(0.0994)	(0.0859)	(0.109)	(0.0994)	(0.335)	(0.539)	(0.0994)
MBA Holder	-0.0319	0.212***	-0.138***	-0.00955	0.0992	-0.138***	-0.0281	0.180***	-0.138***	-0.0334	0.225***	-0.138***	0.162	0.155	-0.138***
	(0.0392)	(0.0509)	(0.0379)	(0.0562)	(0.0782)	(0.0379)	(0.0401)	(0.0516)	(0.0379)	(0.0361)	(0.0475)	(0.0379)	(0.147)	(0.267)	(0.0379)
CFA Charterholder	0.0344	0.260***	-0.292***	-0.0236	0.247***	-0.292***	0.0398	0.259***	-0.292***	0.0550	0.217***	-0.291***	0.0952	0.220	-0.292***
	(0.0386)	(0.0509)	(0.0374)	(0.0555)	(0.0785)	(0.0374)	(0.0395)	(0.0516)	(0.0374)	(0.0355)	(0.0473)	(0.0374)	(0.145)	(0.261)	(0.0374)
Manager's Number of Funds	0.107***	0.0862***	-0.501***	0.123***	0.133***	-0.501***	0.106***	0.0912***	-0.501***	0.110***	0.0840***	-0.501***	0.118***	0.212***	-0.501***
	(0.00728)	(0.0124)	(0.0310)	(0.0106)	(0.0227)	(0.0310)	(0.00727)	(0.0124)	(0.0310)	(0.00669)	(0.0108)	(0.0310)	(0.0155)	(0.0397)	(0.0310)
Manager's Total Assets	0	0	-0***	-0	-0**	-0***	0	0	-0***	0	0***	-0***	0	0	-0***
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Fund Size	-0	-0***	-0***	0***	0	-0***	-0	-0***	-0***	-0	-0***	-0***	0	0	-0***
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5.33e-11)	(0)
Fund Age	0.252***	0.000889	0.000140	0.0837*	-0.0634	-0.00100	0.295***	0.0209	0.000320	0.264***	0.0280	0.000445	-0.0372	-0.135	-0.00116
	(0.0323)	(0.0411)	(0.0314)	(0.0448)	(0.0596)	(0.0314)	(0.0336)	(0.0420)	(0.0314)	(0.0304)	(0.0393)	(0.0314)	(0.123)	(0.204)	(0.0314)
Fund Objective Dummies	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Objective Net Asset Inflows	-10.37**	7.863	0.474	-13.33**	9.827	0.492	-12.21***	7.444	0.467	-7.736**	2.764	0.467	0.915	11.84	0.519
	(3.805)	(5.253)	(3.109)	(5.517)	(8.620)	(3.109)	(3.878)	(5.352)	(3.109)	(3.498)	(4.974)	(3.109)	(12.47)	(21.93)	(3.109)
Socially Responsible Fund	-0.457**	-0.519**	-0.000929	-0.676**	-0.516	0.000259	-0.550***	-0.676**	-0.00116	-0.485***	-0.448**	-0.00114	-0.000595	0.0649	0.00177
	(0.188)	(0.245)	(0.131)	(0.306)	(0.368)	(0.131)	(0.203)	(0.267)	(0.131)	(0.176)	(0.224)	(0.131)	(0.627)	(0.894)	(0.131)
Fund of Funds	0.0340	-1.600***	0.730***	0.229	-0.895**	0.732***	-0.0631	-1.502***	0.730***	0.0428	-1.361***	0.730***	0.349	-0.158	0.732***
	(0.137)	(0.317)	(0.132)	(0.175)	(0.374)	(0.132)	(0.145)	(0.307)	(0.132)	(0.126)	(0.266)	(0.132)	(0.458)	(0.981)	(0.132)
Investment Turnover	4.75e-05	-3.22e-05	0.000553**	9.27e-06	-0.000835*	0.000552**	5.69e-05	1.23e-05	0.000553**	0.000146	9.78e-05	0.000554**	0.000530	0.000451	0.000553**
