

Social Preferences and Selection into the Financial Industry

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Abstract

We examine the social behavior of business and economics students with varying professional preferences and experiences. To gather data on professional experience, we collect subjects' résumés before the experimental game is played. In trust and public goods games, subjects with high interest in working in finance act more selfishly than subjects with other professional goals. We find no evidence that the extent of experience in finance changes behavior. In a prediction game strategically equivalent to the trust game, first-movers' trust was significantly smaller when the second-mover indicated a high interest in working in finance. These results suggest that the financial industry attracts more selfish individuals, which may contribute to the lack of trust in its employees.

Keywords: Social Preferences, Selection, Financial Industry

JEL Codes: C9, G2, M5

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1. Introduction

Trust – the subjective probability one attributes to the possibility of being cheated – is an essential feature of every transaction in the financial industry. If trust in its actors (brokers, bankers, financial advisors) is low, investors will be more cautious in making their money available to the financial industry. This has serious consequences for individuals' financial well-being. Demand for advice and delegation is reduced so that more individuals hold inefficient portfolios and less financial wealth (Guiso 2010). A low level of trust also reduces demand for insurance and hence increases individuals' exposure to financial risk. More generally, low trust results in lower stock market participation (Guiso et al. 2008) and an increased demand for regulation (Aghion et al. 2010, Pinotti 2012).

Unfortunately, there seems to be a general lack of trust and trustworthiness in the financial industry. The *General Social Survey* and the *Financial Trust Index Survey* reveal that trust in banks and bankers declined sharply during the last financial crisis. According to the 8th *Consumer Markets Scoreboard*, the financial service sector is viewed by consumers as a substantially underperforming sector.⁴ This distrust seems to be warranted. Many financial corporations have been repeatedly accused of defrauding their private, business, and government clients.⁵ Financial advisers frequently propose products that generate fees for themselves but on average hurt the customer (Mullainathan et al. 2012). In a recent conference presentation on “malfeasance in financial markets,” Michael Brennan⁶ describes the current status of the trader profession as follows: “Now individuals who make their livelihood by

⁴ In particular, the market for “investment products, private pensions, and securities” ranks worst of all markets in overall consumer satisfaction, see European Commission (2012).

⁵ One of the largest recent frauds was the LIBOR and EURIBOR scandal in which several financial companies formed an illegal cartel to manipulate important interest rates for interbank trade. In December 2013, the European Commission fined several companies, including *Royal Bank of Scotland*, *Société Générale*, *Deutsche Bank*, *JP Morgan*, and *Citigroup*. *Goldman Sachs* has been embroiled in the following “controversies”: their involvement in the European sovereign debt crisis (*GS* helped the *Central Bank of Greece* hide the size of Greece's debt), several insider trading cases, misstatement of financial results, and the scandal about the Abacus mortgage-backed CDOs (*GS* created these CDOs, sold them to investors, and then bet against them).

⁶ Keynote speech given at the Marie Curie ITN - *Conference on Financial Risk Management & Risk Reporting*, University of Konstanz, Germany, April 11 - 12, 2013.

trading face what we might describe as moral erosion. [...] Their profession frequently requires them to disguise their motives in trading and to use their superior information to take advantage of the people with whom they trade.”

This lack of trust and trustworthiness may arise from various sources. The usual economic explanation is that monetary incentives in financial institutions alter employees’ propensity to act against their clients’ interests. Compensation schemes are therefore at the heart of policy debates about financial market regulation and consumer protection (e.g., Inderst and Ottaviani 2012, Bénabou and Tirole 2013, Thanassoulis 2012, 2013). However, two behavioral mechanisms may also aggravate the nuisance. First, working in the financial industry may change employees’ preferences and therefore lead to, as Michael Brennan puts it, “moral erosion.” A growing number of economists propose that the societal and institutional environment can change preferences (e.g., Fehr and Hoff 2011, Cohn et al. 2014). So working in finance may make employees more selfish. Second, the financial industry may just attract more selfish people. A nascent literature in organizational economics analyzes selection and matching effects between individuals and organizations according to social motivations. Besley and Ghatak (2005) show in a principal-agent framework that workers who are motivated by a “mission” (such as saving lives, promoting justice, or creating knowledge) self-select into occupations with moderate monetary incentives, while workers without such “mission motivation” choose occupations with steep incentives.⁷ The financial industry with its materialistic values and high bonuses may attract rather selfish individuals who are more willing to exploit situations of asymmetric information than those people with other professional preferences.

