# Knowledge Teams, Careers, and Gender<sup>\*</sup>

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#### Abstract

Using rich data on personnel records, work assignments, and performance from a financial institution, we uncover the mechanisms leading to promotion gaps in knowledge teamwork. A substantial promotion gap for women emerges early in their careers and leads to under-representation of women in senior positions. Bankers work in project teams and may either take on team leadership roles or be ordinary team members. Analyzing over 10,000 investment projects, we find that assignments to team leadership are crucial for promotions and affect long-term careers. Assignments to these jobs are carried out by supervisors and favors men. We find evidence for different managerial styles in assignment to leadership roles. A survey among employees indicates that women indeed perceive to be disadvantaged in the assignments of roles.

**JEL codes**: M51, J16, D22, J44

**Keywords:** Knowledge teams; promotions; gender gaps; visibility; leadership; internal

labor market

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# 1 Introduction

Gender wage gaps persist despite the convergence in education of men and women in most industrialized countries.<sup>1</sup> At lower levels of the skill distribution, gaps have been closed, but in high-skilled work the gaps are largest. The high-skilled gap in Europe, for instance, is in the realm of 20%, with relatively little variation across countries.<sup>2</sup> This has lead 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). Because high-skilled work is often conducted in organizations with internal labor markets, much of the wage gap for high-skilled workers is caused by gaps in promotions (Bronson and Thoursie, 2020; Blau and DeVaro, 2007). Promotions reward individuals and this requires to evaluate their performance. However, knowledge work is mostly carried out in teams with complementary skills and problem solving capacities of people with different backgrounds (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). When deciding whom to promote, decision makers in a knowledge organization 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) and Sarsons et al. (2021), Benson et al. (2021)).

We investigate whether lower rates of promotions for women are caused by lower performance, differential performance evaluation, motherhood penalty or something else that is related to the organization of knowledge work. To uncover the organizational mechanisms, researchers need detailed data on personal characteristics and performance and a thorough understanding of organizational strategy and practices (Ichniowski et al., 1997; Bloom and Van Reenen, 2007; Syverson, 2011; Gibbons and Henderson, 2012). A large financial institution (FI) has provided us with such data including information about thousands of investment projects and the involvement of 1,500 knowledge workers in these projects and their respective careers. Managers and employees in HR, banking, and staff council have helped us in understanding the organizational practices.

We find that a substantial promotion gap for women emerges early in their careers. We uncover the organizational mechanisms leading to these promotion gaps in knowledge teamwork. The gender promotion gap occurs only on the junior level — women need around two years more than men to have their first promotion (men, on average, get promoted after

<sup>&</sup>lt;sup>1</sup>Altonji and Blank (1999) and Blau and Kahn (2017) provide extensive surveys of the literature.

<sup>&</sup>lt;sup>2</sup>In Figure A.1 in the Web Appendix, we provide 2018 data for a selection of European Countries.

6 years. There is no evidence for lower performance of women on projects — if anything, women are the better bankers. Motherhood penalties are low, but there is some differential performance evaluation. Instead, the promotion gap is mostly caused by an assignment gap. Ceteris paribus, women are assigned to the role of project team leaders at a much lower rate, disadvantaging them when promotions are awarded.

In our 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, screen and potentially suggest them to a committee of senior managers who decide on the allocation of funds. In total, we observe 10,000 banking projects and the respective teams spanning a period of 19 years (2000-2018). A unique feature of the data set is that we have hard performance data for knowledge work.<sup>3</sup> Team performance is measured in 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.<sup>4</sup> 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. Informal interviews at the bank revealed 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. They also receive slightly less credit for team performance than men do. Taking these factors into account, then, brings the gender promotion gap down to a statistically insignificant level. Assignments to team roles are carried out by supervisors and favor men. We find evidence for different managerial styles in assignment to leadership roles, particularly, managers who have children behave more favorable to women and those who have been with the organization for a longer time before becoming a Director seem to

<sup>&</sup>lt;sup>3</sup>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.

<sup>&</sup>lt;sup>4</sup>At levels further up, women at least have the same promotion rates (we will get back to this later).

disadvantage women.

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 very fine 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 ranges 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. Cullen and Perez-Truglia (2019) 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. This 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; Friebel et al. 2022; Dessein and Santos 2021).

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 and 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, which 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 institution's ILM 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.

Promotions (or the lack thereof) together with exit decisions shape careers in an organization. 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: women who do get promoted from the entry level of highly educated workers to the next level make better careers than men do. Second, women with very good track records who get promoted are more likely to move from the banking division to other divisions within the organization, such as credit, legal, HR, or general administration (including public policy and regulatory affairs). Successful men, however, are more likely to leave the firm, arguably to find better paying jobs at other banks. Third, we find that some employees enter the internal labor market of our organization not at the standard job band (band 5) but one job band lower. Entry at this point is more frequently observed for women and is associated with a disadvantageous future career path. Initial career decisions seem to substantially shape the gender gap. We believe that these insights about differential career paths constitute an important contribution to the internal labor market literature.

In what follows, we provide information about the institutional setting and our data in Sections 2 and 3. We explain our conceptual framework and research design in Section 4. Section 5 discusses the results of our promotion and assignment regressions. The mechanisms behind these results are explored in Section 6. Section 7 analyzes the internal labor market and long-term careers outcomes for men and women, before offering concluding remarks in Section 8.

# 2 Institutional Setting

### 2.1 Strategy and structure of the financial institution

The FI is active in multiple sectors and countries around the globe. In 2021, for instance, the FI invested many billion Euros through hundreds of projects, mostly debt, and some equity. Figure 1 depicts the stylized organizational structure. While there have been strategic changes over our study period, e.g. inclusion of new operation regions or changes in the significance of individual sectors, the structure of organization, operation and allocation of decision rights as outlined in Figure 1 remained largely unchanged. Strategy planning and implementation are overseen by a group of senior managers consisting of the president, vice-presidents, and managing directors (MDs), who together constitute the organization's executive committee (ExCom). They issue long-term (five-year) strategy plans concerning the sectors and countries in which the FI operates and its use of capital. A corporate scorecard sets out the annual investment target 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.

There are two main parts of the FI, banking and non-banking; roughly of equal size (see Figure 2). Focusing on banking, MDs are responsible for their division which is either concerned with one country group, or a sector (approx. on a one-digit SIC code level). Under each division in banking, there are several "directorates" (departments) each of which is headed by one director who reports to the respective MD. Directorates are structured along sectors and regions of operations. The delivery of the corporate scorecard is ensured through (i) management scorecard, and (ii) departmental scorecard. In management scorecard, MDs commit on how annual investment will be broken down by different sectors, regions, and how sectors and regions will work together. The departmental scorecard defines how specific directorates are aligned with strategy. Staff expenditures are also tracked (i.e. cost-to-income ratio), so MDs and directors have an incentive to meet their business volume targets while maintaining a low salary cost.

Every banking director receives a yearly scorecard setting a minimum volume of signed investment and a maximum number of projects 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). To meet their targets, directors manage around 25 bankers on three different levels (associates/analysts, principals, associate directors) who are staffed on projects by the director.

Banking operations are supported by numerous departments in non-banking, which house

lawyers, economists, risk officers and other specialists (e.g. environmental specialists), to ensure that each project meets the FI's financial criteria and business strategy.



Figure 1: Stylized Organizational Chart

Notes: Reports a snapshot of the organization in the FI in 2014. Stylized representation.

### 2.2 Internal labor market

The bank has a well-organized internal labor market, which bankers usually enter at the analyst/associate level (the educational requirement is a master's degree). The firm then promotes these employees internally. Promotions are the main incentive for wage progression, with wages increasing by up to 20% from one band to another and allowing steeper wage progression. Annual performance-based bonuses are however relatively small (up to 20% of a worker's annual salary). For lower ranks in the hierarchy (band 5 to 7), the main incentives are hence career concerns; at higher levels, bonuses become more substantial. Employees can move between different directorates during their internal careers, and they can move between banking and non-banking (see Section 7).

Each year, each banker nominates a number of people in the FI to evaluate the bankers performance. Most importantly, people from higher ranks in the hierarchy provide performance evaluations that are aggregated by the responsible director who can also ask for additional feedback among colleagues, subordinates and supervisors. Promotions then occur in certain windows, typically in the first quarter of a year and based on performance history.





Notes: This figure shows the size of the workforce in the banking and non-banking divisions of the FI.