	(0.000138)	(0.000215)	(7.59e-05)	(0.000198)	(0.000438)	(7.59e-05)	(0.000143)	(0.000202)	(7.59e-05)	(0.000118)	(0.000188)	(7.59e-05)	(0.000323)	(0.000606)	(7.59e-05)
Risk	0.248***	0.395***	0.0517	0.186***	0.401***	0.0512	0.266***	0.436***	0.0518	0.189***	0.370***	0.0514	-0.101	-0.340	0.0510
	(0.0390)	(0.0512)	(0.0322)	(0.0591)	(0.0846)	(0.0322)	(0.0399)	(0.0522)	(0.0322)	(0.0367)	(0.0472)	(0.0322)	(0.157)	(0.335)	(0.0322)
Expense Ratio	-3.563	-30.14***	4.605***	0.784	-6.717	4.623***	-5.399	-32.51***	4.604***	-5.091	-30.84***	4.602***	-5.936	5.053	4.621***
	(4.946)	(7.443)	(1.087)	(2.513)	(10.58)	(1.087)	(5.376)	(7.572)	(1.087)	(4.716)	(6.936)	(1.088)	(16.80)	(4.253)	(1.087)
Fund Number of Managers	0.00283	0.0476***	-0.00572	0.0142**	0.0543***	-0.00581	0.00661	0.0482***	-0.00570	0.00902*	0.0465***	-0.00564	-0.466**	-0.193**	-0.00601
	(0.00519)	(0.00442)	(0.00503)	(0.00668)	(0.00618)	(0.00503)	(0.00520)	(0.00443)	(0.00503)	(0.00470)	(0.00406)	(0.00503)	(0.0593)	(0.0753)	(0.00502)
Management Co. Number of Funds	-0.000128***	-0.000295***	-0.000410**	-9.88e-05*	0.000289***	-0.000410*	-0.000106**	-0.000337***	-0.000410**	-0.000149***	0.000290***	-0.000410**	-9.16e-05	1.84e-05	-0.000410**
	(3.81e-05)	(4.07e-05)	(4.79e-05)	(5.37e-05)	(6.20e-05)	(4.79e-05)	(3.87e-05)	(4.07e-05)	(4.79e-05)	(3.54e-05)	(3.80e-05)	(4.79e-05)	(0.000142)	(0.000232)	(4.79e-05)
Management Co. Total Assets	0***	0***	-0***	0***	0***	-0***	0***	0***	-0***	0***	0***	-0***	0***	0***	-0***
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Management Co. Net Asset Inflows	-2.892	-2.212	-4.763*	-2.195	-5.040	-4.752	-2.187	-0.933	-4.757	-2.232	-2.622	-4.757*	6.722	-26.22	-4.739
	(2.601)	(3.440)	(2.895)	(3.621)	(5.332)	(2.895)	(2.710)	(3.478)	(2.895)	(2.438)	(3.301)	(2.895)	(8.869)	(20.20)	(2.894)
Management Co. Number of Managers	0.00321***	0.000246	0.00371***	0.00383***	-0.00138	0.00370***	0.00339***	0.000242	0.00371***	0.00294***	0.000494	0.00371***	0.00631***	-0.00424	0.00369***
	(0.000471)	(0.000684)	(0.000474)	(0.000685)	(0.00108)	(0.000474)	(0.000483)	(0.000696)	(0.000474)	(0.000439)	(0.000640)	(0.000474)	(0.00174)	(0.00391)	(0.000474)
Constant	-11.31***	-11.87***	-4.929***	-11.05***	-12.29***	-4.919***	-11.96***	-12.83***	-4.932***	-10.68***	-11.59***	-4.928***	-8.318***	-288.8	-4.915***
	(0.488)	(0.667)	(0.382)	(0.694)	(1.051)	(0.382)	(0.507)	(0.710)	(0.382)	(0.447)	(0.626)	(0.382)	(1.690)	(651.8)	(0.382)
Observations	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780	571,780