The goal of this paper is to find out whether there is any evidence for these two behavioral mechanisms. We conducted a sequence of experiments – trust and public goods

⁷ Delfgaauw and Dur (2007) and Kosfeld and von Siemens (2009, 2011) explore similar mechanisms.

games⁸ – with students of business administration and economics from two large German universities. We required them to bring a current version of their résumé so that we have information about their professional experiences (through internships or vocational training). Subjects answered a number of survey questions, in particular, questions on professional preferences. We then compared the behavior of those eager to work in finance with that of those who have other professional goals; and the behavior of those with experience in finance with that of those with no such experience. If none of the two behavioral mechanisms is at work, there should be no differences in experimental behavior between these groups (provided that there is no selection into the experiment based on social preferences, which we discuss at a later stage).

The hypothesis of no differences in behavior is clearly rejected in both experimental games. In the trust game, we find that those with high interest in working in the financial industry return 25 percent less than those with low interest in finance (the threshold is determined by sample split). We also find that those with professional experience in finance return 25 percent less than those without such experiences. Similarly, we find in the public goods game that those with high finance interest contribute 21 percent less than those with low finance interest, and that those with professional experience in finance contribute 25 percent less than those with no experience in the financial industry. Overall, individuals who are highly interested in working in finance and/or already accumulated professional experience in this industry act much more selfishly than other students of business and economics.

⁸ A number of studies show that behavior in these games is correlated with real-world decisions. For the trust game, Karlan (2005) and Baran et al. (2010) provide evidence that the trust game played in the lab predicts reciprocal behavior in the field. Moreover, Cohn et al. (forthcoming) find that workers who do not behave reciprocally in an experimental game conducted in the lab (which is strategically similar to the trust game) also do not act reciprocally in a field experiment in which they do not know that they are observed. For the public goods game, Rustagi et al. (2010) find that communities with a higher share of conditional cooperators (individuals who contribute to the common good if others do so as well) are more successful in forest commons management than communities with a smaller share of these types.

If the financial industry attracts more selfish individuals or if working there makes individuals more selfish, we should observe distrust against those eager to work in finance or those with professional experience in finance. To test this hypothesis, we conducted an additional experiment in which subjects play a prediction game that is strategically equivalent to the first-mover decision in a trust game against randomly chosen second-movers from the previous study. The second-movers' decision was recorded through the strategy method (they made conditional decisions for every possible first-mover action). We can therefore match the first-mover's action in the new experiment to a payoff that depends on the second-movers' decision. There were no additional payments to previous participants. Hence, only subjects' assessment of the second-movers' trustworthiness matters for their decision (and no other considerations such as altruism or in-group favoritism). Before subjects made their decision, they received information about their second-movers' professional preferences and experiences. Thus, we can test whether there is a lack of trust in those fellow students who are interested in working or have gathered experience in finance.

Indeed, we find that subjects trust those with high interest in working in the financial industry significantly less than those with low interest. Second-movers with high finance interest receive 8 percent less than second-movers with low finance interest. A second-mover's professional experience has no impact on the amount received. Hence, our subjects seem to believe that the financial industry attracts less trustworthy individuals but that working there does not change a person's trustworthiness.

Our datasets do not allow us to distinguish selection from treatment in a clean manner (an appropriate experimental setup would randomly assign student subjects to firms from various industries, which requires firms' consent, enormous resources, and may be ethically questionable). However, they are rich enough to provide some indicative evidence for selection. We find a strong relationship between finance interest and experimental behavior in the subsample of subjects who do not have any professional experience in finance. On the contrary,

we find little evidence that the extent of experience in the financial industry impacts on behavior. Hence, the financial industry seems to attract more selfish individuals, but working there does not necessarily corrupt one's character.