### 2.3 Investment projects, teams

The relevant "unit of production" are investment projects that are developed by professional staff in the banking directorates. We use data on the entire population of more than 10,000 banking projects. Each project is subject to intensive screening before being either signed or aborted. The proportion of non-performing loans is low, in the realm of 4 percent. While each project is linked to a sector and a region, project teams get staffed by the sectoral director.

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: "the team"). Upon arrival of a project at a directorate, the relevant director will assign employees of the directorate to work on 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 (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. On average, a team consists of 2.5 banking team members. This may include analysts/associates (job band 5), principals (job band 6), and associate directors (job band 7).



Figure 3: The Banking Project Team





(b) Composition of teams by role, seniority, and directorate Notes: xxx

Figure 3 provides the distribution of different team sizes and the team composition by role and seniority. One of these team members is the operation leader who is a principal banker (job band 6) in 40% of cases. The other 1.5 team members (on average) are mostly junior bankers who occasionally work as OL on smaller projects. 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 special-

ists). 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.

#### **2.4** Incentives and process

Because the director's main incentive is to sign a specific amount of business volume and a certain number of projects, bankers' main task is to get projects signed. We learned in interviews that both the number and the size of projects signed are important for promotions, which we will be able to verify in our regressions.

For a project to be signed, it needs to undergo an approval process that contains three different stages (see Figure 4). The project is first entered into the FI's systems 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. The long-term nature of project execution means that promotion cycles are shorter than the revelation of project success.

In interviews we were told that it is crucial for bankers' career that, at each of the review stages, it is the OL who presents the project in front of a committee of senior managers from different departments. Being an OL then provides visibility to a banker to representatives of higher echelons in the hierarchy who will provide performance evaluations in the promotion decisions.



#### **Figure 4: Project Lifecycle**

Notes: Shows the lifecycle 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.

### **3** Data and Descriptive Statistics

For our analysis we merge data spanning a period of 19 years (2000-2018) from two different databases. First, the project tracking software records each team member, project charac-

teristics and success on a monthly basis. Second, unique employee identifiers allow us to merge these data to the firm's personnel records, which provide personal characteristics of employees and allows to follow these employees over their entire career in the organization. This yields a uniquely detailed monthly panel of all banking employees including their personal characteristics, current workloads and project track records as well as the resulting long-term project performance.

We had to carefully identify and track changes over time to identify organizational structures and employees' affiliations. This is especially important for the estimation and subsequent analysis of Director-specific assignment gaps as well as for the inclusion of precise fixed effects for organizational units. In many regressions we will use division\*fixed effects, for some we break this down further to account for the direct relationship between director and theri employees. This if further explained below.

**Projects** Table 1 summarizes project information. By definition, all included projects pass the concept review stage which accounts for 10,155 projects with an average contractual amount of almost 30 million euros. Risk is evaluated on a scale from 1 to 8 in 20 increments. While 1 roughly corresponds to a triple A rating, 8 is the grade given to impaired assets. The sample average of 6 shows that risk taking is acceptable, however it needs to be compensated by high impact and high financial returns. The majority of projects are done by debt instruments provided to private firms. Around 15% of finance is done through equity components and many projects feature repeat clients. Working with a client that has been in a relationship with the organization before increases chances of the project being signed. In the sample, around 58% of projects are signed, of which 59% are completed (i.e. repayment and delivery of impact are concluded and finally evaluated). Hence, around 36% of projects in the whole sample are complete. Data are right-censored for uncompleted projects due to the long repayment and monitoring phase.

	Conce	pt Reviewe	d Projects	Sig	ned Proje	ects
	mean	median	s.d.	mean	median	s.d.
Amount (Million EUR)	28.98	13.35	45.89	22.96	10.00	36.24
Risk	6.00	6.00	0.85	5.94	6.00	0.87
Share of equity	0.17	0.00	0.37	0.15	0.00	0.35
Repeat client	0.44	0.00	0.50	0.61	1.00	0.49
Share of completed projects	0.36	0.00	0.48	0.59	1.00	0.49
Number of projects		10,155			5,916	

**Table 1: Project Summary Statistics** 

Notes: This table shows summary statistics for all investment projects reviewed by the FI.

**Bankers** Panel B of table 2 reports the number of observations by gender. Our panel consists of around 94,000 person-month observations of which 54% come from men. On the junior level women account for almost half of the observations. Panel C reports baseline promotion rates for the different job bands. The monthly hazard describes the unconditional probability to be promoted in any given month. It is 0.8% for the pool of all employees. The within sample row restricts the sample to months in which at least one employee of the same seniority is promoted. This increases the before mentioned probability to 3.4%. The descriptive statistics of promotion rates for men and women hint towards a gender promotion gap at the junior level. One can also see the fact that promotion from Associate Director to Director is a scarce event, making the job of Associate Director a ceiling for many employees. Panel A shows sample averages for men and women in each band separately. The average male banker in job band 5 is 31 years of age, while women in the same band are more than 1 year older on average. They have an experience in the junior band of 2.5 years (31 months) and almost 3 years, respectively. These differences disappear and partly reverse on the more senior levels.

	Job b	band 5	Job b	pand 6	Job	band 7
	Men	Women	Men	Women	Men	Women
A. HR characteristics (means)						
Age	31.13	32.53	36.83	37.33	44.93	42.96
Tenure in job band, months	31.19	36.10	29.82	31.22	47.55	49.96
Married	0.46	0.42	0.68	0.61	0.87	0.65
Child	0.32	0.29	0.56	0.56	0.72	0.63
Paid leave	0.00	0.68	0.00	1.19	0.01	0.89
Unpaid leave	0.00	0.42	0.00	0.93	0.00	0.44
Non-banking experience	0.11	0.11	0.05	0.05	0.11	0.09
B. Sample coverage						
Monthly observations	20,912	20,189	$14,\!371$	10,279	$14,\!485$	$9,\!173$
# Workers	574	486	202	268	267	149
# Promoted	239	180	138	109	33	22
C. Promotion hazards						
Within sample	0.0499	0.0383	0.0461	0.0495	0.099	0.098
Monthly hazard	0.0114	0.0091	0.0097	0.0107	0.0023	0.0024

Table 2: Banker Summary Statistics by Job Band and Gender

Notes: This table reports summary statistics (means) for the banker-year-month panel by job band and gender for banking employees in job bands 5-7.

Table 3 compares men and women who work as bankers at some point in their career at the time they enter the organization. Most bankers enter the FI in the banking division; only 5% entered in other divisions. They are included here as well. Comparing men and women

shows significant differences in age, the share of married bankers, having a child and the entry level. Women are about 6 months younger, slightly less likely to have a child and be married. The differences are not large in size and we will control for these demographic variables in our empirical analysis. Interestingly, women also tend to enter more frequently in job bands lower<sup>5</sup> than the standard entry port in this organization's internal labor market; job band 5. These entrants may have different unobservable characteristics and thus potentially have different careers. A fact that we will discuss later.

				W	Vomen vs. M	en
	All	Men	Women	Dif.	s.e.	p-value
Age	28.28	28.51	28.02	-0.49	0.28	0.07
Married	0.26	0.28	0.23	-0.05	0.03	0.09
Child	0.14	0.16	0.10	-0.06	0.02	0.01
EU nationality	0.40	0.41	0.37	-0.04	0.03	0.24
Sector directorate	0.45	0.45	0.46	0.01	0.03	0.76
Banking division	0.95	0.94	0.95	0.00	0.02	0.80
Job band $< 5$	0.20	0.15	0.26	0.11	0.03	0.00
Job band $= 5$	0.78	0.83	0.72	-0.11	0.03	0.00
N	873	467	406			

 Table 3: Banker Summary Statistics at Entry to the Organization

Notes: Includes all bankers in our sample at the time they entered the organization. Some bankers (5%) entered not in the banking department but in other departments of the bank, however, they became bankers during our observation period.

At each point in time (month) staff usually work on 1-2 projects as an operation leader and are involved in 2-3 additional projects as team member. These include all projects a banker is staffed on that are not yet signed. Figure A.2 in the web appendix shows the cumulative number of signed projects over a banker's career and their cumulative amounts including 95% confidence intervals. While men sign more projects as OL, especially early in their careers, women sign more projects in the role of team member. It is rare that bankers sign projects as OL in their first few years at the organization. After ten years in the FI, bankers have signed on average 6.5 projects and 120 million euros in investment.

