Knowledge Teams, Careers, and Gender*

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Abstract

Using rich data on personnel records, work assignments, and performance in a financial institution, we uncover the mechanisms leading to promotion gaps in knowledge teamwork. There is a substantial promotion gap for women in early careers. Analyzing over 10,000 investment projects, we find that assignments to project team leadership are crucial in explaining the gaps in promotions and affect long-term careers. We find causal evidence that male supervisors favor male bankers. A survey among employees indicates that women perceive to be disadvantaged in the assignments of roles, but that they do not differ in the demand for these roles.

JEL codes: M51, J16, D22, J44

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1 Introduction

Gender wage gaps persist in most industrialized countries despite the convergence in education of men and women.[1] At lower levels of the skill distribution, gaps have been closed; but in high-skilled work, large gaps remain. This persistence has led to the insight that intra-organizational factors may play a decisive role in explaining the gaps and leveling the playing field for women (Goldin, 2014; Bertrand, 2018). High-skilled work is often conducted in organizations with internal labor markets. As a consequence the wage gap for high-skilled workers is strongly related to gaps in promotions (Blau and DeVaro, 2007; Bronson and Thoursie, 2020). While promotions reward individuals and require individual performance evaluation, (high-skilled) knowledge work is carried out in teams in which people contribute complementary skills and problem solving capacities to succeed (Page et al., 2019; Wuchty et al., 2007; Katzenbach and Smith, 2015). Team work, though, blurs individual performance signals in a joint signal (Itoh, 1991), giving rise to the "metering" problem first investigated by Alchian and Demsetz (1972): how can firms evaluate individual performance from team output?

Decision makers may attribute team success more to some individuals and less to others. Because of the subjective nature of this evaluation, many biases may arise that could systematically disadvantage women (Bagues et al., 2017; Sarsons, 2017; Sarsons et al., 2021; Benson et al., 2021; Drechsel-Grau and Holub, 2024). These biases may exist not only in the evaluation of performance but also in the assignment of roles within the team, which may make some people more promotable or visible than others. Bloom et al. (2015) find that employees working from home were less visible in the office and promoted at lower rates, and in the context of academics Babcock et al. (2017) show that women hold more non-promotable tasks.

We investigate promotion gaps and what might lead to them in a setting with knowledge team work. Our contribution is to show that there are substantial biases in the assignment of visible and promotable tasks, which almost entirely explain gender promotion gaps. Importantly, while the firm we study has made many efforts to ensure equal chances, the decision whom to assign to what role is in the authority of directors. This may have good reasons but comes at the expense of distorting the career opportunities for women. Our contribution to the literature is to combine the insights from research on gender gaps, which has no context of teamwork, with the one on assigning tasks and teams, which makes little or no mention of gender. We combine the two in a simple framework inspired by Ortega (2003) as a framework for the empirical analysis.

[1] Altonji and Blank (1999) and Blau and Kahn (2017) provide extensive surveys of the literature.

We use detailed, long-term data from an international financial institution (referred to hereinafter as "the FI" or "the firm") that provided us with unrestricted access spanning the years from 2000 to 2018. Data include information about 10,000 investment projects and the 1,500+ knowledge workers involved in these projects and their respective careers. Managers and employees in HR, banking, and staff association have helped us in understanding the organizational practices. In the FI, highly educated workers, half of them women, enter at a well-defined level (job band 5, for university-educated workers) and the main way to increase one's wage and status is to be promoted. We match monthly personnel records and project information. Teams work on projects of firms around the globe, screening and potentially suggesting them to a committee of senior managers who decide on the allocation of funds.

A unique feature of the data set is the availability of hard performance data in knowledge work.[2] Team performance is measured in the number of projects signed and funding amounts. We also have individuals' roles in each project team, their promotion rates, long-run career outcomes, and know how individuals and supervisors (Directors) who take staffing decisions are matched into departments.

We find a substantial gender promotion gap on the entry level (promotion from job band 5 to 6). Women are promoted at a 30% lower hazard then men, which is more than a year in the raw data.[3] We open the black box of team production and use information about the role women and men play in project teams, comparing the impact of being a simple team member to being a team leader, in the language of the organization, an "operational leader" (OL), in successful projects on the individual promotion hazard. We find that individuals who hold the role of an operational leader are rewarded much more likely with a promotion than those who are ordinary team members.

Importantly, being an operational leader does not require a high rank in the hierarchy, such that many people are in principle eligible for it. In interviews at the bank we were told that this may be owing to increased visibility towards the higher echelons of the organization and better networks. Women, even after controlling for personal characteristics such as tenure, age, and project track record, are assigned operational leadership roles with a much lower probability than men are and the role assignments are persistent. Women also receive slightly less credit for team performance than men do. Taking these factors into account, then, brings the initially identified gender promotion gap down to a statistically insignificant level.

While promotions are decided upon by a committee, role assignments within teams are

[2]Both Guadalupe (2021) and Englmaier et al. (2018) offer insights into the nature of knowledge work. We believe that having performance data from a real organization engaged in knowledge work will further expand our understanding of how work is done in these settings.

[3]At levels further up, women at least have the same promotion rates (we will get back to this later).

carried out by the direct supervisors. They tend to favor men and we find evidence for different managerial styles in these assignments. Simple comparison of individuals' task assignments under different types of managers would be misleading. We therefore adopt two types of strategies previously used by the literature to generate plausibly exogenous variation in the assignments of managers to bankers.

Our first strategy studies how task assignment for male and female new-joiners differs by the gender of their first manager at the firm. This strategy is inspired by Hoffman and Tadelis (2021) and reduces the concern that an assignment gap is driven by the firm sorting managers to bankers based on long-time information about the banker. For instance, if the firm collects data points about the ability of junior bankers through repeated assignments and decides to allocate lower ability bankers to certain managers, then an assignment gap will arise naturally. By analyzing the career trajectory for new-joiners, we reduce the possibility that assignments are done based on banker-specific information.

We find that new-joiner women wait on average three months longer than new-joiner men before they are assigned their first operational leadership role. This relative waiting time differs significantly under different directors. Under the supervision of male directors, junior women wait around six months longer, while under the supervision of female directors there is no relative difference. Given the importance of role persistence in assignments, this suggests that junior women whose first supervisor is a man are likely to have little opportunity to gain visibility. We also find some evidence that new-joiner women wait longer under a director who has children or who has been with the firm longer. However, these estimates are noisy.

The new-joiner analysis cannot confirm that junior men and women hired by a manager are similar in their unobserved attributes that may affect their subsequent assignments, such as their ability, previous work experience, or professional network. Therefore, our second strategy leverages variation in junior bankers' workload from switching managers to provide a causal estimate of potential managerial homophily in task assignment. This strategy is inspired by Cullen and Perez-Truglia (2023) and Minni (2023) and helps us to exploit quasi-random variation in the gender of a manager induced by rotations. It allows us to control for bankers' and directors' permanent unobserved characteristics to rule out assignment bias.

Following this second strategy, we first confirm that assignments for junior men and women follow parallel trends leading up to each one of the four possible transition types in directors' gender. We then document a significant advantage in assignments to junior women from having a female director. Specifically, junior women who transition from a male to a female director receive more and larger assignments as operational leaders relative to junior men, when compared with junior women who transition from a male to another male director. At the same time, junior women are assigned fewer team member roles under

female directors. We interpret these findings as female managers positively affecting junior women's careers by giving them more opportunities to be visible inside the firm and a better workload balance by reducing their involvement in non-promotable tasks.

To dig deeper into the mechanism, we carried out an extensive survey at the firm (which we first tested on another, unrelated firm with similar results). We find little difference in the perceptions between women and men except that women perceive to be disadvantaged in the assignments of interesting roles and tasks. They do, however, not differ in aspirations, self-evaluation, self-promotion, or the demand for these roles.

Because of the long-term nature of our data, we can explore whether women's careers are different from men's. First, as predicted by the model of Lazear and Rosen (1990), we find some mild evidence for a survivor bias: once women get promoted from the entry level, they make better careers than men do. Second, we can link our analyses of new-joiners and the effect of switching managers to long-term career outcomes. We find that junior men and women go on to have similar careers when their first director is a woman. In contrast, new-joiner women move slower up the firm's hierarchy than new-joiner men do when their first director is a man. However, switching from a male to a female manager early in one's career can help a junior woman. We find that at five years following such a transition, the relative gain for junior women is 0.38 job bands, which rises to 0.62 job bands at eight years after the switching event. At our FI, promotions are rare and limited. These managerial homophily results imply that junior women secure around half a promotion more than junior men over a decade, which implies an economically large and meaningful effect.

Our findings support the general perception that despite the positive effects of regulatory initiatives (Bertrand et al., 2018; Besley et al., 2017) and family support systems (Ekberg et al., 2013; Lalive and Zweimüller, 2009; Adda et al., 2017) and the awareness about behavioral determinants of women versus men (Niederle and Vesterlund, 2007; Babcock and Laschevar, 2003), organizational structures and processes may be most crucial in determining the situation of women in the labor market (Goldin, 2014). Similarly, corporate culture matters for promotions (Adams et al., 2021). While we study a firm that is concerned with gender equality and fairs very well with respect to gender equality, we nonetheless find evidence of subtle mechanisms that disadvantage women.

This underlines the need for understanding processes in the depth of organizations. Policies can change the framework an organization operates in. However, they are unlikely to affect the subtle inner workings inside organizations. This is especially important when looking at knowledge work and internal labor markets where progress in the depth of the organization is essential for having women talent on the top.

Our finding that women's careers are slower at lower ranks in the hierarchy resonates

with Haegele (2022a). For lawyers, Azmat and Ferrer (2017) show that gender gaps in the promotion to partner are driven by performance differences, but these are endogenously determined by career aspirations (Azmat et al., 2020) which, in turn, react negatively to early career experiences, like demeaning comments or harassment. Hospido et al. (2022) find that promotion differences at the European Central Bank are partly explained by a gender application gap, which vanishes after the introduction of a policy change that encourages more women to apply for open positions. In a large retailer, Benson et al. (2021) show that women's potential is consistently underestimated, whereas Haegele (2022b) shows that managers hoarding talented workers affects women disproportionately.

Recent work, like ours, ties into a broader literature analyzing and quantifying the importance of middle managers or "Bosses" who, in the depth of the organization, take important human resource and leadership decisions affecting efficiency and equity alike (e.g., Lazear et al., 2015; Hoffman and Tadelis, 2021; Dessein and Santos, 2021; Friebel et al., 2022; Minni, 2023). For instance, Cullen and Perez-Truglia (2023) explain around one third of the gender promotion gap in a commercial bank by social interactions of bosses and employees. Yu (2021) highlights the importance of the assignment to attractive court cases for lawyers and that women partners help women lawyers. In contrast, Drechsel-Grau and Holub (2024) find that manager gender does not affect gender differences in wage growth of promotion rates at a large European multinational high-tech manufacturer.

What is unique in our study is that we look at knowledge teams with hard performance and personnel data. Both the existence of teams and different roles with rotation as well as the possibility to measure team performance in an exact way sets our study apart from previous literature. We find that, in such knowledge work, the key difference is not so much that women and men perform differently, but that women do not get the same opportunities as men do in terms of holding roles in teams deemed more important to team performance. This is reminiscent of Sarsons (2017) and Sarsons et al. (2021) who study a marketplace that may be different from the inner workings of an organization.

The firm's internal labor market is remarkably similar to the one studied by Baker et al. (1994). Hence, we can connect the classical literature on internal labor markets in economics (Baker et al., 1994; see Waldman, 2012 for a survey) with a new literature on promotions (Benson et al., 2019) and augment both literatures in two ways. First, we zoom in on the observable career differences between men and women. Second, we take into account the specificities of team production, which opens up a new perspective on the determinants of promotions and promotion gaps.

In what follows, Section 2 provides information about our institutional setting and data. We explain our conceptual framework and document promotion and assignment gaps in

Section 3. Section 4 details our research designs to identify the role of directors in driving assignment gaps. We discuss alternative mechanisms and present our survey-based evidence in Section 5. We finally analyze the internal labor market and long-term career outcomes in Section 6, before offering concluding remarks in Section 7.

2 Setting

2.1 The Financial Institution: Structure and Projects

The financial institution (FI) we work with is active in multiple sectors and countries around the globe. In 2023, the FI invested a double-digit USD billion sum through hundreds of projects, mostly debt, and some equity. Figure A.1 in the Appendix depicts the organizational structure in a stylized way. For our purpose of analyzing the promotion gap and differential careers of women, the following pieces of information are crucial.

First, strategy planning and implementation are overseen by the organization's executive committee. They issue a *corporate scorecard* that sets out annual investment targets both in terms of number of realized projects and business volume for the entire FI and defines certain parameters, most importantly, development impact and financial profitability.

Second, there are two main parts of the FI, banking and non-banking, roughly of equal size (see Figure A.2). We focus on banking, which is the revenue-generating part. There are several "directorates" (departments) each of which is headed by one director. Directorates are structured along sectors and regions of operations. Departmental scorecards are derived from the corporate scorecard. They set a minimum volume of signed investment per year, subject to reaching at least a threshold level of social impact (such as positive environmental outcomes) and financial sustainability (such as the ratio of non-performing loans) for each directorate. In this way, incentives of the directorates are aligned with strategy. The directorate's cost-to-income ratio is monitored as well such that directors cannot hire bankers at will. Directorates contain on average 13 bankers on three different levels: analyst/associates in job band 5; principals in job band 6; associate directors in job band 7. They are managed and staffed on projects by the director (job band 8) (see Table A.1), supported by administrative staff.

Third, banking operations are supported by numerous departments in non-banking, which house lawyers, economists, risk officers and other specialists (e.g. environment), to ensure that each project meets the FI' s financial criteria and business strategy.

2.2 Internal labor market

The bank has a well-organized internal labor market, which bankers usually enter at job band 5. Here, the educational requirement is a master' s degree. The firm then promotes these employees internally, but also hires externally on all ranks (as in Baker et al., 1994). Promotions are the main way for wage progression, with wages increasing by up to 20% from one band to another and allowing subsequent steeper wage progression, while annual performance-based bonuses are relatively small (up to 20% of a worker's annual salary, but usually much less). For employees on bands 5 to 7, the main incentives are hence career concerns. Only at higher levels, bonuses become more substantial. Employees can apply for jobs in different directorates during their internal careers.

Each banker's performance is evaluated annually mostly by employees and managers from higher bands. Promotions then occur in certain windows, typically in the first quarter of a year, and are decided upon by a committee based on the individual performance history and the annual evaluations. In interviews, we learned that the main relevant performance measures for bankers are (i) the number of projects signed and (ii) the size of projects (funds invested). In our regressions, these will be important explanatory variables, in line with the design of departmental score cards (see above). How precisely performance maps into promotions is investigated in the regressions in Section 3.

2.3 Investment projects, teams, incentives

The relevant "unit of production" are investment projects that are developed by professional staff in the banking directorates. We have data on more than 10,000 banking projects, each of which is subject to intensive screening before being either signed or aborted. While each project is linked to a sector and a region, project teams get usually staffed by the sector director. In the next section, we explain how we use the project data to calculate performance histories and analyze project assignments.

The screening of a deal, the development of its structure and negotiations (internally and externally) are carried out by a designated banking project team (hereafter simply "the (project) team"). Upon arrival of a project at a directorate, the relevant director assigns his or her employees to the project. The project team is led by an "operation leader" (OL). The OL is responsible for a project during its whole life cycle and works with at least one other banking "team member" (TM), often from the respective regional directorate, and a number of non-banking staff. The work of the OL comprises coordinating the project work and organizing communication within the team, with superiors, and with the client. Importantly, besides organizing the work flow of a project team, the OL is responsible with

presenting the project to a committee of senior managers from different departments. On average, a team consists of 2.5 banking team members. This may include analysts/associates (band 5), principals (band 6), and associate directors (band 7) who all can either be the OL or TM. Figure A.3 in the Appendix provides more detailed information on the project team composition.

Directors' main incentives are to sign a specific amount of business volume and a certain number of projects as outlined in the directorate scorecard. Bankers' main tasks are to get projects signed; bigger projects are likely to be better for careers. From interviews with bankers, we further learned that signing projects as the OL is crucial to move up the ranks in the FI. Clearly, being an OL provides visibility to a banker to representatives of higher echelons in the hierarchy who will provide performance evaluations in the promotion decisions. Section 3.1 formalizes this mechanism below.

A project undergoes a lengthy development and approval process with three review stages (see Figure A.4). Around 60% of all projects are signed over our sample period. Table A.2 shows summary statistics: incoming projects have a volume of EUR 30 million on average and take around 140 days, or four to five months, to signing. Project risk is evaluated on a scale from 1 (equivalent to a triple-A rating) to 8 (equivalent to an impaired asset) in 20 increments; an average of 6 indicates that risk taking is acceptable, which needs to be compensated by high impact and financial returns. Around 20% of projects contain an equity component but are pure loans otherwise. Usually, ultimate success or failure of projects is only revealed several years after promotion decisions. Only 60% of signed projects in our sample are completed (repaid and impact monitored).

2.4 Data

We use data from the firm's (i) HR database and (ii) project monitoring tool. The HR database for bankers covers the years 2000-2018. For our analysis sample, we keep bankers who have been assigned at least one project in any role. From 2014 onward, we observe the director each banker is assigned to. From April 2007 to beginning of 2014, the data do not match directors and bankers, but we have information about cost centers and organizational units bankers are associated with. Together with the annual reports that lay out the organizational charts and respective directors, we can infer the director/banker match. For the time between 2000 and April 2007, it is impossible to match bankers and directors. Hence, we exclude these data from the analysis.[4]

[4]We start with more than 130,000 worker-month observations for all employees in job bands 5-8 in the banking division over the 2000-2018 period. Limiting the sample to bankers in bands 5 to 7 who have worked on at least one project during this period removes around 30,000 worker-month observations. Because we

The data from the project monitoring tool goes back until 1991 and covers the universe of projects the FI considered. To ensure that we only investigate projects that were seriously pursued by the FI, we only keep those 10,155 projects in the data set that passed the FI's initial review stage (called "concept review"). With these projects data we can (i) calculate individual performance records spanning the period from 1991 to 2018, and (ii) run regressions on new assignments for the period from April 2007 to December 2018. We also know the role bankers have played in each project (OL or TM) and which director has overseen the assignment.

Table 1 shows summary statistics. Panel A shows the characteristics for men and women in each band. The average male banker in job band 5 is 31 years of age, while women in the same band are a year older on average. Men have an experience in the junior band of 2.8 years (34 months) and women have over 3 years (39 months), respectively. These differences disappear and partly reverse on the more senior levels.

Panel B reports baseline promotion rates for the different job bands. The monthly hazard is the unconditional probability to be promoted in any given month. From band 5 to 6 it is roughly 0.8% for women and 1% for men. As in Benson et al. (2019) the within-sample rate restricts the sample to months in which at least one employee of the same seniority is promoted. This increases the before mentioned probability to 3.6% for men and 2.8% for women. These descriptive statistics of promotion rates for men and women hint towards a gender promotion gap at the junior level, while in higher bands, if anything, the reverse is true. One can also see the fact that promotion from band 6 to band 7 is a scarce event, making the job of Associate Director (band 7) a ceiling for many employees.

Panel C shows that across all bands, women have more project signings and larger projects. Importantly, in job band 5, men have more signings as OLs; that changes at higher levels of the hierarchy. Women tend to have slightly larger projects as OLs. These differences can also be seen when looking at project assignments, regardless of whether the FI ends up signing them. In fact, while men and women have similar signing ratios in job band 5, women sign a greater share of their assignments in higher job bands.

Panel D reports the assignment hazards to OL and TM roles, revealing a difference between men and women in job band 5. The monthly hazard of OL assignment for junior men is 10.1%, while it is 8.8% for junior women, which again reverses in higher job bands. Junior women have a slightly higher hazard of TM assignment at all levels of seniority. We will explore to what extent performance in different roles matters for promotion and what

can match each banker to his/her director only from April 2007 onward, we drop the preceding months, losing roughly another 30,000 worker-month observations along the way. Our final analysis sample therefore consists of 73,467 worker-month observations, including all bankers in job bands 5-7 who have worked on at least one project and their directors.

drives assignment to the roles in the next sections.

Finally, panel E reports the number of observations by job band, with more than 30,000 person-month observations in job band 5 coming from 814 individual bankers. Women account for almost half of the observations, while on the higher levels, men have a larger share.

We present a career transition matrix of monthly hazards for men and women separately in Table A.3. This table provides an overview of gendered careers at our FI, summarized in the following results. First, the main port of entry for bankers is job band 5, accounting for 69% women and 67% of men. Second, a higher share of women than men enters the FI in bands 1-4, which include interns and support roles (19% vs. 11%). Third, promotions happen step-wise and there are rarely demotions. Fourth, women have lower exit rates to the non-banking part of the FI, but have similar exit rates from the firm to men. Finally, the table confirms our earlier observation that women have lower promotion rates at band 5, but higher promotion rates at higher bands.

3 Promotions and Assignments

Promotions are decided upon by a committee, including individual bankers' respective directors. In contrast to promotion decisions, the assignment of individual bankers to projects and the decision whom to assign the OL role to is at the discretion of the respective director. These assignments to OL may matter substantially for promotions and the gaps between men and women. To explain how, we first outline a model in which directors may have biases in assigning bankers to OL (vs TM) roles that may lead to biased promotion decisions, even if the promotion rule itself is unbiased. We then carry out regressions to establish empirically the significance of gaps at assignment and promotion stages.

3.1 Model

We adopt the model by Ortega (2003) who studies managers' effort decisions in response to the power and visibility associated with different roles of people in team production. We abstract from managerial effort and analyze the promotion effects of directors holding distorted priors about the ability of workers.

Setup Our model consists of three stages $t \in \{0, 1, 2\}$ and has bankers, a director and a promotion committee. In $t = 0$, two bankers enter the firm; in $t = 1$, the director assigns his or her bankers to the two tasks in the project $j \in \{OL, TM\}$. The output is then realized,

and beliefs about bankers' ability levels are updated by all players. Finally, in $t = 2$, the firm's promotion committee takes a promotion decision according to their posterior beliefs or hires from the external market to fill the senior position.

Without loss of generality, assume that one banker from each group $i \in \{blue, red\}$ has entered the firm in stage $t = 0$. Bankers have an ability level η_i which is constant over the stages, unknown to all participants including the bankers themselves, the director, and the promotion committee and drawn from an i.i.d. normal distribution, $\eta_i \sim N(0, \sigma^2)$ with known variance. All participants have prior beliefs about these ability levels $\hat{\eta}_{i,t=0} \sim N(\eta_{i,0}, \sigma^2)$. For bankers and the promotion committee the prior distribution is independent of i, $\hat{\eta}_{i,t=0} \sim N(\eta_0, \sigma^2)$, i.e. they correctly believe both groups to have the same ability distribution.

Director's beliefs $\hat{\eta}^d_{i,t=0}$, however, may be biased. In particular, we here assume (without loss of generality) that $\eta^d_{blue,0} \geq \eta^d_{red,0}$. Hence, we allow for the director to believe the blue group to be more productive. Assuming that the director is not aware of this bias, he or she maximizes output i.e., the success of a project by assigning tasks to the two bankers. Project outcome is:

$$y_t = \varphi * \eta_i^{OL} + (1 - \varphi) * \eta_{-i}^{TM} + \varepsilon_t \tag{1}$$

The project's success depends on the inputs of each task $j \in \{OL, TM\}$, which directly depend on η_i^j, the ability of banker i who is assigned to task j. These abilities are not task-specific, i.e. banker i's ability level is the same for both tasks, $\eta_i^{OL} = \eta_i^{TM} = \eta_i$. Parameter φ indicates the importance of a role for project success. It can be interpreted as power, or, in our case more importantly, visibility. In line with what we know from our firm, we assume that $\varphi \in (0.5, 1)$, which makes the OL's input to the project more important and their output more visible and informative as explained by Ortega (2003). Lastly, ε_t is a random productivity shock, with $\varepsilon_t \sim N(0, \sigma^2_\varepsilon)$.

Task assignment Directors prefer to staff the banker for which they believe ability to be higher on the OL project. Since $\varphi \in (0.5, 1)$, the following holds $\frac{\partial y}{\partial \eta_i^{OL}} > \frac{\partial y}{\partial \eta_i^{TM}}$. Hence, the impact of the supposedly more productive worker is more efficient in the OL position and will maximize expected profits. Due to $\eta^d_{blue,0} \geq \eta^d_{red,0}$, the director will hold the expectation that $\hat{\eta}^d_{blue,0} \geq \hat{\eta}^d_{red,0}$ and assign the OL role to the blue worker.

Promotion At time $t = 2$, the promotion committee takes a decision after observing the output of the project and updating its beliefs about banker ability. The committee does not know about the director's potential bias (even the director is not aware of having a bias).

The decision will be to promote the banker with the higher posterior ability, as long as it is positive because the firm may also hire from the external labor market based on the prior of the promotion committee.

We assume that the committee is unbiased. We believe that, given the institutional setting, in particular the firm's concerns about diversity, there are good reasons for this belief. Ultimately, this is an empirical question that we will answer in the next section.

The committee promotes the banker $i \in \{blue, red\}$ for whom it has the higher posterior estimate of ability $\hat{\eta}_{i,t=1}$. The updating of beliefs follows a standard Bayesian approach of weighting the signal received from the project $z^j_{i,t}$ and the prior with the corresponding variances (DeGroot, 2004, p.167).

$$\hat{\Theta}^{OL}_{i,t=1} = \frac{\varphi^2\sigma^2}{\varphi^2\sigma^2 + (1-\varphi)^2\sigma^2 + \sigma^2_\varepsilon} z^{OL}_{i,1} + \frac{(1-\varphi)^2\sigma^2 + \sigma^2_\varepsilon}{\varphi^2\sigma^2 + (1-\varphi)^2\sigma^2 + \sigma^2_\varepsilon} \hat{\eta}_{i,t=0} \tag{2}$$

Because the prior $\hat{\eta}_{i,t=0}$ for both groups $i \in \{blue, red\}$ is 0, the signal used to update for the OL is $z^{OL}_{i,1} = \frac{y_1}{\varphi}$ and $z^{TM}_{i,1} = \frac{y_1}{1-\varphi}$ for the banker in the TM role. An equation similar to (2) holds for the TM.

Proposition Despite being unbiased, the committee will in a rational expectation equilibrium never promote the *red* banker. First, from the assignment of the Director it follows that the *blue* banker becomes the OL and the *red* banker the TM. Second, the committee will promote the *blue*/*OL* banker if the project was successful ($y_t \geq 0$).[5] Third, if the project fails ($y_t < 0$), the committee beliefs $\hat{\eta}^j_{i,t=1} < 0$ and hires on the external market with $\hat{\eta}^{external}_{i,t=1} = 0$. Thus, promoting neither the *blue* nor the *red* banker.

To see this consider the following: According to the promotion rule the bank promotes the OL if $\hat{\Theta}^{OL}_{i,t=1} \geq \hat{\Theta}^{TM}_{i,t=1}$. Because of $\hat{\eta}_{i,t=0}$, this is equal to the following inequality:

$$\frac{\varphi^2\sigma^2}{\sigma^2 + \sigma^2_\varepsilon} \frac{y_{i,1}}{\varphi} \geq \frac{(1-\varphi)^2\sigma^2}{\sigma^2 + \sigma^2_\varepsilon} \frac{y_{i,1}}{1-\varphi} \tag{3}$$

This, using the fact that all variances are positive, boils down to the committee promoting the OL if:

$$\varphi * y_{i,1} \geq (1-\varphi) * y_{i,1} \tag{4}$$

[5] Ultimately, the outcomes we observe on the project level will be (0/1): signed/not signed or paid back/default. y_t can here be seen as a latent variable which determines success if crossing a threshold, which the committee may observe contrary to the researchers. Alternatively, it may be seen as a different project or even portfolio characteristic such as funds dispersed or time to signing.

Since $\varphi \in (0.5, 1)$, which is due to the OL being more powerful and having more visibility, the committee adjusts its posterior for the OL more towards the signal, while it does this to a lesser extent for the TM. Hence, the OL is rewarded for good project performance and promoted if $y_{i,1} \geq 0$ and punished for bad project performance, in which case the firm does not promote from within because $\hat{\eta}^{j}_{i,t=1} < \hat{\eta}^{external}_{i,t=1} = 0$.

Discussion Our setting is very simple. It could be extended to a binary outcome (success vs. failure) or to multiple project assigning. It is mainly meant to bring two things home: (i) it posits that, given performance and assignment to OL roles, we should not see much gender bias in promotions, but (ii) there may be a bias in assigning men and women to OL roles. We could think of extending this framework to multiple periods, which would show that there will be path dependency: a bias against one type of workers can translate into future biases. We could also consider different strategies of directors. In particular, a director may not simply maximize output in a static sense, but dynamically, rather experiment with OL assignments in order to learn more about the ability of workers.

In what follows, we empirically investigate the following questions: (i) What is the promotion rule the FI employs? (ii) Is there a gap in promotions and how is it related to performance on projects? (iii) Is there a gender gap in assignments? (iv) Can one identify causally the role of potential director bias? We then also provide survey evidence that shows that women and men do not differ in their interest in leadership roles.

3.2 Promotion rule

We run descriptive regressions to establish the FI's promotion rule based on bankers' observed performance. This exercise helps to verify what we have learned from our informal interviews and take our simple model to the data.

Our empirical methodology for estimating the determinants of promotions and possible promotion gaps follows Benson et al. (2019), who run their promotion regression only in periods in which at least one employee is promoted. We adopt this strategy to account for the fact that promotions typically occur only when slots for promotion are open. Hence, we run the following regression on banker i in directorate d who have not yet been promoted in their current job band only in year-month t, in which at least one banker is promoted:

$$\text{Promoted}_{idt} = \beta_1 \text{Performance}_{idt} + \beta_2 \text{X}_{idt} + \delta_d + \delta_t + \varepsilon_{idt} \tag{5}$$

The dependent variable is an indicator variable showing whether a banker is promoted in the next month. We estimate Equation (5) separately for each job band j to allow for different promotion factors in $Performance_{idt}$ to affect junior and senior bankers. Our

baseline regression controls X_{idt} include family status variables (marital status, a parent dummy, number of months spent on parental leave, paid and unpaid separately, if any) - and entry characteristics (joining: in a job band < 5, in a sector vs. a region directorate, in- vs. outside the banking workforce). We also use a set of fixed effects. We create five bins each for age, length of service in the organization, and tenure on the job band, and include indicators for an employee's directorate and year. Standard errors are clustered on the individual level to account for serial correlation across time within individuals.

In estimating Equation (5), we use variation in performance across individual bankers who are in the same directorate, have similar backgrounds, and are comparable in terms of their time at the firm. In the model, the committee decides on promotion purely given the one-dimensional project outcome by updating. In reality this decision is more complex. Hence, it is important to understand what performance is in our setting. A number of measures could, in principle, be used in $Performance_{idt}$. From interviews with bankers, we learned that signing projects is crucial to move up the ranks in the FI, in particular as an OL. The firm might also consider the ratio of signed to total projects assigned to a banker as a performance measure. We therefore construct these measures and include them in alternate specifications.

Table 2 shows our estimates of the FI's promotion rule for junior bankers. A banker's performance, as captured by completed project signings and their average amount, has a strong impact on promotion prospects. However, as anticipated from our interviews, column (2) confirms that project signings as an OL play a particularly important role in boosting a banker's promotion prospects. For instance, a junior banker who signs an additional project as OL can boost her/his promotion chances by 36% (=0.0113/0.0318) relative to the sample mean. In contrast, performance in the TM role has a minimal effect.

We next test the idea that bankers who lead successful projects are more likely to be promoted. To begin, we re-estimate Equation (5) but include total assignments for each banker regardless of project outcomes in column (3). Visibility gained through assignments as OL continues to matter. In column (4), we control for the ratio of these assignments that a banker successfully oversees through to signing. In line with the simple model above, bankers with a greater signing ratio as OL are more likely to be promoted, while signing ratio as TM has no effect.

These findings suggest that the promotion committee updates its priors based on bankers' performance as OL and discounts any signal received through TM roles. Since the OL is seen as the face of a project and is responsible for presenting it to senior management, this role increases bankers' visibility and hence promotion chances. This is crucial for junior bankers for whom no other information is available early in their career. Our estimates of

the promotion rule for bankers in job bands 6 and 7 (in Table B.1) show that performance as OL loses its explanatory power higher up the job ladder. Visibility matters the most for junior bankers.

3.3 Promotion gaps

We adjust our earlier specification to test for gender promotion gaps as follows:

$$\text{Promoted}_{idt} = \beta_1 \text{Woman}_{idt} + \beta_2 \text{X}_{idt} + \delta_d + \delta_t + \varepsilon_{idt} \tag{6}$$

We estimate Equation (6) separately for each job band j to identify where promotion gaps might arise in one's career. For the determination of a gender gap, the coefficient of interest is β_1.