Does the financial industry screen out selfish individuals in the hiring process? We conjecture that the answer is “no” for three reasons. First, we find that subjects with high finance interest who applied for a job in the financial industry, but (so far) have no working experience in finance, behave in the same way as those with professional experience in the financial industry. Second, financial companies do not seem to be especially concerned with the social preferences of their applicants. We conducted a number of interviews with human resource managers from financial companies. Our main finding is that trustworthiness seems to be rather unimportant for a successful application, compared to analytical and communication skills. Third, and perhaps most important, there is little reason for financial companies to screen for social preferences. Their employees work in an environment with substantial monitoring and incentives to perform well (for the company). Indeed, in the repeated version of the public goods game we find that the differences in behavior become small as soon as there is scope for reputational concerns.

Given the importance of the financial industry for the economy, this adverse selection may be costly for society. There does not seem to be a simple solution. Regardless of previous professional experiences, the share of least trustworthy individuals is largest in the group of those with high interest in working in finance, i.e., those most likely to apply for jobs there. Thus, hiring applicants with professional experiences in other industries may again tend to attract more selfish individuals. Making employment in the financial industry less attractive in terms of monetary rewards could be one way to change the pool of applicants. Indeed, one of the few significant differences in personal characteristics between low and high finance interest subjects is a relatively higher valuation of income in the latter group. Hence, a regulation that lowers profits and earnings in the financial industry may also change the selection of workers

into occupations. Policy-makers should therefore account for the self-selection of workers into occupations based on social preferences when deciding about regulation.

The rest of the paper is organized as follows. In Section 2, we review the related literature. In Section 3, we explain the experimental setup and the results of Study 1 (trust game), which is the main focus of the paper. In Section 4, we explain the experimental setup and the results of Study 2 (public goods game), which serves as a robustness check. In Section 5, we present Study 3 (prediction game) and its results. In Section 6, we discuss a number of issues, in particular, whether the financial industry attracts and selects more selfish individuals. Section 7 concludes and discusses the implications of our results.

2. Related Literature

A number of studies show that economics students behave more selfishly than students of other majors (Marwell and Ames 1981, Carter and Irons 1991, Frank and Schulze 2000, Frey and Meier 2003, Rubinstein 2006, Baumann and Rose 2011). This paper confirms this result and demonstrates that even within the pool of business and economics students there are considerable behavioral differences between subjects of varying professional preferences.

A growing literature analyzes the extent to which individuals self-select into different occupations based on social preferences. For non-profit organizations there is some evidence for matching effects. Carpenter and Myers (2010) find that the decision to join a volunteer fire service is positively correlated with altruism. Gregg et al. (2011) find a positive correlation between self-selection into the public service sector and the propensity to donate labor. Serra et al. (2011) find that pro-socially motivated health care workers are more likely to work in the non-profit sector where they earn lower wages (in Ethiopia). Hanna and Wang (2014) show that students who cheat in a laboratory task are more eager to work in the public sector (in India). A number of experimental papers provide evidence that some workers are motivated by their organization's mission (e.g., Carpenter and Gong 2013, Gerhards 2013). We study the "inverse"

of this selection and find that the financial industry attracts selfish individuals. To the best of our knowledge, this paper is the first that provides some evidence for selection based on social preferences for an important industry of the private sector.

Study 3 in our paper is related to the literature that analyzes trust and discrimination based on ethnicity and geographic location. Fershtman and Gneezy (2001) examine the trust game and the dictator game played in Israel between Eastern Jews and Ashkenazic Jews. They find that men of Eastern origin receive fewer investments in the trust game, but the same amounts in the dictator game. Hence, in their sample, discrimination in the trust game is due to a lack of trust and not to a taste for discrimination. They also find that this lack of trust is not warranted, i.e., both ethnicities are equally trustworthy. Falk and Zehnder (2013) conduct a city-wide experiment in Zurich where inhabitants of different districts play the trust game against each other. Individuals living in high-income districts receive higher investments and return more. As in our experiment, first-movers correctly anticipate the relative trustworthiness of second-movers.