Figure A.3, however, describes project assignment over a banker's career. Unlike the previous graph, these assignment figures are not cumulative over the whole career of a banker. Instead, they show the number of projects a banker has been assigned to over the past year and the average amount of these projects. Strikingly, men who recently entered the institution receive more project assignments as operation leaders than women do, while men and women both receive on average 3.5 project assignments as team member during their

<sup>&</sup>lt;sup>5</sup>These could e.g. be internship positions or team assistant positions.

first year. This number reduces to around two newly assigned projects as team member in the subsequent years. Men receive slightly larger projects as OL at the beginning of their career, however the ordering is reversed after around five years at the institution and turns insignificant after the first year. The projects junior bankers are assigned to as operation leader are small compared to the average project size of 30 million euro and grow over the career. The inverse is true for the assignment as team member, where bankers are supposed to learn from senior colleagues.

### 4 Conceptual Framework

Gender promotion gaps may accumulate at multiple levels and are likely to have long-term implications. Our conceptual framework, illustrated in Figure 5 unpacks these determinants. When bankers enter the organization, they join a directorate and work on various projects. Which project to work on and in what role — operational leader or simple team member — is determined by a person's supervisor, usually, the Director of the unit. The bankers then work in teams on the assigned projects. Their performance will be observed and evaluated by the respective director. Promotions occur (or not) after a banker has worked on several projects; it is overseen by a promotion committee whose members also serve on the committee approving projects. Hence, the same people who evaluate projects also decide on promotions. From interviews in the firm, we learned that operational leaders gain substantial visibility by presenting to the project committees who hence receive a more informative signal about bankers who have OL rather than team member roles. Thus, a promotion gap may arise at different promotion stages (from band 5 to 6, 6 to 7 etc.) and is likely to depend on the assigned projects and roles. Finally, promotions will shape long-term careers: attrition, internal and external moves.



#### **Figure 5: Conceptual Framework**

Notes: Shows our conceptual framework, in particular steps in a banker's career in which gender gaps may open.

The question of assignments to projects and roles is demanding to study empirically as it is an equilibrium outcome of bankers volunteering (i.e., the demand side of OL positions) and Directors providing these roles (i.e, the supply of positions). We will employ OLS regressions to measure the determinants of promotions and project assignment and whether there exists a gender gap. Subsequently, we discuss and analyze possible mechanisms to arrive at an equilibrium setting.

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 OLS regression on banker i in department d who have not yet been promoted in their current job band j only in months t, in which at least one banker is promoted:

$$Promotion_{idjt} = \alpha_1 Woman_{idjt} + \alpha_2 X_{idjt} + \alpha_3 Z_{idjt} + \alpha_4 Z_{idjt} * Woman_{idjt} + \delta_{d\times t} + \delta_j + \varepsilon_{idjt}$$
(1)

The dependent variable Promotion is a (0/1) indicator variable showing whether a banker is promoted in the next month. For the determination of a gender gap, the coefficient of interest is  $\alpha_1$ . In the baseline regression controls  $(X_{idjt})$  include marital status, job entry characteristics, a parent dummy and the number of months spent on parental leave. Further controls include ten age and five tenure bins. Additionally, we use a set of fixed effects. We create bins for age and tenure, and fixed effects for the job band an employee works in. We also include a division×year fixed effect to account for business cycles in different sectors and regions and because the strategic plans are defined on the level of a division which is run by an MD. Standard errors are clustered on the individual level to account for serial correlation across time within individuals.

To better understand the dynamics of promotion within different job bands and to see at which career step a gap may arise, we also run the regression separately for the three job bands of interest. In a second step, we add additional control variables and possible determinants of promotion. This allows us to understand the promotion policy of our FI and could explain away parts of a possible gender gap. We additionally include performance in getting projects signed (in terms of the number of signed projects and amount signed) and characteristics of these past signed projects (risk, team size and non-performing funds). To be able to speak about whether certain determinants of promotion are of differential importance for men and women to be assigned new projects, we interact the subset of control variables that are performance measures explaining project assignment  $Z_{idjt}$  with the gender dummy variable. Hence,  $\alpha_4$  allows conclusions about whether some performance variables which the firm uses to inform its promotion decision have smaller or larger effects for men and women. This allows us to analyze whether similar effects as found by Hengel (2022) are at play in our institution. She documents that women are held to higher standards when publishing in academic journals. This also relates to Lazear and Rosen (1990) who theoretically show that women might are subject to higher standards in the promotion process owing to the perception of managers that they may drop out from the organization.

To predict whether an employee is given a new project in the next month and determine a possible gap in project assignments which are essential to showcase performance, we run the following regression:

$$NewProject_{idjt} = \alpha_1 Woman_{idjt} + \alpha_2 X_{idjt} + \alpha_3 Z_{idjt} + \alpha_4 Z_{idjt} * Woman_{idjt} + \delta_{d \times t} + \delta_j + \varepsilon_{idjt}$$
(2)

This estimates the effect of performance on whether a banker is assigned a new project (0/1) in the next month on the full banker-year-month level panel. We estimate this regression separately for the roles in the team (OL and Team Member). The control variables and fixed effects remain largely unchanged compared to regression 1.

## **5** Results

#### 5.1 **Promotion gap**

Table 4 provides evidence of a large gender gap in promotion (column 1). It amounts to 0.71 percentage points with a baseline promotion rate of 3.6%. Marital status or having children does not explain this gap. Instead, around a third can be explained by the amount of unpaid leave associated with parenthood a banker takes. Paid parental leave which tends to be less than 6 months however has no significant effect. This is in line with the findings of Johnsen et al. (2020) who study the effect of paternity leave on future wage growth. They find significant effects of the relative standing of an employee in the leave distribution. Further, Tô (2018) proposes a signaling mechanism leading to a negative effect of parental leave on future career outcomes. Additionally, one can see that entering at a lower job band than job band 5, which is more common among women, decreases promotion chances. Section 7 provides more information of potentially different career paths of men and women.

Upon splitting the sample by the individual job bands, one can see that the gap is entirely driven by the group of most junior employees (columns 1 through 4 of Table A.1 in the web appendix). In this specification, the unexplained gap rises to approximately 35%(1.47/4.41) compared to 17.5% averaged over the whole institution. For ease of reading, Figure 6 visualizes the main findings and shows the robustness of the women promotion gap which is only present in band 5. In the following regressions, we focus on this job band.

Table 5 shows the determinants of promotion for junior employees. Column 1 replicates column 4 of Table A.1. Around 35% of the remaining gender promotion gap after controlling for parental leave is explained by bankers' performance on past project assignments. We include both the number of past signed projects and the average size of the respective projects. We further distinguish between projects done in the capacity of operation leader and team member. Importantly, the number and size of projects done as an operation leader greatly dominate the effects of being a team member. Also indicative of performance is the average team size of past projects a banker has done as OL, since taking the lead on projects with many team members is challenging. We include this variable together with the average investment amount which is not repaid (non-performing) for the projects done as OL in column 4. Some performance variables are highly correlated with each other, e.g. team size and project amount. Consequently, we do not include all of them in the same regression to avoid issues of multicollinearity. Unsurprisingly, leading large teams in the past increases promotion chances substantially at the same time there seems to be no penalty for leading ex-post "bad" projects. Given that this is usually only revealed after individual promotions took place, this comes not as a surprise either.

	(1)	(2)	(3)	(4)	(5)
Woman	$-0.0071^{***}$ (0.0025)	$-0.0070^{***}$ (0.0025)	$-0.0052^{**}$ (0.0026)	$-0.0052^{*}$ (0.0027)	$-0.0078^{**}$ (0.0033)
Married		-0.0007 (0.0031)	-0.0004 (0.0031)	-0.0013 (0.0032)	-0.0012 (0.0032)
Child		$0.0056^{*}$ (0.0033)	$0.0074^{**}$ (0.0033)	$0.0078^{**}$ (0.0034)	$0.0052 \\ (0.0040)$
Paid leave			0.0004 (0.0012)	0.0006 (0.0012)	0.0002 (0.0013)
Unpaid leave			$-0.0036^{***}$ (0.0012)	$-0.0036^{***}$ (0.0013)	$-0.0036^{***}$ (0.0013)
Non-banking experience			0.0003 (0.0051)	-0.0021 (0.0053)	-0.0021 (0.0053)
Entry: pre-2000				$0.0056 \\ (0.0062)$	$\begin{array}{c} 0.0051 \\ (0.0062) \end{array}$
Entry: $<$ job band 5				$-0.0173^{***}$ (0.0039)	$-0.0176^{***}$ (0.0039)
Entry: sector				$\begin{array}{c} 0.0015 \\ (0.0038) \end{array}$	$\begin{array}{c} 0.0017 \\ (0.0038) \end{array}$
Entry: banking				-0.0041 (0.0058)	-0.0041 (0.0058)
Woman * Child					0.0065 (0.0050)
Age, tenure, and job band FE	Yes	Yes	Yes	Yes	Yes
Division $\times$ year FE	Yes	Yes	Yes	Yes	Yes
R-squared	0.060	0.060	0.061	0.062	0.062
Number of bankers	$1,\!431$	$1,\!431$	$1,\!431$	$1,\!431$	$1,\!431$
Observations	22,908	22,908	22,908	22,908	22,908

Table 4: The Promotion Gap: All Job Bands

Notes: This table presents results of Equation (1). The dependent variable, *Promoted* (0/1), indicates whether a banker is promoted next month. The sample includes all bankers in job bands 5-7 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. Age and tenure FE include fixed effects for ten bins of worker age and five bins of tenure on the job band; job band FE include fixed effects for each job band from 5 to 7. Standard errors are clustered at the banker level and shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.