Figure 1 presents the baseline gender promotion gap regression results for job bands 5-7 separately. Being a woman reduces the promotion hazard within sample by around one third (1.04 percentage points at a baseline of 3.2% within sample). This is only true for junior bankers in job band 5, which is the standard entry level of academically trained personnel. The underlying regression results are reported in Table B.2 of the Appendix. The only baseline controls that matter for promotions from band 5 to 6 are taking unpaid parental leave (over and above the standard paid parental leave in the FI) and entry in bands lower than 5, which are typically support or short-term positions. Both of these are concentrated among women, but hardly affect the size of the gender promotion gap.

We now focus on job band 5 where the gender gap opens. We adapt our specification to include bankers' performance as possible determinants of promotion. Following our estimates of the FI's promotion rule, these include the cumulative number of signed projects and the average amount signed (the latter in logs) for each banker at each point in time:

$$\text{Promoted}_{idt} = \beta_1 \text{Woman}_{idt} + \beta_2 \text{Performance}_{idt} + \beta_3 \text{X}_{idt} + \delta_d + \delta_t + \varepsilon_{idt} \tag{7}$$

Column 1 of Table 3 replicates our baseline, green specification for job band 5 from Figure 1. Column (2) shows estimates when we add our performance variables. As expected, performance has a strong effect on promotions, but it does not affect the gender promotion gap. In column (3), we break down each banker's performance by their role on the project. We find a noticeable difference in the effect of signings and average project amounts as OL vs. TM on promotions. Controlling for role-specific performance reduces the promotion gap by around a third to 0.72 percentage points.

It is possible that junior women are held to higher standards in the promotion process if managers perceive them to have a higher risk of leaving the firm (Lazear and Rosen, 1990), or if they are simply credited less for their contribution in a team environment (Sarsons

et al., 2021; Hengel, 2022). In the last column, we interact signings as OL and average amount as OL with the woman indicator to investigate potentially differential performance evaluations. While women's promotions react less to average project amount managed as OL than men's, they react more to the number of signings, although the latter effect is statistically insignificant. We also find that the gender promotion gap is further reduced by a quarter to a statistically insignificant 0.45 percentage points.

Taken together, these results indicate that performance on the job and differential performance evaluations can mostly explain the observed gender gap in junior bankers' promotions at the FI. In unreported results, we check that they are robust to alternative measures of performance (e.g. time spent on screening projects or team members supervised as OL), alternative sets of baseline controls (e.g. nationality or contract type), and alternative specifications for career disruption, internal networks, or fixed effects. They further hold for sub-samples of our data, for instance when we exclude all bankers with children. This highlights that the mechanisms we identify go beyond a gender gap caused by a child penalty.

3.4 Assignment Gaps

We run a similar specification as earlier to see if women are indeed assigned OL roles less often than men are:

$$\text{Assignment}_{idt} = \beta_1 \text{Woman}_{idt} + \beta_2 \text{Performance}_{idt} + \beta_3 \text{X}_{idt} + \delta_d + \delta_t + \varepsilon_{idt} \tag{8}$$

The dependent variable is an indicator variable showing whether a banker is assigned at least one new project in the next month. We estimate this regression separately for the OL and TM roles in the team including the full monthly panel of all bankers in job band 5 as assignments are much more frequent than promotions. The control variables and fixed effects remain unchanged from Equation (7).

Table 4 shows that there is a large assignment gap for women when it comes to OL roles. Junior women's monthly hazard of being assigned OL in a new project is 1.14 percentage points lower than junior men's, which accounts for 12% of the baseline hazard among all bankers in the sample. Column (2) suggests persistence in roles: past project performance as OL increases the probability to be assigned to future projects in this role. Controlling for previous performance in both OL and TM roles reduces the gender gap in assignment slightly to 0.92 percentage points, or 10% of the baseline hazard. Column (3) shows that men and women do not have different probabilities of being assigned OL based on their past performance. Most importantly, however, we continue to find a sizable gender gap in OL assignment.

The results for team membership assignment do not show a gender gap and are presented in Appendix Table B.3. We do find persistence for TM roles as well, suggesting that the first assignments junior bankers take on at the FI can have important implications for their future workload and careers. Figure 2 presents descriptive evidence in this regard. It shows a binscatter plot of time to first assignments to OL and to being a "normal" team member (irrespective of the assignment outcome) against time to the first promotion for junior bankers. Time to first OL assignment correlates at more than 61% with time to first promotion, while the time to first TM assignment correlates at 23% only.

Are women worse bankers? We want to exclude the possibility that our results are driven by differences in work quality or effort between men and women, which would rationalize differential assignment to OL positions. We therefore run a set of regressions at the project level to test if project outcomes depend on the OL's gender. Project outcomes can be varied. On the one hand, directors and bankers are incentivized to achieve short-term performance by generating business volume in the least amount of time. Hence, a logical measure of success is whether the project is signed or not, or how long bankers have spent on the project, holding constant characteristics such as credit rating, financing structure, and project size (alongside any directorate and year differences). On the other hand, the organization values the social impact of projects and their profitability. However, this is only realized up to several years after a project is signed.

Table B.4 reveals that women are not worse OLs than men when it comes to getting deals done. Women also do not take longer to get projects from the first investment review stage to the final signing stage. And conditional on signing, projects led by women do not have differential non-performing rates. These results hold similarly regardless of whether we focus on projects led by women in all job bands or only on projects led by junior women.[6]

4 Directors

We have shown that a gender promotion gap exists and junior bankers who hold the role of OL in successful and larger projects are promoted at a faster rate. While promotions are decided upon by a committee, assignments are at the discretion of directors, who seem to prefer

[6]These results also alleviate concerns of the FI "overhiring" women at entry. If few qualified women applied to the FI, which may aim at gender parity in hiring, then hired women would be on average of worse quality. This effect could be undone at later stages within the organization (Lehmann, 2013) by assigning fewer leadership positions. To investigate this, we obtained data on the FI's applicants shown in Appendix Table B.5. The firm faces sufficiently large men and women applicant pools; on the junior level, there are on average 14 applications by women and 26 by men. In the presence of large applicant pools, hiring men and women equally often should not come at the expense of quality.

assigning junior men to these roles, even though junior men and women perform similarly on the job. In this section, we analyze the role played by directors in task assignment.

We are interested in three aspects of directors that previous literature has identified as potentially important in task assignment and careers: (i) gender, in particular managerial homophily (Kurtulus and Tomaskovic-Devey, 2012; Kunze and Miller, 2017; Maida and Weber, 2022; Fortin et al., 2022; Cullen and Perez-Truglia, 2023; Drechsel-Grau and Holub, 2024); (ii) parenthood (Washington, 2008; Ronchi and Smith, 2021); and (iii) "high-flyer" managers (Minni, 2023).

Performing a simple comparison of bankers' task assignments under different types of directors would be misleading due to evident concerns of endogeneity. Directors are instrumental both in the hiring of bankers and the allocation of tasks and roles. The assignment of directors and bankers is clearly not random. The ideal experiment to overcoming this type of endogeneity would involve randomly matching directors and bankers, for instance via frequent rotation of directors across directorates or teams of bankers. However, this is not what the FI does, and rotation in firms often has non-random elements. We therefore adopt two types of experiments used by earlier studies to exploit plausibly exogenous assignment of directors to bankers.

First, we carry out a new-joiner analysis of the waiting time a person has until becoming an OL for the first time. This is inspired by Hoffman and Tadelis (2021) and reduces concerns about assignment bias. On the one hand, a new-joiner is unlikely to have substantial information about the director's management style – and specifically the director's propensity to assign OL vs. TM roles differently to men and women – that would enable them to choose their managers (Hoffman and Tadelis, 2021). On the other hand, directors are unlikely to have accurate information about a new banker's ability to lead projects or their productivity as a team member, especially if they were not involved closely in the hiring process (Lazear et al., 2015). This approach should therefore reduce concerns around the FI sorting junior bankers, and specifically junior women, into teams and directors where waiting times for assignments can be longer than usual.

Second, we estimate event studies of bankers experiencing a change in their direct supervisor as in Cullen and Perez-Truglia (2023) and Minni (2023). There are many reasons why a director may be replaced by another: promotion, horizontal moves across location or job function, exit, illness, or death. In general, it is hardly imaginable that junior bankers would have a say in their director staying or leaving, or which new director would take over the directorate.

These event studies address a potential selection mechanism during the hiring process based on stereotyping. Directors may hire junior men and women with specific roles in

mind for task allocation. They may hire junior men to lead projects and women to take on supporting roles. The reasons for such behavior may be unobservable to us (bankers' past experience, ability, or connections). One might then expect to observe junior women to wait longer before they are given an opportunity to lead a project. Event studies of bankers' assignments around managerial rotations help us address this concern by controlling for junior bankers' unobservable attributes.

4.1 New-joiner analysis

Sample We focus on junior bankers who have recently joined the organization. A new-joiner is defined as a banker who joined the FI in the past six months and is currently in job band 5. We observe 814 unique bankers in job band 5, out of which 554 are new-joiners. Out of these new-joiners, 534 get a first OL assignment during our sample period from 64 directors. They form our analysis sample in this sub-section.

Identification We use the cross-section of new joiners to investigate how long a junior woman has to wait for her first assignment compared with a junior man and depending on the characteristics of their director. We estimate the following regression:

$$\text{Time to assignment}_i = \sum_{j \in J} \beta_j \text{Woman}_i \times \text{D}_i^j + \eta \text{X}_i + \delta_d + \delta_t + \gamma_i^D + \varepsilon_i \tag{9}$$

where the dependent variable is the number of months between joining the FI and the first assignment as OL or TM for banker i under director D with type j in directorate d in year t. D_i^j indicates director D's one of three aspects mentioned above. For instance, when we are interested in how the gender of a banker's first director affects relative waiting times for junior women, $j \in [M, F]$ with $\text{D}_i^M = 1$ for a male director and $\text{D}_i^F = 1$ for a female director. We include fixed effects for directorates (δ_d), years (δ_t), and directors (γ_i^D). We cluster standard errors at the director level.

The identifying assumption behind Equation (9) is that, conditional on our fixed effects and controls, the characteristic of a junior banker's first director is orthogonal to factors influencing that junior banker's waiting time to his/her first assignment. Table B.6 shows that new-joiner men and women are mostly similar in terms of their observable characteristics such as age, marital status, parenthood, and what division of the FI their first position is in regardless of their first director's gender. Nevertheless, we control for these characteristics of junior bankers measured at the time they join the FI in X_i.

To estimate how directors with a certain type j affect the relative waiting times for junior

women, Equation (9) assumes that new-joiners stay with their first director at least until they are given their first assignment as OL. As discussed earlier, this can take more than a year. If the director type changes in the meantime, then the estimated impact may be compromised. Therefore, we initially restrict our estimation to new-joiners who do not experience a director transition during our sample period. This leaves us with 241 new-joiners who get their first OL assignment from 41 directors; although it is a smaller sample, it should provide us with cleaner estimates for the impact of a first manager. We will also present below estimates when we replicate the analysis using the full set of new-joiners.

Effects on waiting times Table 5 establishes that new-joiner women's waiting time to their first OL assignment is significantly longer than new-joiner men's, and especially so when their first directors are of a certain type. In column (1), we first report an estimate that does not differentiate between director types: new-joiner women wait on average 3.05 months longer than new-joiner men (p-value=0.040). This relative difference is not driven by the sorting of junior bankers to certain directors as this specification does not include director fixed effects. When we include them in column (2), the relative difference in waiting time is 3.41 months (p-value=0.032).

Column (3) reveals that waiting times for new-joiner men and women differ significantly across male and female directors. Under the supervision of male directors, junior women wait 6.07 months longer for their first OL assignment when compared with their male counterparts (p-value=0.002), while under the supervision of female directors they actually wait 0.53 months less (p-value=0.788). Although the latter estimate is not statistically different from zero, we can reject the equality of the two estimates (p-value=0.020). This finding suggests that junior women who start their careers with a female director *and* remain under a female director's supervision do not miss out on OL assignments to junior men. However, junior women who start their careers with a male director are made to wait substantially longer for their first OL assignment.

Although we do not know the gender of the children of a director as in Washington (2008) or Ronchi and Smith (2021), we check whether their presence affects directors' gender preferences in assignment. Column (4) shows that junior women wait 4.59 months longer for their first OL assignment under a director who is a parent (p-value=0.059), as opposed to 2.16 months longer under a director who is not (p-value=0.308). However, there is plenty of variation in waiting times underlying these estimates. A test for the equality of the two coefficients cannot rule out that a junior woman's waiting time to their first OL assignment relative to junior men differ by whether or not their first director is a parent.

Finally, we test whether new-joiner women wait longer for their first assignment as OL

under less successful directors.[7] We follow Minni (2023) in defining successful managers based on their own promotion speed as a revealed preference measure of the FI. We try two alternative definitions of being a high-flying director by considering the earliest age a senior banker is promoted to director. We define a binary measure based on whether the individual is promoted at p25 or p33 of the distribution for earliest age at promotion amongst directors. However, we find no consistent picture in columns (5)-(6). Better managers do not seem to assign women quicker to their first OL assignment than worse managers, and we cannot rule out that the two coefficients are statistically different from each other.

Table 6 shows results when the outcome is a junior banker's waiting time to his/her first TM assignment. Columns (1) and (2) show that junior women wait on average 1.32 months longer than junior men do. Column (3) suggests that this relative difference is likely driven by junior women whose first director is a man; they wait 1.99 months longer than junior men for their first TM assignment (p-value=0.050), while the estimated additional waiting time of 0.35 months when the first director is a woman is statistically insignificant. However, we cannot rule out the equality of these two coefficients. We find no meaningful patterns when we compare across directors who are parents vs. who are not in column (4). There is some evidence in columns (5)-(6) that junior women wait around 1.5 months longer under low-flyer managers. However, as before, we cannot rule out that these estimated relative waiting times differ significantly when compared with high-flyer managers.

Discussion & robustness We check the robustness of our new-joiner results using the full set of new-joiners, which includes junior bankers who experience a director transition. This more than doubles our estimation sample. Table B.7 confirms that new-joiner women's waiting time to their first OL assignment is around four months longer than new-joiner men's on average (columns 1-2).

Column (3) shows that, when their first directors are men, junior women wait 5.12 months longer for a first OL assignment (p-value=0.002), while under the supervision of female directors this difference is 2.49 months but statistically insignificant (p-value=0.372). It is important to note again that this sample includes junior bankers who experienced a director transition. For instance, a junior female banker whose first director was a man may have switched to a female director, which may reduce the time to her first assignment (or conversely she may have transitioned from a female director to a male director, which may

[7] Minni (2023) finds that good managers match workers' specific skills to specialized jobs, thereby improving productivity. In our context, there is no reason why new-joiner women and men should differ in their skill sets' suitability to an OL role within a directorate, as all junior bankers are expected to take on this task. Hence, we would expect to find no difference between the waiting times for junior women and men under better managers.

increase her waiting time). If such transitions affect assignments as we discuss in detail in the next sub-section, then these estimates will be noisy. Indeed, this seems to be going on. A test for the equality of the two coefficients in this sample cannot rule out that junior women's relative waiting time differs by the gender of their first director.

In the remaining columns of Table B.7, we test whether relative waiting times are different across directors who are parents vs. not and directors who are high- vs. low-flyers. We cannot reject the equality of estimates under different director types. Similarly, we find no meaningful patterns in Table B.8, which shows estimates on the full set of new-joiners of the waiting time to a first TM assignment.

4.2 Director transitions

We follow the literature on managerial homophily, which has argued that women's leadership may be positive for junior women's career achievements. Specifically, we use the same methodology as in Cullen and Perez-Truglia (2023) and Minni (2023) to exploit quasi-random variation in the gender of a junior banker's director induced by director rotations. We study how the four possible transition types in directors' gender that may occur for a given banker affect the workload of junior bankers. This methodology helps us isolate to what extent female junior bankers, relative to their male colleagues, benefit from having a female manager early in their careers. Importantly, it helps us to account for a host of factors potentially correlated with junior bankers' unobserved ability and task assignment.[8]

Sample We focus on director transitions that a banker experiences while he/she is in job band 5. In the data, 239 bankers experience exactly one manager transition event, 125 bankers experience two events, and 83 bankers experience three or more events. For the event study analysis, we exclude the 83 bankers who experience three or more transitions.[9] As in Minni (2023), we only consider the first manager transition that a banker experiences in the data and track his/her outcomes regardless of future manager transitions while he/she is still in job band 5.

In the data, we have 364 unique events, affecting 364 unique junior bankers (176 female

[8]We focus on gender-based homophily, instead of parenthood or high-flier status, given that gender is often a pre-determined characteristic and we can rely on quasi-random variation in director-banker gender pairings. In contrast, junior bankers can possibly choose to become parents and time fertility decisions in response to their managers' attitudes, while their high-flier status is undefined.

[9]These bankers have typically joined the FI on a two-year entry-level graduate program, which rotates individuals across the FI's banking and non-banking teams for six months in each team, or they are in a few directorates that underwent several rounds of restructuring during the sample period.

and 188 male) and involving 85 unique directors.[10] Out of these events, 98 involve a male-to-female director transition, 167 involve a male-to-male director transition, 41 involve a female-to-female director transition, and 58 involve a female-to-male transition. As Figure B.1 shows, director transitions of all types occur more or less equally throughout the year and are independent of the FI's promotion cycle for junior bankers (shown in Figure B.2).

A director transition can occur as a result of either (i) director rotations, when an entire team transitions from one director to another; or (ii) worker transfers, when a banker moves from one team to another. The typical case – 251 out of 364, or 69% of all events – is when directors are reassigned across entire teams, so that all bankers in that team experience the same transition. Such director rotations occur due to events exogenous to junior bankers in that team, for instance when the existing director is promoted to a higher position or transferred to another directorate within the firm, or altogether leaves the firm for retirement or opportunities elsewhere. Worker transfers occur typically due to reorganizations of teams and occasionally if a banker changes office locations or if he/she requests a transfer within the same location.[11] We retain events that involve worker transfers as individual bankers are unlikely to initiate reorganizations or choose an office location specifically to improve their project assignment prospects. Nevertheless, we discuss how our results change when we restrict the sample to entire team transitions in our robustness checks below.

Table B.9 provides descriptive statistics for bankers by transition event type. Half of all junior bankers (50% = 364/726) experience a director transition. Columns (1)-(2) show that they are similar in terms of their characteristics and performance at the time of an event to bankers who do not experience an event.[12] For instance, bankers with events signed 2.43 projects on average at the time of a director transition compared with bankers without events who signed 2.24 projects, primarily as TM for both groups. Likewise, bankers with events were assigned 1.73 OL roles on average compares with bankers without events who were assigned 1.79 OL roles. Columns (3)-(4) compare between transitions away from a male manager, and columns (5)-(6) compare between transitions away from a female manager. Our identification strategy does not require pre-event characteristics to be similar (only that trajectories of outcomes are parallel). However, we note that bankers who experienced a

[10] Number of unique events is the same as the number of unique bankers experiencing a transition since we focus only on the first transition event.

[11] Testimonies from bankers suggest that reorganizations occur when teams naturally grow over time and are split up between two directors and re-named; usually, the original director remains and a new director is appointed to lead the new, second team. As a result, only a subset of the original team experiences a director transition event.

[12] Both groups of bankers have almost equal representation of men and women with an average age of 31, 2.8 years of service, and 26% of whom are parents. However, the sample of bankers with events is less likely to have gone on maternity leave or joined the FI in a sector directorate.

male-to-male director transition event have been longer with the FI at the event time. They therefore had slightly more signings than bankers who experienced other transition types, although their signing ratios both as OL and TM are comparable to others'.

Identification We estimate the following event study:

$$\begin{aligned}\text{Assignments}_{i,t} = &\sum_{j\in J}\sum_{s\in S}\beta^{W}_{s,j}\times \text{Woman}_i \times \text{D}^{j}_{i,t+s} + \sum_{j\in J}\sum_{s\in S}\beta^{M}_{s,j}\times (1-\text{Woman}_i)\times \text{D}^{j}_{i,t+s} \\ &+ \alpha_i + \gamma^{D}_{i,t} + \delta^{W}_{t} + \delta^{M}_{t} + \eta \text{X}_{i,t} + \epsilon_{i,t}\end{aligned} \tag{10}$$

where $s = [-8, ..., -3, -2, 0, 1, 2, ..., 8]$ denotes quarters around the director transition event and $j = [W2M, W2W, M2W, M2M]$ denotes director transition types. Note that our data are at the monthly level, but we report quarterly coefficients to simplify the exposition. The omitted time category, $s = -1$, corresponds to the three months immediately preceding a transition event, and $s = 0$ denotes the three months from the transition event onward. Therefore, the event study window spans from 24 months before the event to 27 months after the event (including the event month).[13]

We follow Cullen and Perez-Truglia (2023) and interact the transition type dummies ($\text{D}^{j}_{i,t+s}$) with indicators for female and male junior bankers separately. We include banker fixed effects (α_i) to control for permanent differences in banker ability and possible differences in their attributes at the time of entry to the organization. In addition, we have director fixed effects ($\gamma^{D}_{i,t}$), year-month fixed effects separately for men and women ($\delta^{W}_{t} + \delta^{M}_{t}$), and baseline controls ($\text{X}_{i,t}$).[14] We double cluster the standard errors at both director and banker levels.

There are two transition types that keep the gender of the director constant; they can be interpreted as control group transitions. We are interested in the effects of "gaining" a female director given by $\beta_{s,M2W} - \beta_{s,M2M}$ and "losing" a female director given by $\beta_{s,W2M} - \beta_{s,W2W}$. These "single-difference" isolate the impact of a change in director gender from a director change more generally on junior men and women separately. Hence, $\beta^{W}_{s,M2W} - \beta^{W}_{s,M2M}$ provides estimates for junior women who transition from a male manager to a female manager, relative to junior women who transition from a male manager to another male manager, for each time period s around the transition date; $\beta^{M}_{s,M2W} - \beta^{M}_{s,M2M}$ provides the corresponding estimates

[13] Following Cullen and Perez-Truglia (2023), we have absorbing dummies for the extreme categories of $s \leq -9$ and $s \geq +9$, which are not reported in the event study graphs.

[14] $\text{X}_{i,t}$ includes five bins each for age, length of service in the organization, tenure on the job band, and family status variables (marital status, parent dummy, and number of months spent on parental leave - paid and unpaid separately - if any).

for junior men. Similarly, $\beta^{W}_{s,W2M} - \beta^{W}_{s,W2W}$ provides estimates for junior women transitioning from a female manager to a male manager, relative to transitioning from a female manager to another female manager; $\beta^{M}_{s,W2M} - \beta^{M}_{s,W2W}$ provides the same estimates for junior men.

Ultimately, we want to understand whether changes in a director's gender have a differential impact on junior men and women. For instance, if gaining a female director changes the assignment hazards of both male and female bankers similarly, then transitioning from a male director to a female director would not enable junior women to lead more projects and gain visibility when compared with their junior male colleagues in the same directorate. We therefore calculate and report "double-differences", which take into account a first difference with respect to change in director gender and a second difference with respect to the junior banker's gender. Hence, the impact of gaining a female director for junior women relative to men is given by $(\beta^{W}_{s,M2W} - \beta^{W}_{s,M2M}) - (\beta^{M}_{s,M2W} - \beta^{M}_{s,M2M})$ for each time period s around the transition date; a positive estimate would imply that a transition to a female director favors junior women. Similarly, the relative impact of losing a female director for junior women is given by $(\beta^{W}_{s,W2M} - \beta^{W}_{s,W2W}) - (\beta^{M}_{s,W2M} - \beta^{M}_{s,W2W})$.

The outcome of interest is the cumulative number of assignments and their total amount by role. Recall that bankers' performance as project leaders – measured by signings and business volumes as OL, which increase junior bankers' visibility to senior management – are the main determinants of promotions, while their performance as OL and TM affect their future OL assignments. Director transitions can therefore impact junior bankers' careers by influencing both their visibility and existing workload.

The necessary condition for our identification strategy is that the evolution of assignments for junior women relative to junior men is orthogonal to the director transition type conditional on our fixed effects and bankers' observable characteristics. In other words, we require that project assignments follow a similar trajectory for junior men and women prior to an event of each type, thereby ensuring that there is no systematic sorting of bankers to directors based on possible pre-existing gender gaps in workload. The event-study specification in Equation (10) provides a natural framework to test this parallel trends assumption up to eight quarters before the date of a director transition.

Effects on assignments Figure 3 presents the effect of a change in a director's gender on OL assignments for junior bankers; single-difference estimates are shown in blue squares for male bankers and in red circles for junior female bankers. The figure shows that, in the eight quarters prior to the event date, estimates for both junior men and women are

statistically indistinguishable from zero.[15] This evidence supports our identifying assumption that director transition types and their timing may be as good as random.

Panel (a) plots the change in cumulative number of OL assignments when bankers move from a male director to a female director – i.e. gaining a female director – compared with a banker who transitions between directors who are both men. There are no discernible differences between junior men and women in their OL assignments up to five quarters after the event, while junior men see a further drop slightly eight quarters after the event. Panel (b) paints a different picture: OL assignments drop for junior women who transition from a female director to a male director – i.e. losing a female director – compared with junior women who move between directors who are both women. This reduction widens over time, reaching 3.03 assignments as OL at eight quarters after the director transition (p-value=0.004). In contrast, OL assignments for junior men evolve similarly and are hardly distinguishable from zero after the event.

Figure 4 presents the double-differences estimates, which make the relative effects between junior men and women experiencing the same events much clearer. For instance, panel (a) of Figure 4 shows the difference between the female and male banker coefficients in panel (a) of Figure 3; eight quarters after gaining a female director, a junior woman's OL assignments is higher by 0.67 relative to a junior man, although this estimate is not statistically significant (p-value=0.400). Panel (b) of Figure 4 shows that, eight quarters after losing a female director, a junior woman's OL assignments is lower by 2.91 relative to a junior man (p-value=0.005).

Note that the greater share of men in director positions affects the precision of our estimates for the transition types we consider. Because 70% of events (=314/447) involve a transition away from a male director and the remaining 30% involve a transition away from a female director, we have more variation in the data for the former types of transition ($j = [M2W, M2M]$) than the latter types of transition ($j = [W2M, W2W]$). This means that our point estimates for gaining a female director are in general more precise than those for losing a female director.

We therefore calculate and report "dual-double-differences" estimates in panel (c) of Figure 4, which maximize statistical power based on all four transition types (Cullen and Perez-Truglia, 2023). Specifically, these estimates are given by an equally-weighted combination of the double-differences estimates from gaining a female director and the (negative of) double-

[15] It is important to note that our event-study coefficients refer to differences across transition types. A zero coefficient before or after an event does not imply that bankers do not take on any new assignments. Instead, it means similar growth rates in assignments across bankers transitioning away from a male manager to a female manager versus bankers transitioning from another male manager to a new male manager (and likewise, for the two transitions away from a female manager).

differences estimates from losing a female director: $\frac{1}{2}\times$ $\{[(\beta^{W}_{s,M2W} - \beta^{W}_{s,M2M}) - (\beta^{M}_{s,M2W} - \beta^{M}_{s,M2M})] - [(\beta^{W}_{s,W2M} - \beta^{W}_{s,W2W}) - (\beta^{M}_{s,W2M} - \beta^{M}_{s,W2W})]\}$. Accordingly, the estimated advantage to junior women from having a female director rises gradually and reaches 1.80 OL assignments eight quarters after an event (p-value=0.004). This estimate is an economically large magnitude, considering that junior bankers are assigned a sample average of 2.15 projects as OL (an increase of 84% relative to the sample mean).

The dual-double-differences allow us to say more precisely when director transitions influence junior bankers' workload. As we discussed in Section 2, bankers work concurrently on multiple projects in multiple roles, with project screening taking several months and junior bankers taking on more TM than OL roles. Panel (c) of Figure 4 indicates that junior women start benefiting from having a female director – as measured by receiving new assignments to lead projects – six quarters after a transition, when they have 1.20 more OL assignments relative to their male colleagues (p-value=0.022).

Do junior women take on more work under a new female director or does the new female director re-allocate work across junior women and men? Figure 5 presents double-differences estimates when the outcome of interest is cumulative TM assignments.[16] Panel (a) shows that gaining a female director has an almost immediate impact of reducing junior women's workload as TM relative to junior men; one quarter after the event, the double-difference estimate is -0.93 (p-value=0.090). This effect grows gradually over the next seven quarters and it is statistically significant and persistent. Eight quarters after the event, junior women who gain a female director have started 2.18 projects fewer as TM when compared with their male colleagues (p-value=0.053). In terms of economic magnitude, this corresponds to a reduction of 31% relative to the sample mean of 6.99 TM assignments.

Panel (b) of Figure 5 likewise shows an immediate and large impact on TM assignments, this time of losing a female director. One quarter after the event, the double-difference estimate is +2.69 (p-value=0.025), meaning that junior women who transition from a female director to a male director are assigned TM roles on several new projects soon after the event relative to their male colleagues (when compared with junior bankers who transition from a female to another female director). However, this effect is short-lived; within six quarters following the loss of a female director, there is no difference in cumulative TM assignments between junior men and women.

It is not surprising that the effect on TM assignments is more immediate than for OL assignments especially for junior women. Junior bankers typically work on multiple projects

[16] We report single-difference estimates when the outcome is TM assignments in Figure B.3. The coefficients for male and female junior bankers track each other closely in the eight quarters before an event, suggesting that our assumption of parallel trends holds for this outcome as well.

as TM while they wait for their chance to lead a project. Recall from Table 1 that the monthly hazard for TM assignments is more than double that for OL assignments for junior women (0.2145 vs. 0.0881) and similarly higher for junior men (0.2025 vs. 0.1005). The dual-double-differences estimates in panel (c) of Figure 5 confirms the immediate reduction in junior women's TM assignments under a female director relative to junior men, but this reduction dissipates over time.

It is possible that directors differ in their styles to form project teams, elicit effort from junior bankers, and manage their workload. For instance, junior women may benefit from working with a female director if they are assigned more prestigious projects rather than the sheer number of projects as junior men are. After all, visibility is gained both by a banker's OL assignments and how big or complex these assignments are.

Figure 6 presents double-differences estimates of our event study when the outcome of interest is the cumulative volume of OL assignments (in logs), our measure of how prestigious an assignment is.[17] In panel (a), gaining a female director increases the total volume of assignments that junior women lead relative to their male colleagues soon after an event. At two quarters after a director transition, this volume is higher for junior women by 0.42 log points (or by 31% relative to the sample mean of 1.34) compared with junior men (p-value=0.037). However, this estimate is reduced in size and less precise in the quarters that follow, suggesting that junior men who gain a female director eventually catch up to their female colleagues in terms of the cumulative project volume that they lead.

In panel (b), losing a female director leads junior women to experience a gradually increasing gap to junior men in terms of the cumulative volume of projects they are assigned as OLs. At eight quarters after such an event, junior women are assigned a lower business volume by 1.77 log points (p-value=0.073). We consider the average impact of having a female director for junior women relative to junior men by using our dual-double-differences estimate in panel (c). Although this effect is almost zero in the eight quarters prior to an event, we see a large and persistent effect following a director transition. The estimate is +0.55 log points (41% relative to the sample mean, p-value=0.048) at one quarter after the event and rises to +0.95 log points (71%, p-value=0.101) at eight quarters after the event.

Discussion & robustness Our results suggest that female managers may affect junior women's careers by giving them more opportunities to be visible – as captured by more OL assignments or larger, more prestigious OL assignments – and a better workload balance by reducing their involvement in non-promotable tasks – as captured by fewer TM assignments.

[17] We report single-difference estimates in Figure B.4 of the appendix. As before, the coefficients for male and female junior bankers track each other closely in the eight quarters before an event, so that our parallel trends assumption is likely to hold.

Gaining a female director benefits junior women primarily by reducing their workload as TM and increasing, event if temporarily, their visibility by assigning them more prestigious projects. Losing a female director hurts junior women by taking away their opportunity to lead projects both in terms of number and volume of assignments, and by increasing their workload as TM temporarily.

The timing of task assignment and director transitions, and therefore even temporary differences between junior men and women in their workload and visibility, matters. As we discuss in Section 2, the FI's promotion cycle for bankers happens once a year in the first quarter and only a few bankers in each team, if any, can be promoted at one time. However, director transitions happen any month of the year, as they typically involve lateral rotations or external recruitment (see Figure B.1). Hence, signing projects as an OL ahead of their peers even by a few months can help bankers secure a promotion, which can only happen if they are given OL assignments ahead of their peers or they are quicker to signing projects conditional on assignment.