Two papers examine the social behavior of employees of the financial industry experimentally. Cohn et al. (2014) find that priming employees of financial firms with their professional identity increases cheating in a coin-tossing task. Burks and Krupka (2012) identify the norms of financial advisers and their leaders and whether they are consistent with the guidelines of the company. We focus on the relationship between professional and social preferences of individuals who will enter the job market in the near future. The information provided through the résumés allows us to control for the (potential) influence of work experience on behavior and to evaluate subjects' relative chances of getting a job in finance. Unlike Cohn et al. (2014) we find that individuals eager to work in finance are behaviorally different from those with other professional goals.

3. Study 1: Trustworthiness, Professional Preferences, and Experiences

The goal of Study 1 is to examine the relationship between job preferences, experiences, and behavior in the trust game. Moreover, we will draw the matching partners for the participants of Study 3 from the pool of Study 1 subjects.

Since the focus of this paper is on the financial industry, we conducted Study 1 and Study 3 at *Goethe-University* Frankfurt. Frankfurt is the financial center of Germany and continental Europe.⁹ This makes it relatively easy for students of *Goethe-University* Frankfurt to acquire professional experience in the financial industry before graduation. The economics department at *Goethe-University* specializes in finance and attracts many students who wish to work in the financial sector. Around 40 percent of business and economics students choose their specialization in finance. More than 35 percent of *Goethe-University's* business and economics graduates find their first job in the financial industry.

3.1 Experimental Design and Procedures (Study 1)

In the invitation email for the experiment, we asked subjects to bring a current version of their résumé to the lab for an experimental game and a survey on “Study Motivation, Specialization, and Occupational Choice.” The experimenter collected the résumés and deleted any personal information (name, address, etc.) in front of the subject. To ensure the participation of sufficiently many subjects, we paid them a show-up fee of 20 Euros, which is extraordinarily high for this laboratory.

The experiment started with a survey on professional preferences. Among other things, subjects answered the question “To what extent can you imagine working in the following industries in the future?” for a number of industries on a Likert-scale between 1 (“certainly not”) and 7 (“definitively”).¹⁰ The corresponding answer for the financial industry is our

⁹ The headquarters of many of Germany’s and Europe’s most important private and public financial institutions are located there (e.g. *European Central Bank, German Central Bank, Deutsche Bank, Commerzbank*, local headquarters of *Goldman Sachs, Morgan Stanley*).

¹⁰ Besides finance, we asked subjects to what extent they can imagine working in the following industries: health, tourism, logistics, IT/communication, engineering, electronics, car manufacturing, insurance, energy, retail, public

measure of preference for working in finance. We also collected demographic information, personality measures (Big Five), the willingness to take risks (as measured by the SOEP scale, see Dohmen et al. 2011), patience (as measured by the SOEP scale, see Vischer et al. 2013), and work values (Ronen 1994). After conducting the survey, we measured subjects' cognitive ability by using the 12 minute version of Raven's Advanced Progressive Matrices (Bors and Stokes 1998).

Next, subjects played the trust game against each other with role uncertainty. Each subject played the game as first- and as second-mover. In our version of the trust game, the first-mover is initially given 8 Euros and can send any integer value between 0 and 8 Euros to the second-mover. Before reaching the second-mover, the amount is tripled. The second-mover can then send back any integer value between 0 and the amount received. We applied the strategy method so that for each subject we know the behavior as second-mover for any possible amount received. After the experiment, we randomly decided for each subject the matching partner and the player role that determines the payoff.¹¹

The experiment was programmed using z-Tree (Fischbacher 2007). We used ORSEE (Greiner, 2004) to recruit subjects from the business and economics faculty. In total, 268 subjects participated in the experiment.¹² Payments were made right after the end of the session. Each session lasted about 60 minutes (including time needed for instructions and payments). On average, subjects earned 26.61 Euros (including the show-up fee).