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Model is multinomial logit. Displayed categories are 1) Internal - advancement via internal career move, 2) External - advancement via external career move, and 3) Termination - no longer employed as mutual fund manager. Omitted category is remaining as mutual fund manager without career-advancing move.
Observations are manager-month level.
All models include year dummies to control for time.
For managers managing multiple funds simultaneously, performance and fund-level variables are average of manager's funds weighted by assets per manager.
Risk-adjusted returns rank scaled are annual moving average.
Fund net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average.
Net asset inflows are winsorized 0.5% on each tail.
Risk is annual moving average.
Investment turnover is fiscal year turnover.

Table 3.9: Advancement via internal and external mobility – interaction of gender and performance with 50% spline of performance

	Total Assets			Average Fund Size			Total Revenues			Number of Funds			Number of Individually-Managed Funds		
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Internal	External	End	Internal	External	End	Internal	External	End	Internal	External	End	Internal	External	End
Female	0.271	1.081***	-0.233	0.930*	1.274*	-0.233	0.178	0.996**	-0.233	-0.198	1.054**	-0.234	-3.465	4.582**	-0.236
	(0.376)	(0.451)	(0.307)	(0.497)	(0.712)	(0.307)	(0.394)	(0.468)	(0.307)	(0.345)	(0.421)	(0.307)	(2.482)	(1.895)	(0.307)
Lower 50% Spline of Performance	0.0999***	0.0328	-0.0980***	0.188***	0.0866	-0.0979***	0.116***	0.0399	-0.0979***	0.0692***	0.0249	-0.0980***	-0.0177	0.406*	-0.0983***
	(0.0288)	(0.0396)	(0.0265)	(0.0425)	(0.0631)	(0.0265)	(0.0299)	(0.0403)	(0.0265)	(0.0261)	(0.0366)	(0.0265)	(0.102)	(0.240)	(0.0265)
Female * Lower 50% Spline of Performance	-0.0638	-0.238**	0.121*	-0.194*	-0.261*	0.121*	-0.0409	-0.222**	0.121*	0.0311	-0.241***	0.121*	0.639	-1.080***	0.122*
	(0.0790)	(0.0965)	(0.0648)	(0.105)	(0.152)	(0.0648)	(0.0824)	(0.0996)	(0.0648)	(0.0726)	(0.0901)	(0.0648)	(0.493)	(0.422)	(0.0648)
Upper 50% Spline of Performance	-0.0149	0.0291	-0.0408	-0.0452	0.158*	-0.0408	-0.0287	0.0313	-0.0408	-0.00687	0.00170	-0.0408	0.317***	-0.0910	-0.0407
	(0.0416)	(0.0604)	(0.0434)	(0.0593)	(0.0887)	(0.0434)	(0.0428)	(0.0611)	(0.0434)	(0.0385)	(0.0571)	(0.0434)	(0.122)	(0.278)	(0.0434)
Female * Upper 50% Spline of Performance	-0.0804	0.0628	-0.310***	-0.0520	-0.394	-0.311***	-0.0664	0.108	-0.310***	-0.201*	0.0387	-0.311***	-0.156	0.890*	-0.310***
	(0.118)	(0.172)	(0.113)	(0.161)	(0.337)	(0.113)	(0.118)	(0.167)	(0.113)	(0.119)	(0.169)	(0.113)	(0.346)	(0.529)	(0.113)
Career Experience	0.00604***	0.0115***	0.00263***	0.00615***	0.0149***	0.00261***	0.00629***	0.0113***	0.00263***	0.00431***	0.00894***	0.00263***	0.0111***	0.0140**	0.00260***
	(0.000870)	(0.00129)	(0.000659)	(0.00123)	(0.00197)	(0.000659)	(0.000889)	(0.00130)	(0.000659)	(0.000772)	(0.00115)	(0.000659)	(0.00388)	(0.00712)	(0.000658)