### Figure 6: Promotion Regression

Notes: Shows regression coefficients and 95% confidence intervals from specifications (1)-(3), (5)-(7), and (9)-(11) of table A.1

	(1)	(2)	(3)	(4)	(5)	(6)
Woman	-0.0128***	-0.0115***	-0.0082*	-0.0071	-0.0036	-0.0040
	(0.0041)	(0.0042)	(0.0045)	(0.0044)	(0.0039)	(0.0039)
Signings		0.0017				
		(0.0015)				
Avg. amount		0.0096***				
0		(0.0018)				
Signings as OL			0.0122***	0.0159***	$0.0092^{*}$	0.0127**
51 <u>61111</u> 60 (m) 0 1			(0.0035)	(0.0040)	(0.0052)	(0.0056)
Signings as TM			-0.0010	-0.0012**	-0.0011	-0.0014**
Signings as The			(0.0007)	(0.0006)	(0.0007)	(0.0006)
Avg amount as OL			0.0281***	· · · ·	0 0369***	· /
rivg. amount as on			(0.0042)		(0.0070)	
Avg amount as TM			0.0052***	0.0071***	0.0054***	0 0073***
rivg. amount as rivi			(0.0019)	(0.0019)	(0.0019)	(0.0019)
Avg. team size as OL			· · · ·	0.0105***	· · · ·	0.0158***
rivg. team size as on				(0.0032)		(0.0052)
Woman × Signings as OI					0.0062	0.0066
Wollian × Signings as OL					(0.0062)	(0.0078)
Woman X Avg amount as OI					0.0168*	()
woman $\times$ Avg. amount as OL					(0.0088)	
Warran X Aver toom size as OI					(0.0000)	0.0109*
woman × Avg. team size as OL						-0.0103 (0.0062)
Controlo	V	V	V	V	V	(0.0002) V
Age and tonure FF	Yes Vor	Yes Vog	Yes Voc	Yes Voc	Yes Vog	Yes Voc
Division V year FF	Vog	Vog	Vor	Voc	Vog	Vog
Division × year FE R squared	1 es 0 107	1 es 0 111	10S	1 es 0 1 9 9	1 es 0 1 9 0	1 US 0 1 20
n-squared	0.107	0.111	0.130	0.120	0.100	0.129
Observations	1,000	1,040	1,040	1,040	1,040	1,040
Observations	10,947	10,999	10.999	10,999	10,999	10.999

Table 5: Promotion Determinants for Junior Bankers (Job Band 5)

Notes: This table presents results of Equation (1). The dependent variable, *Promoted* (0/1), indicates whether a banker is promoted next month. The sample includes 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. Controls include Married, Child, Paid leave, Unpaid leave, Non-banking experience, Entry: pre-2000, Entry: < job band 5, Entry: sector, and Entry: banking. Age and tenure FE include fixed effects for ten bins of worker age and five bins of tenure on the job band. Standard errors are clustered at the banker level and shown in parentheses. \*\*\*, \*\*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Further, including interaction effects between the gender indicator variable and performance in columns 5 and 6 brings the gender gap down to an insignificant level. These results suggest that women receive less credit for work on larger projects which is done in large teams even if they are in the leadership position. This ties in to the work of Sarsons (2017) who shows that women receive less credit for work they have done in teams in the context of economic academics.

These regressions confirm anecdotal evidence we have from conducting interviews with bankers of various seniority. Since the OL is seen as the face of the project and is responsible for presenting it to management, this role increases banker's visibility and hence promotion chances. This is crucial for junior bankers for whom no other information is available early in their career.

These results are robust to alternative measures of project performance (e.g. the time spend on screening projects), alternative sets of baseline controls (e.g. nationality, contract type) and alternative specifications for career disruption, internal networks or fixed effects. They further hold for sub-samples of our data: (i) The results are robust with respect to excluding bankers with children. This further highlights that the mechanisms we are finding is go beyond a gender gap caused by a child penalty. In the context of an organization concerned with gender equality it seems reasonable that we are finding very subtle mechanisms driving this promotion gap. (ii) However, when excluding bankers that entered at a lower job band than band 5, the point estimate is reduced substantially, indicating that women and men may have different career paths. Indeed we know that most employees who enter at job bands lower than band 5 before raising to that level are women, and in section 7 we look at other dimensions along which men and women differ with respect to long-term career paths.

### 5.2 Team leadership assignment gap

Table 6 presents the results of regression (2) for receiving new projects as OL. Women are less likely to be assigned new projects in the important operation leader role. Further, the results suggest a role persistence, i.e. performance as an OL increases the probability to be assigned to projects in this role in the future. Employees working primarily as a team member are also more likely to work as a team member again.<sup>6</sup>

<sup>&</sup>lt;sup>6</sup>See Table A.2 in the web appendix, reporting results for the outcome: NewProject as TM. The table also reveals that there is no gender gap for the assignment to team membership roles.

	(1)	(2)	(3)	(4)	(5)
Woman	$-0.0120^{**}$ (0.0048)	$\begin{array}{c} -0.0108^{**} \\ (0.0045) \end{array}$	$\begin{array}{c} -0.0094^{**} \\ (0.0045) \end{array}$	$-0.0077^{*}$ (0.0042)	$-0.0072^{*}$ (0.0042)
Signings as OL		$\begin{array}{c} 0.0149^{***} \\ (0.0020) \end{array}$	$\begin{array}{c} 0.0124^{***} \\ (0.0020) \end{array}$	$\begin{array}{c} 0.0133^{***} \\ (0.0024) \end{array}$	$\begin{array}{c} 0.0109^{***} \\ (0.0025) \end{array}$
Signings as TM		$\begin{array}{c} 0.0018^{**} \\ (0.0007) \end{array}$	$0.0016^{**}$ (0.0007)	$0.0018^{**}$ (0.0008)	$0.0016^{**}$ (0.0007)
Avg. amount as OL		$\begin{array}{c} 0.0141^{***} \\ (0.0028) \end{array}$		$\begin{array}{c} 0.0194^{***} \\ (0.0038) \end{array}$	
Avg. amount as TM		0.0028 (0.0018)	$0.0033^{*}$ (0.0018)	$0.0029^{*}$ (0.0018)	$0.0034^{*}$ (0.0018)
Avg. team size as OL			$\begin{array}{c} 0.0139^{***} \\ (0.0022) \end{array}$		$\begin{array}{c} 0.0168^{***} \\ (0.0028) \end{array}$
Woman $\times$ Signings as OL				$\begin{array}{c} 0.0032 \\ (0.0039) \end{array}$	0.0034 (0.0040)
Woman $\times$ Avg. amount as OL				$-0.0102^{*}$ (0.0057)	
Woman $\times$ Avg. team size as OL					-0.0063 (0.0042)
Controls	Yes	Yes	Yes	Yes	Yes
Age and tenure FE	Yes	Yes	Yes	Yes	Yes
Division $\times$ year FE	Yes	Yes	Yes	Yes	Yes
R-squared	0.048	0.053	0.054	0.053	0.054
Observations	43,733	$41,\!439$	$41,\!439$	$41,\!439$	$41,\!439$
Number of bankers	1,074	1,064	1,064	1,064	1,064