3.2 Classification of Subjects

service, consulting, auditing. We chose the industries where most graduates find their first job (based on alumni data from *Goethe-University*).

¹¹ Using the strategy method in the trust game reduces the amounts sent and returned (Burks et al. 2003). Since in Study 1 all subjects play the same game, this is not a problem.

¹² One subject studied law and was dropped from the sample; 93 percent of our subjects were Bachelor students (all others Master students), and 75 percent of the Bachelor students were in the first two years of their studies.

We classify our subjects along two dimensions, preferences and experiences. For preferences, our classification is based on subjects' self-reported interest in working in the financial industry. Figure 1 displays the distribution of this variable: 58 subjects indicate seven points, and 99 subjects indicate six points in the finance interest question. Those subjects will be called "high finance interest subjects." All others will be called "low finance interest subjects." Our sample contains 157 high finance interest subjects and 110 low finance interest subjects.

[INSERT FIGURE 1 ABOUT HERE]

For experience, our classification is based on the subjects' résumés. Subjects who have professional experience (vocational training, internships, or student assistantships) in firms that belong to the NACE¹³ two-digit industry codes sub-category "financial service activities" are called "finance experience subjects." Subjects who have no professional experience in this category are called "no finance experience subjects." We have 71 finance experience subjects in our sample and 189 no finance experience subjects.¹⁴ Not surprisingly, the correlation between finance interest and experience is large: 83.1 percent of our finance experience subjects are also high finance interest subjects, compared to 50.2 percent of no finance experience subjects.

Our subjects acquired substantial professional experience. Finance experience subjects had on average had 2.9 (sd = 1.6) jobs (1.3 (sd = 0.8) in the financial industry) and had spent 105.0 (sd = 79.8) weeks in a working relationship with some firm. Almost 30 percent of them completed a three-year vocational training program in a bank. No finance experience subjects

¹³ The European classification of economic activities ("Nomenclature statistique des activités économiques dans la Communauté européenne").

¹⁴ Six subjects worked at firms that belong to the sub-category "Insurance, reinsurance, and pension funding", and one subject worked at a firm that belongs to the sub-category "Activities auxiliary to financial services and insurance activities." We will drop these subjects from the main analysis. We will show that the inclusion of them as finance or no finance experience subjects does not affect our results in a qualitative way.

had on average had 2.1 (sd = 1.6) jobs and had spent 80.8 (sd = 127.9) weeks in a working relationship;¹⁵ 10.6 percent of them had completed a vocational training program.

3.3 Experimental Results (Study 1)

Table 1 provides an overview of subjects' behavior in the trust game, ordered by finance interest and experience. There are no statistically significant differences in the amounts sent, neither between low and high finance interest subjects, nor between subjects with and without finance experience.

[INSERT TABLE 1 ABOUT HERE]

In terms of the mean amount returned as a fraction of the amount received (henceforth “mean amount returned”), we find remarkable differences between groups. While subjects with low finance interest return on average 24.1 percent, subjects with high finance interest return only 17.4 percent. The difference in the average mean amount returned is highly significant (t-test, p-value = 0.001; MW, p-value = 0.001).¹⁶ A similar pattern is obtained if we compare subjects with and without finance experience. No finance experience subjects return substantially more on average than finance experience subjects (21.5 percent compared to 16.4 percent; t-test, p-value = 0.024; MW, p-value = 0.025). Thus, subjects that are eager to work in the financial industry and subjects with previous professional experience in finance return on average 25 percent less in the trust game than subjects with low finance interest/without finance experience.