(Career Experience)	-8.64e-06***	-2.63e-05***	-5.36e-07	-8.25e-06***	-3.35e-05***	-5.35e-07	-9.04e-06***	-2.51e-05***	-5.40e-07	-4.39e-06*	-1.84e-05***	-5.29e-07	-2.84e-05***	-3.29e-05	-5.54e-07
	(2.84e-06)	(4.64e-06)	(1.83e-06)	(4.08e-06)	(7.27e-06)	(1.82e-06)	(2.89e-06)	(4.60e-06)	(1.83e-06)	(2.41e-06)	(4.00e-06)	(1.83e-06)	(1.37e-05)	(2.59e-05)	(1.82e-06)
Tenure at Fund	-0.0152***	-0.0168***	-0.00158***	-0.0183***	-0.0274***	-0.00155***	-0.0151***	-0.0162***	-0.00158***	-0.0117***	-0.0139***	-0.00158***	-0.00708***	-0.0154***	-0.00151***
	(0.000614)	(0.000867)	(0.000457)	(0.000965)	(0.00158)	(0.000457)	(0.000622)	(0.000866)	(0.000457)	(0.000532)	(0.000775)	(0.000457)	(0.00206)	(0.00419)	(0.000457)
Net Asset Inflows	4.390***	3.423***	-7.435***	4.324***	2.882***	-7.453***	4.425***	3.537***	-7.437***	4.080***	3.337***	-7.433***	2.353	2.727	-7.467***
	(0.525)	(0.695)	(0.753)	(0.716)	(1.035)	(0.753)	(0.550)	(0.705)	(0.753)	(0.499)	(0.665)	(0.753)	(2.045)	(3.016)	(0.753)
PhD Holder	0.223**	0.396***	0.0341	0.280**	0.451***	0.0333	0.265***	0.398***	0.0342	0.327***	0.390***	0.0351	0.500	0.819	0.0322
	(0.0974)	(0.116)	(0.103)	(0.133)	(0.170)	(0.103)	(0.0988)	(0.117)	(0.103)	(0.0859)	(0.108)	(0.103)	(0.335)	(0.540)	(0.103)
MBA Holder	-0.0316	0.212***	-0.143***	-0.00687	0.0997	-0.144***	-0.0284	0.180***	-0.143***	-0.0327	0.225***	-0.143***	0.164	0.156	-0.144***
	(0.0391)	(0.0508)	(0.0383)	(0.0561)	(0.0781)	(0.0383)	(0.0401)	(0.0515)	(0.0383)	(0.0361)	(0.0474)	(0.0383)	(0.147)	(0.266)	(0.0383)
CFA Charterholder	0.0349	0.258***	-0.292***	-0.0228	0.246***	-0.293***	0.0414	0.257***	-0.292***	0.0556	0.216***	-0.292***	0.0989	0.222	-0.293***
	(0.0385)	(0.0508)	(0.0378)	(0.0553)	(0.0783)	(0.0378)	(0.0395)	(0.0515)	(0.0378)	(0.0355)	(0.0472)	(0.0378)	(0.145)	(0.261)	(0.0378)
Manager's Number of Funds	0.106***	0.0859***	-0.506***	0.121***	0.134***	-0.507***	0.106***	0.0907***	-0.506***	0.110***	0.0834***	-0.506***	0.119***	0.214***	-0.507***
	(0.00727)	(0.0124)	(0.0314)	(0.0106)	(0.0226)	(0.0314)	(0.00728)	(0.0124)	(0.0314)	(0.00670)	(0.0108)	(0.0314)	(0.0155)	(0.0396)	(0.0314)
Manager's Total Assets	0	0	-0**	-0	-0**	-0**	0	0	-0**	0	0***	-0**	0	0	-0**
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Fund Size	-0	-0***	-0***	0***	0	-0***	-0	-0***	-0***	-0	-0***	-0***	0	(5.40e-11)	-0***
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Fund Age	0.260***	0.00463	0.0125	0.0888***	-0.0657	0.0113	0.305***	0.0240	0.0126	0.273***	0.0294	0.0128	-0.0284	-0.126	0.0111
	(0.0322)	(0.0408)	(0.0316)	(0.0446)	(0.0592)	(0.0316)	(0.0335)	(0.0417)	(0.0316)	(0.0303)	(0.0390)	(0.0316)	(0.123)	(0.204)	(0.0316)
Objective Net Asset Inflows	-10.33***	7.877	0.386	-13.51**	10.33	0.404	-12.13***	7.389	0.379	-7.719**	2.923	0.379	0.978	12.25	0.430
	(3.800)	(5.236)	(3.133)	(5.510)	(8.588)	(3.133)	(3.872)	(5.335)	(3.133)	(3.493)	(4.957)	(3.133)	(12.45)	(21.90)	(3.133)
Socially Responsible Fund	-0.462**	-0.525**	0.0284	-0.688**	-0.521	0.0296	-0.554***	-0.682**	0.0282	-0.486***	-0.453**	0.0282	-0.00738	0.0558	0.0312
	(0.188)	(0.245)	(0.131)	(0.307)	(0.368)	(0.131)	(0.203)	(0.266)	(0.131)	(0.176)	(0.224)	(0.131)	(0.627)	(0.893)	(0.131)