Table 6: The Leadership Assignment Gap for Junior Bankers

Notes: This table presents results of Equation (2). The dependent variable, New Assignment as OL(0/1), indicates whether a banker is assigned at least one new project next month as an OL. The sample includes the full banker-year-month level panel of bankers in job band 5. Controls include Married, Child, Paid leave, Unpaid leave, Non-banking experience, Entry: pre-2000, Entry: < job band 5, Entry: sector, and Entry: banking. Age and tenure FE include fixed effects for ten bins of worker age and five bins of tenure on the job band. Standard errors are clustered at the banker level and shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

These results suggest that the first assignment to operation leader is particularly important. Figure 7 further substantiates this importance for promotion by analyzing the time waiting for the first OL assignment. The interaction effects in columns 4 and 5 suggest that women are rewarded less for large projects. Moreover, the positive, albeit not statistically significant, coefficient on the interaction between the number of signings and the women indicator variable suggests that women might benefit from having a signing in the past as OL more than men do when it comes to getting an operation leadership on their next project. Although this may seem as a positive thing, it means that women first need to prove themselves before being assigned to projects as operation leader. Here, it is interesting to revisit figures A.2 and A.3 in the web appendix, where we depict the projects of a banker over the career. Women first receive less and smaller projects but get larger projects than men after being in the organization for a longer time. This is consistent with the idea that women first need to prove themselves before being assigned to projects. The regression results are robust to alternative measures of project performance, alternative sets of baseline controls (e.g. nationality, contract type), alternative specifications for career disruption, internal networks or fixed effects and excluding bankers with children, bankers entering at a job band below 5 as well as the union of these groups.





Notes: This figure shows binscatter plots of a banker's time to promotion (in months) against his/her time to first project assignment as operation leader (OL). The sample includes all junior bankers for whom we observe a promotion and an assignment to a project as OL.

Another interesting finding is that assignment to operation leadership for projects for women is reduced even before child birth. Figure A.4 shows that the assignment to new projects as OL for women decreases some months before having a child, while there is no effect for men. Some of this is related to the effect of maternity leave, but since the effect starts before giving birth this may be owing to some anticipation effects which are however not excessive. Thus, it should be noted that there are no excessively long effects of motherhood on team leadership role assignments. The dip occurs only shortly before women usually go on maternity leave and comes back fully around 9 months after the child is born. All in all, what we see in this picture does not seem to drive a large part of the assignment gap. Instead, we will turn to additional mechanisms and the supply and demand effects of the leadership assignment in the next section.

## 6 Mechanisms

We have established that the promotion gap for women in this organization is driven by a lack of assignments to team leadership positions which are career critical and may be seen as a pre-condition to be promoted. Although both phenomena are substantial in size and robust to many checks, they do not yet constitute an equilibrium story which we are ultimately interested in. When decisions whom to make an operational leader are taken, demand of women and men bankers for these positions and supply of positions by Directors meet. Hence, in this section we analyze both sides using available data and by conducting surveys. Additionally, we explores several mechanisms and alternative explanations for our findings. Potential stories include performance differentials and selection of men and women into the organization or specific projects.

### 6.1 Are women worse bankers?

Before turning to disentangling the mechanisms behind the team leadership positions gap, we want to exclude that our results are driven by quality differentials between men and women bankers. This would rationalize differential assignment to OL positions. In order to investigate whether it could indeed be quality driving our results, we run the a set of regressions on the project level j. Given the importance of the OL role, we focus on the project performance depending on the OL's gender. Performance outcomes on the project level can be short or long-term oriented. On the one hand, banking directors and subsequently bankers are incentivized to achieve short-term performance, i.e. create business volume. Hence, a logical measure of success is whether the project size  $(X_j)$ . 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.

$$ProjectOutcome_j = \alpha_1 WomanOL_j + \alpha_2 X_j + \delta_{dt} + \varepsilon_j \tag{3}$$

Table 7 reveals that women are not worse OLs than men when it comes to getting deals done. If anything, they are doing slightly better. Having a woman OL increases a project's likelihood to be signed by 2-3 percentage points with a baseline probability of 58%. This effect is statistically significant when running equation 3 pooled for all job band and becomes a bit more noisy when running individual regressions for each job band. Women also do not do worse in terms of prep time for projects or non-performing loans.

		All job bands		Job band 5	Job band 6	Job band 7
	(1)	(2)	(3)	(4)	(5)	(6)
Woman OL	0.0195	0.0239*	$0.0264^{*}$	0.0305	0.0377	-0.0134
	(0.0133)	(0.0132)	(0.0148)	(0.0304)	(0.0240)	(0.0308)
Team size		0.0040	0.0038	0.0049	-0.0020	0.0062
		(0.0058)	(0.0057)	(0.0114)	(0.0103)	(0.0116)
Project size		-0.0466***	-0.0384***	-0.0225	-0.0509***	-0.0533***
		(0.0078)	(0.0093)	(0.0176)	(0.0130)	(0.0123)
Equity		$-0.1074^{***}$	-0.0995***	-0.0969**	-0.0936***	-0.1178***
		(0.0211)	(0.0247)	(0.0414)	(0.0336)	(0.0341)
Stand-alone		-0.0273	-0.0799***	-0.0957**	-0.0262	0.0344
		(0.0186)	(0.0222)	(0.0376)	(0.0309)	(0.0352)
Credit rating			-0.0353***	. ,	. ,	
			(0.0102)			
Sector team-year FE	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.082	0.099	0.146	0.233	0.148	0.159
N	6529	6411	5048	1632	2660	2119

 Table 7: Probability of Signing Projects by Operation Leader Gender

Notes: Regression results from an OLS model on a cross-section of all projects that are taken to the FI's investment committee. The dependent variable, *Signed* (0/1), indicates whether a project is eventually signed or not. Standard errors are clustered at the level of the sector team-year fixed effects and shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Showing that women are not worse in their project work also alleviates concerns of the organization "overhiring" women at the entry stage. If few qualified women applied to the FI, which may aim at hiring at gender parity, the hired women would be on average of worse quality. This effect could be undone at later stages within the organization (Lehmann, 2013) by assigning less team leadership positions. To further investigate this, we obtained data on the FI's applicants shown in Table A.3 in the Online Appendix. It shows that the firm faces sufficiently large men and women applicant pools; on the junior level there are on average 13-14 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. Although women

apply less frequently than men do in job band 5 (for instance, 34% of applicants to the Banking division hiring at job band 5 are women when the eventual hire is a woman vs. 31% when the eventual hire is a man), this is not necessarily informative of the quality among men and women in the applicant pool (Fluchtmann et al., 2021; Hensvik et al., 2021).

### 6.2 Selection into project leadership assignments

Table A.4 in the web appendix compares the first OL project assignments of men and women both along the banker and the project characteristics. There is not much evidence that would support the view that women and men sort differentially into projects. Women seem to do more small business and environmental projects but these differences disappear when controlling for team and time fixed effects. Interestingly, after adding the fixed effects women seem to do slightly larger projects.

#### 6.3 Director effects

As Directors have formal discretion over assignment to team roles, it is crucial to understand their styles and strategies in the assignment decision to understand the assignment gap (from a supply side perspective). Kunze and Miller (2017); Cullen and Perez-Truglia (2019); Drechsel-Grau and Holub (2020); Yu (2021); Benson et al. (2021) have shown that manager gender matters for gender gaps in various settings. However, we aim to expand this line of query by looking at other characteristics and style of managers (in our setting: Directors). To do this, we employ a fixed effects strategy: We estimate a Director-specific assignment gap and relate it back to Director characteristics.

This analysis is only possible for a subset of the data (from 2014 onward) in a precise way. This is because, beginning in 2014, we observe the direct match between bankers and their line managers, which allows us to precisely match bankers to their responsible Director. We are currently working on matching directors to employees from pre-2014 data.

Estimating the director-specific assignment gap relies on the following regression describing the new assignment of an OL position in any month t being assigned to banker i in division d under manager/Director m:

$$NewProject_{imdt} = \alpha_1 Woman_{imdt} + \alpha_2 \delta_m \times Woman_{imdt} + \alpha_3 X_{imdt} + \delta_m + \delta_d + \delta_t + \varepsilon_{imdt}$$

$$\tag{4}$$

In a first stage, this regression estimates the Director-specific assignment gap as  $\alpha_2$  which

we extract for each Director. In a second stage, we run a regression of the estimated assignment gaps for each Director on their characteristics in a cross-section, using as weights the inverse of the standard error for each Director-specific assignment gap that we obtained in the first stage.