We check the robustness of our results to the timing and definition of director transition events. First, we replicate the analysis based on whether a junior banker experiences a director transition earlier or later during their careers. We define an early career transition as one that has occurred for a banker within three years of joining the FI. Bankers who have been with the FI and the same director for more than this amount of time are likely to have signed a project as OLs and demonstrated their ability to their manager; they may also be closer to a promotion as a result, meaning that they would leave the sample of junior bankers. In contrast, bankers who experience a director transition early in their careers are unlikely to have had this opportunity.

Figures B.5-B.7 show our double-differences and dual-double-differences estimates when we focus on this latter group of bankers. Our results remain broadly similar to our baseline. As earlier, coefficients for the quarters preceding an event are typically close to zero and precisely estimated, suggesting that director transitions are as good as random for junior men and women experiencing an early career transition. The dual-double-difference estimates suggest that the advantage to junior women from having a female director rises gradually and reaches 1.64 additional OL assignments eight quarters after an event (p-value=0.034). There is an immediate reduction in junior women's workload as TM relative to men, an effect that lasts up to six quarters after an event. But the impact on business volume assigned to junior women as OLs remains large and persistent at +1.15 log points higher at eight quarters after the event (p-value=0.087).

Second, we focus on events that involve entire team transitions and exclude those that occur due to reorganisations or worker transfers. Figures B.8-B.10 present the double-

differences and dual-double-differences estimates. These estimates are more muted and suffer from the reduction in the number of events that we can use for identification, which drops from 363 to 250. For instance, the dual-double-difference estimate for OL assignments is +1.17 eight quarters after an event but not statistically significant (p-value=0.153). We have more precision for the reduction in junior women's workload as TM relative to men, but the same is not true of OL assignment amounts.

Finally, we follow Cullen and Perez-Truglia (2023) and Minni (2023) in running a placebo test in which we focus on a director and banker characteristic that should be irrelevant to task allocation: whether a director and a banker share an odd or even employee ID number. Because this is an irrelevant attribute, an event in which a banker with an odd (or even) ID number gains or loses a director with an odd (or even) ID number should not impact the number or amount of assignments in a statistically significant way. This test serves a dual purpose. First, it helps to check for any mechanical reasons why our event study might generate spurious effects. Second, it provides a sanity check on the level of our standard errors; if the placebo tests returns statistically significant coefficients, our inference might be misleading.

The placebo exercise reproduces the analysis in Equation (10) on the exact same sample, except that director transition events are replaced everywhere by whether they have an even or odd ID, $j = [E2O, E2E, O2E, O2O]$, and the female banker indicator is replaced by the same. The single-difference, dual-difference, and dual-double-differences estimates are analogously defined. We present these estimates for our three outcomes of interest in Figures B.11-B.13, which are equivalent to Figures 4-6.[18] As expected, there is very little difference between different transition types for bankers as defined by their employee types either before or after an event. All the coefficients are close to zero, precisely estimated, and almost always statistically insignificant.

5 Survey Evidence

We carried out two separate surveys to capture bankers' perceptions about job assignment and career progression. First, we conducted a short pilot at a European commercial bank where Friebel and Stahl carried out *pro bono* work for the diversity council. Second, we conducted an online survey at the FI between July and August 2022 in cooperation with the staff association.[19] Detailed figures, tables, and the questionnaire are presented and

[18]Single-difference estimates (unreported) show expected results, with little difference at any horizon before or after an event between odd-number and even-number bankers.

[19]At the pilot firm, we only asked questions regarding the work environment. At the FI, we conducted the full survey.

discussed in Appendix C.

All staff at the FI were invited to participate in the survey by e-mail. We received responses from 1,049 staff, out of which 473 are from the banking part. The response rate was 42%. We confirm in Section 5.2 that we can replicate the assignment gap in OL assignments in the sample of survey respondents.

5.1 Opinions, beliefs and behavior

Besides demographic and job-specific information, we specifically asked about (a) experiences in the work environment, (b) aspirations, (c) perceptions about OL assignment, (d) self-evaluation, and (e) self-promotion with a battery of questions.[20] We summarize the main findings for each of these batteries in this section and present results from a simple regression of gender differences in Appendix C. To summarize our results, we do not find meaningful gender differences at our firm when it comes to "demand effects" that might be linked to gaps in promotion or visible task assignments.

a. Experiences in the work environment Table C.1 reveals that any notable differences between men and women relate to the following questions: "I was given subordinate tasks." and "I was portrayed in a stereotypical way.". Strikingly, women in banking, in contrast to women in non-banking, report being given subordinate or less interesting tasks than colleagues with comparable experience and ability more often then men. This effect is particularly strong for women in banking in job band 5 for whom we document the gender assignment and promotion gaps. There is, however, no evidence related to differential perceptions about bankers' visibility with their direct supervisor. This is not surprising in project work as direct supervisors, who are not necessarily directors, and bankers hold team meetings and discuss project strategy frequently. Nevertheless, having subordinate tasks or fewer OL assignments leads to less visibility with other senior managers of the organization during the project approval process. Importantly, women do not report that they have the sense of putting in too little effort, withholding their opinion out of fear of being snubbed, or being given preference over

[20] There is evidence from lawyers pointing to differences in workplace experience and aspirations at early career stages as possible reasons behind the gender promotion gap (Azmat and Ferrer, 2017; Azmat et al., 2020). Different access to social networks as in Cullen and Perez-Truglia (2023) may lead to different perceptions and understandings about how assignment processes work. Additionally, experimental evidence from school-aged youth suggests that gender differences may also exist in exhibiting leadership in a real effort task in public (Alan et al., 2020). Haegele (2022a) and Hospido et al. (2022) find gender gaps in leadership and applications to promotions for junior women. Lastly, experimental evidence shows a gender gap in self-evaluation and self-promotion in male-typed tasks related to math and science (Exley and Kessler, 2022). Further, Babcock et al. (2017) find that in academia, women volunteer to do non-promotable tasks more often then men do.

others. However, women report being portrayed in a stereotypical way more frequently than their men colleagues. In sum, it seems unlikely that women's experiences in the workplace cause the promotion and assignment gaps in our organization.

In the pilot survey in another bank, we found a similar picture about these questions, but in addition, women felt to have less visibility with direct supervisors, and more often held back expressing their opinion (Figure C.8). We do not find evidence for such perceptions at our FI (except for visibility for direct supervisors in non-banking).

b. Aspirations Employees' aspirations, as measured by the importance of different career attributes, are very similar among men and women in banking (Figure C.3). However, there seems to be a small tendency for women to care less about pay progression, and more for training and career development. In the regressions, we find no differences in terms of work-life balance and the evaluation of status in high positions. Taken together, there is no evidence of differential evaluations of career attributes, which one would expect if women's aspirations were lower.

c. Perceptions about OL assignments Bankers who have held at least one OL position were also asked to rank various attributes according to their importance in the assignment to OL positions. The analysis in Table C.3 shows no noteworthy differences between men's and women's perceptions about what is important to be assigned an OL role. One exception is that junior women may seem to attach less value to leadership skills than men. Nonetheless, we think that our effects are not driven by differences in the understanding of the market for OL positions.

d. Self-evaluation Figures C.5 and C.6 show how people self-evaluate their performance in an OL role (if they have already had an OL role) or in a TM role. Little stands out here (except that men may think they are better in communicating with clients). Tables C.4 and C.5 reveal that men and women show no statistically significant gaps in their self evaluations along all dimensions. This speaks against the idea that women in banking are less confident or unsure about their performance in projects, which may have led them to request OL positions less often than men do.

e. Self-promotion To check if women bankers are less "pushy" than their men colleagues in marketing themselves as OL towards their supervisors, Figure C.7 looks at whether women and men undertake different strategies to signal their interest in OL roles. We asked how actively and clearly bankers express interest in becoming an OL of an upcoming project in

the FI in two scenarios: (i) as a single question for a project that they believe to be qualified for; and (ii) immediately after the self-evaluation as OL or TM as described in (d). The regressions in Table C.6 show no differences. The panels relate to the situations in which we asked for the intensity of signaling on a scale from 0 to 100. In panels A and B, the sample is restricted to staff who were assigned at least one project as OL in banking. Panel C reveals that the above results also hold for bankers who have so far only done TM projects. Panels B and C show the results for being asked after the self-evaluation. This allows to make the situation even more realistic while being able to check for consistency. All the panels show no meaningful differences. Similarly, restricting the sample to bankers in job band 5 (columns 4-6) does not change this pattern.[21]

5.2 Assignment gap in the survey

We also asked people how often they had been assigned to OL roles. Table C.7 shows that the assignment gap replicates in the survey. Strikingly, the only two items that bear statistical significance in explaining variation in the assignment gap are the answers to the statements: "I was given subordinate or less interesting tasks compared to others of equal experience and ability" and "I held back expressing my opinion because I feared either not being listened to or receiving a dismissive response". These results are in line with the evidence form administrative data that directors' assignment behavior matters and make us confident that demand effects are not important for the assignment gap.

6 Gendered Careers

Promotion gaps are related to assignment gaps, which, in turn, seem to depend on junior bankers' exposure to directors of the same gender early in their careers. We have earlier analyzed the short-run effects of such managerial homophily on assignments, but it is important to know whether there are long-run, differential effects of managers on the careers of men and women. Since we are particularly interested in the impact of managerial homophily for junior women, we do this analysis first by tracking the long-term outcomes for new-joiners depending on their exposure to female directors early in their careers, and then by estimating how director transitions can shift their career prospects. In terms of outcomes, we are interested not only in bankers' career progression at the firm but also their attrition.

[21] This is in contrast to Haegele (2022a) who finds that women tend to apply less for leadership positions. This might however be for reasons of the corporate culture of that firm, in which talent hoarding is also an issue. Adams et al. (2021) find for Australian firms that workplace culture is heavily gendered. Anticipating this, women might prefer not to expose themselves in leadership positions.

6.1 Long-term effects of first directors

We provide descriptive evidence on how early-career exposure to a director of the same gender impacts a junior banker's subsequent career. We focus on new-joiners who joined the firm in job band 5 since we can accurately observe who their first director is.[22] Based on that information, we estimate:

$$\begin{aligned} \mathrm{y}_{i,t} = &\sum_{j\in J}\sum_{s\in S}\beta^{W}_{s,j} \times \mathrm{Woman}_i \times \mathrm{D}^{J}_{i} + \sum_{j\in J}\sum_{s\in S}\beta^{M}_{s,j} \times (1-\mathrm{Woman}_i) \times \mathrm{D}^{J}_{i} \\ &+ \alpha_i + \delta_d + \delta_t + \epsilon_{i,t} \end{aligned} \tag{11}$$

where $s = [1, 2, ..., 9]$ denotes *years* following from a new-joiner's entry into the firm, and $j = [M, W]$ denotes whether the new-joiner's first director is male or female, with D^J_i the respective dummies. The omitted category is $s = 0$ and refers to the quarter in which the junior banker joined the firm. We include banker, directorate, and time fixed effects $(\alpha_i + \delta_d + \delta_t)$. Our main dependent variable is banker i's job band, so that the coefficients $\beta^W_{s,j}$ and $\beta^M_{s,j}$ capture, respectively, female and male bankers' job band growth relative to their entry point based on if their first director, j, is a man or a woman.

We are primarily interested in understanding whether new-joiner women go on to have different careers based on the gender of their first director when compared with their male colleagues. We therefore calculate and compare the differences between the job band progression of new-joiner women and men under female directors, as given by $\beta^W_{s,W} - \beta^M_{s,W}$, and under male directors, as given by $\beta^W_{s,M} - \beta^M_{s,M}$. We cluster standard errors at both banker and director levels.

Figure 7 shows these differences. Panel (a) shows that there are no meaningful differences in the relative job band growth of junior men and women when their first director is female. This is consistent with the evidence in Section 4.1 that, when the first director is a woman, junior women do not wait longer than their male colleagues for their first OL assignment. In contrast, panel (b) shows that new-joiner women go on to have slower job band growth relative to new-joiner men when their first director is a man. Because new-joiners need to wait a few years before they take on assignments and get promoted, the estimated gap emerges gradually and becomes significant in the long term. The estimate is -0.12 at five years into individuals' careers (p-value=0.064) and grows further to -0.38 at nine years after joining the firm (p-value=0.006). This provides suggestive evidence that new-joiner women's longer waiting times for OL assignments under a first male director, which we documented in Section 4.1, can translate into large gaps in long-term careers.

[22] This is the same set of 554 new-joiners that we started our analysis with in Section 4.1.

Since we track new-joiners over a long time period, it is possible that junior women and men have differential attrition based on the gender of their first director.[23] This may in turn affect observed job band growth. We therefore re-estimate Equation (11) when the dependent variable is exit from the firm (indicator multiplied by 100 to facilitate reporting). In this sample of 554 new-joiners, we observe 184 exits in total with a mean monthly hazard of 0.65%. Panel (c) does not show any differential attrition between new-joiner women and men when their first director is a woman. However, panel (d) suggests that new-joiner women exit the firm at lower rates than new-joiner men when their first director is a man. For instance, the estimate at five years shows that female bankers exit the firm at 1.10 percentage points lower rate than male bankers (p-value=0.085), while the differential attrition is estimated to be -1.28 percentage points at seven years (p-value=0.062).

6.2 Long-term effects of director transitions

To identify the impact of director transitions on junior bankers' long-term career outcomes, we track female and male junior bankers over a decade following their first transition event.[24] We estimate the following event study:

$$\begin{aligned} \mathrm{y}_{i,t} = &\sum_{j\in J}\sum_{s\in S}\beta^{W}_{s,j} \times \mathrm{Woman}_i \times \mathrm{D}^{j}_{i,t+s} + \sum_{j\in J}\sum_{s\in S}\beta^{M}_{s,j} \times (1-\mathrm{Woman}_i) \times \mathrm{D}^{j}_{i,t+s} \\ &+ \alpha_i + \delta_t + \epsilon_{i,t} \end{aligned} \tag{12}$$

where $s = [1, 2, ..., 9]$ denotes *years* following from the director transition event and, as before, $j = [W2M, W2W, M2W, M2M]$ denotes director transition types. The outcome variable is either banker i's job band while they remain in the banking division or their exit from this sample. We track bankers from their current position in band 5 up to band 7 if they secure promotions. The omitted category is $s = 0$ and refers to the quarter immediately preceding a transition event.[25]

The estimation sample includes all monthly observations for each banker who experienced an event from one quarter before their event month until December 2018, when our sample

[23] In our setting, firm exits can be due to voluntary attrition (quits for bankers on a permanent contract) or involuntary attrition (when bankers' time-limited contracts, if they are on one, are not renewed). However, bankers may also choose to run down their time-limited contracts to pursue opportunities outside the FI, meaning that the latter group will contain some voluntary attrition. What we capture, therefore, primarily reflects bankers' "quits" rather than "fires".

[24] As earlier, we exclude bankers who have experienced three or more director transitions.

[25] Note that we cannot estimate pre-transition coefficients in this event study because: (i) when the outcome is job band, we do not have any variation before a transition as we focus on junior bankers already in job band 5; and (ii) when the outcome is exit, junior bankers do not experience director transitions after they leave the firm, by definition.

ends, or their exit from the firm (whichever is earlier), while they are in the banking division.[26] Given our sample begins in April 2007, we can track individual careers for around a decade at most. However, there are few bankers who experience an event early in the sample *and* stay with the FI throughout. We therefore group observations for bankers we can track for more than a decade together with $s = 9$ observations. We include banker and time fixed effects $(\alpha_i + \delta_t)$ and cluster standard errors at both banker and director levels.

Figure 8 presents double-differences estimates of long-term career outcomes for junior bankers experiencing director transition events.[27] Panel (a) shows that there is at first very little difference in the average job band between junior women and men who gain a female director. However, at five years following such a transition, the relative gain for junior women is 0.38 job bands (p-value=0.053), which rises to 0.62 job bands at eight years post-event (p-value=0.023). In panel (b), we do not find a significant difference in the job bands between junior men and women who have lost a female director across most horizons. Junior women seem to fall behind their male colleagues only around nine years after the event by -0.91 job bands (p-value=0.089).

Note that the sample of bankers we can track following a director transition event is naturally shrinking over time, leading to less precise estimates for longer horizons. Panel (c) presents dual-double-differences estimates that maximize our statistical power. The impact of managerial homophily on the long-term careers of junior women starts to appear at around four to five years following a managerial change. At eight years after an event, the estimated relative gain is 0.51 job bands (p-value=0.108) and rises to 0.62 job bands at the longest horizon (p-value=0.047). Recall that junior bankers can be promoted twice at most during our sample period. These estimates imply that junior women secure around half a promotion more than junior men over a decade and are therefore economically large and meaningful effects.[28]

Junior women may go on to have better careers under the supervision of female directors because they put in greater effort, perform better, or they are simply less likely to leave the FI. As we have shown previously in Section 3, junior women and men perform similarly when they are assigned projects; they take a similar amount of time to get projects signed,

[26] Note that some bankers may go on rotation or move permanently to other parts of the FI. They leave the estimation sample as a result.

[27] As before, our estimates capture differences across transition types and time. Hence, a zero coefficient does not imply that bankers remain in their current job band. Rather, it implies that female and male bankers experiencing the same event have seen similar number of promotions in the years after the event. The single-difference estimates are reported in Figure B.14.

[28] In the sample, 153 out of 364 (=42% of) junior bankers experiencing an event have gone on to secure at least one promotion, moving up to job band 6, while only 46 (or 13% of them) have secured two promotions, moving up to job band 7.

and their signed projects have similar financial outcomes. Therefore, differential effort and performance are unlikely to explain the impact of managerial homophily on long-term careers. This leaves attrition as a potential mechanism.

Figure 9 shows estimates of Equation (12) when the dependent variable is exit from the firm (indicator multiplied by 100 to facilitate reporting).[29] Since bankers leave the sample when they exit the FI, these estimates reflect differential attrition in each year following a director transition event.[30] Panel (a) shows that, over the course of a year after gaining a female director, junior women exit at a higher rate of 1.71 percentage points than junior men do (p-value=0.008). The differential higher attrition for junior women remains in the following years as well, although it is not precisely estimated, except in year six when the coefficient is 3.36 percentage points (p-value=0.004).

This result raises an intriguing nuance to our earlier findings. We have previously shown that junior women are assigned more promotable tasks under female directors, which help them to secure more promotions at the firm. However, this greater visibility may also increase their outside options and hamper worker retention. As a result, female directors may anticipate that junior women might leave the FI unless they get prominent roles, which may lead them to assign more OL roles in the first place to prevent attrition.

However, our result on differential attrition is asymmetric. Panel (b) shows no difference between the exit rates of junior women and men who lose a female director in the years that follow. When we consider both types of director transitions in panel (c), we find that junior women have higher exit rates than junior men following a transition, but these estimates are imprecise. For instance, the dual-double-differences estimate four years after an event is 2.02 percentage points with a p-value of 0.13.

7 Conclusion

Knowledge work is team work. We have here looked at investment projects as a good example of such teamwork. Members in the team may work more or less hard for project success and may be talented to a different extent, but teamwork blurs individual performance evaluation. Different roles in a team give different visibility though. Because a team leader is more important for the outcome of a project than ordinary team members, rational inference leads to attributing more of the outcome to the person who plays that role. Team leaders are, furthermore, the ones who present projects to the committees who decide about the future

[29] The single-difference estimates are reported in Figure B.15.

[30] In this sub-sample, mean attrition is 0.58% per month and we observe just under a third (=112/364) of junior bankers who experienced a director transition exit the firm.

of a project; here, whether it can get signed or not. It is likely that this type of visibility is an important input into a person's career. Indeed, it is – not only do team leaders of successful projects get more credit (in terms of promotions) than ordinary team members, even team leaders of unsuccessful projects tend to make better careers than normal team members with successful projects.

We find that women at early career stages need much longer to be promoted, but this effect is almost entirely driven by different performance records, and the fact that women get fewer assignments to team leadership the men. Causal analysis sheds light on the role of supervisors' gender. Women wait longer to get the first team leader assignment if their first supervisor is a man. Female managers affect junior women's careers by giving them more opportunities to be visible. They also provide a better workload balance by reducing women junior bankers' involvement in non-promotable tasks. Gaining a female director benefits junior women primarily by reducing their workload as TM and increasing, even if temporarily, their visibility by assigning them more prestigious projects. Losing a female director hurts junior women by taking away their opportunity to lead projects both in terms of number and volume of assignments, and by increasing their workload as TM temporarily.

The firm we have worked with does much to assure equal opportunity and enjoys an excellent reputation. Our analysis, though, highlights that in the depth of organizations, many forces are at work that result in a less-than-level playing field. Descriptive statistics seem to show that in subsequent career steps, women make much better careers. However, causal analysis shows path dependency with women who experienced a change from a woman supervisor to a man reaching less steep careers.

What we find about the assignment practice of male directors could be called homophily, but it is hard to tell whether this is owing to taste, implicit bias, or rational behavior. In particular, directors may give men better assignments because they must anticipate that dissatisfied men are more likely to leave. What we can exclude by our deep surveys is that women are not willing to play the role of team leader. We also find it noteworthy that the disadvantageous treatment occurs well before motherhood.

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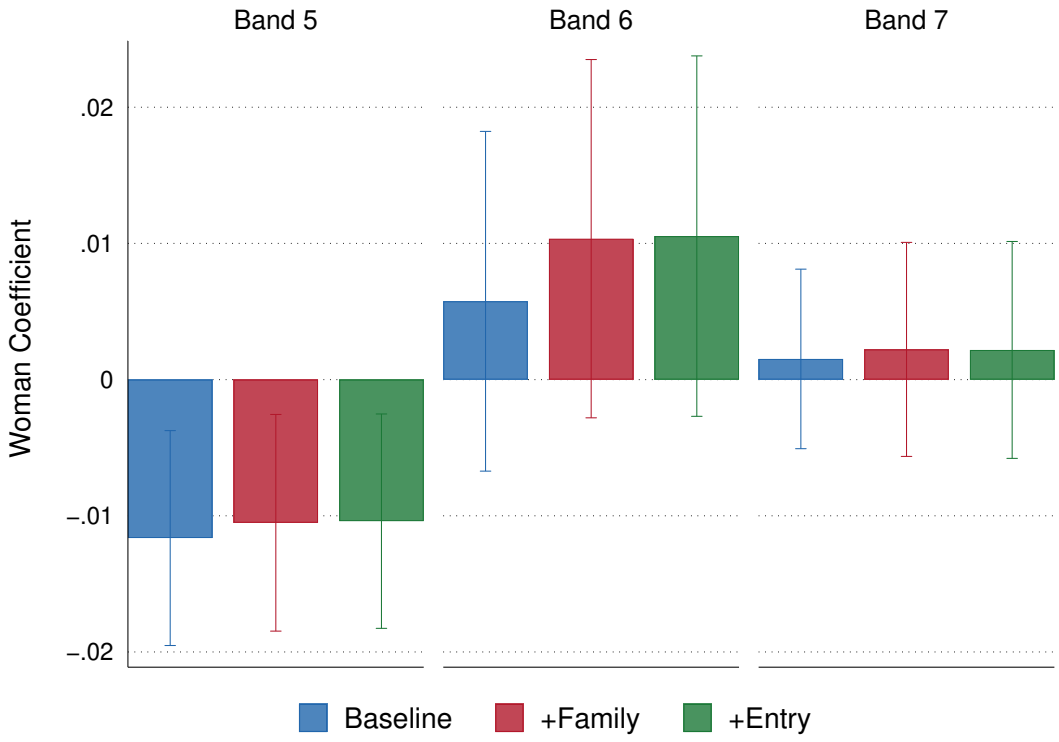
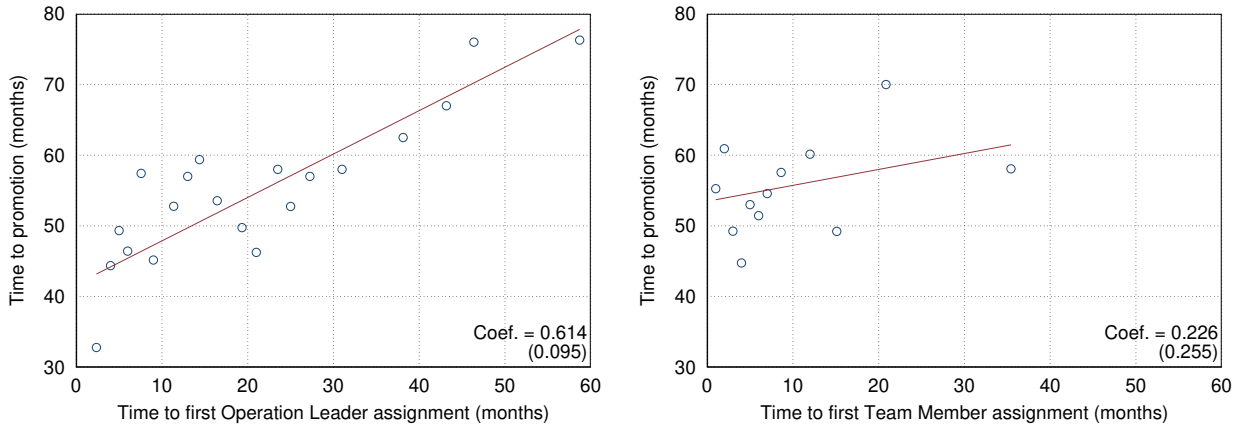
Figure 1: Promotion Gaps by Job Band



Notes: Figure shows regression coefficients and 95% confidence intervals from Equation (6) by job band. The left, middle, and right panels show estimated gender gaps in promotion for job bands 5, 6, and 7, respectively. The full set of estimates can be seen in columns (1)-(3), (5)-(7), and (9)-(11) of Table B.2. The within sample promotion hazards are 0.0318, 0.0383, and 0.0086, for job bands 5, 6, and 7, respectively.

Figure 2: Time to First Assignments and Time to Promotion

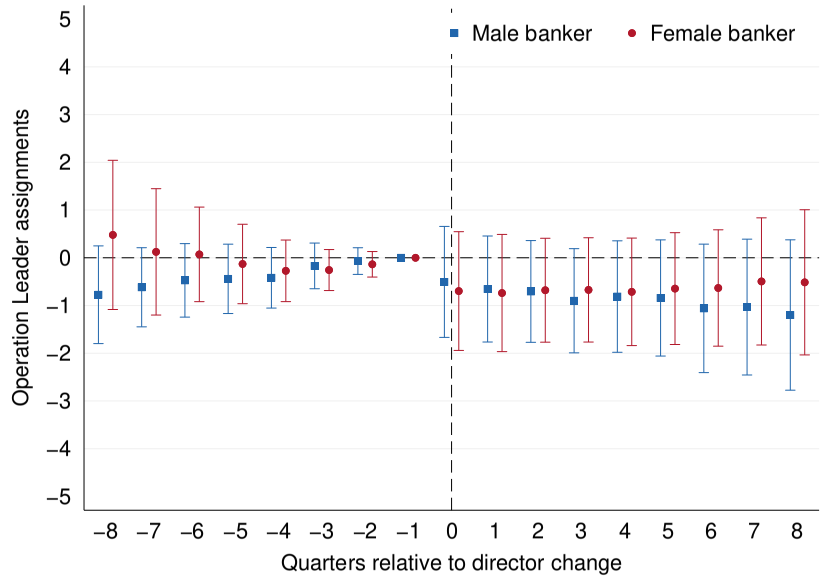


(a) Time to First Assignment for Operation Leadership

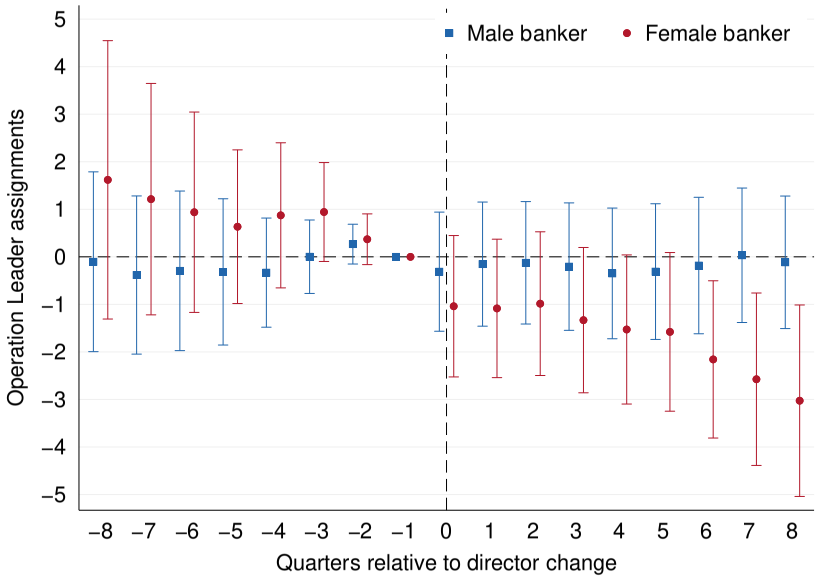
(b) Time to First Assignment for Team Membership

Notes: Figure shows binned scatter plots of a banker's time to promotion from job band 5 to job band 6 against her/his time to first assignment as Operation Leader in panel (a) and Team Member in panel (b), both measured in months. The sample includes all new-joiners in job band 5 for whom we observe a promotion. The lower right corner of each panel shows the coefficient and a robust standard error in parentheses for a banker-level regression of time to promotion on time to assignment ($N = 154$).