To better understand this result, we compare the number of subjects who always return zero, independently of the amount received. We find that 12.7 percent of low finance interest subjects have a mean return of zero, compared to 35.7 percent of high finance interest subjects;

¹⁵ There are 29 subjects without any working experience. Excluding these subjects, we find that a no finance experience subject had on average 2.46 (sd = 1.47) jobs and spent 95.50 (sd = 133.94) weeks in a working relationship with some firm. Excluding these subjects does not change our main results.

¹⁶ All p-values for reported t-tests in the paper result from two-sided tests.

23.3 percent of no finance experience subjects have a mean return of zero, compared to 35.2 percent of finance experience subjects.

These results are confirmed in OLS regressions with the mean amount returned as dependent variable. As the main independent variable we include either *finance interest* (a variable defined on a scale from 1 to 7)¹⁷ or *finance experience*, which is a dummy set to one if a subject has experience in the financial industry (and zero otherwise). We conduct separate regressions for both independent variables as they are highly correlated. Results for finance interest are presented in Panel A of Table 2, results for finance experience in Panel B.¹⁸

[INSERT TABLE 2 ABOUT HERE]

As shown in column 1a, when regressing the mean amount returned on finance interest, the coefficient for finance interest is negative and significant. The size of the coefficient indicates that, whenever a subject is one point more interested in working in finance, she returns 1.9 percentage points less. In column 2a, we include age, a gender dummy, a dummy capturing whether the subject has used the résumé in a previous job application (according to our survey), and, to control for cognitive ability, the number of correctly solved problems in the Raven test as controls. Including the controls has a slight impact on the size of the finance interest coefficient, but the effect remains economically and statistically significant. Age is the only control variable that turns out to be statistically significant, indicating that older subjects on average return more.¹⁹

Using finance experience as an independent variable, we also find a significant negative effect. Finance experience subjects return on average 25 percent less than subjects who have no

¹⁷ One concern may be that we interpret the ordinal finance interest scale in a cardinal way. Therefore, we also regress seven dummy variables (one dummy for each value of finance interest) on the mean amount returned. As shown in Table A in the Online Appendix, the main qualitative results are quite similar to our regression results above. Another concern may be that the amount returned is bounded. We thus estimate our baseline regression using a tobit model. As shown in Table B in the Online Appendix, the main results are the same.

¹⁸ In all regressions, we use Huber-White standard errors. Using heteroskedasticity-robust standard errors does not change our main results.

¹⁹ A number of studies found that trustworthiness increases with age (Fehr et al. 2003, Bellemare and Kröger 2007, Sutter and Kocher 2007), however, for much wider ranges of years of life.

finance experience. Including additional control variables improves the fit of the regression, but it does not affect the results (column 2b). Again, age turns out to be significant in these specifications. Moreover, we find that women are significantly more trustworthy.²⁰ Based on the results above, we conclude:²¹

Result 1. *Subjects with high interest in working in the financial industry and subjects with previous professional experience in finance return around 25 percent less in the trust game than subjects with low finance interest and no such experiences.*

Do similar behavioral patterns exist for other industries? Based on the résumés, we could identify the industries in which the subjects in our sample have professional experience. Besides finance (n = 71), most subjects gathered experience in the retail industry (n = 43), the audit industry (n = 40), and in public administration (n = 26). To control for the effects of other industries, we run our baseline regression, including dummies for the 15 industries in which most subjects had professional experience. Each dummy is set to one if a subject has professional experience in the corresponding industry and zero otherwise.²² Our main

²⁰ A number of papers find that women are more trustworthy than men, while others find no significant gender differences (see Croson and Gneezy 2009 for an overview). In our experiment, we find significant differences only in some specifications. To control for the impact of gender and age, we include both variables in all regressions.

²¹ One concern may be that finance experience subjects have (by definition) some professional experience, while some subjects in the no finance experience group have no experience at all. If we exclude all subjects that have no job experience in any industry, the results remain the same (see Online Appendix, Table C). We also run a regression in which we use an extended definition of experience in the financial industry. Here we include subjects who have experience in “Activities auxiliary to financial services and insurance activities” and “Insurance, reinsurance and pension funding” and set the finance experience dummy to one for those observations. As shown in column 2 (Online Appendix, Table C), the results remain the same.