Figure 8 plots the distribution of the estimates of the extracted estimates. While both panels show that there is a large variability in Directors, the right panel further reveals that men Directors exhibit much more variation than women Directors do.



#### Figure 8: Director-specific Assignment Gaps

Notes: The left panel shows the point estimate of the director-specific assignment gaps in thick blue; dashed lines indicate the 95% confidence interval of the point estimates. The right panel displays the distribution of director-specific assignment gaps.

Results for the importance of different characteristics of Directors in explaining the director-specific assignment gap are reported in table 8. First, they show that the Director characteristics are important in explaining the assignment gap. The number of children a Director has explains around 12.6% of the variance in the assignment gaps. Up to almost 24% can be explained including all Director characteristics in table 8. Second, while no clear-cut picture on Director-gender and age emerges, Directors who have children and have a lower tenure seem to be more favorable towards women in assigning Operation Leadership roles to women. However, more work is needed to better understand the different styles Directors may have, e.g. along the persistence of assigned roles, the gender or experience composition of teams and turnover. An additional questions concerns the optimality of these strategies. One key concern could be that attrition of employees depends on the attractiveness of assignments. Thus, it is important to understand the mobility and long-term careers of bankers.

	(1)	(2)	(3)	(4)	(5)
Woman	-0.0057				0.0093
	(0.0127)				(0.0128)
Age		-0.0002			0.0008
		(0.0008)			(0.0008)
Length of service		. ,	-0.0018*		-0.0023**
			(0.0010)		(0.0008)
Children			. ,	$0.0149^{**}$	0.0183***
				(0.0063)	(0.0060)
R-squared	0.003	0.001	0.075	0.126	0.239
Ν	55	55	55	55	55

Table 8: Director-specific Assignment Gap and Director Characteristics

Notes: This table presents regressions of the Director-specific Assignment Gap on Director Characteristics (see text). Robust standard errors are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

### 6.4 Demand effects

Although Directors play an active role in assigning team roles in our setting, we need to consider factors that may differentially affect demand for OL-ship for men and women. For instance, survey evidence from lawyers points to differences in workplace experience and aspirations at the early stages of men's and women's careers as possible reasons behind the gender promotion gap (Azmat and Ferrer, 2017; Azmat et al., 2020). 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) and self-evaluation and self-promotion in male-typed tasks related to math and science (Exley and Kessler, 2022).

To test possible gender differences in such "demand effects", we carried out an online survey in the FI between July and August 2022. We received responses from 1,049 staff, out of which 473 are from the banking part. 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. In the following analysis, we focus on responses by junior bankers (job band 5) to capture any differences in early-career experiences and perceptions.

We first asked banking staff about how often they experienced certain types of behaviour at the workplace. Figure 9 shows the distribution of answers by men and women for the six vignettes included in this question. 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. 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.

In preparation of this survey, we did a pilot survey at a private bank of similar size and structure located in Germany (our FI is based in another European country). We asked many of the survey items on work environment using very similarly worded vignettes (see the Online Appendix). The results from the private bank are reported in Figure 10, which are remarkably similar to the one in our FI (Figure 9).



Figure 9: Junior Bankers' Perceptions of the Work Environment at FI

Notes: Shows results of the survey conducted at FI. Responses by banking staff at job band 5 are shown (N=199).



Figure 10: Perceptions of the Work Environment in a Private Bank

Notes: Shows results of the survey conducted at a German private bank.

The FI survey also included questions on how important different career aspirations are to banking staff. The results are shown in Figure 11 and do not reveal gender gaps in terms of aspirations for work-life balance, 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.



Figure 11: Junior Bankers' Aspirations at FI

Notes: Shows results of the survey conducted at FI. Responses by banking staff at job band 5 are shown (N=199).

The FI survey then asked junior bankers who were assigned an OL-ship at least once in their FI career to rank various attributes in terms of their lowest vs. highest importance for assignment to OL-ship in their teams. Responses to this question are shown in Figure 12. The first two top panels show that a greater share of women, when compared with men, regard leadership skills and personal relationship with managers as carrying less importance in OL assignment. However, a simple regression of bankers' answers to these questions (which were captured in a 1-10 Likert scale) on gender reveals no statistically significant differences. 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.



Figure 12: Junior Bankers' Perceptions of OL Assignment at FI

Notes: 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 (N=102).

Finally, we asked junior bankers to evaluate their performance along several dimensions on the latest project that they worked on as an OL. Figure 13 shows the responses by gender for each of the four aspects in which bankers evaluated their past performance. Both 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 shows that men were more likely to rate themselves more favorably when it came to communication with clients.

In short, we do not find meaningful gender differences at our organization when it comes to "demand effects" that might be linked to gaps in promotion or visible task assignments.



Figure 13: Junior Bankers' Self-evaluation of Their Last OL-ship

Notes: 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 (N=102).

## 7 Internal Mobility and Exits

Do men and women make differential careers that are not fully explained by differences in their promotions? Starting at a descriptive level, Table 9 provides a transition matrix of monthly hazards for men and women separately. First, it provides an overview of careers at our FI, summarized in the following three results: (i) the main port of entry for skilled workers is job band 5; (ii) promotions usually happen stepwise and there are no demotions; and (iii) promotion to Director is very rare. Second, it shows that women have lower promotion hazards from band 5 to 6. Third, this gap vanishes at more senior levels. Fourth, women have lower exit rates at bands 5 to 7. Lastly, women tend to enter the organizations at lower levels than job band 5 more frequently, which puts them on a disadvantageous future career path as shown in section 5.

	Support	Analyst- Associate	Principal	Associate Director	Director	Managing Director		
Women	Band 1-4	Band 5	Band 6	Band 7	Band 8	Band 9	Int. move	Exit
Entry	20.55	66.42	9.27	2.76	0.75	0	0.25	0
Band 1-4	97.87	2.07	0.02	0.04	0	0	0	0
Band 5	0	98.35	0.95	0.04	0	0	0.12	0.56
Band 6	0	0	98.09	1.11	0.01	0	0.14	0.64
Band 7	0	0	0	99.13	0.21	0	0.22	0.44
Band 8	0	0	0	0	98.90	0.32	0.13	0.65
$Band \ 9$	0	0	0	0	0	98.45	0.52	1.04
Men								
Entry	8.91	66.42	14.66	8.16	1.67	0.19	0	0
Band 1-4	91.03	8.67	0.15	0.15	0	0	0	0
Band 5	0	97.85	1.21	0.02	0	0	0.11	0.81
Band 6	0	0	97.93	1.03	0	0	0.12	0.91
Band 7	0	0	0	98.78	0.24	0.01	0.21	0.76
Band 8	0	0	0	0	99.05	0.15	0.19	0.61
Band 9	0	0	0	0	0	99.26	0.19	0.56

**Table 9: Transition Matix** 

Notes: Table presents transition probabilities between job bands at the FI for banking staff only.

Since the promotion gap exists solely on the junior level, one possible explanation is a selection effect in which low-performing women leave the banking part of the organization either to exit the institution or move to its non-banking part. Especially, the non-banking part of the FI would offer a valuable outside option for these cases as the required skills are similar but the job involves less travel and more flexible deadlines (e.g. in the risk department).

To see if men and women sort out of the banking part of the FI given their performance differentially, we estimate a linear probability model of an employee leaving the banking department either to exit or to move to a non-banking department for each seniority level. We use a gender dummy variable, performance variables, and interaction effects between gender and performance.

$$Mobility_{idjt} = \alpha_1 Woman_{idjt} + \alpha_2 X_{idjt} + \alpha_3 Z_{idjt} + \alpha_4 Z_{idjt} \times Woman_{idjt} + \delta_{d\times t} + \delta_j + \varepsilon_{idjt}$$
(5)

Table 10 shows that women in general are not more likely to switch from the banking part to the non-banking part of the FI as one may have thought, given the competitive nature of that work. Junior women are less likely to leave the bank altogether (column 2), despite the fact that they are promoted at lower rates. We do not observe a difference in exit rates between men and women in higher job bands.

Higher performance in terms of signings and project sizes is not necessarily associated with greater retention in the firm, but for women we find a differential effect – they are less likely to leave the organization when they signed more projects as OLs (column 2).