Figure 3: Director Transitions and Operation Leader Assignments: Single-Difference Estimates



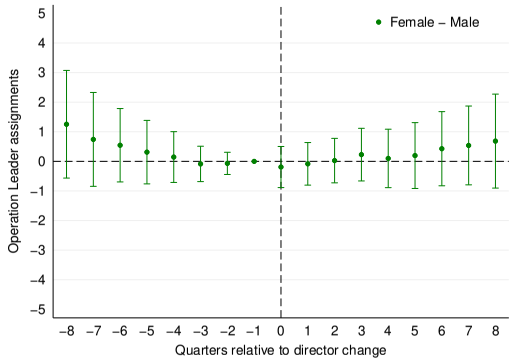
(a) Male-to-Female Director *minus* Male-to-Male Director ("Gaining a woman Director")



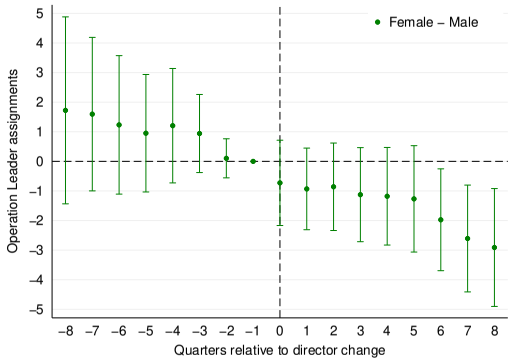
(b) Female-to-Male Director *minus* Female-to-Female Director ("Losing a woman Director")

Notes: Figure shows single-difference estimates from the event study specification in Equation (10). Panel (a) shows estimates of gaining a woman director ($\beta^g_{s,M2W} - \beta^g_{s,M2M}$), while panel (b) shows estimates of losing a woman director ($\beta^g_{s,W2M} - \beta^g_{s,W2W}$) for female ($g = W$) and male ($g = M$) bankers separately around the transition event. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. 176 female bankers and 188 male bankers experience events. The dependent variable is cumulative assignments as Operation Leader; its sample mean is 2.15 and standard deviation is 3.37. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

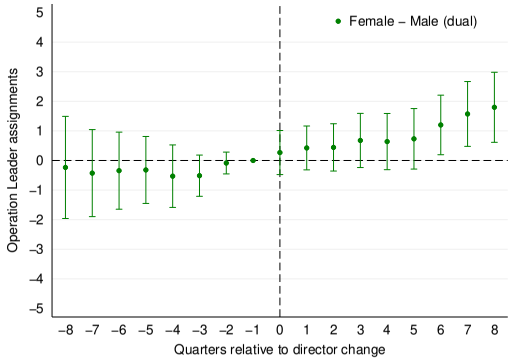
Figure 4: Director Transitions and Operation Leader Assignments: Double-Differences Estimates



(a) Male-to-Female Director *minus* Male-to-Male Director ("Gaining a woman Director")



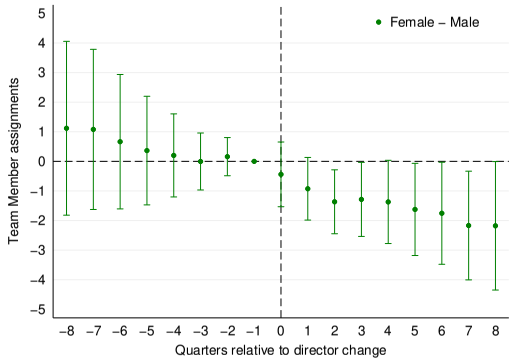
(b) Female-to-Male Director *minus* Female-to-Female Director ("Losing a woman Director")



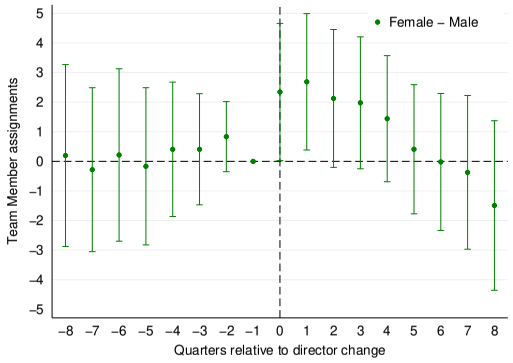
(c) Dual-double Differences: (a) *minus* (b)

Notes: Figure shows double-difference estimates from the event study specification in Equation (10). Panel (a) shows difference in estimates of gaining a woman director $[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})]$, while panel (b) shows estimates of losing a woman director $[(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]$, for female bankers relative to male bankers around the transition event. Panel (c) shows the average between the coefficients from panel (a) and the (negative value of) coefficients from panel (b), given by $\frac{1}{2}\times \{[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})] - [(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]\}$. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. 176 female bankers and 188 male bankers experience events. The dependent variable is cumulative assignments as Operation Leader; its sample mean is 2.15 and standard deviation is 3.37. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

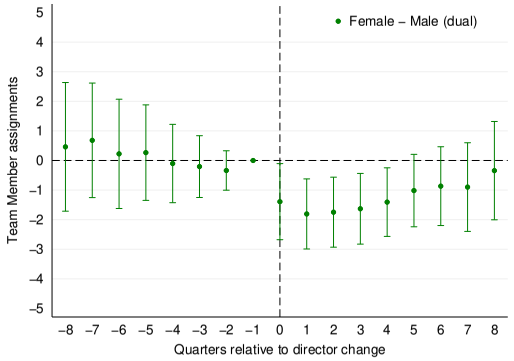
Figure 5: Director Transitions and Team Member Assignments: Double-Differences Estimates



(a) Male-to-Female Director *minus* Male-to-Male Director ("Gaining a woman Director")



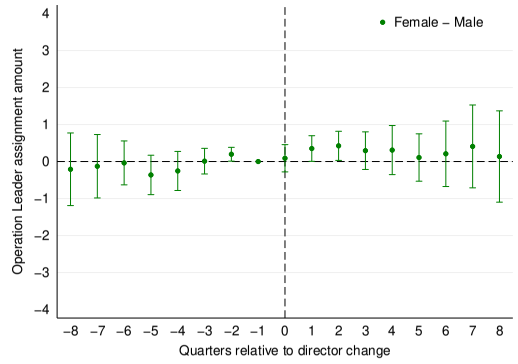
(b) Female-to-Male Director *minus* Female-to-Female Director ("Losing a woman Director")



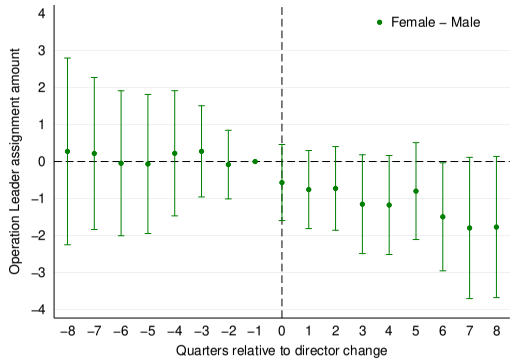
(c) Dual-double Differences: (a) *minus* (b)

Notes: Figure shows double-difference estimates from the event study specification in Equation (10). Panel (a) shows difference in estimates of gaining a woman director $[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})]$, while panel (b) shows estimates of losing a woman director $[(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]$, for female bankers relative to male bankers around the transition event. Panel (c) shows the average between the coefficients from panel (a) and the (negative value of) coefficients from panel (b), given by $\frac{1}{2}\times \{[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})] - [(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]\}$. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. 176 female bankers and 188 male bankers experience events. The dependent variable is cumulative assignments as Team Member; its sample mean is 6.99 and standard deviation is 7.06. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

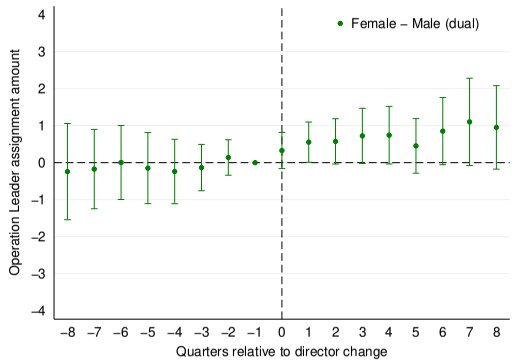
Figure 6: Director Transitions and Operation Leader Assignment Amounts: Double-Differences Estimates



(a) Male-to-Female Director *minus* Male-to-Male Director ("Gaining a woman Director")



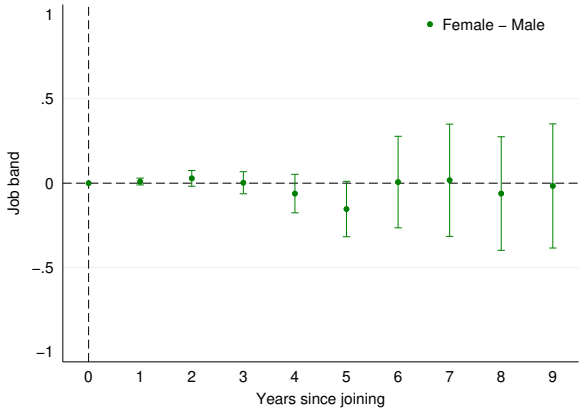
(b) Female-to-Male Director *minus* Female-to-Female Director ("Losing a woman Director")



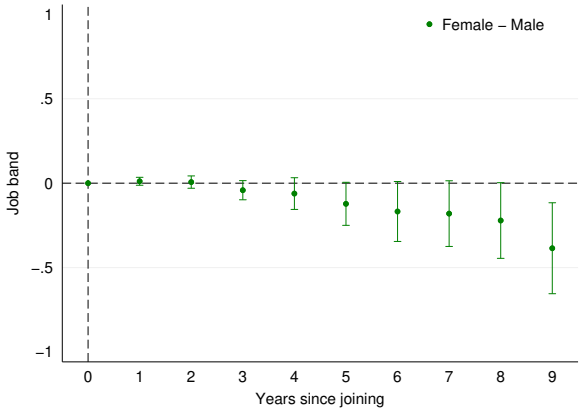
(c) Dual-double-differences: (a) *minus* (b)

Notes: Figure shows double-difference estimates from the event study specification in Equation (10). Panel (a) shows difference in estimates of gaining a woman director $[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})]$, while panel (b) shows estimates of losing a woman director $[(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]$, for female bankers relative to male bankers around the transition event. Panel (c) shows the average between the coefficients from panel (a) and the (negative value of) coefficients from panel (b), given by $\frac{1}{2}\times \{[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})] - [(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]\}$. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. 176 female bankers and 188 male bankers experience events. The dependent variable is (log) cumulative volume of assignments (in million EUR) as Operation Leader; its sample mean is 1.34 and standard deviation is 1.76. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

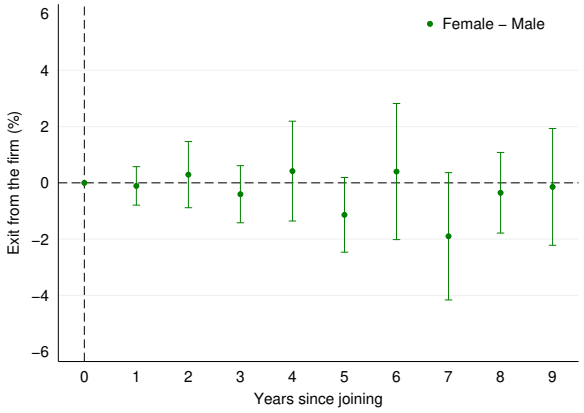
Figure 7: Gender of First Director and Long-Term Careers



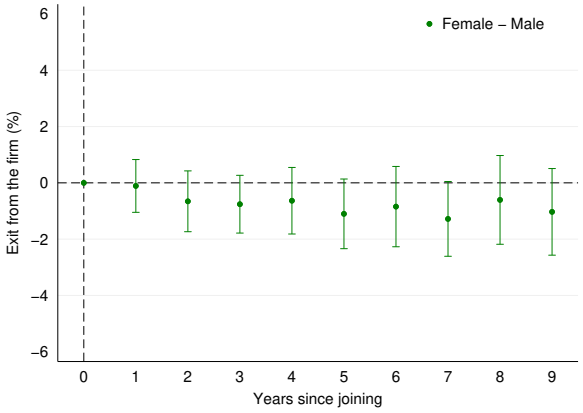
(a) Relative Job Band Change with First Female Director



(b) Relative Job Band Change with First Male Director



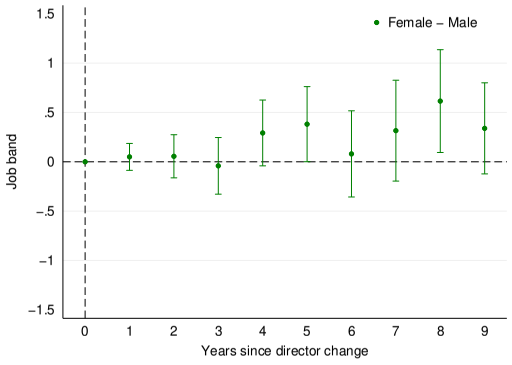
(c) Relative Attrition with First Female Director



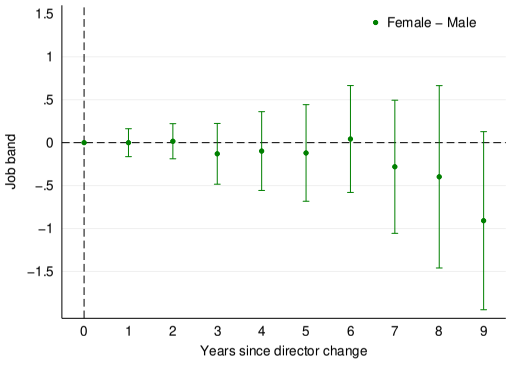
(d) Relative Attrition with First Male Director

Notes: Figure shows estimates from the event study specification in Equation (11). Panels (a) and (c) show the difference between junior female and male bankers whose first director was female in each year after they join the firm: $\beta^W_{s,W} - \beta^M_{s,W}$. Panels (b) and (d) show the same difference for bankers whose first director was male: $\beta^W_{s,M} - \beta^M_{s,M}$. All coefficients are estimated from a single regression including 28,000+ observations of 233 female and 319 male bankers, and 80 directors. The dependent variable in panels (a) and (b) is job band; its sample mean is 5.27 and standard deviation is 0.51. The dependent variable in panels (c) and (d) is attrition (indicator multiplied by 100); its sample mean is 0.65 and standard deviation is 8.06. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

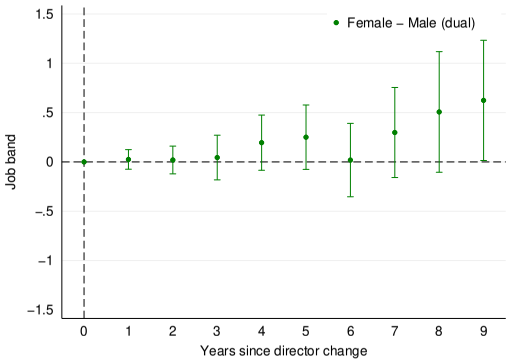
Figure 8: Director Transitions and Long-Term Careers



(a) Male-to-Female Director *minus* Male-to-Male Director ("Gaining a woman Director")



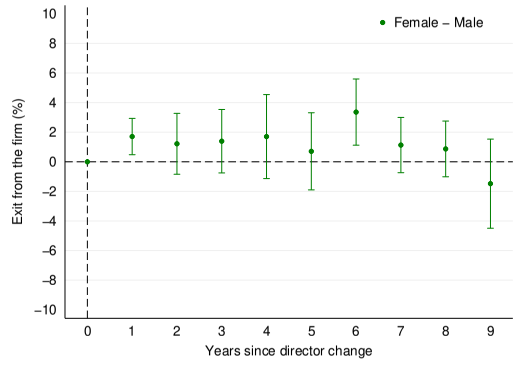
(b) Female-to-Male Director *minus* Female-to-Female Director ("Losing a woman Director")



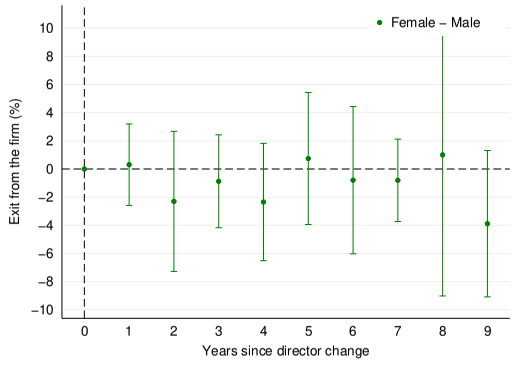
(c) Dual-double-differences: (a) *minus* (b)

Notes: Figure shows double-difference estimates from the event study specification in Equation (12). Panel (a) shows difference in estimates of gaining a woman director $[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})]$, while panel (b) shows estimates of losing a woman director $[(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]$, for female bankers relative to male bankers following the transition event. Panel (c) shows the average between the coefficients from panel (a) and the (negative value of) coefficients from panel (b), given by $\frac{1}{2}\times \{[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})] - [(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]\}$. All coefficients are estimated from a single regression including 19,000+ monthly observations of 176 female and 188 male bankers, and 85 directors. All bankers experience events. The dependent variable is job band; its sample mean is 5.47 and standard deviation is 0.65. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

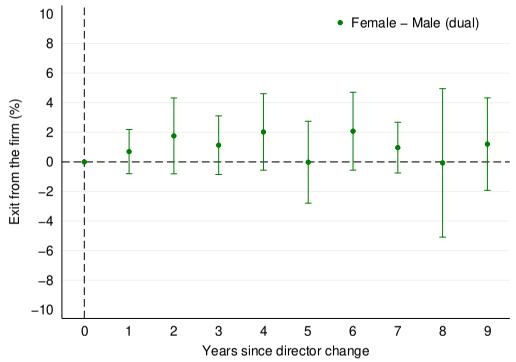
Figure 9: Director Transitions and Attrition



(a) Male-to-Female Director *minus* Male-to-Male Director ("Gaining a woman Director")



(b) Female-to-Male Director *minus* Female-to-Female Director ("Losing a woman Director")



(c) Dual-double-differences: (a) *minus* (b)

Notes: Figure shows double-difference estimates from the event study specification in Equation (12). Panel (a) shows difference in estimates of gaining a woman director $[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})]$, while panel (b) shows estimates of losing a woman director $[(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]$, for female bankers relative to male bankers following the transition event. Panel (c) shows the average between the coefficients from panel (a) and the (negative value of) coefficients from panel (b), given by $\frac{1}{2}\times \{[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})] - [(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]\}$. All coefficients are estimated from a single regression including 19,000+ monthly observations of 176 female and 188 male bankers, and 85 directors. All bankers experience events. The dependent variable is attrition (indicator multiplied by 100); its sample mean is 0.58 and standard deviation is 7.57. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

Table 1: Summary Statistics by Job Band and Gender

	Job band 5		Job band 6		Job band 7		Job band 8	
	Men	Women	Men	Women	Men	Women	Men	Women
A. HR characteristics								
Age	31.28	32.68	37.05	37.45	45.39	43.71	50.22	48.83
Length of service	2.98	4.76	6.03	8.17	10.30	12.89	13.12	14.55
Tenure in job band	34.15	39.12	33.61	33.82	59.42	55.64	60.95	49.68
Married	0.44	0.42	0.67	0.61	0.86	0.65	0.87	0.59
Child	0.30	0.30	0.59	0.56	0.75	0.66	0.76	0.56
Paid leave	0.00	0.85	0.00	1.38	0.01	1.03	0.00	0.02
Unpaid leave	0.00	0.49	0.01	1.08	0.01	0.53	0.00	0.00
Entry: job band 4	0.17	0.31	0.06	0.13	0.01	0.03	0.02	0.01
Entry: sector	0.38	0.40	0.43	0.40	0.32	0.23	0.19	0.19
Entry: banking	0.92	0.91	0.84	0.76	0.58	0.50	0.29	0.39
B. Promotion hazards								
Within sample	0.0359	0.0280	0.0351	0.0429	0.0079	0.0099	0.0307	0.0423
Monthly hazard	0.0096	0.0078	0.0085	0.0107	0.0020	0.0024	0.0027	0.0036
C. Performance								
Signings	2.83	3.41	7.16	10.47	12.30	17.73	-	-
Avg. amount	1.62	1.73	2.41	2.65	2.42	2.85	-	-
Signings as Operation Leader	0.68	0.58	3.10	3.89	6.08	8.19	-	-
Signings as Team Member	2.15	2.83	4.06	6.57	6.22	9.54	-	-
Avg. amount as Operation Leader	0.52	0.58	1.82	2.13	2.07	2.67	-	-
Avg. amount as Team Member	1.58	1.71	2.21	2.57	2.23	2.72	-	-
Assignments as Operation Leader	2.43	2.25	9.69	10.75	14.91	19.60	-	-
Assignments as Team Member	7.50	10.00	12.48	18.33	17.26	23.08	-	-
Assignments as Operation Leader avg. amount	0.90	0.83	2.31	2.35	2.35	2.93	-	-
Assignments as Team Member avg. amount	2.40	2.38	2.83	2.80	2.68	2.81	-	-
Signing ratio as Operation Leader	0.13	0.11	0.25	0.30	0.29	0.39	-	-
Signing ratio as Team Member	0.22	0.21	0.27	0.31	0.30	0.40	-	-
D. Assignment hazards								
Monthly hazard, Operation Leader	0.1005	0.0881	0.1582	0.1620	0.1014	0.1218	-	-
Monthly hazard, Team Member	0.2025	0.2145	0.1405	0.1419	0.1424	0.1761	-	-
E. Sample coverage								
Monthly observations	16,914	15,298	10,469	7,841	10,520	7,882	2,989	1,644
# Bankers	427	387	279	211	198	136	60	32
# Promoted	153	124	89	84	20	19	8	6

Notes: Table reports summary statistics for the banker-year-month panel by job band and gender. The sample consists of all bankers staffed on at least one project during their career. Panel A reports means for bankers' HR characteristics; panel B reports promotion hazards; panel C reports means for bankers' performance; panel D reports project assignment hazards; and panel E reports the number of observations and distinct number of bankers observed. Age and length of service are measured in years; tenure in job band, paid leave, and unpaid leave are measured in months. Other variables in Panel A are binary. In Panel B, within sample refers to the probability to be promoted conditional on at least one employee from the same job band being promoted in that month; monthly hazard refers to the unconditional probability to be promoted in any given month. In Panel C, signings are cumulative number of signed projects, and avg. amounts are cumulative sums of signed project size (in logs of EUR millions). Assignment variables are similarly defined. Signing ratio is defined as signings divided by assignments. In Panel D, monthly hazard refers to the unconditional probability that a banker is assigned a new project.

Table 2: Promotion Rule for Junior Bankers

	(1)	(2)	(3)	(4)
Signings	0.0026**			
	(0.0011)			
Avg. amount	0.0045***			
	(0.0016)			
Signings as Operation Leader		0.0113***		
		(0.0032)		
Signings as Team Member		-0.0000		
		(0.0005)		
Avg. amount as Operation Leader		0.0205***		
		(0.0040)		
Avg. amount as Team Member		0.0034**		
		(0.0016)		
Assignments as Operation Leader			0.0079***	0.0077***
			(0.0015)	(0.0015)
Assignments as Team Member			-0.0004	-0.0004
			(0.0003)	(0.0003)
Assignments as Operation Leader avg. amount			0.0119***	0.0110***
			(0.0025)	(0.0025)
Assignments as Team Member avg. amount			0.0036***	0.0036***
			(0.0014)	(0.0014)
Signing ratio as Operation Leader				0.0232**
				(0.0112)
Signing ratio as Team Member				0.0044
				(0.0076)
Controls	Yes	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes	Yes
R-squared	0.068	0.087	0.089	0.089
Observations	8,784	8,784	8,784	8,784
Number of bankers	803	803	803	803

Notes: Table presents results of Equation (5) on a sample that includes all bankers in job band 5 who have not yet been promoted in their current job band as of year-month t, in which at least one banker at the relevant job band is promoted. The dependent variable indicates whether a banker is promoted next month; its sample mean is 0.0318. Controls include Married, Child, Paid leave, Unpaid leave, Entry: $<$ job band 5, Entry: sector, and Entry: banking. Fixed effects include directorates, years, and five bins each for worker age, tenure in job band, and length of service. Standard errors are clustered at the banker level and shown in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 3: Gender Promotion Gap for Junior Bankers

	(1)	(2)	(3)	(4)
Woman	-0.0104***	-0.0103**	-0.0072*	-0.0045
	(0.0040)	(0.0040)	(0.0040)	(0.0035)
Signings		0.0026**		
		(0.0011)		
Avg. amount		0.0046***		
		(0.0016)		
Signings as Operation Leader			0.0111***	0.0066
			(0.0032)	(0.0044)
Signings as Team Member			0.0000	-0.0000
			(0.0005)	(0.0005)
Avg. amount as Operation Leader			0.0206***	0.0290***
			(0.0040)	(0.0066)
Avg. amount as Team Member			0.0034**	0.0035**
			(0.0016)	(0.0016)
Woman × Signings as Operation Leader				0.0100
				(0.0067)
Woman × Avg. amount as Operation Leader				-0.0162**
				(0.0082)
Controls	Yes	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes	Yes
R-squared	0.064	0.068	0.087	0.089
Observations	8,784	8,784	8,784	8,784
Number of bankers	803	803	803	803

Notes: Table presents results of Equation (6) on a sample that includes all bankers in job band 5 who have not yet been promoted in their current job band as of year-month t, in which at least one banker at the relevant job band is promoted. The dependent variable indicates whether a banker is promoted next month; its sample mean is 0.0318. Controls include Married, Child, Paid leave, Unpaid leave, Entry: $<$ job band 5, Entry: sector, and Entry: banking. Fixed effects include directorates, years, and five bins each for worker age, tenure in job band, and length of service. Standard errors are clustered at the banker level and shown in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4: The Operation Leader Assignment Gap for Junior Bankers

	(1)	(2)	(3)
Woman	-0.0114**	-0.0092**	-0.0085*
	(0.0051)	(0.0045)	(0.0047)
Signings as Operation Leader		0.0119***	0.0095***
		(0.0026)	(0.0033)
Signings as Team Member		0.0034***	0.0033***
		(0.0006)	(0.0006)
Avg. amount as Operation Leader		0.0128***	0.0163***
		(0.0030)	(0.0042)
Avg. amount as Team Member		0.0018	0.0018
		(0.0017)	(0.0017)
Woman × Signings as Operation Leader			0.0052
			(0.0052)
Woman × Avg. amount as Operation Leader			-0.0069
			(0.0059)
Controls	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes
R-squared	0.127	0.134	0.134
Observations	32,103	32,103	32,103
Number of bankers	814	814	814

Notes: Table presents results of Equation (8) on a sample that includes the full banker-year-month level panel of job band 5 bankers. The dependent variable indicates whether a banker is assigned at least one new project as an Operation Leader next month; its sample mean is 0.0944. Controls include Married, Child, Paid leave, Unpaid leave, Entry: < job band 5, Entry: sector, and Entry: banking. Fixed effects include directorates, years, and five bins each for worker age, tenure in job band, and length of service. Standard errors are clustered at the banker level and shown in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 5: Time to First Operation Leader Assignment and Initial Director Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)
Woman	3.0472**	3.4090**				
	(1.4376)	(1.5301)				
Woman × Director is female			-0.5316			
			(1.9675)			
Woman × Director is male			6.0671***			
			(1.8314)			
Woman × Director is a parent				4.5894*		
				(2.3612)		
Woman × Director is not a parent				2.1605		
				(2.0942)		
Woman × Director is high flyer (p25)					4.0397	
					(2.8029)	
Woman × Director is low flyer (p25)					3.2654*	
					(1.7082)	
Woman × Director is high flyer (p33)						3.7839
						(2.3333)
Woman × Director is low flyer (p33)						3.3005*
						(1.7714)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Director effects		Yes	Yes	Yes	Yes	Yes
R-squared	0.339	0.390	0.404	0.392	0.390	0.390
Observations	241	240	240	240	240	240
Equality of coefficients (p-value)			0.02	0.46	0.81	0.86

Notes: Table presents results of Equation (9). The dependent variable is the number of months between a banker's date of joining the organization and receiving his/her first assignment as Operation Leader. The sample includes the cross-section of bankers who joined the organization in job band 5, received an assignment as Operation Leader during the sample period, and remained with the same director during this period. High- and low-flyer definitions are based on the age distribution when a director first obtains such management responsibility (p25 = 39.58 and p33 = 41.08). Controls include Married, Child, Entry: < job band 5, Entry: sector, and Entry: banking. Fixed effects include directorates, years, and five bins of worker age. Standard errors are clustered at the director level and shown in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 6: Time to First Team Member Assignment and Initial Director Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)
Woman	1.3205**	1.3150*				
	(0.5887)	(0.6603)				
Woman × Director is female			0.3535			
			(0.7063)			
Woman × Director is male			1.9930**			
			(0.9848)			
Woman × Director is a parent				1.6646		
				(1.0167)		
Woman × Director is not a parent				0.9368		
				(1.1479)		
Woman × Director is high flyer (p25)					0.6385	
					(1.4481)	
Woman × Director is low flyer (p25)					1.4701*	
					(0.8060)	
Woman × Director is high flyer (p33)						0.4766
						(1.1737)
Woman × Director is low flyer (p33)						1.5602*
						(0.8501)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Director effects		Yes	Yes	Yes	Yes	Yes
R-squared	0.290	0.383	0.387	0.384	0.384	0.385
Observations	241	238	238	238	238	238
Equality of coefficients (p-value)			0.19	0.68	0.64	0.49

Notes: Table presents results of Equation (9). The dependent variable is the number of months between a banker's date of joining the organization and receiving her first assignment as Team Member. The sample includes the cross-section of bankers who joined the organization in job band 5, received an assignment as Team Member during the sample period, and remained with the same director during this period. High- and low-flyer definitions are based on the age distribution when a director first obtains such management responsibility (p25 = 39.58 and p33 = 41.08). Controls include Married, Child, Entry: < job band 5, Entry: sector, and Entry: banking. Fixed effects include directorates, years, and five bins of worker age. Standard errors are clustered at the director level and shown in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Online Appendix for

Knowledge Teams, Careers, and Gender

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A Setting and Data

This section provides further detail into the organization that we are studying in the main body of the paper. The information described here is based on the confidential administrative data that we have been given access to, informal interviews with staff from various levels of the organization, and our own reading of documents that describe the organization's day-to-day operations (e.g. the "Staff Handbook") as well as its publicly available documentation.

Organizational chart Figure A.1 presents a stylized version of the firm's organizational chart. While there have been strategic changes over our study period, for instance the inclusion of new operation regions or changes in the significance of individual sectors, the structure of the organization, operation and allocation of decision rights remained largely unchanged. Hence, this figure reports a snapshot of the FI's organization in 2014. Managing directors (job band 9) are responsible for each division, which consists of several directorates. Each directorate is either concerned with one country group or a sector (approx. on a one-digit SIC code level) and is run by a Director (job band 8). Directors oversee bankers at three job band levels: Associate Directors (job band 7), Principals (job band 6), and Analyst/Associates (job band 5). We exclude interns, executive assistants, short-term consultants and other staff (job bands 1-4) from the analysis, as they are not involved in the FI's main project work and therefore do not appear on the project tracking database.

Figure A.2 shows how the FI's workforce has grown over the 2000-2018 period. The majority of the workforce – around 55% of all staff in 2018 – is employed in banking divisions, shown on the right panel of the figure, while the remaining workforce is employed in the non-banking support divisions, such as finance, risk, IT, and HR. It is clear from the figure that the organization follows a typical corporate hierarchy: junior staff in job band 5 make up just over half of the workforce, mid-senior staff at job bands 6 and 7 each account for around 20% of staff, and senior staff at job band 8 make up for a small share.

Table A.1 shows descriptive statistics for directorates when we arrange the data in a directorate-month level panel setting. Each director oversees the start of 1.47 projects and EUR 35.58 million in total volume each month on average. The average size of a directorate is 13.34 and consists of 6.24 junior bankers in band 5, 3.55 bankers in band 6, and 3.55 bankers in band 7. At the junior level, there is gender parity, but at the mid-senior levels there are more men.

Project life-cycle Figure A.4 shows the life-cycle and steps of a project in its approval process within the organization. We focus only on projects which have at least passed the initial (concept) review. The project is first entered into the FI's project tracking database when it arrives at a directorate and a team is assigned. Afterwards there are two review stages: a "*concept*" and a "*final*" review. The general criteria for the project to be approved by the investment committee are its overall fit with the organizational goals, an economic, social, or environmental impact rating calculated by the bank's economists, and the project's financial risk assessed by the credit department. The latter two ratings are available in the data and (re-)assessed at each review stage. Importantly, many of the parameters (like interest rates or timing of repayment) will not be under the exclusive purview of the banking

team but rather are determined in a process between all members of the project team and, in particular, the investment committee.

In the time leading up to the concept review, the team conducts initial screening and preparation work. The purpose of this initial review is to determine whether the proposed operation fits into the bank's operating principles before significant resources are used for the further development of the project. Additionally, it allows the project team to receive feedback from non-banking departments and senior management. Points that the committee addresses are a proposed general transaction structure as well as comments and guidance for the following due diligence and structuring phase.

In the time leading up to the final review, the team's work consists in developing the project's overall structure. Around 60% of projects pass the final review stage conditional on passing concept review. In order to prepare final review, the team collects information about the project and proposes a financial structure to ensure that the investment committee is able to make an informed decision on whether to finally approve the project or not. Further, the committee confirms expected compliance with bank policies, priorities, and strategies. Moreover, the final review serves as a tool to determine how to approach any remaining due diligence and ensure that potentially outstanding issues are resolved. At this point, a contract proposal with the client which specifies the structure and the main terms of the financing exists.

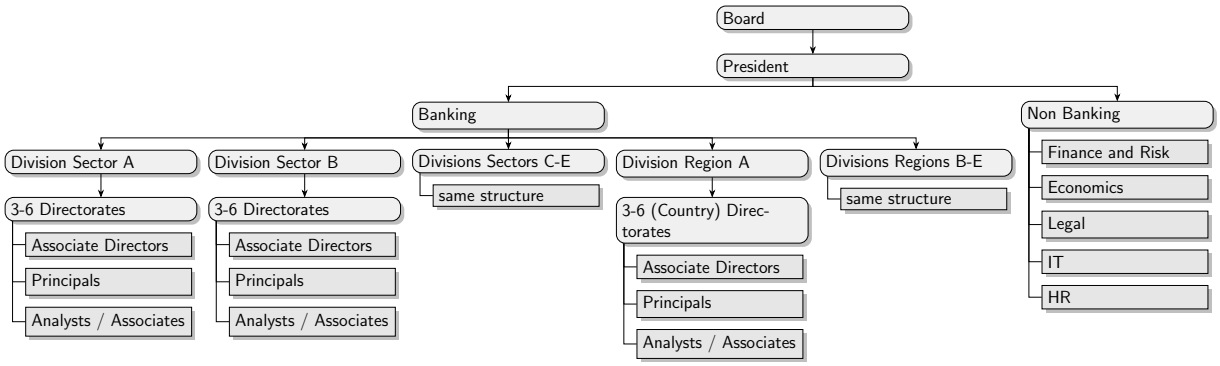
After this approval process, the project is approved and signed by the Board of the FI and ultimately executed (disbursement of the financing, repayment, and social impact delivery). Several years may pass until repayment of the financing and the attainment of social impact. The portfolio and economics units track the financial progress and the delivery of impact, respectively, every six months between signing and final repayment. Immediate action is taken once assets become impaired or are not performing as desired. Importantly, the long-term nature of project execution means that promotion cycles are shorter than the revelation of project success. In particular, at the time of promotions, it is often not yet known what the outcome of a project is, making number of projects signed and their amount the main performance measures.

Table A.2 shows summary statistics for all projects reviewed by the FI during 2000-2018 for a set of variables that we can observe in the project tracking database. For instance, out of a total of 10,155 projects, only 5,916 pass the review stages described above and are eventually signed by the FI. The average project reviewed is EUR 30 million in size, but the median is EUR 14 million, meaning that there are some very large projects in the FI's portfolio. A banking project team spends 142 days on average in preparation before they go to the FI's investment committee for a first review. On average, 1 in 5 projects includes an equity product, 44% is a transaction with an existing client, and 14% involves a public entity. Of the 5,916 projects, only 59% are completed during our sample period, meaning that the client has fully repaid the FI's loan (in the case of a debt product) or if the FI has fully sold its equity investment (in the case of an equity product).