Fund of Funds	0.0698	-1.655***	0.742***	0.260	-0.909**	0.744***	-0.0357	-1.556***	0.741***	0.0777	-1.404***	0.742***	0.348	-0.190	0.744***
	(0.135)	(0.244)	(0.131)	(0.172)	(0.373)	(0.134)	(0.144)	(0.308)	(0.134)	(0.125)	(0.267)	(0.134)	(0.457)	(0.984)	(0.134)
Investment Turnover	6.44e-05	-3.60e-05	0.000534***	3.12e-05	-0.000826*	0.000533***	7.28e-05	7.68e-06	0.000534***	0.000156	9.53e-05	0.000535***	0.000528*	0.000471	0.000534***
	(0.000136)	(0.000216)	(7.32e-05)	(0.000196)	(0.000439)	(7.32e-05)	(0.000141)	(0.000212)	(7.32e-05)	(0.000116)	(0.000188)	(7.32e-05)	(0.000309)	(0.000588)	(7.33e-05)
Risk	0.248***	0.399***	0.0538*	0.187***	0.403***	0.0533	0.266***	0.441***	0.0540*	0.190***	0.374***	0.0535*	-0.101	-0.345	0.0532
	(0.0389)	(0.0511)	(0.0325)	(0.0590)	(0.0846)	(0.0325)	(0.0398)	(0.0522)	(0.0325)	(0.0366)	(0.0471)	(0.0325)	(0.158)	(0.335)	(0.0325)
Expense Ratio	-2.548	-30.89***	4.121***	0.993	-7.717	4.141***	-4.407	-33.27***	4.120***	-4.065	-31.22***	4.118***	-6.288	5.142	4.137***
	(4.620)	(7.426)	(1.223)	(2.320)	(10.60)	(1.223)	(5.268)	(7.553)	(1.223)	(4.600)	(6.918)	(1.224)	(16.86)	(4.209)	(1.223)
Fund Number of Managers	0.00337	0.0475***	-0.00417	0.0147**	0.0546***	-0.00426	0.00722	0.0480***	-0.00415	0.00939**	0.0464***	-0.00409	-0.465***	-0.193**	-0.00447
	(0.00518)	(0.00441)	(0.00503)	(0.00666)	(0.00618)	(0.00503)	(0.00520)	(0.00442)	(0.00503)	(0.00469)	(0.00405)	(0.00503)	(0.0594)	(0.0752)	(0.00502)
Management Co. Number of Funds	-0.000129***	0.000296***	-0.000403***	-0.000101*	0.000290***	-0.000403***	-0.000106***	0.000338***	-0.000402***	-0.000149***	0.000291***	-0.000403***	-9.35e-05	2.25e-05	-0.000403***
	(3.80e-05)	(4.06e-05)	(4.83e-05)	(5.36e-05)	(6.19e-05)	(4.83e-05)	(3.86e-05)	(4.06e-05)	(4.83e-05)	(3.53e-05)	(3.79e-05)	(4.83e-05)	(0.000142)	(0.000231)	(4.83e-05)
Management Co. Total Assets	0***	0***	-0***	0***	0***	-0***	0***	0***	-0***	0***	0***	-0***	0***	0***	-0***
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Management Co. Net Asset Inflows	-3.498	-2.983	-2.568	-3.132	-6.048	-2.554	-2.705	-1.769	-2.558	-2.750	-3.383	-2.571	6.409	-26.80	-2.539
	(2.576)	(3.385)	(2.862)	(3.588)	(5.255)	(2.861)	(2.685)	(3.423)	(2.861)	(2.415)	(3.252)	(2.861)	(8.776)	(20.12)	(2.861)
Management Co. Number of Managers	0.00318***	0.000238	0.00377***	0.00376***	-0.00139	0.00376***	0.00336***	0.000231	0.00377***	0.00295***	0.000491	0.00377***	0.00634***	-0.00427	0.00375***
	(0.000469)	(0.000683)	(0.000478)	(0.000685)	(0.00108)	(0.000478)	(0.000483)	(0.000694)	(0.000478)	(0.000439)	(0.000639)	(0.000478)	(0.00174)	(0.00391)	(0.000478)
Constant	-11.46***	-11.74***	-4.772***	-11.10***	-12.35***	-4.762***	-11.96***	-12.72***	-4.775***	-10.80***	-11.57***	-4.771***	-8.949***	-288.8	-4.758***
	(0.458)	(0.601)	(0.345)	(0.648)	(0.954)	(0.345)	(0.473)	(0.647)	(0.345)	(0.420)	(0.570)	(0.345)	(1.615)	(654.7)	(0.345)
Observations	572,929	572,929	572,929	572,929	572,929	572,929	572,929	572,929	572,929	572,929	572,929	572,929	572,929	572,929	572,929