	Job band 5		Job band 6		Job band 7	
	(1) Move to non-banking	(2) Exit	(3) Move to non-banking	(4) Exit	(5) Move to non-banking	(6) Exit
Woman	-0.0315 (0.0325)	$-0.3103^{***}$ (0.1054)	-0.0955 (0.0681)	$\begin{array}{c} 0.0023\\ (0.2291) \end{array}$	0.1137 (0.1234)	-0.0497 (0.2560)
Signings as OL	-0.0098 (0.0071)	$\begin{array}{c} 0.0212 \\ (0.0653) \end{array}$	-0.0081 (0.0059)	$-0.0439^{*}$ (0.0248)	-0.0011 (0.0035)	$\begin{array}{c} 0.0119 \\ (0.0127) \end{array}$
Signings as TM	-0.0035 (0.0035)	-0.0132 (0.0092)	$\begin{array}{c} 0.0036 \\ (0.0034) \end{array}$	$\begin{array}{c} 0.0139^{*} \\ (0.0082) \end{array}$	0.0007 (0.0057)	-0.0046 (0.0116)
Avg. amount as OL	$-0.0193^{*}$ (0.0109)	-0.0325 (0.0858)	-0.0192 (0.0170)	$\begin{array}{c} 0.0388 \\ (0.0695) \end{array}$	-0.0041 (0.0246)	-0.0332 (0.0675)
Avg. amount as TM	-0.0096 (0.0145)	0.0597 (0.0388)	$\begin{array}{c} 0.0119 \\ (0.0133) \end{array}$	-0.0169 (0.0490)	-0.0075 (0.0147)	$\begin{array}{c} 0.0073 \\ (0.0535) \end{array}$
Woman $\times$ Signings as OL	0.0437 (0.0309)	$-0.1242^{*}$ (0.0739)	-0.0061 (0.0087)	-0.0202 (0.0300)	-0.0006 (0.0071)	$-0.0354^{**}$ (0.0180)
Woman $\times$ Avg. amount as OL	0.0033 (0.0296)	$0.1095 \\ (0.1100)$	0.0328 (0.0262)	-0.1445 (0.0881)	-0.0292 (0.0376)	-0.0373 (0.0889)
Controls Age and tenure FE	Yes Yes	Yes Ves	Yes Yes	Yes Ves	Yes Yes	Yes Ves
Division $\times$ year FE	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.011	0.010	0.013	0.018	0.019	0.019
Number of bankers	1,064	1,064	678	678	429	429
Observations	41,439	$41,\!439$	24,924	24,924	23,859	23,859

Table 10: Mobility of Bankers by Job Band

Notes: This table presents results of Equation (5). Move to non-banking (0/1) indicates whether a banker permanently moves to a non-banking department next month. Exit (0/1) indicates whether a banker leaves the bank permanently next month. The sample includes the full banker-year-month level panel of bankers in job band 5 in columns (1)-(2), in job band 6 in columns (3)-(4), and in job band 7 in columns (5)-(6). Controls include Married, Child, Paid leave, Unpaid leave, Non-banking experience, Entry: pre-2000, Entry: < job band 5, Entry: sector, and Entry: banking. Age and tenure FE include fixed effects for ten bins of worker age and five bins of tenure on the job band. Standard errors are clustered at the banker level and shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

We also checked the promotion policies (from equation 1) for the non-banking departments. They show that having been a banker increases promotion chances substantially on the junior level, while on the principal level this is especially true for women. Except for some specifications on the principal level, we do not find a gender promotion gap, when controlling for personal characteristics and parental leave which has a robust negative effect. However, it is not possible to control for performance on the job since it is not tracked as precise as in the banking department. Although economists, lawyers and risk officer appear in our project data, they usually work on many different projects and their job performance is considered to be independent of whether the project is signed or not. This suggests other parts of the FI to be less competitive than the banking side.

### 8 Concluding Remarks

Over the last decades, the situation of women in the professional world has changed. In many countries, women have similar, sometimes even higher educational credentials than men. Women have also entered in many domains that traditionally have been "male". Finance and IT are such examples, and in many research fields, women are today much more present than before. Nonetheless, women are underrepresented in senior positions inb almost all countries. To understand mechanisms and inform policy makers on the levels of society and organizations, one must dig deep into organizations.

The FI that we have looked at is very well suited to investigate whether promotions are fair. To start with, while this is a financial job, it is also a job with social impact, hence being attractive for both men and women. Indeed, on the junior, yet highly educated, level, women and men are equally represented and equally qualified. The FI scores high on market-wide diversity benchmarking carried out by consulting firms, and the FI's leadership is strongly committed to diversity. Nonetheless, we find substantial promotion gaps from the entry level for the highly-educated.

Our unique data allow us to decompose the gap precisely. While we find some evidence for child penalties and differential performance evaluation, we unpack the organizational mechanisms that are related to teamwork. A large part of the promotion gap we observe is indeed related to assignments to operational leader rather than team member roles. These assignments are in the discretion of Directors; they are important for the management of teams and they provide visibility to the upper echelons of the hierarchy who decide on promotions. Our initial analysis shows that the Director characteristics are important for assignment gaps; hence, there are assignment styles, in which the work experience of Directors before becoming Directors may matter greatly.

Assignments to roles affect promotions and promotions translate into careers. While men tend to use promotions to also move externally, successful women tend to move internally to non-banking roles. To what extent these effects are foreseen by the firm and its directors and how this may shape the assignment of roles is what we currently explore to get an equilibrium story that fits our observations.

The firm we study is representative of many others in the field of knowledge work, offers the unique opportunity to combine promotion information with team performance data, and allows us to identify new micro mechanisms through which women seem to get disadvantaged,. Two things seem important to us. First, to the extent possible, we seek for external validation, and, second, we want to qualitatively explore the mechanism we identify. We are hence currently preparing and running surveys in the study firm and other institutions.

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Online Appendix for

# Knowledge Teams, Careers, and Gender

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Figure A.1: Gender Earning Gaps by Occupation Skill in European Economies

Notes: This figure plots the average gender gap in monthly earnings (in percent) by occupation skill level using the Structure of Earnings Survey 2018. Sill levels are derived according to the ISCO08 major occupation groups, excluding armed forces. Gaps within each of the nine occupation groups are weighted by the number of employees relative to the overall number of employees in this skill level when aggregating to a skill level. Shows the five largest economies in terms of employees in the data set and the EU27 average (as of 2020).



Figure A.2: Performance During a Banker's Career

(b) Cumulative amount of signed projects (in millions of EUR)

Notes: This figure depicts average work performance of men and women against their tenure at the institution. Panel A shows the average cumulative number of projects signed by men and women in their roles as OL (left panel) and TM (right panel). Panel B shows the average cumulative amount (in millions of EUR) of projects signed by men and women in their roles as OL (left panel) and TM (right panel). Lines indicate the 95% confidence interval.





(a) Number of newly assigned projects over past 12 months



(b) Amount of newly assigned projects over past 12 months (in millions of EUR)

Notes: This figure depicts average work assignment to men and women against their tenure at the institution. Panel A shows the average number of new projects assigned to men and women in their roles as OL (left panel) and TM (right panel) over the past twelve months.Panel B shows the average amount (in millions of EUR) of new projects assigned to men and women in their roles as OL (left panel) and TM (right panel) over the past twelve months. Lines indicate the 95% confidence interval.



Figure A.4: Project Leadership Assignment Around Parenthood

Notes: This figure plots the average number of new projects as operation leader assigned to bankers around parenthood by gender. At month 0 the banker's child is born. Red indicates women, blue indicates men. 95% confidence intervals are included.