The banking project team Figure A.3 shows summary statistics for banking project teams based on the cross-section of projects reviewed by the FI during our sample period. Panel (a) shows that just over half of all teams consist of two bankers, just over 20% of all teams

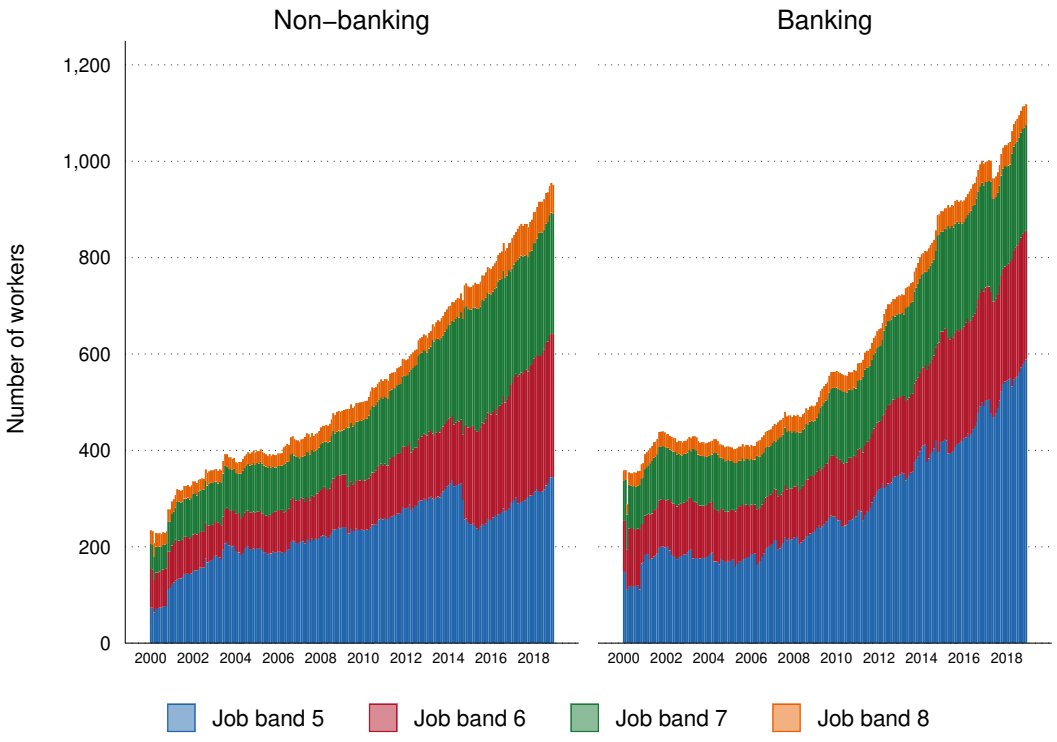
have three bankers, and 10% of teams have four bankers staffed on a project. A small share of projects appear to have one banker only, while a minority of projects have five or more. Team size has grown over time as project volumes have gotten bigger and projects have become more complex. Panel (b) shows the composition of team roles by job bands in the pooled cross-section. For instance, one of the team members is the operation leader (OL) who is a banker in job band 6 in 40% of cases. The other 1.5 team members (on average) are mostly junior bankers in job band 5 who occasionally work as OL (in 31% of cases). In this case, they are usually assisted by more senior team members. Additional non-banking team members are economists, lawyers, risk officers and potentially other experts (e.g. environmental specialists), who are not shown. Economists help with the evaluation of the project's social impact, while lawyers are involved in the contractual details of the agreement, and risk officers assess the financial viability of the deal.

Figure A.1: Stylized Organizational Chart



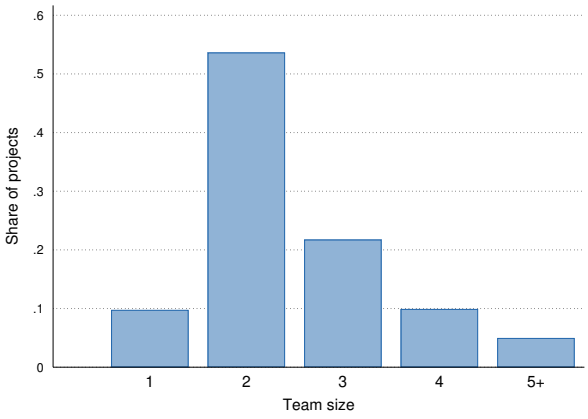
Notes: Stylized representation of the FI's organizational chart.

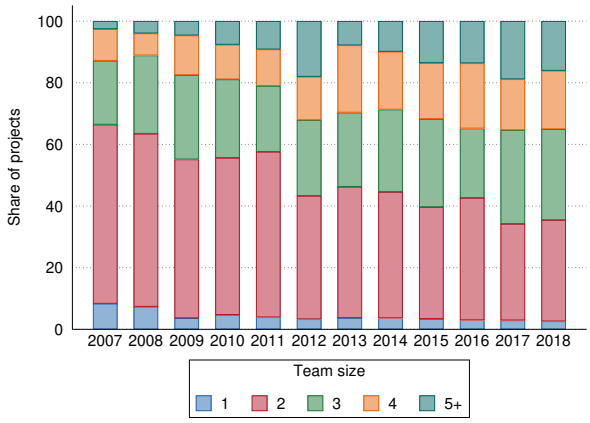
Figure A.2: Size of the Workforce



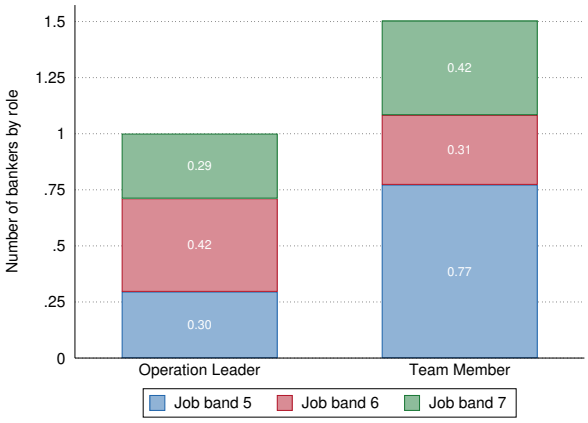
Notes: Figure shows the size of the workforce for job bands 5-8 in the non-banking (left panel) and banking (right panel) divisions of the FI in the raw data.

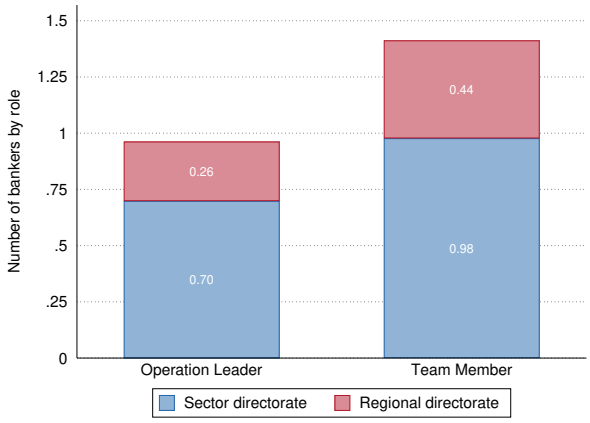
Figure A.3: The Banking Project Team





(a) Team size distribution in the pooled cross-section and over the sample period

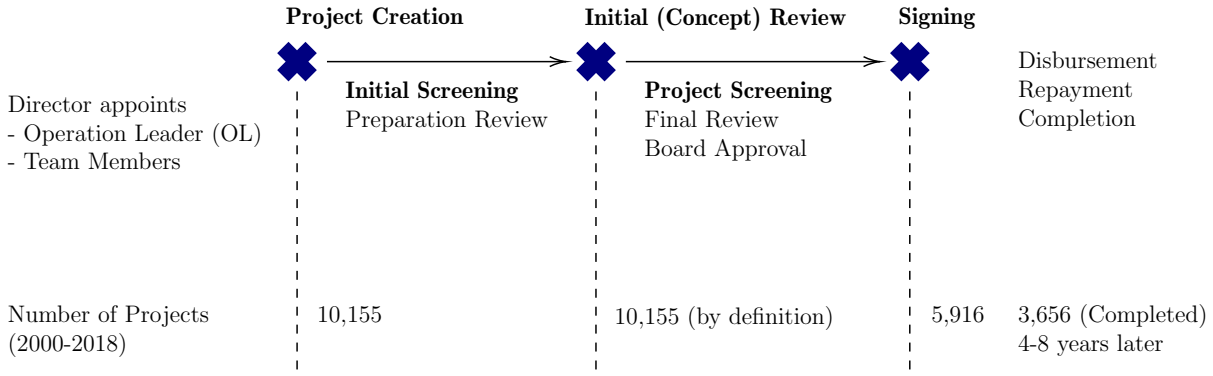




(b) Composition of teams by role, seniority, and directorate over the sample period

Notes: This figure provides the distribution of different team sizes and the team composition by role and seniority for projects reviewed by the FI during the sample period, April 2007 to December 2018. Panel (a) shows the team size distribution in the pooled cross-section and over time. Panel (b) shows the composition of team roles by job bands in the pooled cross-section.

Figure A.4: Project Life-cycle



Time in each state	Initial Screening	Project Screening
Average Time	145 Days	435 Days
Median Time	44 Days	238 Days

Notes: Shows the life-cycle and steps of a project in its approval process within the organization.

Table A.1: Directorate Summary Statistics

	mean	sd	p25	p50	p75
Projects	1.47	1.91	0.00	1.00	2.00
Amounts (million EUR)	35.38	78.61	0.00	0.00	35.00
Bankers	13.34	9.34	6.00	12.00	19.00
Bankers in band 5	6.24	4.74	3.00	5.00	9.00
Women	3.09	2.60	1.00	3.00	4.00
Men	3.15	2.99	1.00	2.00	4.00
Bankers in band 6	3.55	3.62	1.00	2.00	5.00
Women	1.52	1.69	0.00	1.00	2.00
Men	2.03	2.40	0.00	1.00	3.00
Bankers in band 7	3.55	2.98	1.00	3.00	6.00
Women	1.52	1.65	0.00	1.00	2.00
Men	2.03	1.91	0.00	2.00	3.00

Notes: This table presents summary statistics of directorates managed by one Director from a panel at the directorate-month level. *Projects* is the number of new project starts with an Operation Leader from the directorate in any given month. *Amounts* is the total volume of new projects started and led by an Operation Leader from the directorate in that month. *Bankers* is the total number of bankers from job bands 5, 6, and 7 who report to the Director in that directorate.

Table A.2: Project Summary Statistics

	Reviewed			Signed		
	mean	median	sd	mean	median	sd
Amount (million EUR)	29.79	14.12	46.76	24.40	10.00	37.78
Risk rating (1-8)	6.04	6.00	0.86	5.99	6.00	0.87
Preparation time (days)	142.24	43.00	238.24	140.52	49.00	230.14
Time to signing (days)	-	-	-	433.79	237.00	647.02
Equity product	0.20	0.00	0.40	0.18	0.00	0.38
Repeat client	0.44	0.00	0.50	0.61	1.00	0.49
Completed	0.36	0.00	0.48	0.59	1.00	0.49
Observations	10,155			5,916		

Notes: This table presents summary statistics at the project level. The left panel includes all projects that pass the FI's initial investment review ("concept review stage") and the right panel includes projects that also pass subsequent reviews and are eventually signed. *Risk* is evaluated on a scale from 1 to 8 in 20 increments. *Preparation time* is the number of days between when a project is first logged on the FI's systems and when it reaches the FI's initial investment review stage. *Time to signing* is the number of days between when a project is approved at the FI's initial review stage and when it is eventually signed (defined only for signed projects). *Equity product* indicates whether the project has an equity finance component, including for instance growth capital, pre-IPO or IPO financing. *Repeat client* indicates whether the FI has signed a project with a client before. *Completed* indicates if the client has fully repaid the FI's loan (in the case of a debt product) or if the FI has fully sold its equity holdings (in the case of an equity product).

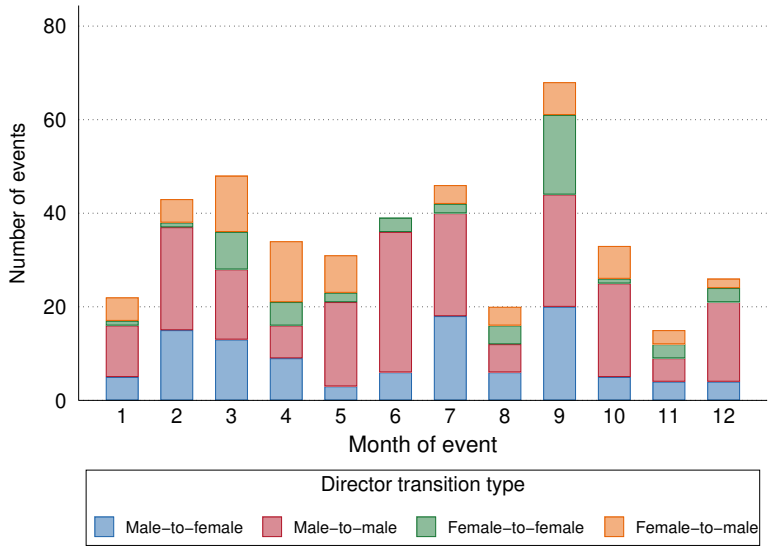
Table A.3: Career Transition Matrix by Gender

	Bands 1-4	Band 5	Band 6	Band 7	Band 8	Band 9	Move to non-banking	Exit
Women								
Entry	18.64	68.81	8.81	3.05	0.68	0.00	0.00	0.00
Bands 1-4	97.39	2.58	0.00	0.03	0.00	0.00	0.00	0.00
Band 5	0.02	98.54	0.80	0.00	0.00	0.00	0.56	0.08
Band 6	0.00	0.04	98.21	1.11	0.00	0.00	0.55	0.09
Band 7	0.00	0.00	0.04	99.12	0.27	0.00	0.43	0.14
Band 8	0.00	0.00	0.00	0.00	99.13	0.35	0.41	0.12
Band 9	0.00	0.00	0.00	0.00	0.00	98.61	0.93	0.46
Men								
Entry	10.62	67.41	14.32	5.68	1.73	0.25	0.00	0.00
Bands 1-4	89.56	10.24	0.20	0.00	0.00	0.00	0.00	0.00
Band 5	0.02	98.12	1.02	0.01	0.00	0.00	0.76	0.08
Band 6	0.00	0.06	98.16	0.90	0.00	0.00	0.81	0.08
Band 7	0.00	0.00	0.00	99.00	0.20	0.00	0.69	0.11
Band 8	0.00	0.00	0.00	0.06	98.97	0.26	0.62	0.09
Band 9	0.00	0.00	0.00	0.00	0.09	98.87	0.96	0.09

Notes: Table presents monthly transition probabilities in percentages at the FI for banking staff only. Job bands 1-4 include support roles such as interns, short-term consultants, and team assistants.

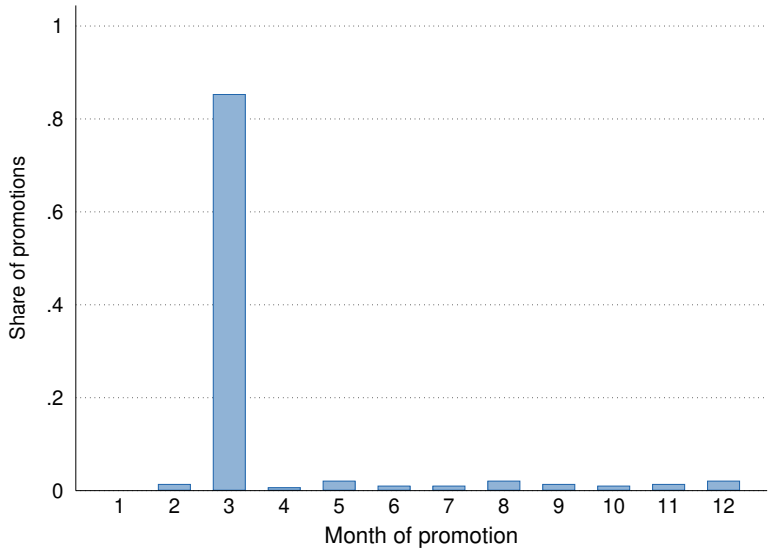
B Additional Results

Figure B.1: Distribution of Director Transition Events



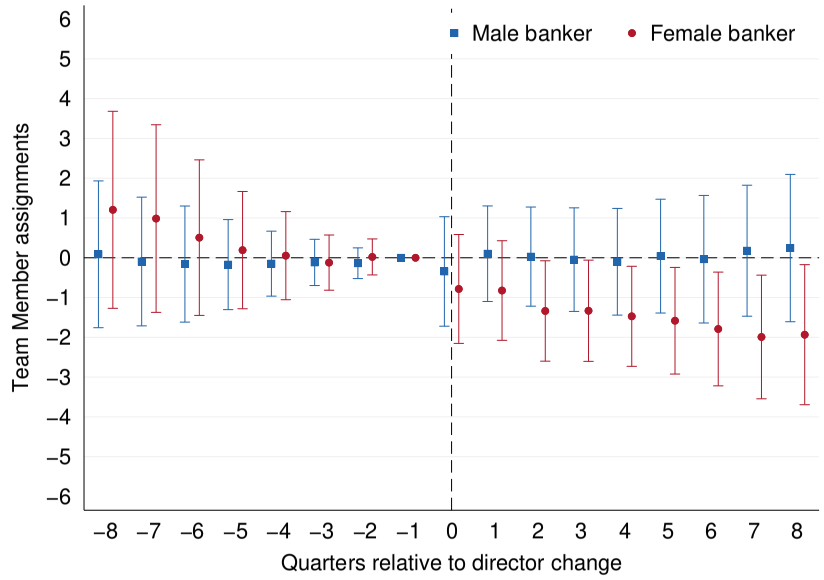
Notes: Figure shows the distribution of director transition events by type and month of the year in which the transition takes place.

Figure B.2: Distribution of Junior Bankers' Promotions

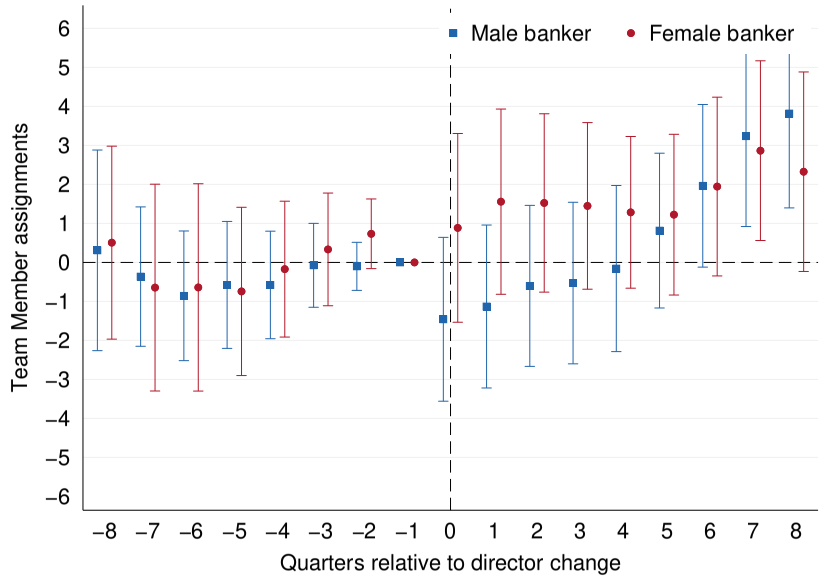


Notes: Figure shows the distribution of promotions for junior bankers taking place over the course of a year.

Figure B.3: Director Transitions and Team Member Assignments: Single-Difference Estimates



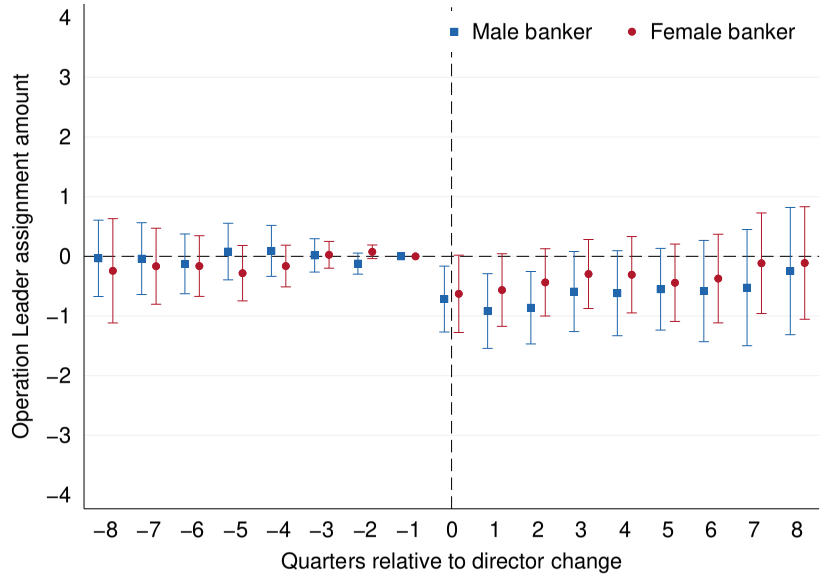
(a) Male-to-Female Director *minus* Male-to-Male Director ("Gaining a woman Director")



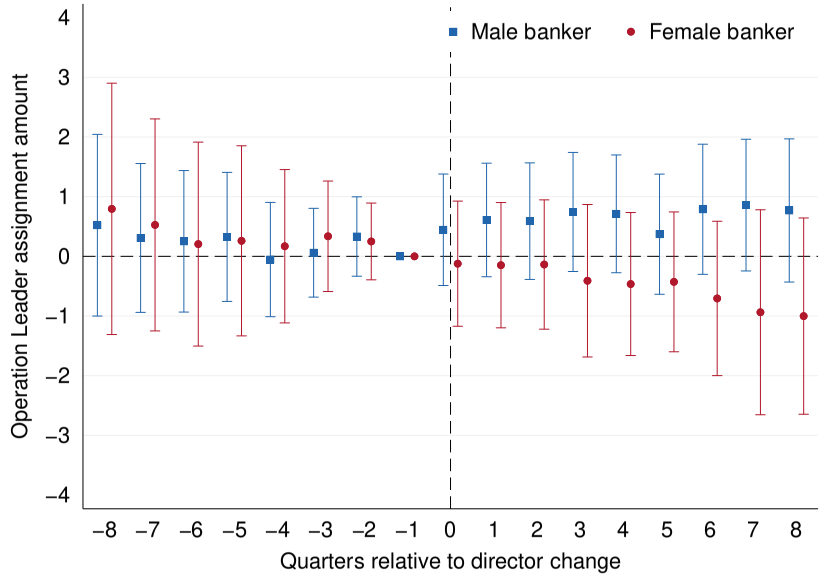
(b) Female-to-Male Director *minus* Female-to-Female Director ("Losing a woman Director")

Notes: Figure shows single-difference estimates from the event study specification in Equation (10). Panel (a) shows estimates of gaining a woman director ($\beta^g_{s,M2W} - \beta^g_{s,M2M}$), while panel (b) shows estimates of losing a woman director ($\beta^g_{s,W2M} - \beta^g_{s,W2W}$) for female ($g = W$) and male ($g = M$) bankers separately around the transition event. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. 176 female bankers and 188 male bankers experience events. The dependent variable is cumulative assignments as Team Member; its sample mean is 6.99 and standard deviation is 7.06. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

Figure B.4: Director Transitions and Operation Leader Assignment Amounts: Single-Difference Estimates



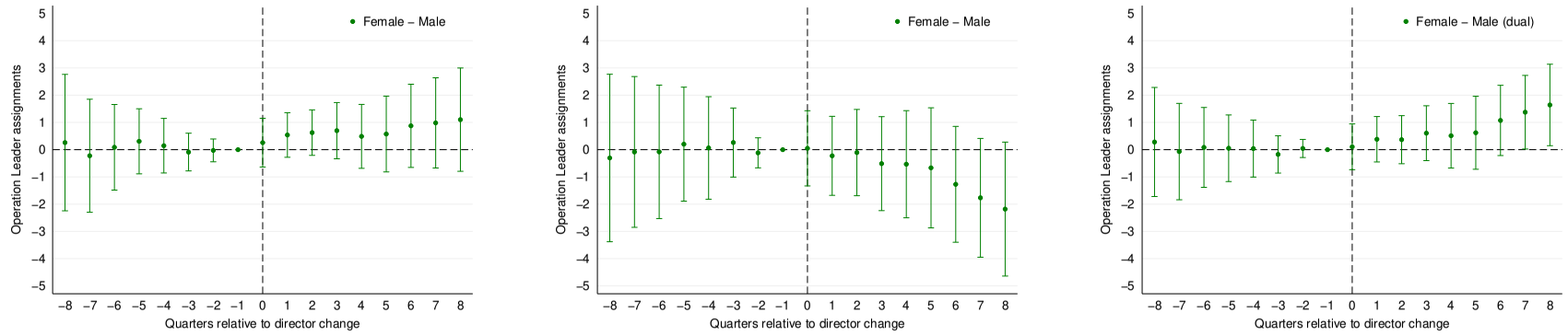
(a) Male-to-Female Director *minus* Male-to-Male Director ("Gaining a woman Director")



(b) Female-to-Male Director *minus* Female-to-Female Director ("Losing a woman Director")

Notes: Figure shows single-difference estimates from the event study specification in Equation (10). Panel (a) shows estimates of gaining a woman director ($\beta^g_{s,M2W} - \beta^g_{s,M2M}$), while panel (b) shows estimates of losing a woman director ($\beta^g_{s,W2M} - \beta^g_{s,W2W}$) for female ($g = W$) and male ($g = M$) bankers separately around the transition event. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. 176 female bankers and 188 male bankers experience events. The dependent variable is (log) cumulative volume of assignments (in million EUR) as Operation Leader; its sample mean is 1.34 and standard deviation is 1.76. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

Figure B.5: Early Career Transitions and Operation Leader Assignments: Double-Differences Estimates



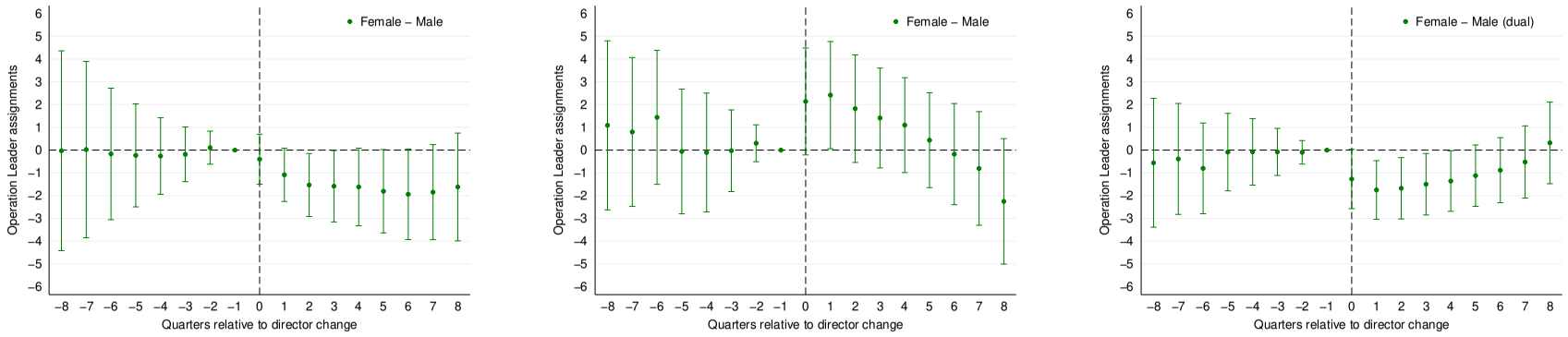
(a) Male-to-Female Director *minus* Male-to-Male Director

(b) Female-to-Male Director *minus* Female-to-Female Director

(c) Dual-double-differences: (a) *minus* (b)

Notes: Figure shows double-difference estimates from the event study specification in Equation (10) when director transitions involve junior bankers early in their careers. Panel (a) shows difference in estimates of gaining a woman director $[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})]$, while panel (b) shows estimates of losing a woman director $[(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]$, for female bankers relative to male bankers around the transition event. Panel (c) shows the average between the coefficients from panel (a) and the (negative value of) coefficients from panel (b), given by $\frac{1}{2} \times \{[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})] - [(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]\}$. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. 122 female bankers and 154 male bankers experience events. The dependent variable is cumulative assignments as Operation Leader; its sample mean is 2.15 and standard deviation is 3.37. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

Figure B.6: Early Career Transitions and Team Member Assignments: Double-Differences Estimates



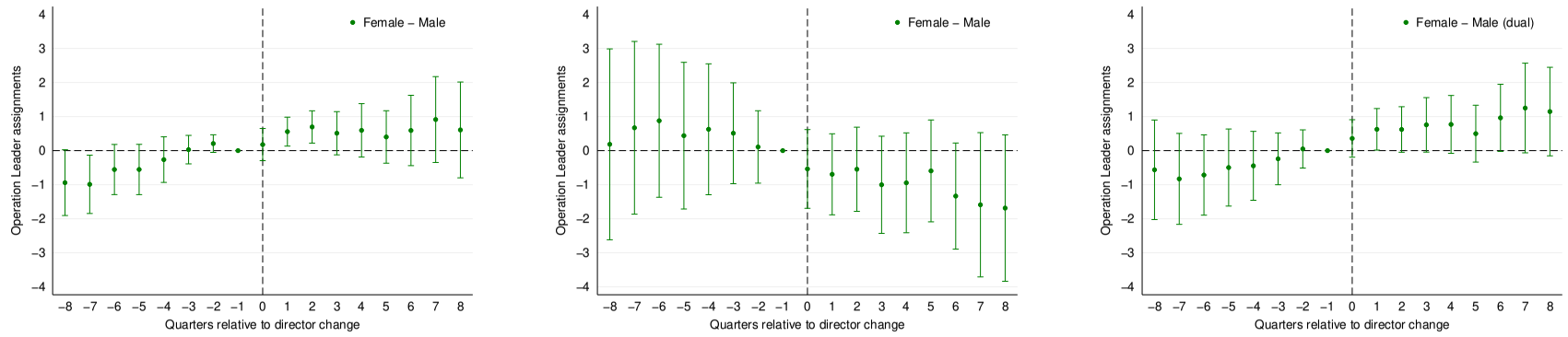
(a) Male-to-Female Director *minus* Male-to-Male Director

(b) Female-to-Male Director *minus* Female-to-Female Director

(c) Dual-double-differences: (a) *minus* (b)

Notes: Figure shows double-difference estimates from the event study specification in Equation (10) when director transitions involve junior bankers early in their careers. Panel (a) shows difference in estimates of gaining a woman director $[(\beta^{W}_{s,M2W} - \beta^{W}_{s,M2M}) - (\beta^{M}_{s,M2W} - \beta^{M}_{s,M2M})]$, while panel (b) shows estimates of losing a woman director $[(\beta^{W}_{s,W2M} - \beta^{W}_{s,W2W}) - (\beta^{M}_{s,W2M} - \beta^{M}_{s,W2W})]$, for female bankers relative to male bankers around the transition event. Panel (c) shows the average between the coefficients from panel (a) and the (negative value of) coefficients from panel (b), given by $\frac{1}{2} \times \{[(\beta^{W}_{s,M2W} - \beta^{W}_{s,M2M}) - (\beta^{M}_{s,M2W} - \beta^{M}_{s,M2M})] - [(\beta^{W}_{s,W2M} - \beta^{W}_{s,W2W}) - (\beta^{M}_{s,W2M} - \beta^{M}_{s,W2W})]\}$. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. 122 female bankers and 154 male bankers experience events. The dependent variable is cumulative assignments as Team Member; its sample mean is 6.99 and standard deviation is 7.06. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

Figure B.7: Early Career Transitions and Operation Leader Assignment Amounts: Double-Differences Estimates



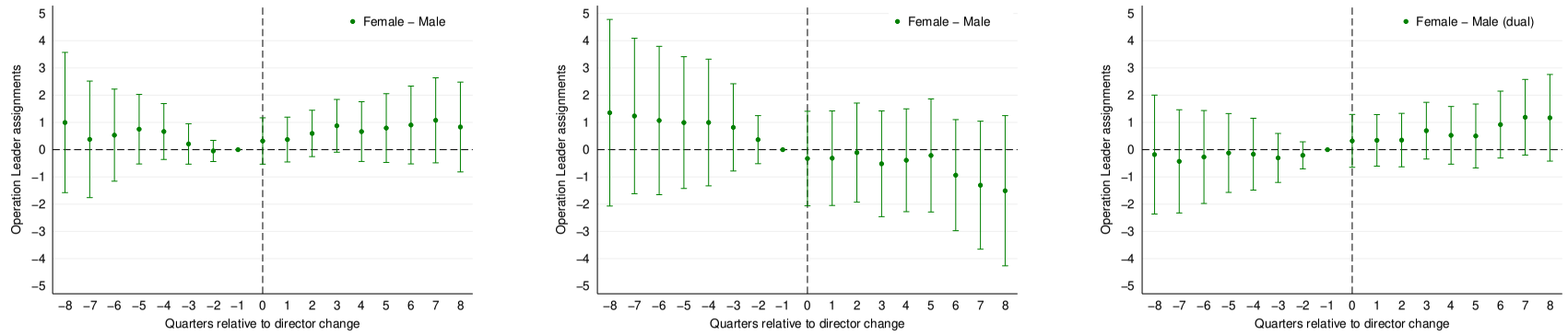
(a) Male-to-Female Director *minus* Male-to-Male Director