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: Model is multinomial logit. Displayed categories are 1) Internal - advancement via internal career move, 2) External - advancement via external career move, and 3) Termination - no longer employed as mutual fund manager. Omitt mutual fund manager without career-advancing move.

Observations are manager-month level.

Spline of performance is 50% spline of risk-adjusted returns rank scaled.

All models include year dummies to control for time.

For managers managing multiple funds simultaneously, performance and fund-level variables are average of manager's funds weighted by assets per manager.

Risk-adjusted returns rank scaled are annual moving average.

Fund net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average.

Net asset inflows are winsorized 0.5% on each tail.

Risk is annual moving average.

Investment turnover is fiscal year turnover.

Table A.1: Mutual funds by objective category

Objective	Pecent
Growth	26.8%
Growth/Income	8.8%
Municipal Bond - Single State	7.2%
Small Company	6.5%
Foreign Stock	5.9%
Asset Allocation	5.4%
Income	3.8%
Municipal Bond - National	3.7%
Corporate General	3.5%
Balanced	2.7%
World Stock	2.4%
Corporate High Yield	2.2%
Equity-Income	2.1%
Government General	2.0%
Diversified Emerging Market Stock	1.7%
Real Estate	1.6%
Corporate High Quality	1.4%
Technology	1.4%
Worldwide Bond	1.4%
Aggressive Growth	1.2%
Multisector Bond	1.2%
Pacific Stock	1.0%
Government Mortgage	0.9%
Health	0.8%
Natural Resources	0.7%
Government Treasury	0.6%
Financial	0.6%
Europe Stock	0.6%
Specialty	0.5%
Multiasset Global	0.4%
Convertible Bond	0.4%
Utilities	0.4%
Metals	0.3%
Communications	0.2%
Government Adjustable Rate Mortgage	0.1%
Government	0.0%
Single State/Federal Tax-Exempt	0.0%
Federal Tax-Exempt	0.0%

Notes: Percent is percent of fund - quarter observations.

Table A.2: Management fees when *first-time* mutual fund managers are hired to assume management of an *initial* mutual fund

Dependent Variable:	Management Fee	Management Fee	Management Fee
	no controls	all controls	all controls + fund fixed effects
	(1)	(2)	(3)
Gender			
Female	-0.0101	-0.00761	-0.00346
	(0.0117)	(0.0123)	(0.00675)
Manager Controls			
PhD Holder		0.0400	0.00968
		(0.0323)	(0.0154)
MBA Holder		0.0153	0.00681
		(0.0122)	(0.00700)
CFA Charterholder		0.00915	-0.00620
		(0.00861)	(0.00479)
Manager Age		0.135***	0.00105
		(0.0326)	(0.0374)
Fund Controls			
Fund Size		0.0286***	0.0192***
		(0.00340)	(0.00549)
Fund Age		-0.00469	0.0596***
		(0.00704)	(0.0171)
Objective Dummies		x	x
Objective Net Asset Inflows		-0.112	-0.958*
		(0.623)	(0.506)
Socially Responsible Fund		0.0788**	0.427***
		(0.0398)	(0.114)
Fund of Funds		-0.348***	0.730***
		(0.0562)	(0.135)
Investment Turnover		4.75e-05	7.18e-05
		(5.00e-05)	(6.45e-05)
Risk		0.0372*	0.0583***
		(0.0214)	(0.0195)
Number of Managers		0.00350***	0.00357***
		(0.00127)	(0.00136)
Fund Fixed Effects			x
Mangement Company Controls			
Management Company Dummies		x	x
Management Company Number of Funds		7.97e-05	0.000181***
		(5.95e-05)	(5.63e-05)
Management Company Net Asset Inflows		-1.327*	-0.138
		(0.692)	(0.513)
Performance Controls			
Risk-Adjusted Returns Rank Scaled		0.000878	-0.000178
		(0.00342)	(0.00288)
Net Asset Inflows		-0.485***	-0.0754
		(0.110)	(0.0960)
Time Dummies	x	x	x
Constant	0.714***	-0.338*	-0.0156
	(0.0260)	(0.179)	(0.239)
Observations	7,750	2,562	2,562
R-squared	0.054	0.702	0.980