		Job b	and 5			Job ł	and 6			d dol	and 7	
	(1)	(2)	(3)	(4)	(5)	(9)	(2)	(8)	(6)	(10)	(11)	(12)
Woman	$-0.0155^{***}$ (0.0041)	$-0.0126^{***}$ (0.0041)	$-0.0128^{***}$ (0.0041)	$-0.0136^{***}$ (0.0044)	-0.0002 (0.0061)	0.0027 (0.0068)	0.0018 (0.0068)	0.0093 (0.0088)	$\begin{array}{c} 0.0006 \\ (0.0027) \end{array}$	0.0017 (0.0031)	$\begin{array}{c} 0.0015 \\ (0.0033) \end{array}$	-0.0025 (0.0053)
Married		0.0036 (0.0048)	0.0017 (0.0049)	0.0018 (0.0049)		0.0010 (0.0073)	0.0017 (0.0075)	0.0011 (0.0075)		-0.0007 (0.0042)	-0.0011 (0.0042)	-0.0017 (0.0043)
Child		0.0089 $(0.0060)$	0.0092 (0.0061)	0.0078 (0.0077)		0.0065 (0.0074)	0.0044 (0.0075)	$\begin{array}{c} 0.0109 \\ (0.0085) \end{array}$		$\begin{array}{c} 0.0003 \\ (0.0040) \end{array}$	0.0009 (0.0041)	-0.0014 (0.0051)
Paid leave		0.0012 (0.0024)	0.0016 (0.0025)	0.0014 (0.0026)		0.0018 ( $0.0029$ )	0.0022 ( $0.0029$ )	0.0033 (0.0031)		-0.0003 (0.0014)	-0.0004 (0.0014)	-0.0006 (0.0014)
Unpaid leave		$-0.0075^{**}$ (0.0030)	$-0.0072^{**}$ (0.0031)	$-0.0073^{**}$ (0.0031)		$-0.0050^{**}$ (0.0020)	$-0.0050^{**}$ (0.0020)	$-0.0050^{**}$ (0.0020)		-0.0019 (0.0015)	-0.0018 (0.0015)	-0.0020 (0.0016)
Non-banking experience		-0.0105 (0.0076)	-0.0100 (0.0082)	-0.0100 (0.0082)		0.0068 (0.0161)	0.0006 (0.0167)	0.0010 (0.0168)		0.0060 (0.0076)	0.0046 (0.0072)	0.0043 (0.0071)
Entry: pre-2000			$0.0344^{***}$ (0.0128)	$\begin{array}{c} 0.0342^{***} \\ (0.0128) \end{array}$			0.0056 (0.0169)	$0.0064 \\ (0.0170)$			-0.0029 (0.0086)	-0.0032 $(0.0085)$
Entry: $< job band 5$			$-0.0167^{***}$ (0.0050)	$-0.0169^{***}$ (0.0050)			-0.0065 (0.0100)	-0.0051 (0.0100)			0.0161 (0.0128)	0.0164 (0.0128)
Entry: sector			0.0029 (0.0067)	0.0029 (0.0067)			$-0.0134^{*}$ (0.0078)	$-0.0134^{*}$ (0.0077)			0.0013 (0.0044)	0.0012 (0.0044)
Entry: banking			0.0093 (0.0092)	0.0093 (0.0092)			-0.0003 (0.0147)	-0.0002 (0.0147)			-0.0060 (0.0084)	-0.0058 (0.0083)
Woman * Child				0.0032 (0.0096)				-0.0163 (0.0129)				0.0061 (0.0068)
Age and tenure FE Division × vear FE	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
R-squared	0.104	0.105	0.107	0.107	0.121	0.122	0.123	0.123	0.049	0.050	0.050	0.050
Number of bankers Observations	1,058 10.947	1,058 10.947	1,058 10 947	1,058 10 947	681 5 901	681 5 901	681 5 901	681 5 901	429 6 038	429 6 038	429 6 038	429 6 038

Table A.1: The Promotion Gap by Job Band

at the relevant job band is promoted. Age and tenure FE include fixed effects for ten bins of worker age and five bins of tenure on the next month. The sample includes bankers in job band 5 in columns (1)-(4), bankers in job band 6 in columns (5)-(8), and bankers in job band 7 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 Notes: This table presents results of Equation (1). The dependent variable, *Promoted* (0/1), indicates whether a banker is promoted job band. Standard errors are clustered at the banker level and shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
Woman	$0.0056 \\ (0.0067)$	$0.0025 \\ (0.0063)$	0.0025 (0.0063)	$0.0056 \\ (0.0065)$	0.0074 (0.0065)
Signings as OL		-0.0058 (0.0037)	$-0.0094^{**}$ (0.0038)	-0.0032 (0.0051)	-0.0081 (0.0053)
Signings as TM		$\begin{array}{c} 0.0065^{***} \\ (0.0008) \end{array}$	$\begin{array}{c} 0.0065^{***} \\ (0.0008) \end{array}$	$\begin{array}{c} 0.0066^{***} \\ (0.0008) \end{array}$	$\begin{array}{c} 0.0066^{***} \\ (0.0008) \end{array}$
Avg. amount as OL		$-0.0110^{***}$ (0.0040)		$-0.0110^{**}$ (0.0054)	
Avg. amount as TM		0.0033 (0.0024)	0.0024 (0.0024)	0.0033 (0.0024)	$0.0026 \\ (0.0024)$
Avg. team size as OL			0.0001 (0.0025)		$0.0025 \\ (0.0033)$
Woman $\times$ Signings as OL				-0.0055 $(0.0069)$	-0.0024 (0.0069)
Woman $\times$ Avg. amount as OL				$0.0001 \\ (0.0078)$	
Woman $\times$ Avg. team size as OL					-0.0055 $(0.0050)$
Controls	Yes	Yes	Yes	Yes	Yes
Age and tenure FE	Yes	Yes	Yes	Yes	Yes
Division $\times$ year FE	Yes	Yes	Yes	Yes	Yes
R-squared	0.056	0.050	0.050	0.050	0.050
Observations	43,733	$41,\!439$	$41,\!439$	$41,\!439$	$41,\!439$
Number of bankers	1,074	1,064	1,064	1,064	1,064

Table A.2: The Team Membership Assignment Gap for Junior Bankers

Notes: This table presents results of Equation (2). The dependent variable, New Assignment as TM (0/1), indicates whether a banker is assigned at least one new project next month as a TM. The sample includes the full banker-year-month level panel of bankers in job band 5. Controls include Married, Child, Paid leave, Unpaid leave, Non-banking experience, Entry: pre-2000, Entry: < job band 5, Entry: sector, and Entry: banking. Age and tenure FE include fixed effects for ten bins of worker age and five bins of tenure on the job band. Standard errors are clustered at the banker level and shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

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

Table A.3: Job Applications to the Banking Division

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-N/A" refers to applicants who preferred not to state their gender.

	Women as OL		Men as OL		Difference		Difference		Difference	
_	mean	s.d.	mean	s.d.	coef.	p-value	coef.	p-value	coef.	p-value
Banker characteristics										
Age	31.14	3.79	30.97	3.69	0.17	0.63	0.10	0.81	0.41	0.43
Length of service	3.05	2.25	2.47	1.68	0.59	0.00	0.70	0.00	0.80	0.00
Time in banking	3.00	2.25	2.42	1.65	0.58	0.00	0.70	0.00	0.81	0.00
Married	0.38	0.49	0.46	0.50	-0.08	0.10	-0.05	0.35	-0.10	0.14
Children	0.33	0.62	0.42	0.73	-0.09	0.15	-0.02	0.77	0.09	0.34
Sector directorate	0.50	0.50	0.51	0.50	-0.00	0.92	-0.02	0.66	-0.10	0.10
Entry: job band 5	0.77	0.42	0.83	0.37	-0.07	0.07	-0.05	0.27	-0.03	0.62
Project characteristics										
Signed	0.58	0.49	0.56	0.50	0.02	0.64	-0.04	0.51	-0.00	0.99
Team size	2.64	1.68	2.53	1.37	0.11	0.43	0.03	0.86	-0.10	0.65
Log amount	2.36	1.07	2.22	1.11	0.14	0.17	0.20	0.07	0.27	0.03
Credit rating	6.15	0.89	6.25	0.74	-0.09	0.26	-0.09	0.35	-0.08	0.53
Creation to first review	137.69	220.60	105.24	167.84	32.44	0.10	28.13	0.25	9.35	0.76
Environment flag	0.23	0.42	0.17	0.37	0.07	0.07	0.06	0.12	0.08	0.15
Small business flag	0.33	0.47	0.22	0.42	0.11	0.01	0.04	0.38	0.02	0.67
Repeat client	0.45	0.50	0.32	0.47	0.13	0.00	0.04	0.44	0.02	0.75
Equity	0.12	0.33	0.20	0.40	-0.09	0.01	-0.06	0.14	-0.03	0.60
Stand-alone	0.44	0.50	0.43	0.50	0.01	0.75	0.06	0.24	0.05	0.43
Observations	202		265							
Group-year FE							Yes			
Region-year FE							Yes		Yes	
Sector team-year FE									Yes	

Table A.4: Selection into First Project Leadership Assignment

Notes: This table reports summary statistics by gender for the first ever project assignment of a banker as project team leader. Only bankers who joined the organization after August 1999, which is when our data begin, and those in job band 5 are included in the sample. Only the first project assignments in a banker's career are included. Group FE correspond to a Managing Director level split. Sector team corresponds to a directorate level split, however it is not equal to a directorate FE due to temporal inconsistencies and restructuring.