(b) Female-to-Male Director *minus* Female-to-Female Director

(c) Dual-double-differences: (a) *minus* (b)

Notes: Figure shows double-difference estimates from the event study specification in Equation (10) when director transitions involve junior bankers early in their careers. Panel (a) shows difference in estimates of gaining a woman director $[(\beta^{W}_{s,M2W} - \beta^{W}_{s,M2M}) - (\beta^{M}_{s,M2W} - \beta^{M}_{s,M2M})]$, while panel (b) shows estimates of losing a woman director $[(\beta^{W}_{s,W2M} - \beta^{W}_{s,W2W}) - (\beta^{M}_{s,W2M} - \beta^{M}_{s,W2W})]$, for female bankers relative to male bankers around the transition event. Panel (c) shows the average between the coefficients from panel (a) and the (negative value of) coefficients from panel (b), given by $\frac{1}{2} \times \{[(\beta^{W}_{s,M2W} - \beta^{W}_{s,M2M}) - (\beta^{M}_{s,M2W} - \beta^{M}_{s,M2M})] - [(\beta^{W}_{s,W2M} - \beta^{W}_{s,W2W}) - (\beta^{M}_{s,W2M} - \beta^{M}_{s,W2W})]\}$. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. 122 female bankers and 154 male bankers experience events. The dependent variable is (log) cumulative volume of assignments (in million EUR) as Operation Leader; its sample mean is 1.34 and standard deviation is 1.76. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

Figure B.8: Entire Team Transitions and Operation Leader Assignments: Double-Differences Estimates



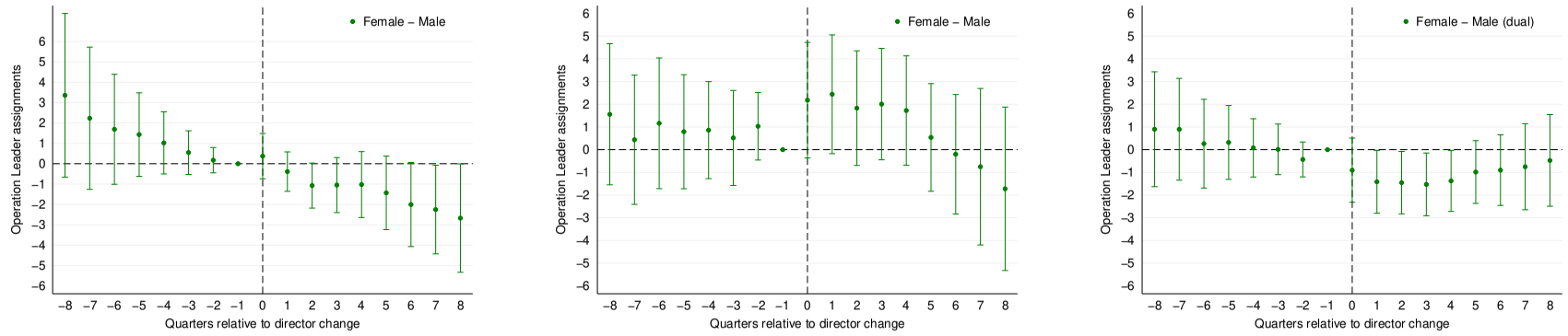
(a) Male-to-Female Director *minus* Male-to-Male Director

(b) Female-to-Male Director *minus* Female-to-Female Director

(c) Dual-double-differences: (a) *minus* (b)

Notes: Figure shows double-difference estimates from the event study specification in Equation (10) when director transitions involve entire teams. Panel (a) shows difference in estimates of gaining a woman director $[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})]$, while panel (b) shows estimates of losing a woman director $[(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]$, for female bankers relative to male bankers around the transition event. Panel (c) shows the average between the coefficients from panel (a) and the (negative value of) coefficients from panel (b), given by $\frac{1}{2}\times \{[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})] - [(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]\}$. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. 121 female bankers and 129 male bankers experience events. The dependent variable is cumulative assignments as Operation Leader; its sample mean is 2.15 and standard deviation is 3.37. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

Figure B.9: Entire Team Transitions and Team Member Assignments: Double-Differences Estimates



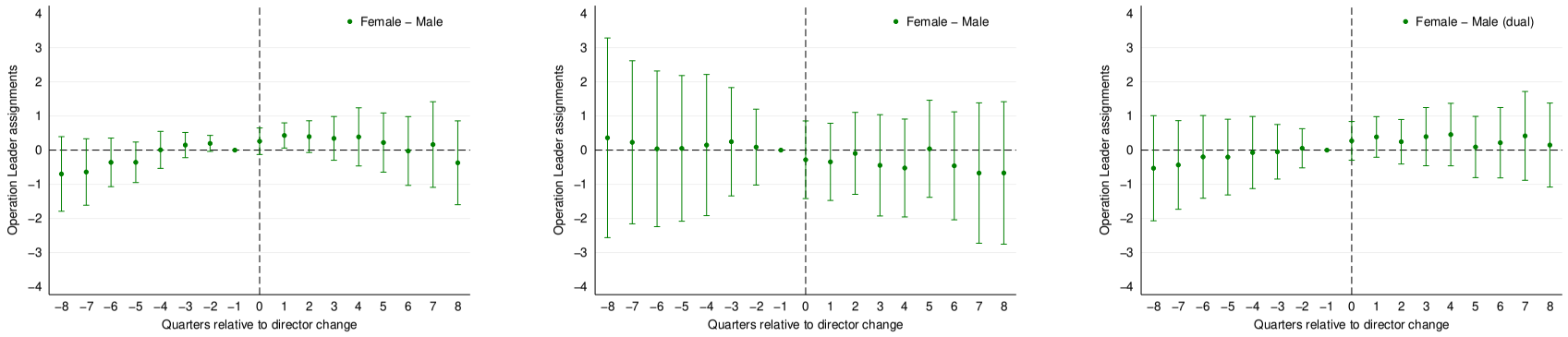
(a) Male-to-Female Director *minus* Male-to-Male Director

(b) Female-to-Male Director *minus* Female-to-Female Director

(c) Dual-double-differences: (a) *minus* (b)

Notes: Figure shows double-difference estimates from the event study specification in Equation (10) when director transitions involve entire teams. Panel (a) shows difference in estimates of gaining a woman director $[(\beta^{W}_{s,M2W} - \beta^{W}_{s,M2M}) - (\beta^{M}_{s,M2W} - \beta^{M}_{s,M2M})]$, while panel (b) shows estimates of losing a woman director $[(\beta^{W}_{s,W2M} - \beta^{W}_{s,W2W}) - (\beta^{M}_{s,W2M} - \beta^{M}_{s,W2W})]$, for female bankers relative to male bankers around the transition event. Panel (c) shows the average between the coefficients from panel (a) and the (negative value of) coefficients from panel (b), given by $\frac{1}{2}\times \{[(\beta^{W}_{s,M2W} - \beta^{W}_{s,M2M}) - (\beta^{M}_{s,M2W} - \beta^{M}_{s,M2M})] - [(\beta^{W}_{s,W2M} - \beta^{W}_{s,W2W}) - (\beta^{M}_{s,W2M} - \beta^{M}_{s,W2W})]\}$. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. 121 female bankers and 129 male bankers experience events. The dependent variable is cumulative assignments as Team Member; its sample mean is 6.99 and standard deviation is 7.06. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

Figure B.10: Entire Team Transitions and Operation Leader Assignment Amounts: Double-Differences Estimates



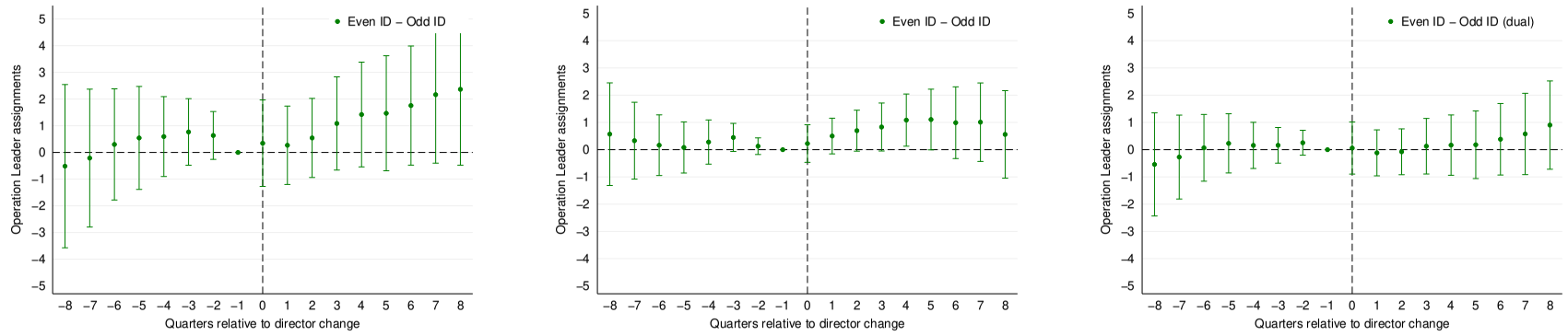
(a) Male-to-Female Director *minus* Male-to-Male Director

(b) Female-to-Male Director *minus* Female-to-Female Director

(c) Dual-double-differences: (a) *minus* (b)

Notes: Figure shows double-difference estimates from the event study specification in Equation (10) when director transitions involve entire teams. Panel (a) shows difference in estimates of gaining a woman director $[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})]$, while panel (b) shows estimates of losing a woman director $[(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]$, for female bankers relative to male bankers around the transition event. Panel (c) shows the average between the coefficients from panel (a) and the (negative value of) coefficients from panel (b), given by $\frac{1}{2}\times \{[(\beta^W_{s,M2W} - \beta^W_{s,M2M}) - (\beta^M_{s,M2W} - \beta^M_{s,M2M})] - [(\beta^W_{s,W2M} - \beta^W_{s,W2W}) - (\beta^M_{s,W2M} - \beta^M_{s,W2W})]\}$. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. 121 female bankers and 129 male bankers experience events. The dependent variable is (log) cumulative volume of assignments (in million EUR) as Operation Leader; its sample mean is 1.34 and standard deviation is 1.76. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

Figure B.11: Placebo Exercise: Operation Leader Assignments



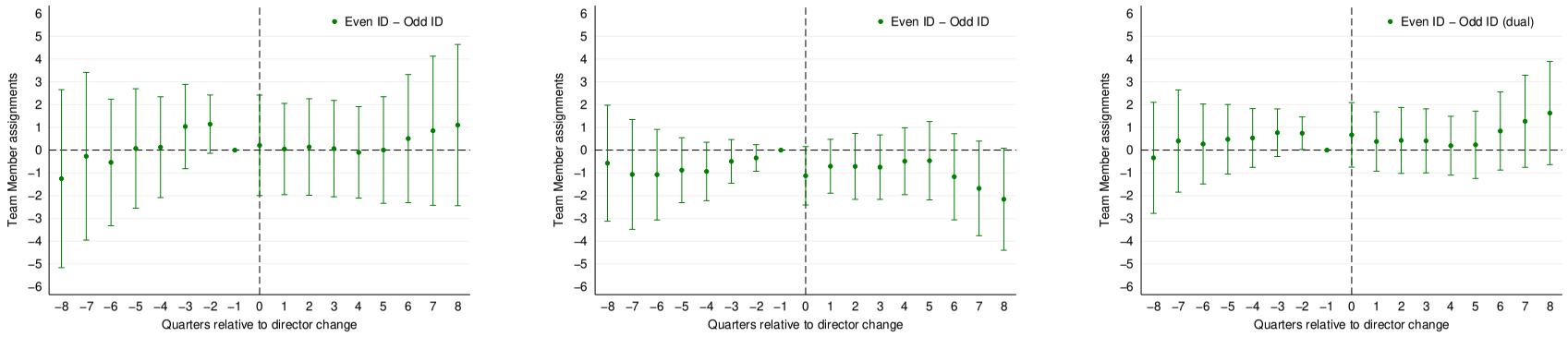
(a) Odd ID-to-Even ID Director *minus* Odd ID-to-Odd ID Director

(b) Even ID-to-Odd ID Director *minus* Even ID-to-Even ID Director

(c) Dual-double-differences: (a) *minus* (b)

Notes: Figure shows double-difference estimates from the event study specification in Equation (10) when director transitions and junior banker characteristics are defined by whether their employee ID number is odd even. Panel (a) shows difference in estimates of gaining a director with an even ID $[(\beta^E_{s,O2E} - \beta^E_{s,O2O}) - (\beta^O_{s,O2E} - \beta^O_{s,O2O})]$, while panel (b) shows estimates of losing a director with an even ID $[(\beta^E_{s,E2O} - \beta^E_{s,E2E}) - (\beta^O_{s,E2O} - \beta^O_{s,E2E})]$, for bankers with an even ID relative to bankers with an odd ID around the transition event. Panel (c) shows the average between the coefficients from panel (a) and the (negative value of) coefficients from panel (b), given by $\frac{1}{2}\times \{[(\beta^E_{s,O2E} - \beta^E_{s,O2O}) - (\beta^O_{s,O2E} - \beta^O_{s,O2O})] - [(\beta^E_{s,E2O} - \beta^E_{s,E2E}) - (\beta^O_{s,E2O} - \beta^O_{s,E2E})]\}$. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. The dependent variable is cumulative assignments as Operation Leader; its sample mean is 2.15 and standard deviation is 3.37. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

Figure B.12: Placebo Exercise: Team Member Assignments



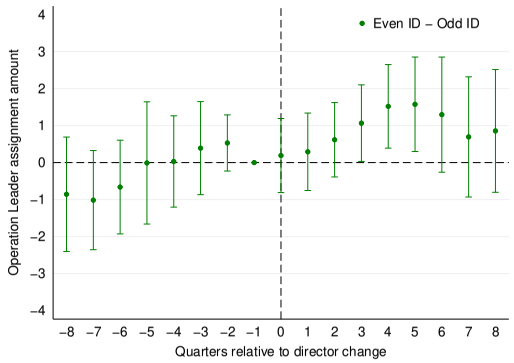
(a) Odd ID-to-Even ID Director *minus* Odd ID-to-Odd ID Director

(b) Even ID-to-Odd ID Director *minus* Even ID-to-Even ID Director

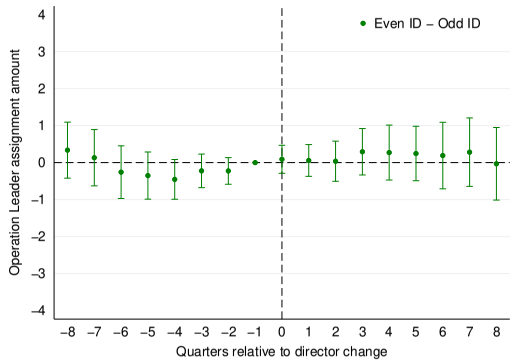
(c) Dual-double-differences: (a) *minus* (b)

Notes: Figure shows double-difference estimates from the event study specification in Equation (10) when director transitions and junior banker characteristics are defined by whether their employee ID number is odd even. Panel (a) shows difference in estimates of gaining a director with an even ID $[(\beta^{E}_{s,O2E} - \beta^{E}_{s,O2O}) - (\beta^{O}_{s,O2E} - \beta^{O}_{s,O2O})]$, while panel (b) shows estimates of losing a director with an even ID $[(\beta^{E}_{s,E2O} - \beta^{E}_{s,E2E}) - (\beta^{O}_{s,E2O} - \beta^{O}_{s,E2E})]$, for bankers with an even ID relative to bankers with an odd ID around the transition event. Panel (c) shows the average between the coefficients from panel (a) and the (negative value of) coefficients from panel (b), given by $\frac{1}{2}\times \{[(\beta^{E}_{s,O2E} - \beta^{E}_{s,O2O}) - (\beta^{O}_{s,O2E} - \beta^{O}_{s,O2O})] - [(\beta^{E}_{s,E2O} - \beta^{E}_{s,E2E}) - (\beta^{O}_{s,E2O} - \beta^{O}_{s,E2E})]\}$. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. The dependent variable is cumulative assignments as Team Member; its sample mean is 6.99 and standard deviation is 7.06. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

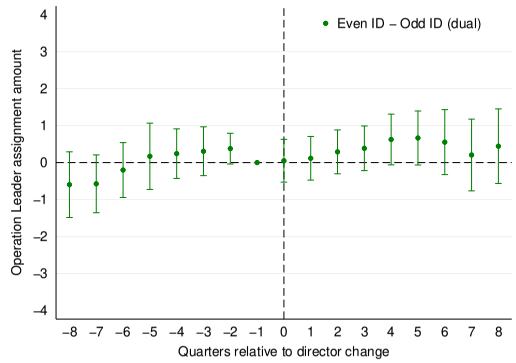
Figure B.13: Placebo Exercise: Operation Leader Assignment Amounts



(a) Odd ID-to-Even ID Director *minus* Odd ID-to-Odd ID Director



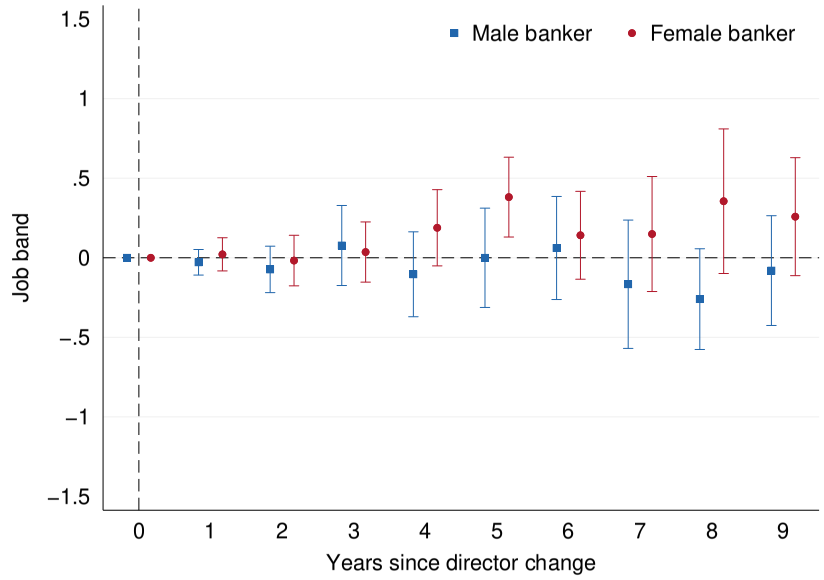
(b) Even ID-to-Odd ID Director *minus* Even ID-to-Even ID Director



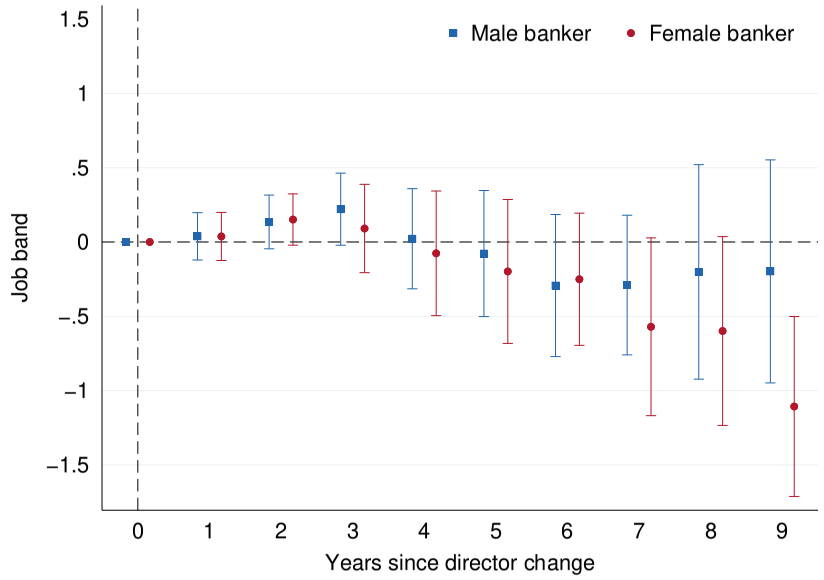
(c) Dual-double-differences: (a) *minus* (b)

Notes: Figure shows double-difference estimates from the event study specification in Equation (10) when director transitions and junior banker characteristics are defined by whether their employee ID number is odd even. Panel (a) shows difference in estimates of gaining a director with an even ID $[(\beta^{E}_{s,O2E} - \beta^{E}_{s,O2O}) - (\beta^{O}_{s,O2E} - \beta^{O}_{s,O2O})]$, while panel (b) shows estimates of losing a director with an even ID $[(\beta^{E}_{s,E2O} - \beta^{E}_{s,E2E}) - (\beta^{O}_{s,E2O} - \beta^{O}_{s,E2E})]$, for bankers with an even ID relative to bankers with an odd ID around the transition event. Panel (c) shows the average between the coefficients from panel (a) and the (negative value of) coefficients from panel (b), given by $\frac{1}{2}\times \{[(\beta^{E}_{s,O2E} - \beta^{E}_{s,O2O}) - (\beta^{O}_{s,O2E} - \beta^{O}_{s,O2O})] - [(\beta^{E}_{s,E2O} - \beta^{E}_{s,E2E}) - (\beta^{O}_{s,E2O} - \beta^{O}_{s,E2E})]\}$. All coefficients are estimated from a single regression including 26,000+ monthly observations of 340 female and 386 male bankers in job band 5, and 85 directors. The dependent variable is (log) cumulative volume of assignments (in million EUR) as Operation Leader; its sample mean is 1.34 and standard deviation is 1.76. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

Figure B.14: Director Transitions and Long-Term Careers: Single-Difference Estimates



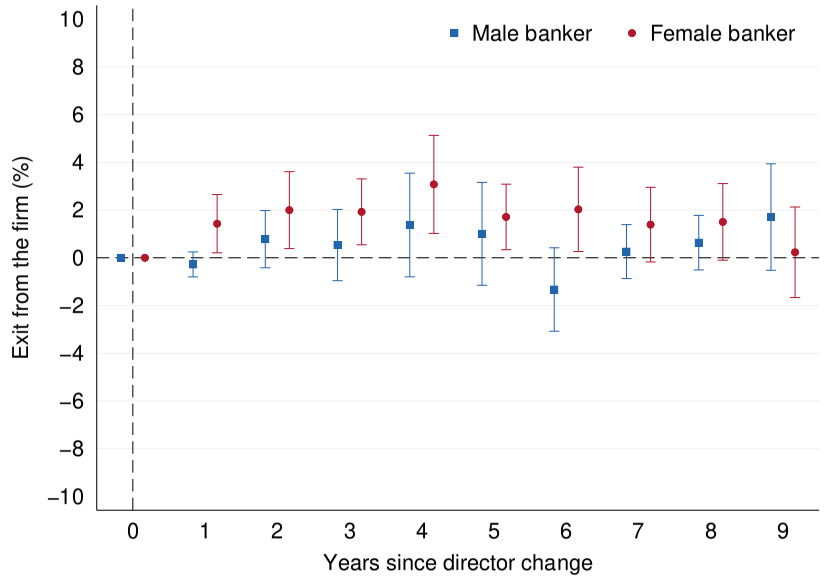
(a) Male-to-Female Director *minus* Male-to-Male Director ("Gaining a woman Director")



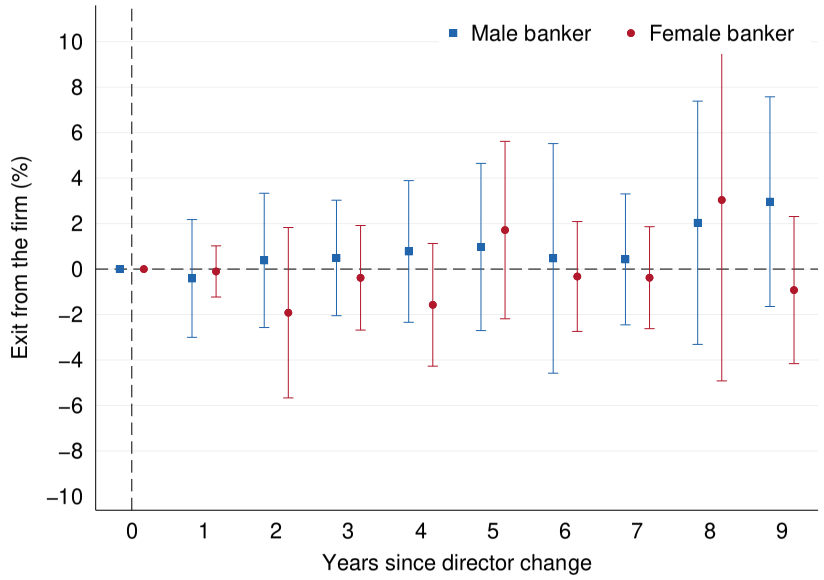
(b) Female-to-Male Director *minus* Female-to-Female Director ("Losing a woman Director")

Notes: Figure shows single-difference estimates from the event study specification in Equation (12). Panel (a) shows estimates of gaining a woman director ($\beta^g_{s,M2W} - \beta^g_{s,M2M}$), while panel (b) shows estimates of losing a woman director ($\beta^g_{s,W2M} - \beta^g_{s,W2W}$) for female ($g = W$) and male ($g = M$) bankers separately following the transition event. All coefficients are estimated from a single regression including 19,000+ monthly observations of 176 female and 188 male bankers, and 85 directors. All bankers experience events. The dependent variable is job band; its sample mean is 5.47 and standard deviation is 0.65. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

Figure B.15: Director Transitions and Attrition: Single-Difference Estimates



(a) Male-to-Female Director *minus* Male-to-Male Director ("Gaining a woman Director")



(b) Female-to-Male Director *minus* Female-to-Female Director ("Losing a woman Director")

Notes: Figure shows single-difference estimates from the event study specification in Equation (12). Panel (a) shows estimates of gaining a woman director ($\beta^g_{s,M2W} - \beta^g_{s,M2M}$), while panel (b) shows estimates of losing a woman director ($\beta^g_{s,W2M} - \beta^g_{s,W2W}$) for female ($g = W$) and male ($g = M$) bankers separately following the transition event. All coefficients are estimated from a single regression including 19,000+ monthly observations of 176 female and 188 male bankers, and 85 directors. All bankers experience events. The dependent variable is attrition (indicator multiplied by 100); its sample mean is 0.58 and standard deviation is 7.57. Error bands indicate 95% confidence intervals obtained by double clustering at banker and director levels.

Table B.1: The Promotion Rule for Senior Bankers

	Job band 6				Job band 7			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Signings	0.0006				-0.0001			
	(0.0006)				(0.0002)			
Avg. amount	0.0049*				0.0018			
	(0.0025)				(0.0014)			
Signings as Operation Leader		0.0032***				-0.0002		
		(0.0012)				(0.0002)		
Signings as Team Member		-0.0004				0.0001		
		(0.0005)				(0.0003)		
Avg. amount as Operation Leader		0.0054**				-0.0003		
		(0.0026)				(0.0015)		
Avg. amount as Team Member		0.0017				0.0014		
		(0.0024)				(0.0015)		
Assignments as Operation Leader			0.0014***	0.0013**			-0.0001	-0.0001
			(0.0005)	(0.0005)			(0.0002)	(0.0002)
Assignments as Team Member			-0.0001	-0.0003			0.0000	-0.0000
			(0.0003)	(0.0003)			(0.0002)	(0.0002)
Assignments as Operation Leader avg. amount			0.0024	0.0011			-0.0002	-0.0002
			(0.0030)	(0.0030)			(0.0017)	(0.0017)
Assignments as Team Member avg. amount			0.0065**	0.0058*			0.0036*	0.0037*
			(0.0031)	(0.0032)			(0.0020)	(0.0020)
Signing ratio as Operation Leader				0.0462***				-0.0099
				(0.0143)				(0.0077)
Signing ratio as Team Member				0.0192				0.0127
				(0.0173)				(0.0119)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.063	0.066	0.065	0.069	0.021	0.021	0.022	0.023
Observations	4,486	4,486	4,486	4,486	4,541	4,541	4,541	4,541
Number of bankers	478	478	478	478	320	320	320	320

Notes: Table presents results of Equation (6) on a sample of job band 6 bankers in columns (1)-(4) and job band 7 bankers in columns (5)-(8), who have not yet been promoted in their current job band as of year-month t, in which at least one banker at the relevant job band is promoted. The dependent variable indicates whether a banker is promoted next month. Fixed effects include directorates, years, and five bins each for worker age, tenure in job band, and length of service. Standard errors are clustered at the banker level and shown in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table B.2: The Promotion Gaps by Job Band

	Job band 5				Job band 6				Job band 7			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Woman	-0.0116***	-0.0105***	-0.0104***	-0.0134***	0.0058	0.0103	0.0105	0.0116	0.0015	0.0022	0.0022	-0.0015
	(0.0040)	(0.0041)	(0.0040)	(0.0042)	(0.0063)	(0.0067)	(0.0067)	(0.0094)	(0.0034)	(0.0040)	(0.0040)	(0.0065)
Married		0.0040	0.0024	0.0026		0.0052	0.0064	0.0064		-0.0024	-0.0025	-0.0029
		(0.0048)	(0.0048)	(0.0048)		(0.0079)	(0.0080)	(0.0080)		(0.0046)	(0.0046)	(0.0047)
Child		0.0041	0.0053	-0.0005		0.0031	0.0025	0.0033		0.0015	0.0021	-0.0001
		(0.0063)	(0.0063)	(0.0079)		(0.0080)	(0.0079)	(0.0091)		(0.0038)	(0.0038)	(0.0048)
Paid leave		0.0020	0.0021	0.0011		0.0002	0.0006	0.0008		-0.0015	-0.0017	-0.0019
		(0.0025)	(0.0025)	(0.0025)		(0.0026)	(0.0026)	(0.0026)		(0.0013)	(0.0014)	(0.0014)
Unpaid leave		-0.0059**	-0.0056*	-0.0057*		-0.0037*	-0.0041**	-0.0041**		0.0010	0.0012	0.0011
		(0.0028)	(0.0030)	(0.0030)		(0.0020)	(0.0019)	(0.0019)		(0.0023)	(0.0023)	(0.0024)
Entry: < job band 5			-0.0249***	-0.0253***			-0.0098	-0.0098			0.0183	0.0187
			(0.0054)	(0.0053)			(0.0089)	(0.0089)			(0.0117)	(0.0117)
Entry: sector			0.0022	0.0022			-0.0069	-0.0069			0.0036	0.0036
			(0.0066)	(0.0065)			(0.0076)	(0.0076)			(0.0045)	(0.0045)
Entry: banking			0.0036	0.0038			-0.0132	-0.0132			-0.0029	-0.0027
			(0.0092)	(0.0092)			(0.0113)	(0.0113)			(0.0053)	(0.0053)
Woman x Child				0.0135				-0.0022				0.0056
				(0.0092)				(0.0126)				(0.0078)
Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.060	0.062	0.064	0.064	0.060	0.061	0.062	0.062	0.019	0.020	0.021	0.021
Observations	8,784	8,784	8,784	8,784	4,486	4,486	4,486	4,486	4,541	4,541	4,541	4,541
Number of bankers	803	803	803	803	478	478	478	478	320	320	320	320

Notes: Table presents results of Equation (6) on a sample of job band 5 bankers in columns (1)-(4), job band 6 bankers in columns (5)-(8), and job band 7 bankers in columns (9)-(12), who have not yet been promoted in their current job band as of year-month t, in which at least one banker at the relevant job band is promoted. The dependent variable indicates whether a banker is promoted next month. Fixed effects include directorates, years, and five bins each for worker age, tenure in job band, and length of service. Standard errors are clustered at the banker level and shown in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table B.3: The Team Membership Assignment Gap for Junior Bankers

	(1)	(2)	(3)
Woman	0.0051	0.0040	0.0023
	(0.0070)	(0.0067)	(0.0074)
Signings as Operation Leader		0.0017	0.0026
		(0.0043)	(0.0062)
Signings as Team Member		0.0043***	0.0043***
		(0.0014)	(0.0014)
Avg. amount as Operation Leader		-0.0113***	-0.0141**
		(0.0043)	(0.0065)
Avg. amount as Team Member		0.0059**	0.0058**
		(0.0026)	(0.0026)
Woman × Signings as Operation Leader			-0.0017
			(0.0077)
Woman × Avg. amount as Operation Leader			0.0053
			(0.0083)
Controls	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes
R-squared	0.085	0.087	0.087
Observations	32,103	32,103	32,103
Number of bankers	814	814	814

Notes: Table presents results of Equation (8) on a sample that includes the full banker-year-month level panel of job band 5 bankers. The dependent variable indicates whether a banker is assigned at least one new project as a Team Member next month; its sample mean is 0.2085. Controls include Married, Child, Paid leave, Unpaid leave, Entry: < job band 5, Entry: sector, and Entry: banking. Fixed effects include directorates, years, and five bins each for worker age, tenure in job band, and length of service. Standard errors are clustered at the banker level and shown in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table B.4: Are Women Worse Project Leaders?