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes:
Management fee (DV) is lagged one quarter.
Manager age is natural log.
Fund size is natural log of assets.
Fund age is natural log.
Investment turnover is fiscal year total, lagged one quarter.
Risk is annual moving average, lagged one quarter.
Risk-adjusted returns rank scaled are annual moving average, lagged one quarter.
Net asset inflows are winsorized 0.5% on each tail.
Net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average, lagged one quarter.

Table A.3: Management fees when *experienced* mutual fund managers are hired to assume management of a *subsequent or additional* mutual fund

	Dependent Variable:	Management Fee — no controls	Management Fee — all controls	Management Fee — all controls + fund fixed effects
		(1)	(2)	(3)
Gender	Female	0.00571	0.0108	0.00546
		(0.00811)	(0.00763)	(0.00372)
Manager Controls	PhD Holder		-0.0187	0.0215**
			(0.0238)	(0.0108)
	MBA Holder		-0.000703	-0.000416
			(0.00573)	(0.00277)
	CFA Charterholder		0.00190	0.00132
			(0.00501)	(0.00239)
	Manager Age		0.0185	-0.0725***
			(0.0211)	(0.0177)
Fund Controls	Fund Size		0.0270***	0.0321***
			(0.00215)	(0.00280)
	Fund Age		-0.000969	0.0271***
			(0.00451)	(0.00962)
	Objective Dummies		x	x
	Objective Net Asset Inflows		0.612	0.433
			(0.446)	(0.290)
	Socially Responsible Fund		0.0765***	0.132
			(0.0256)	(0.119)
	Fund of Funds		-0.469***	0.490***
			(0.0367)	(0.132)
	Investment Turnover		3.37e-05	-6.04e-05***
			(2.65e-05)	(2.08e-05)
	Risk		0.0504***	0.0223*
			(0.0154)	(0.0128)
	Fund Fixed Effects			x
Mangement Company Controls	Management Company Dummies		x	x
	Management Company Number of Funds		-0.000103***	-0.000105***
			(3.40e-05)	(2.96e-05)
	Management Company Net Asset Inflows		-0.0517	0.814***
			(0.426)	(0.248)
	Number of Managers		0.00412***	0.00126**
			(0.000606)	(0.000559)
Performance Controls	Risk-Adjusted Returns Rank Scaled		-0.00256	-0.00548***
			(0.00217)	(0.00167)
	Net Asset Inflows		-0.404***	-0.392***
			(0.0826)	(0.0560)
	Time Dummies	x	x	x
	Constant	0.654***	-0.131	0.582***
		(0.0211)	(0.121)	(0.184)
	Observations	13,375	5,391	5,391
	R-squared	0.031	0.666	0.966

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes:
Management fee (DV) is lagged one quarter.
Manager age is natural log.
Fund size is natural log of assets.
Fund age is natural log.
Investment turnover is fiscal year total, lagged one quarter.
Risk is annual moving average, lagged one quarter.
Risk-adjusted returns rank scaled are annual moving average, lagged one quarter.
Net asset inflows are winsorized 0.5% on each tail.
Net asset inflows, objective net asset inflows, and management company net asset inflows are annual moving average, lagged one quarter.

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