	All bankers			Junior bankers		
	(1) Signed	(2) Time to signing	(3) Non-performing	(4) Signed	(5) Time to signing	(6) Non-performing
Woman OL	0.0074	0.0022	0.0085	0.0149	-0.0652	0.0022
	(0.0102)	(0.0470)	(0.0076)	(0.0165)	(0.0996)	(0.0145)
Project amount	-0.0401***	0.0482*	-0.0033	-0.0330***	0.0276	-0.0100*
	(0.0052)	(0.0261)	(0.0039)	(0.0066)	(0.0395)	(0.0058)
Team size	0.0348*	-0.0598	-0.0109	0.0178	-0.0380	-0.0155
	(0.0207)	(0.0532)	(0.0098)	(0.0239)	(0.0901)	(0.0139)
Equity product	-0.0347	-0.1307*	0.0413***	-0.0173	-0.2935**	0.0098
	(0.0217)	(0.0723)	(0.0124)	(0.0301)	(0.1297)	(0.0262)
Repeat client	0.3462***	-0.2899***	-0.0377**	0.3293***	-0.4006***	-0.0341
	(0.0309)	(0.0417)	(0.0146)	(0.0367)	(0.0771)	(0.0220)
Risk rating	-0.0222***	0.0466**	0.0357***	-0.0112	0.0072	0.0403***
	(0.0064)	(0.0207)	(0.0053)	(0.0141)	(0.0421)	(0.0109)
Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.344	0.314	0.076	0.341	0.353	0.119
Observations	9,258	5,355	5,240	2,555	1,669	1,647
Number of clusters	56	56	56	53	52	52

Notes: Table presents results from regressions estimated on a cross-section of projects taken to the FI's investment committee. The dependent variable in columns (1) and (4) indicates if a project is signed or not. The dependent variable in columns (2) and (5) is (log) time to signing. The dependent variable in columns (3) and (6) indicate, conditional on signing, if a project becomes non-performing. The sample includes all reviewed projects in columns (1) and (4), and only signed projects in other columns. Columns (1)-(3) include all projects; columns (4)-(6) include only those projects that had a junior banker as OL. Project controls are defined as in Table A.2, while Team size is total number of bankers on the project in logs. Regressions include indicators for observations with missing project amount or risk rating. Fixed effects include directorates and years. Standard errors are clustered at directorate level and shown in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table B.5: Job Applications to the Banking Division

Job Band	Hire Gender	Applicant gender			Total	Ratio Women to Men	Positions Filled
		Woman	Man	Other			
5	Woman	8,904	15,760	1,150	25,814	0.56	663
	Man	9,007	18,746	1,490	29,243	0.48	666
	Total	17,911	34,506	2,640	55,057	0.52	1,329
6	Woman	928	2,109	311	3,348	0.44	85
	Man	1,409	3,861	230	5,500	0.36	152
	Total	2,337	5,970	541	8,848	0.39	237
7	Woman	150	544	163	857	0.28	39
	Man	548	1,788	289	2,625	0.31	76
	Total	698	2,332	452	3,482	0.30	115
8	Woman	115	395	119	629	0.29	24
	Man	144	468	97	709	0.31	16
	Total	259	863	216	1,338	0.30	40

Notes: This table reports summary statistics on the gender breakdown of applications by job band and gender of hired person for the banking division of the organization. The sample covers all applications to the organization from January 2017 to June 2021. "Other" refers to applicants who preferred not to state their gender.

Table B.6: New Joiner Characteristics by Gender of First Director

	Male Director		Female Director	
	Men	Women	Men	Women
Age	28.90	28.45	28.47	29.18
Married	0.30	0.28	0.29	0.31
Child	0.17	0.12	0.17	0.15
Entry: job band 4	0.07	0.07	0.10	0.12
Entry: sector	0.49	0.48	0.35	0.51
Entry: banking	0.96	0.98	0.95	0.97
Observations	196	162	109	67

Notes: This table presents summary statistics (means) for new-joiner bankers by gender of their first director. New-joiners are defined as bankers who joined the FI in the past six months and are currently in job band 5 at one of the banking divisions. Summary statistics refer to a total of 534 new-joiners who are identified as new-joiners and who have received at least one project as Operation Leader during the sample period.

Table B.7: Time to First Operation Leader Assignment and Initial Director Characteristics – Including New-Joiners with a Director Transition

	(1)	(2)	(3)	(4)	(5)	(6)
Woman	3.7681**	4.2620***				
	(1.4337)	(1.5085)				
Woman × Director is female			2.4862			
			(2.7626)			
Woman × Director is male			5.1151***			
			(1.6028)			
Woman × Director is a parent				4.6068**		
				(1.9227)		
Woman × Director is not a parent				3.7809		
				(2.5424)		
Woman × Director is high flyer (p25)					3.7462	
					(2.6822)	
Woman × Director is low flyer (p25)					4.3799**	
					(1.6945)	
Woman × Director is high flyer (p33)						5.8089
						(3.5749)
Woman × Director is low flyer (p33)						3.8276**
						(1.5761)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Director effects		Yes	Yes	Yes	Yes	Yes
R-squared	0.346	0.439	0.440	0.439	0.439	0.439
Observations	528	524	524	524	524	524
Equality of coefficients (p-value)			0.40	0.80	0.84	0.60

Notes: Table presents results of Equation (9). The dependent variable is the number of months between a banker's date of joining the organization and receiving his/her first assignment as Operation Leader. The sample includes the cross-section of bankers who joined the organization in job band 5 and received an assignment as Operation Leader during the sample period. High- and low-flyer definitions are based on the age distribution when a director first obtains such management responsibility (p25 = 39.58 and p33 = 41.08). Controls include Married, Child, Entry: < job band 5, Entry: sector, and Entry: banking. Fixed effects include directorates, years, and five bins of worker age. Standard errors are clustered at the director level and shown in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table B.8: Time to First Team Member Assignment and Initial Director Characteristics – Including New-Joiners with a Director Transition

	(1)	(2)	(3)	(4)	(5)	(6)
Woman	0.8215	1.1412				
	(0.6653)	(0.8160)				
Woman × Director is female			0.5696			
			(0.9850)			
Woman × Director is male			1.4279			
			(1.1052)			
Woman × Director is a parent				1.6542		
				(1.3601)		
Woman × Director is not a parent				0.4235		
				(0.7348)		
Woman × Director is high flyer (p25)					-0.5698	
					(0.7718)	
Woman × Director is low flyer (p25)					1.5196	
					(0.9277)	
Woman × Director is high flyer (p33)						-0.9273
						(0.7816)
Woman × Director is low flyer (p33)						1.7121*
						(0.9539)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Director effects		Yes	Yes	Yes	Yes	Yes
R-squared	0.322	0.418	0.418	0.419	0.420	0.422
Observations	531	526	526	526	526	526
Equality of coefficients (p-value)			0.57	0.46	0.06	0.02

Notes: Table presents results of Equation (9). The dependent variable is the number of months between a banker's date of joining the organization and receiving her first assignment as Team Member. The sample includes the cross-section of bankers who joined the organization in job band 5 and received an assignment as Team Member during the sample period. High- and low-flyer definitions are based on the age distribution when a director first obtains such management responsibility (p25 = 39.58 and p33 = 41.08). Controls include Married, Child, Non-banking experience, Entry: < job band 5, Entry: sector, and Entry: banking. Fixed effects include directorates, years, and five bins of worker age. Standard errors are clustered at the director level and shown in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table B.9: Junior Banker Characteristics by Director Transition Event

	Event?		Male to...		Female to...	
	No	Yes	Female	Male	Female	Male
A. Sample						
Unique bankers	362	364	98	167	41	58
B. Banker characteristics						
Woman	0.45	0.49	0.48	0.52	0.38	0.49
Age	31.45	31.12	30.16	32.19	29.63	30.55
Length of service	2.80	2.91	2.37	3.42	2.18	2.82
Tenure in job band	26.02	25.53	22.70	28.58	24.92	21.47
Married	0.41	0.41	0.43	0.41	0.35	0.40
Child	0.26	0.28	0.29	0.33	0.08	0.25
Paid leave	0.30	0.25	0.25	0.20	0.32	0.38
Unpaid leave	0.18	0.07	0.04	0.05	0.27	0.04
Entry: job band 4	0.20	0.22	0.14	0.23	0.16	0.38
Entry: sector	0.52	0.37	0.41	0.36	0.24	0.42
Entry: banking	0.92	0.91	0.91	0.89	0.95	0.96
C. Banker performance						
Signings	2.24	2.43	2.00	3.04	1.62	1.85
Avg. amount	1.48	1.25	1.30	1.28	1.24	1.06
Signings as Operation Leader	0.50	0.46	0.33	0.62	0.32	0.30
Signings as Team Member	1.74	1.97	1.67	2.42	1.30	1.55
Avg. amount as Operation Leader	0.38	0.33	0.28	0.37	0.30	0.31
Avg. amount as Team Member	1.46	1.24	1.30	1.26	1.25	1.06
Assignments as Operation Leader	1.79	1.73	1.67	2.07	1.30	1.08
Assignments as Team Member	6.63	6.95	6.52	8.19	5.03	5.25
Assignments as Operation Leader avg. amount	0.73	0.68	0.67	0.62	0.99	0.66
Assignments as Team Member avg. amount	2.36	2.19	2.42	2.01	2.63	2.02
Signing ratio as Operation Leader	0.10	0.08	0.06	0.10	0.05	0.07
Signing ratio as Team Member	0.19	0.17	0.17	0.18	0.15	0.18

Notes: Table presents average characteristics for bankers experiencing a director transition event and those who have not experienced such an event during the sample period. Panel A shows the unique numbers of bankers in job band 5 who did not experience an event (column 1), who experienced an event (column 2), and who experienced an event by one of four transition types (columns 3-6). Note that bankers can experience multiple transition events; bankers who experience three or more events are excluded from this analysis. For bankers who experience an event, we calculate the average characteristic in the month of the first event. For bankers who never experience an event, we calculate the average characteristic over their tenure in job band 5.

C Survey Evidence

C. 1 Questionnaire and timeline

This section provides more details on the online survey we conducted at the FI between July and August 2022. The survey was conducted in close cooperation with the FI's staff association, which has experience with and infrastructure for surveying the staff of the FI. Further, this increased the legitimacy of and the response rate to our survey. We received responses from 1,049 staff, out of which 473 are from banking divisions. The number of responses for job band 5, 6, and 7 are 199, 130, and 79, respectively, with the remaining 65 responses coming from job bands 1-4 and 8.

We elicited information in three different broad categories: (i) demographics, (ii) job-specific information, and (iii) experiences, perceptions and behaviors that may drive the assignment gap we document. Each panel of Figure C.1 presents one battery of questions we used to investigate the related organizational determinants of the leadership assignment gap that go beyond the effect of Directors. We break them down as follows: C.1a Work Experiences, C.1b Aspirations, C.1c Perceptions on OL assignment (alternative interpretation as information frictions), C.1d Self-evaluation, and C.1e Signaling interest.

In preparation for this survey, we piloted the battery of questions on the workplace experiences in a private bank in another European country. Further information and results are reported in appendix C. 4.

C. 2 Results

In the following paragraphs, we provide the results of our survey for each battery of questions in two ways. First, we plot overlapping histograms for men and women to uncover potential gender differences along the whole distribution of answers. These only include the responses by junior bankers (job band 5) on which we put special emphasis. Second, we test for these differences in responses in a simple regression framework. We report our estimates separately for each of the following samples: (i) "banking", which pools responses from all job bands; (ii) "banking, job band 5", which only reports responses from junior bankers; and (iii) "non-banking", which pools responses from all bands in the non-banking division, if the questions are not specific to banking. Our simple regression is:

$$\text{Response}_i = \alpha + \beta_1 \text{Woman}_i + \beta_2 X_i + \varepsilon_i \tag{C.1}$$

where X_i is a vector of controls for individual and organizational characteristics. Individual controls include indicators for a banker's age group, having children, highest educational degree, and field of study. Organizational controls include indicators for tenure, current job band, division, and office location. We report estimates of $\hat{\beta}_1$, which shows how female bankers respond to various survey questions compared with male bankers, conditional on the observables included in X_i.

Workplace Experiences We first asked banking staff about how often they experienced certain types of behavior at the workplace. Figure C.2 shows the distribution of answers by men and women for the six questions included in this battery. The first two top panels show that women were more likely than men to report being portrayed in a stereotypical way and

given subordinate or less interesting tasks compared to others of equal experience and ability. However, this did not seem to translate into differences in perceptions about visibility vis-a-vis direct supervisors. The first bottom panel shows that women were marginally more likely to report than men that they were never given preference over others of equal experience and ability in the assignment of roles or tasks. We do not observe meaningful differences between junior men and women in their perceptions of expressing their opinion without fear or feeling the need to have put in greater effort.

Table C.1 reports results, in respective panels, from estimating Equation (C.1) when the dependent variable is one of these workplace experiences. Columns (1)-(3) shows results for the full sample of bankers, columns (4)-(6) focus on junior bankers only, and columns (7)-(9) report results from the sample of non-bankers. The first column in each sub-sample is a simple regression that excludes the controls X_i, the second column includes individuals controls, and the third column further adds organizational controls. In line with Figure C.2, we find that female bankers were more likely than male bankers to report being portrayed in a stereotypical way. Across the different specifications, the most robust result appears in Panel B: female bankers, and especially those in job band 5, are more likely to report that they are given subordinate or less interesting tasks compared with others of equal experience and ability. The regression analysis does not reveal any other meaningful differences between junior men and women in banking.

Aspirations It is often suggested that in many workplaces women do not share the same career aspirations as their male counterparts. We therefore asked all bankers doing our survey at the FI how important they deem different career aspirations to be. These results are shown in Figure C.3 and do not reveal gender gaps in terms of aspirations for work-life balance, earnings and pay progression, job satisfaction and stability, status / senior management position, or training and development. Men are marginally more likely to indicate earnings and pay progression as absolutely essential while some women, but virtually no men, reported this aspiration as of little or average importance.

We report results from the estimation of Equation (C.1) when the outcome is one of these aspiration variables in respective panels of Table C.2. In both the full banker sample and the sub-sample of junior bankers, there is little difference between the aspirations of men and women. Panel D suggests that women may attach less importance to earnings and pay progression than men do, but this difference disappears when we include individual and organizational controls. It is interesting to note that women in the non-banking division of the FI are more likely to attach greater importance to job satisfaction and stability, work-life balance, and training and development. Hence, although women and men may differ in their aspirations in the workplace, there can be important differences even within a single firm across its divisions. For our purposes, however, there is no indication that junior women and men in banking vary in this aspect.

Perceptions of OL Assignment The FI survey then asked bankers who were assigned at least one project as an OL to rank various attributes in terms of their importance for determining assignment to the OL position in their teams. Responses to this question by bankers in job band 5 are shown in Figure C.4. The first two top panels show that a greater share

of junior women, when compared with junior men, may regard leadership skills and personal relationship with managers as carrying less importance in OL assignment. However, an estimation of gender differences in bankers' answers to these questions as in Equation (C.1) reveals no statistically significant differences (see Table C.3). Likewise, we do not find meaningful gender differences in junior bankers' responses to current workload, willingness to travel, seniority, or clear expression of OL-ship interest as potential determinants of assignment. We also find no differences in bankers' perceptions of client relationships, seniority, relevant experience, or talent development as potential determinants of OL assignments. Note that these results hold both for the full sample of bankers and the sub-sample of junior bankers. This suggests that men and women at all levels in banking share similar perceptions of how team assignment is determined.

Self-evaluation We then asked junior bankers to evaluate their performance along several dimensions on the latest project that they worked on as an OL. Figure C.5 shows the responses by gender for each of the four aspects in which junior bankers evaluated their past performance. Both junior men and women rated their performance similarly when it came to analytical skills, communication with the organization, and preparing project documentation. However, the second panel suggests that men were more likely to rate themselves more favorably when it came to communication with clients. Again, we test for gender differences in self-evaluation more formally using Equation (C.1) and report results in Table C.4. These regression estimates reveal that while women rate themselves less positively in their communications with clients on the last project they led than men do, this difference is not statistically significant.

We also asked bankers to evaluate themselves following the latest project that they worked on as a TM. For this exercise, we restricted the sample to those bankers who have not yet been assigned a project as OL. This helps us isolate how early-career performance, which is typically achieved by completing a few projects as TM, might affect future OL assignments. Figure C.6 shows that junior women and men reported very similar levels of satisfaction on each of the four aspects they evaluated themselves. The regression analysis presented in Table C.5 confirms no discernible differences.

Signaling Interest in OL Positions Despite reporting similar levels of performance on their most recent projects, junior men and women may still differ in how strongly they push their directors to assign them the next OL role that becomes available. To understand whether junior men and women may differ along this line, we asked bankers how actively and clearly they express interest in becoming an OL to their director at three points during the survey: (i) when they indicated that they were assigned at least one project as OL; (ii) after they evaluated their own performance on their most recent project as OL; and (iii) after they evaluated their own performance on their most recent project as TM.

Figure C.7 shows how junior women and men responded at each of these three points on a 1-10 Likert scale. In general, bankers reported that they were extremely likely to signal their interest in becoming an OL to their supervisors, and there are no differences between junior men and women. Table C.6 shows estimates of Equation (C.1) when the dependent variable is either of these response variables. Across different specifications and samples, we

do not find any gender difference in signaling interest for upcoming OL positions.

C. 3 Leadership assignment gap in the survey

Finally, we confirm that the same assignment gap we find in the administrative firm records is present in the self-reported survey. To document the assignment gap in the survey, we estimate Equation (C.1) with individual and organizational controls, and where the dependent variable is a categorical outcome that reports how many times a banker has been an OL since joining the FI. The dependent variable can take on the values from the following set: [0,1-2,3-4,5+]. Columns (1) and (6) in Table C.7 show that women report a lower category of OL assignments both in the full sample of bankers and in the sub-sample of junior bankers, respectively. Both estimates are statistically significant. However, the fact that the estimate is much larger for junior bankers suggests that the gap in assignments disappears at higher job bands following promotion from job band 5. This is in line with one of our main findings that the promotion gap exist only at the junior level and not further up the corporate hierarchy.

What is especially appealing in estimating the gender gap in assignments using survey data is that we can fully utilize the power of the survey responses in explaining this gap. Specifically, we test what happens to the gender gap in assignments when we control for each battery of questions we asked to elicit information on experiences, perceptions, and behaviors. Columns (2) and (7) show that the assignments gap becomes smaller and is no longer statistically significant when we include workplace experience variables as controls. Specifically, the variable on "tasks" stands out, and it is negatively and strongly correlated with the number of OL assignments. Hence, the gender gap in assignments in the survey data can be accounted for by the fact that female bankers – and especially junior women in job band 5 – are more likely to report being given subordinate or less interesting tasks.

It is also important to note that the inclusion of other sets of responses does little to explain the gender gap in assignments. In columns (3) and (8), we control for a set of responses aimed to proxy bankers' career aspirations. While there is some evidence that bankers who attach greater importance to earnings and pay progression have also received more OL assignments, the coefficient on the Woman dummy barely changes. In columns (4) and (9), we instead control for variables that capture bankers' beliefs about what determines assignment to OL positions. In columns (5) and (10), we include bankers' self-evaluation responses. None of these variables seem to have an explanatory power and they leave the assignment gap unexplained.

C. 4 Pilot survey

In early 2022, Friebel and Stahl piloted most of the work environment questions of our survey in a private bank in Europe. Figure C.8 shows the results which are remarkably similar to the ones in our FI (Figure C.2).

Figure C.1: Survey Questionnaire

(a) Work Experiences

Please indicate how often you have experienced the following in the work environment:

	Never	Once	Several Times	Regularly
I was portrayed in a stereotypical way.	☐	☐	☐	☐
I was given subordinate or less interesting tasks compared to others of equal experience and ability.	☐	☐	☐	☐
I had good visibility with my direct supervisor(s) compared to others of equal experience and ability.	☐	☐	☐	☐
I was given preference over others of equal experience and ability in the assignment of roles and/or tasks.	☐	☐	☐	☐
I held back expressing my opinion because I feared either not being listened to or receiving a dismissive response.	☐	☐	☐	☐
I had a sense that I should have put more effort into my work to achieve the best possible outcome.	☐	☐	☐	☐

(b) Aspirations

Which of the following career aspirations are most important to you (on a scale of 1=not important, 5=absolutely essential), using each only once.

	1 - not important	2 - of little importance	3 - of average importance	4 - very important	5 - absolutely essential
Status/ a position of senior management	☐	☐	☐	☐	☐
Job satisfaction and stability	☐	☐	☐	☐	☐
Work-life balance	☐	☐	☐	☐	☐
Earnings and pay progression	☐	☐	☐	☐	☐
Training and development	☐	☐	☐	☐	☐

(c) Perceptions of OL Assignment

Which of the following attributes, according to your opinion and experience, are important for assignment to OL-ship in your team? (Please number each box in order of preference from 1 to 10, whereby 1 is the highest and 10 is the lowest and using each only once.)

	1	2	3	4	5	6	7	8	9	10
Technical skills	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Leadership skills	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Personal relationship with manager	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Relevant sector or country experience	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Current workload	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Willingness to travel	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Client relationship	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Seniority	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Clear expression of interest to become the OL	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Talent development	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

(d) Self-evaluation

In your opinion, how well did you perform on the last projects you did as an OL in terms of (1=poor; 5=excellent):

	1 - poor	2 - fair	3 - good	4 - very good	5 - excellent
Analytical skills	☐	☐	☐	☐	☐
Communication with clients	☐	☐	☐	☐	☐
Communication within the Bank	☐	☐	☐	☐	☐
Preparing project documentation	☐	☐	☐	☐	☐

In your opinion, how well did you perform on the last projects you did as a TM in terms of (1=poor; 5=excellent):

	1 - poor	2 - fair	3 - good	4 - very good	5 - excellent
Analytical skills	☐	☐	☐	☐	☐
Communication with clients	☐	☐	☐	☐	☐
Communication within the Bank	☐	☐	☐	☐	☐
Preparing project documentation	☐	☐	☐	☐	☐

(e) Signaling Interest

Imagine there is a project that you would like to be the OL of and believe you are qualified to do so. On a scale of 0 to 100 (where 0 is not likely at all and 100 is extremely likely) how likely are you to actively and clearly express your interest in the OL-ship to your supervisor (s)? Respondents need to drag the blue circle to the right to indicate the relevant percentage.

0%

On a scale of 0 to 100 (where 0 is not likely at all and 100 is extremely likely) how likely are you to express your interest to be an OL for a project that matches your skills and knowledge? Respondents need to drag the blue circle to the right to indicate the relevant percentage.

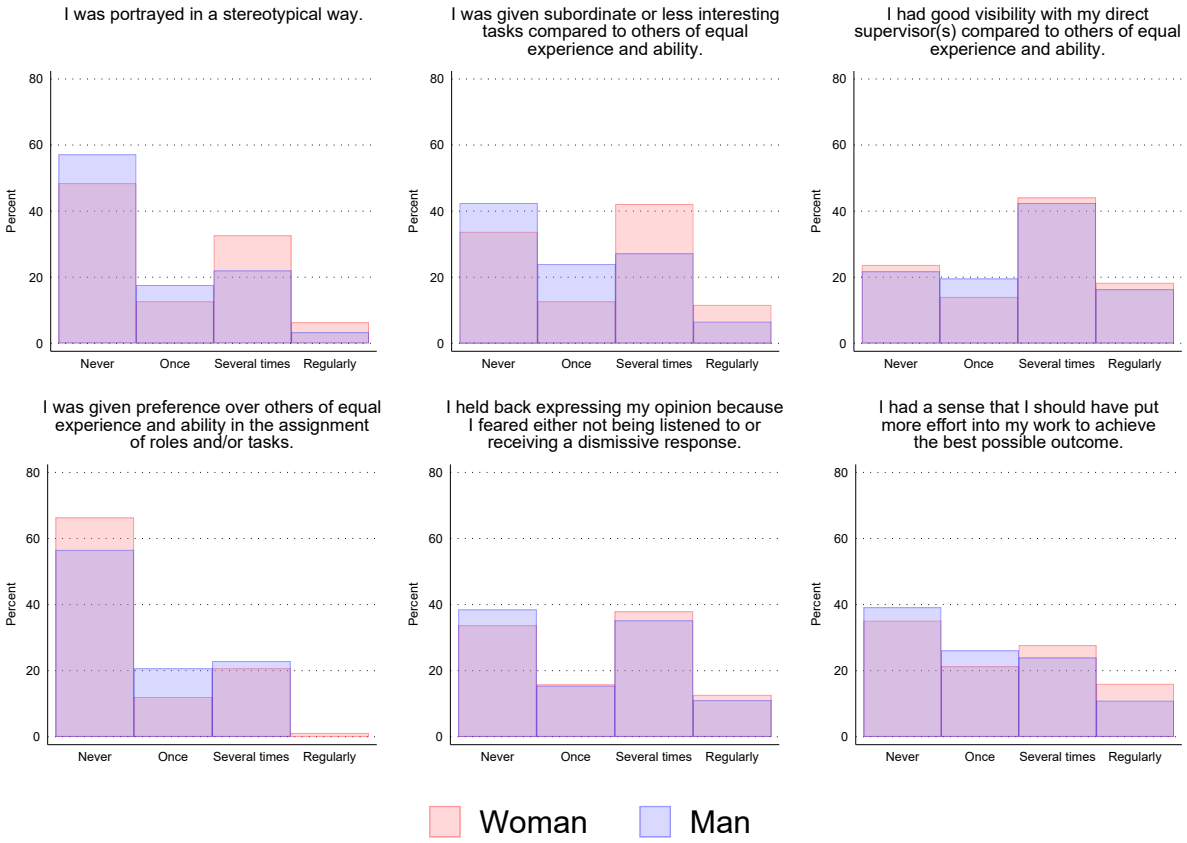
0%

How likely is it that you would clearly express your interest to be an OL for a project with a similar requirement of skills and knowledge? Respondents need to drag the blue circle to the right to indicate the relevant percentage.

0%

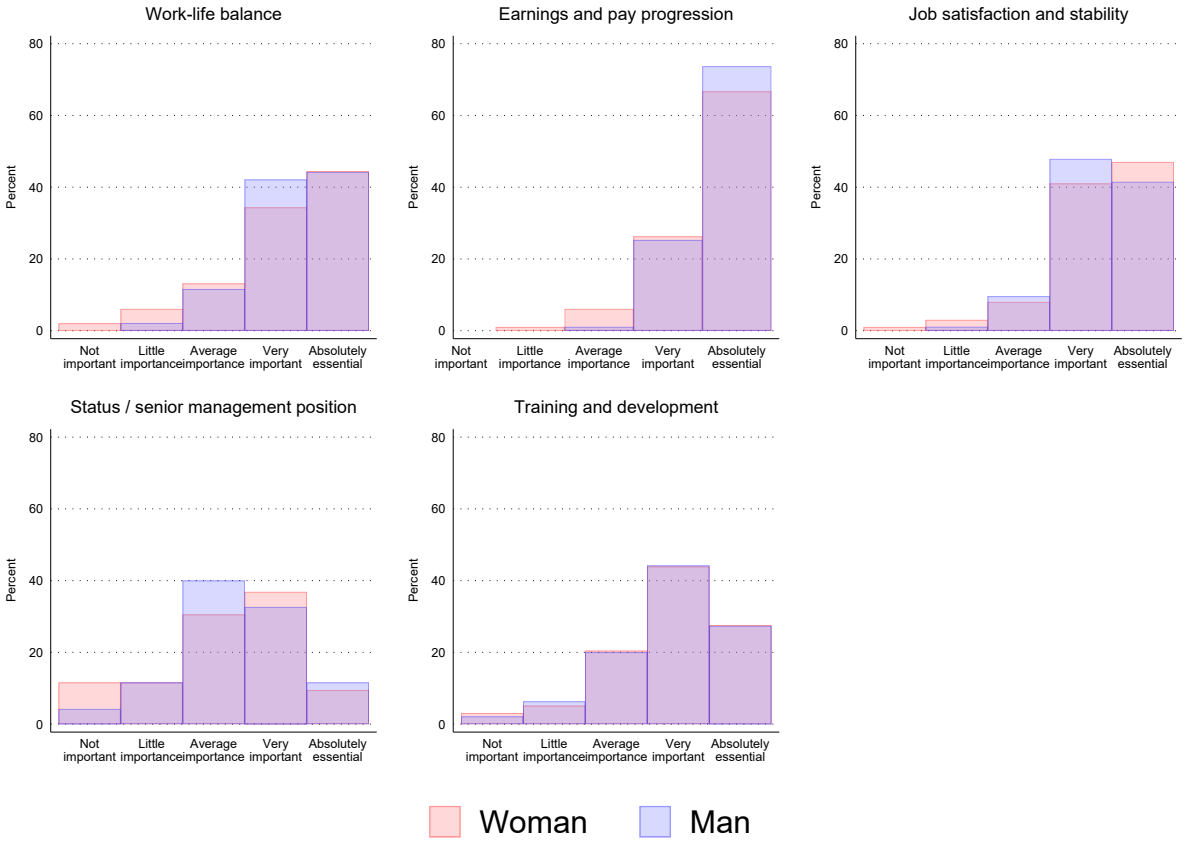
Notes: Figure provides snapshots of our original survey questions as presented to the employees of the FI. Additional text and explanations in between are omitted due to confidentiality.

Figure C.2: Junior Bankers' Perceptions of the Work Environment



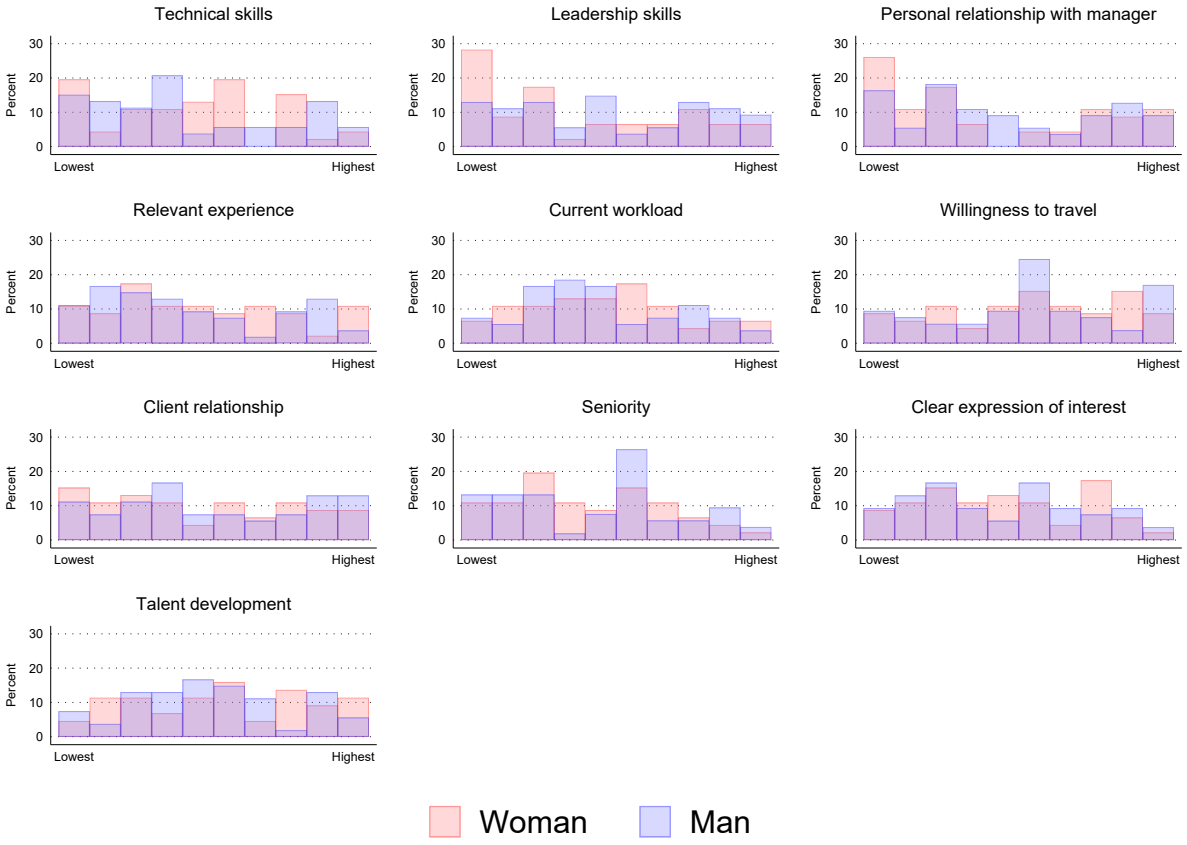
Notes: Figure shows results of the survey conducted at the FI. Responses by banking staff at job band 5 are shown.

Figure C.3: Junior Bankers' Aspirations



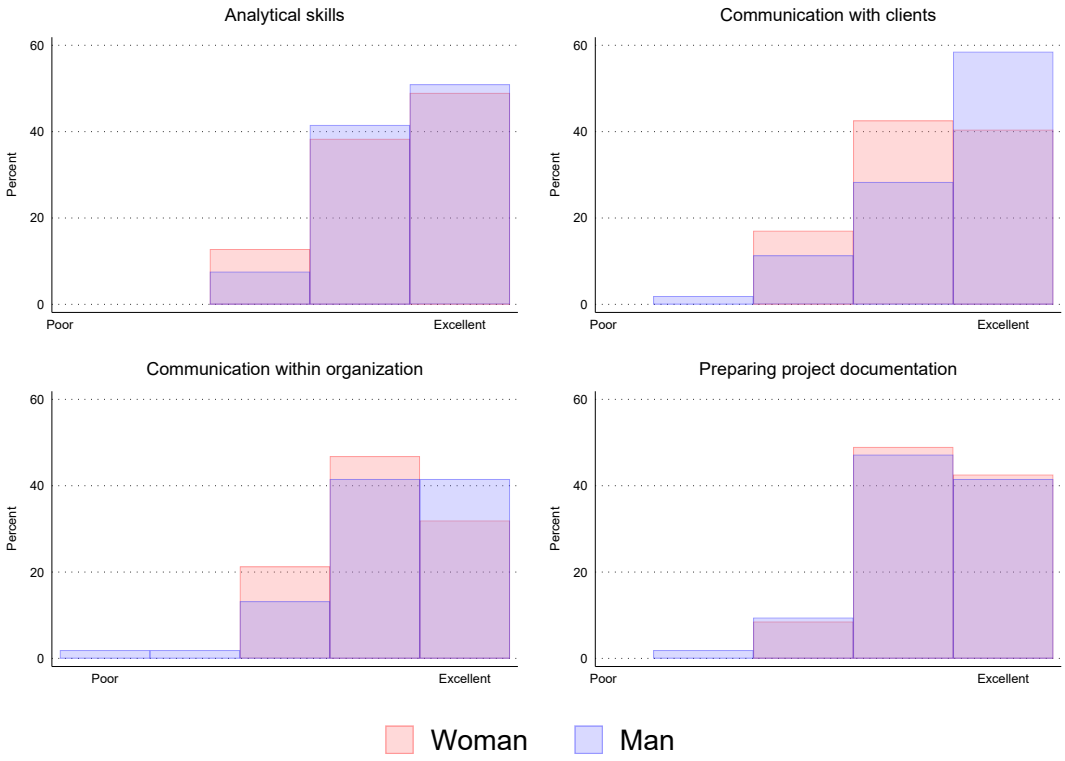
Notes: Figure shows results of the survey conducted at FI. Responses by banking staff at job band 5 are shown.

Figure C.4: Junior Bankers' Perceptions of OL Assignment



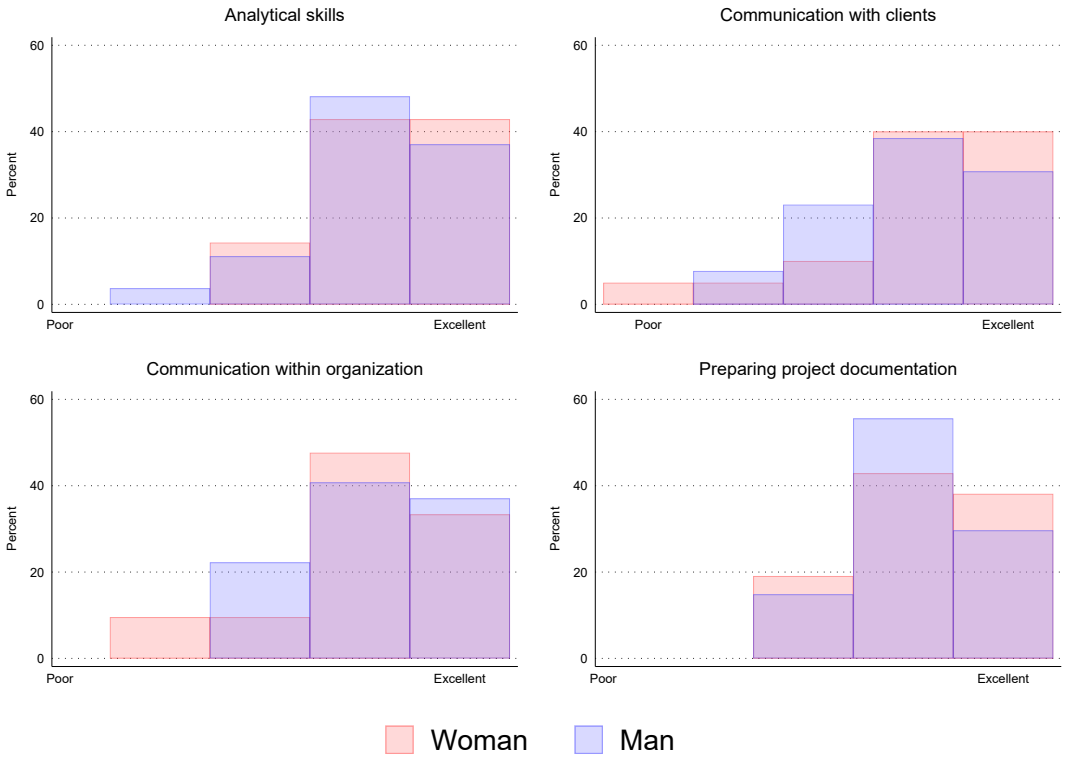
Notes: Figure shows results of the survey conducted at FI. Responses by banking staff at job band 5 who have been assigned at least one project as OL are shown.

Figure C.5: Junior Bankers' Self-evaluation of Their Last OL-ship



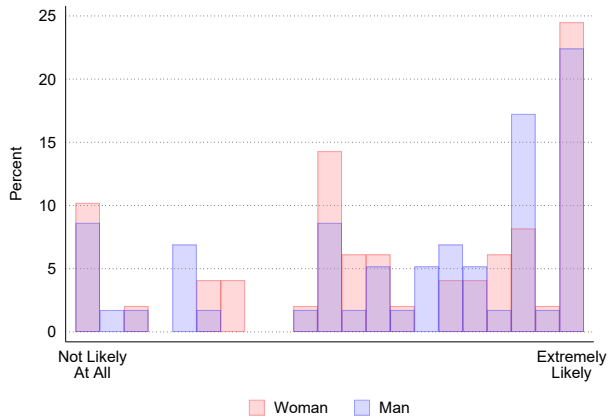
Notes: Figure shows results of the survey conducted at FI. Responses by banking staff at job band 5 who have been assigned at least one project as OL are shown.

Figure C.6: Junior Bankers' Self-evaluation of Their Last TM-ship

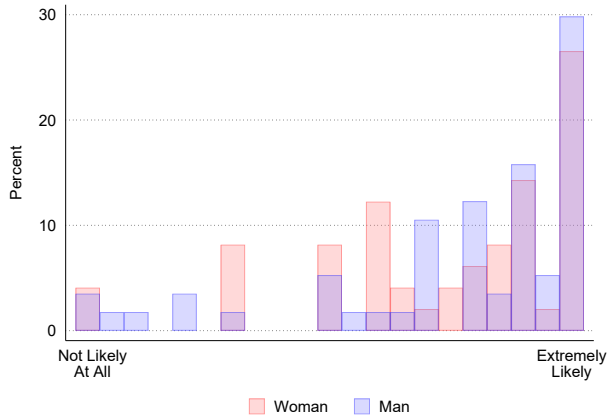


Notes: Figure shows results of the survey conducted at FI. Responses by banking staff at job band 5 who have been assigned at least one project as TM but not yet assigned a project as OL are shown.

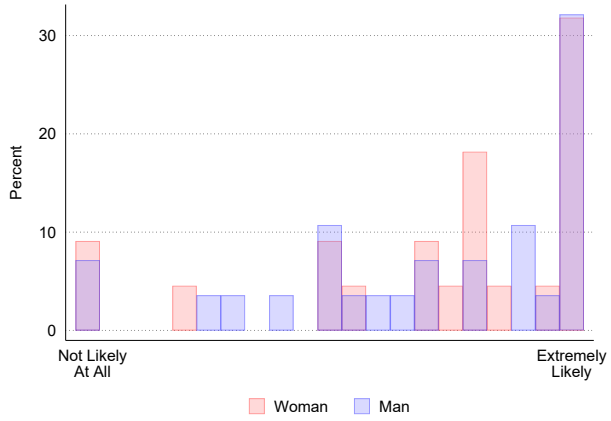
Figure C.7: Junior Bankers' Signaling of Interest in OL positions



(a) Active and clear signaling to supervisor



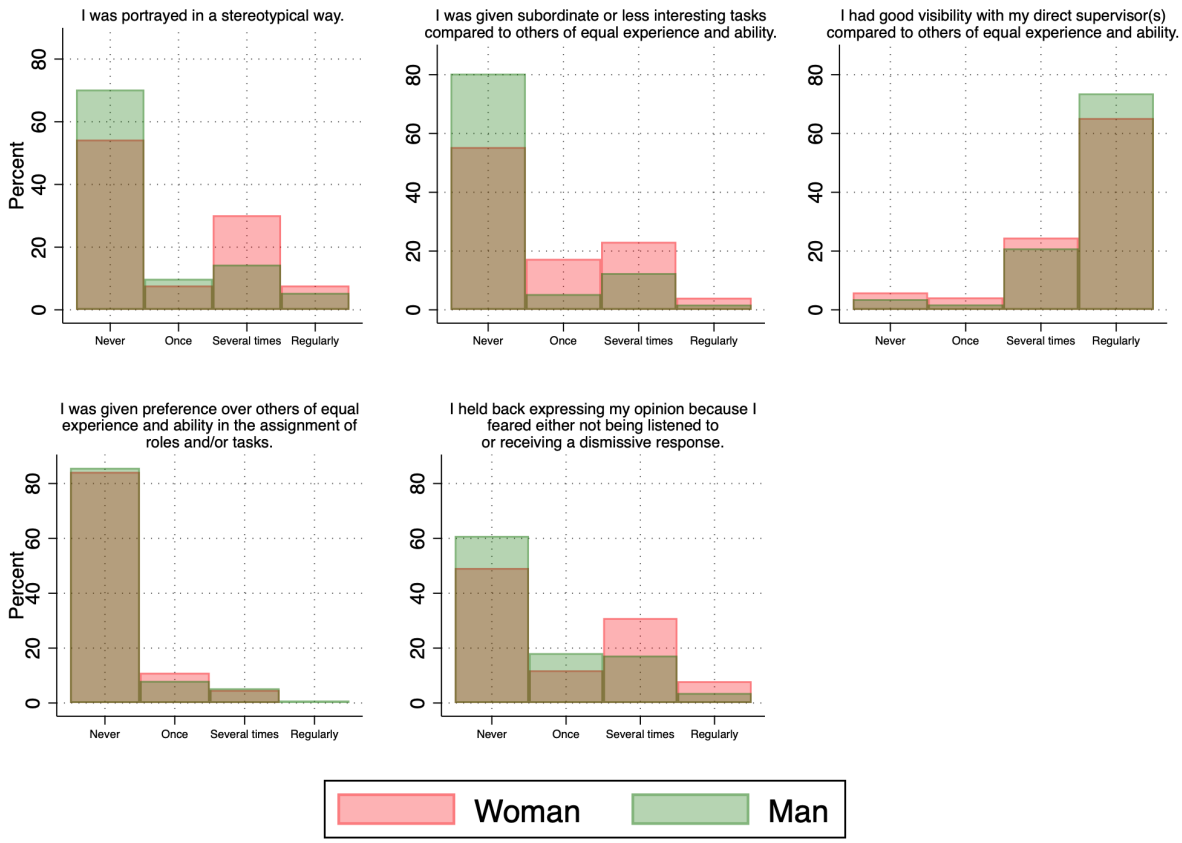
(b) Signaling after self-evaluation as OL



(c) Signaling after self-evaluation as TM

Notes: Responses by banking staff at job band 5 who have been assigned at least one project as OL are shown in panels (a) and (b) and by banking staff at job band 5 who have been assigned at least one project as TM but not yet assigned a project as OL in panel (c).

Figure C.8: Perceptions of the Work Environment in a Private Bank



Notes: Figure shows results of the survey conducted at a European private bank.

Table C.1: Perceptions of the Work Environment

	Banking			Banking - job band 5			Non-banking		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A				*Stereotype*					
Woman	0.3081***	0.3074***	0.3110***	0.2647*	0.2714*	0.1394	0.1565	0.1268	0.1136
	(0.0989)	(0.1055)	(0.1119)	(0.1377)	(0.1589)	(0.1764)	(0.1088)	(0.1131)	(0.1189)
R-squared	0.023	0.057	0.152	0.017	0.077	0.176	0.005	0.066	0.182
Observations	418	418	418	212	212	212	394	394	394
Panel B				*Given subordinate or less interesting tasks*					
Woman	0.2905***	0.3647***	0.3660***	0.2733*	0.4309**	0.4333**	0.0250	0.0180	0.0044
	(0.1014)	(0.1094)	(0.1144)	(0.1418)	(0.1667)	(0.1717)	(0.1062)	(0.1086)	(0.1138)
R-squared	0.019	0.066	0.161	0.017	0.101	0.237	0.000	0.060	0.160
Observations	420	420	420	213	213	213	394	394	394
Panel C				*Visibility with direct supervisor*					
Woman	0.0159	-0.0352	0.0073	0.1014	0.0924	0.0538	-0.2529**	-0.2562**	-0.2516*
	(0.1025)	(0.1064)	(0.1133)	(0.1454)	(0.1713)	(0.1880)	(0.1182)	(0.1253)	(0.1388)
R-squared	0.000	0.053	0.118	0.002	0.062	0.202	0.012	0.048	0.112
Observations	417	417	417	208	208	208	386	386	386
Panel D				*Preference given over others*					
Woman	0.0026	-0.0417	-0.0312	-0.0281	-0.1077	-0.0841	-0.0633	-0.0940	-0.0638
	(0.0887)	(0.0910)	(0.0948)	(0.1199)	(0.1261)	(0.1268)	(0.0904)	(0.0965)	(0.1022)
R-squared	0.000	0.071	0.139	0.000	0.153	0.284	0.001	0.022	0.139
Observations	415	415	415	209	209	209	386	386	386
Panel E				*Held back opinion*					
Woman	0.1547	0.1951*	0.1792	0.1403	0.1914	0.1374	0.1280	0.1605	0.1399
	(0.1069)	(0.1139)	(0.1194)	(0.1488)	(0.1690)	(0.1939)	(0.1125)	(0.1182)	(0.1294)
R-squared	0.005	0.047	0.135	0.004	0.036	0.166	0.003	0.056	0.138
Observations	423	423	423	212	212	212	395	395	395
Panel F				*Effort*					
Woman	0.1492	0.1807	0.1335	0.2059	0.2278	0.0791	0.1523	0.1007	0.0553
	(0.1047)	(0.1132)	(0.1182)	(0.1499)	(0.1715)	(0.1738)	(0.1048)	(0.1076)	(0.1167)
R-squared	0.005	0.051	0.168	0.009	0.074	0.259	0.005	0.101	0.143
Observations	420	420	420	210	210	210	385	385	385
Individual controls		Yes	Yes		Yes	Yes		Yes	Yes
Organizational controls			Yes			Yes			Yes

Notes: Table presents results of Equation (C.1). The dependent variable in each panel is derived from responses to questions on the workplace environment in the FI survey. Sample includes all staff in banking in columns (1)-(3), all job band 5 staff in banking in columns (4)-(6), and all staff in non-banking in columns (7)-(9). Individual controls include indicators for a banker's age group, having children or not, highest educational degree, and field of study. Organizational controls include indicators for tenure, current job band, division, and office location. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table C.2: Aspirations

	Banking			Banking - job band 5			Non-banking		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A	*Status / a position of senior management*								
Woman	-0.1588	-0.0942	0.0028	-0.2036	-0.0386	0.0352	-0.1397	-0.1277	-0.1332
	(0.1084)	(0.1134)	(0.1137)	(0.1475)	(0.1674)	(0.1699)	(0.1054)	(0.1123)	(0.1159)
R-squared	0.005	0.063	0.146	0.009	0.133	0.258	0.004	0.071	0.166
Observations	430	430	430	215	215	215	415	415	415
Panel B	*Job satisfaction and stability*								
Woman	0.0090	0.0024	0.0058	0.0153	-0.0819	-0.0625	0.1550**	0.1471**	0.1683**
	(0.0729)	(0.0775)	(0.0796)	(0.1006)	(0.1233)	(0.1210)	(0.0667)	(0.0710)	(0.0753)
R-squared	0.000	0.044	0.115	0.000	0.110	0.247	0.013	0.040	0.097
Observations	434	434	434	220	220	220	416	416	416
Panel C	*Work-life balance*								
Woman	0.0185	-0.0249	-0.0181	-0.0900	-0.2178	-0.1783	0.1653**	0.1597**	0.1297
	(0.0870)	(0.0940)	(0.0987)	(0.1150)	(0.1380)	(0.1463)	(0.0768)	(0.0788)	(0.0831)
R-squared	0.000	0.048	0.099	0.003	0.142	0.231	0.011	0.070	0.122
Observations	429	429	429	220	220	220	415	415	415
Panel D	*Earnings and pay progression*								
Woman	-0.1132*	-0.0627	-0.0909	-0.1495**	-0.1288	-0.1347	0.0066	-0.0015	-0.0356
	(0.0643)	(0.0669)	(0.0708)	(0.0739)	(0.0841)	(0.0891)	(0.0679)	(0.0752)	(0.0800)
R-squared	0.007	0.078	0.142	0.018	0.116	0.198	0.000	0.054	0.115
Observations	435	435	435	220	220	220	417	417	417
Panel E	*Training and development*								
Woman	0.1382	0.2353**	0.2509**	0.0601	0.1217	0.2208	0.2091**	0.2121**	0.2555**
	(0.0970)	(0.1030)	(0.1030)	(0.1312)	(0.1495)	(0.1574)	(0.0961)	(0.1037)	(0.1090)
R-squared	0.005	0.043	0.134	0.001	0.047	0.183	0.011	0.047	0.138
Observations	434	434	434	219	219	219	416	416	416
Individual controls		Yes	Yes		Yes	Yes		Yes	Yes
Organizational controls			Yes			Yes			Yes

Notes: Table presents results of Equation (C.1). The dependent variable in each panel is derived from responses to questions on aspirations in the FI survey. Sample includes all staff in banking in columns (1)-(3), all job band 5 staff in banking in columns (4)-(6), and all staff in non-banking in columns (7)-(9). Individual controls include indicators for a banker's age group, having children or not, highest educational degree, and field of study. Organizational controls include indicators for tenure, current job band, division, and office location. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table C.3: Perceptions of OL Assignment

	Banking			Banking - job band 5		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A			*Technical skills*			
Woman	0.2173	0.4304	0.5159	-0.0826	0.1039	0.2080
	(0.3684)	(0.3848)	(0.4160)	(0.5625)	(0.6422)	(0.7273)
R-squared	0.001	0.066	0.140	0.000	0.169	0.415
Observations	257	257	257	101	101	101
Panel B			*Leadership skills*			
Woman	0.1000	0.1862	0.2585	-0.9379	-1.2622*	-1.0447
	(0.4173)	(0.4318)	(0.4657)	(0.6206)	(0.6754)	(0.7614)
R-squared	0.000	0.053	0.149	0.022	0.208	0.513
Observations	261	261	261	102	102	102
Panel C			*Personal relationship with manager*			
Woman	-0.2542	-0.4600	-0.3889	-0.4172	-0.6156	-0.6285
	(0.3967)	(0.4082)	(0.4338)	(0.6402)	(0.7284)	(0.7652)
R-squared	0.002	0.052	0.137	0.004	0.078	0.372
Observations	261	261	261	103	103	103
Panel D			*Relevant sector or country experience*			
Woman	0.5391	0.5543	0.5670	0.2399	0.1179	0.3442
	(0.3805)	(0.3972)	(0.4135)	(0.5644)	(0.6357)	(0.6898)
R-squared	0.008	0.067	0.168	0.002	0.113	0.346
Observations	259	259	259	102	102	102
Panel E			*Current workload*			
Woman	0.3941	0.2806	0.3417	0.0311	-0.2100	-0.0084
	(0.3383)	(0.3475)	(0.3816)	(0.5016)	(0.5565)	(0.6027)
R-squared	0.005	0.055	0.113	0.000	0.116	0.369
Observations	260	260	260	102	102	102
Panel F			*Willingness to travel*			
Woman	-0.2018	-0.2265	-0.1785	-0.0941	-0.1383	0.1367
	(0.3717)	(0.3922)	(0.4173)	(0.5621)	(0.6230)	(0.6498)
R-squared	0.001	0.027	0.096	0.000	0.082	0.298
Observations	254	254	254	101	101	101
Panel G			*Client relationship*			
Woman	0.3224	0.4370	0.4810	-0.4744	-0.7221	-0.7175
	(0.3932)	(0.4081)	(0.4297)	(0.6090)	(0.7069)	(0.7130)
R-squared	0.003	0.076	0.178	0.006	0.103	0.437
Observations	259	259	259	102	102	102
Panel H			*Seniority*			
Woman	0.0256	-0.0630	-0.0694	-0.2676	-0.6067	-0.6817
	(0.3303)	(0.3385)	(0.3670)	(0.5154)	(0.5749)	(0.5925)
R-squared	0.000	0.041	0.157	0.003	0.065	0.320
Observations	258	258	258	101	101	101
Panel I			*Clear expression of interest to become the OL*			
Woman	0.0037	0.0421	0.0516	0.0357	0.0710	-0.0576
	(0.3227)	(0.3326)	(0.3635)	(0.5216)	(0.5928)	(0.6933)
R-squared	0.000	0.037	0.131	0.000	0.072	0.309
Observations	260	260	260	102	102	102
Panel J			*Talent development*			
Woman	0.1305	0.1252	0.2980	0.3084	0.0052	0.2637
	(0.3322)	(0.3406)	(0.3641)	(0.5409)	(0.6070)	(0.6653)
R-squared	0.001	0.059	0.150	0.003	0.123	0.320
Observations	255	255	255	100	100	100
Individual controls		Yes	Yes		Yes	Yes
Organizational controls			Yes			Yes

Notes: Table presents results of Equation (C.1). The dependent variable in each panel is derived from responses to questions on perceptions of what determines assignment to OL positions in the FI survey. Sample is restricted to staff who were assigned at least one project as OL in banking in columns (1)-(3) and to job band 5 staff in banking in columns (4)-(6). Individual controls include indicators for a banker's age group, having children or not, highest educational degree, and field of study. Organizational controls include indicators for tenure, current job band, division, and office location. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table C.4: Self-evaluation of Last OL-ship at FI

	Banking			Banking - job band 5		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	*Analytical skills*					
Woman	0.0256	0.0499	0.0514	-0.0928	-0.0856	-0.0518
	(0.0814)	(0.0851)	(0.0926)	(0.1336)	(0.1500)	(0.1568)
R-squared	0.000	0.040	0.175	0.005	0.071	0.365
Observations	260	260	260	102	102	102
Panel B	*Communication with clients*					
Woman	-0.0449	-0.0342	-0.0384	-0.2205	-0.2273	-0.1645
	(0.0860)	(0.0914)	(0.0971)	(0.1481)	(0.1756)	(0.2014)
R-squared	0.001	0.074	0.166	0.022	0.080	0.301
Observations	260	260	260	102	102	102
Panel C	*Communication within the organisation*					
Woman	0.0353	0.0173	0.0189	-0.1118	-0.1775	-0.2434
	(0.0917)	(0.0938)	(0.0984)	(0.1589)	(0.1755)	(0.1855)
R-squared	0.001	0.057	0.164	0.005	0.076	0.360
Observations	260	260	260	102	102	102
Panel D	*Preparing project documentation*					
Woman	0.0641	0.0512	0.0366	0.0313	0.0497	-0.0187
	(0.0827)	(0.0851)	(0.0964)	(0.1339)	(0.1426)	(0.1407)
R-squared	0.002	0.080	0.164	0.001	0.145	0.394
Observations	260	260	260	102	102	102
Individual controls		Yes	Yes		Yes	Yes
Organizational controls			Yes			Yes

Notes: Table presents results of Equation (C.1). The dependent variable in each panel is derived from responses to questions on how well bankers think they did in their last project as OL in the FI survey. Sample is restricted to staff who were assigned at least one project as OL in banking in columns (1)-(3) and to job band 5 staff in banking in columns (4)-(6). Individual controls include indicators for a banker's age group, having children or not, highest educational degree, and field of study. Organizational controls include indicators for tenure, current job band, division, and office location. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table C.5: Self-evaluation of Last TM-ship at FI

	Banking			Banking - job band 5		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	*Analytical skills*					
Woman	0.1039	0.2518	-0.1242	0.0714	0.0739	-0.3107
	(0.1939)	(0.2435)	(0.2585)	(0.2157)	(0.2907)	(0.2792)
R-squared	0.004	0.156	0.552	0.002	0.103	0.516
Observations	64	64	64	49	49	49
Panel B	*Communication with clients*					
Woman	0.0864	-0.0007	0.0242	0.0870	-0.0502	-0.0654
	(0.2656)	(0.3347)	(0.5204)	(0.3047)	(0.4042)	(0.7316)
R-squared	0.002	0.166	0.449	0.002	0.121	0.459
Observations	62	62	62	47	47	47
Panel C	*Communication within the organisation*					
Woman	0.0085	-0.1683	-0.2165	-0.1310	-0.2345	-0.2370
	(0.2210)	(0.2704)	(0.3815)	(0.2480)	(0.3196)	(0.5300)
R-squared	0.000	0.113	0.423	0.006	0.050	0.394
Observations	64	64	64	49	49	49
Panel D	*Preparing project documentation*					
Woman	0.1198	0.1681	-0.3034	0.0119	0.0265	-0.4298
	(0.1879)	(0.2126)	(0.2635)	(0.2066)	(0.2584)	(0.2987)
R-squared	0.007	0.130	0.491	0.000	0.039	0.520
Observations	64	64	64	49	49	49
Individual controls		Yes	Yes		Yes	Yes
Organizational controls			Yes			Yes

Notes: Table presents results of Equation (C.1). The dependent variable in each panel is derived from responses to questions on how well bankers think they did in their last project as TM in the FI survey. Sample is restricted to staff who were assigned at least one project as TM but not yet assigned a project as OL in banking in columns (1)-(3) and to job band 5 staff in banking in columns (4)-(6). Individual controls include indicators for a banker's age group, having children or not, highest educational degree, and field of study. Organizational controls include indicators for tenure, current job band, division, and office location. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table C.6: Signaling Interest in OL Positions at FI

	Banking			Banking - job band 5		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	*Signaling interest in OL-ship*					
Woman	-2.1936	-2.4773	-0.1022	-1.4830	-0.2691	0.8302
	(4.1065)	(4.0359)	(4.1561)	(6.4285)	(6.4724)	(7.6975)
R-squared	0.001	0.083	0.210	0.000	0.193	0.320
Observations	283	283	283	109	109	109
Panel B	*Signaling interest after self-evaluation as OL*					
Woman	-2.3036	-2.5323	-1.3229	-2.8502	-4.0332	-4.0688
	(3.7034)	(3.8121)	(4.0370)	(5.2774)	(5.7680)	(7.1823)
R-squared	0.001	0.068	0.181	0.003	0.107	0.219
Observations	278	278	278	108	108	108
Panel C	*Signaling interest after self-evaluation as TM*					
Woman	13.6944	14.9658*	15.1700	0.2038	11.8162	9.3504
	(8.6814)	(8.0291)	(11.9040)	(8.8226)	(8.3390)	(11.5283)
R-squared	0.032	0.356	0.610	0.000	0.291	0.606
Observations	69	69	69	51	51	51
Individual controls		Yes	Yes		Yes	Yes
Organizational controls			Yes			Yes

Notes: Table presents results of Equation (C.1). The dependent variable in each panel is derived from responses to questions on how actively and clearly bankers express interest in becoming an OL on an upcoming project in the FI survey. In panels A and B, sample is restricted to staff who were assigned at least one project as OL in banking in columns (1)-(3) and to job band 5 staff in banking in columns (4)-(6). In panel C, sample is restricted to staff who were assigned at least one project as TM but not yet assigned a project as OL in banking in columns (1)-(3) and to job band 5 staff in banking in columns (4)-(6). Individual controls include indicators for a banker's age group, having children or not, highest educational degree, and field of study. Organizational controls include indicators for tenure, current job band, division, and office location. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table C.7: The Leadership Assignment Gap in the FI Survey

	Banking					Banking - job band 5				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Woman	-0.1834*	-0.1610	-0.1970*	-0.1517*	-0.1605*	-0.5331**	-0.3391	-0.5502**	-0.5224***	-0.4657**
	(0.0982)	(0.1140)	(0.1021)	(0.0915)	(0.0881)	(0.2176)	(0.2489)	(0.2290)	(0.1895)	(0.2096)
Stereotype		0.0274					-0.0194			
		(0.0620)					(0.1239)			
Tasks		-0.1557***					-0.3029**			
		(0.0555)					(0.1337)			
Visibility		0.0181					0.0703			
		(0.0535)					(0.1102)			
Preference		0.0887					0.1547			
		(0.0606)					(0.1446)			
Opinion		0.0847					0.2478**			
		(0.0536)					(0.1203)			
Effort		-0.0303					-0.0108			
		(0.0514)					(0.1028)			
Status			0.0142					0.0232		
			(0.0539)					(0.1107)		
Satisfaction			-0.0325					-0.1176		
			(0.0819)					(0.1759)		
Balance			-0.0372					-0.0441		
			(0.0625)					(0.1205)		
Earnings			0.1395*					0.2930*		
			(0.0776)					(0.1719)		
Training			0.0252					0.1434		
			(0.0580)					(0.1194)		
Technical skills				-0.0049					-0.0172	
				(0.0271)					(0.0578)	
Leadership skills				0.0222					0.0549	
				(0.0239)					(0.0557)	
Personal relationship with manager				-0.0163					0.0070	
				(0.0164)					(0.0418)	
Relevant sector or country experience				-0.0127					0.0522	
				(0.0276)					(0.0567)	
Current workload				-0.0220					-0.1194*	
				(0.0205)					(0.0629)	
Willingness to travel				-0.0015					-0.0585	
				(0.0152)					(0.0451)	
Client relationship				-0.0186					-0.0997	
				(0.0223)					(0.0663)	
Seniority				-0.0188					-0.0040	
				(0.0202)					(0.0506)	
Clear expression of interest				0.0344					0.0788	
				(0.0245)					(0.0542)	
Talent development				0.0052					0.0646	
				(0.0221)					(0.0693)	
Analytical skills					0.0241					0.0436
					(0.0805)					(0.1794)
Communication with clients					0.0711					0.1248
					(0.0748)					(0.1639)
Communication within organization					0.0867					-0.0619
					(0.0871)					(0.2069)
Preparing project documentation					0.0097					0.4155
					(0.0947)					(0.2500)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Organizational controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.530	0.552	0.547	0.517	0.518	0.379	0.417	0.416	0.574	0.514
N	303	274	288	244	260	133	118	127	96	102

Notes: Table presents results of Equation (C.1). The dependent variable is a categorical outcome that captures how many times a banker has been an OL since joining the FI, taking on values 0, 1-2, 3-4, or 5+. Sample includes staff eligible for an OL-ship in banking for all job bands in columns (1)-(5) and job band 5 only in columns (6)-(10). Columns (2) and (7) include explanatory variables based on responses to questions on the workplace environment; (3) and (8) on aspirations; (4) and (9) on perceptions of what determines OL assignment; and (5) and (10) on how well bankers think they did in their last project as OL. Individual controls include indicators for a banker's age group, having children or not, highest educational degree, and field of study. Organizational controls include indicators for tenure, current job band, division, and office location. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.