²² Note that we cannot run similar regressions for subjects’ interest in working in the 15 industries, as the interests for some sectors are correlated. We investigate the impact of other professional preferences on the amounts returned in two ways. First, we run our baseline regression including the interest in the two other industries where most subjects have experience, i.e., retail and audit. Second, we conduct a regression where we measure finance interest in relative terms, i.e., the interest of a subject to work in the financial industry divided by the subject’s average interest in working in all industries. As shown in Table D in the Online Appendix, the main results are similar to that in our baseline regression. In the first specification, we find a positive correlation between retail interest and the amounts returned.

qualitative results for finance experience are the same (see Table E in the Online Appendix). We do not find a robust and significant effect for any other industry.²³

4. Study 2: Cooperation, Professional Preferences and Experiences

Maniadis et al. (2014) argue that one should be cautious with “novel and surprising experimental results” as they could be a false positive. The authors show that replications of an experimental finding dramatically increase the chances that an original result is true. The results from Study 1 suggest that subjects who are eager to work in finance or who already accumulated experience in the financial industry behave more selfishly than others. To test the robustness of this result, we conduct a similar experiment, but use a different economic game (the public goods game), hire from a different subject pool (from the *University of Cologne*), hire in a different manner (students from all faculties are invited into the lab), and revert the order of questionnaire and experiment.

4.1 Experimental Design and Procedures (Study 2)

As in Study 1, we required subjects to bring a current version of their résumé to the lab. This time we hired subjects from all faculties. Since the *University of Cologne* has Germany’s largest business economics department, we were confident to recruit sufficiently many business and economics students.

In each session, we first conducted the Raven test, second the experimental game, and finally a survey similar to that in Study 1. The experimental game was a standard linear public goods game. Subjects are randomly matched into groups of three participants. Each subject initially holds 20 tokens, which she can either keep or contribute to the public good of her group. The payoff function of group member i is given by

²³ The only exception is the computer industry. Here, however, the number of observations is quite low ($n = 14$).

$$\pi_i = 20 - g_i + 0.6 \sum_{j=1}^3 g_j.$$

In this game, the unique dominant strategy for money-maximizing subjects is to free ride ($g_i = 0$), while the maximization of the group-payoff would dictate to contribute everything ($g_i = 20$). We follow Fischbacher and Gächter (2010) and conduct two types of public good experiments. In the “P-experiment”, we elicit subjects’ cooperation in the one-shot public goods game. In the “C-experiment”, subjects play the public goods game in 10 consecutive rounds with the same matching-partners.

The procedure of the P-experiment is the same as in Fischbacher et. al (2001). Subjects make an “unconditional contribution” and a “conditional contribution” (we will discuss only unconditional contributions). The unconditional contribution is a single decision about how many of the 20 tokens the subject wants to contribute to the public good. After this, subjects indicate their conditional contribution for each of the 21 possible average contribution levels (rounded to integers) of the other group members. When all decisions are made, two subjects are randomly chosen in each group for whom the unconditional contribution becomes relevant, while for the remaining subject the conditional contribution (given the other subjects’ contributions) becomes relevant. This procedure ensures that each decision is made in an incentive-compatible way. Subjects get no feedback about payoffs from this experiment before they play the C-experiment.

In the C-experiment, groups are reshuffled. Subjects play the public goods game in ten rounds with the same group members. After each round, they observe the contributions of their opponents in the previous round, and they can condition their future actions upon this information. We will discuss the results from the C-experiment in Section 6.3.

At the end of the session, it was randomly decided which game would be paid out (by rolling a dice in front of the subjects). The exchange rate was 0.35 Euros for each token. We

used an adapted version of the z-Tree code from Fischbacher and Gächter (2010). In total, 354 subjects participated, of which 179 were business and economics students. Each session lasted about 90 minutes (including time needed for instructions and payments). On average subjects earned 34.22 Euros (including a show-up fee of 23 Euros).

4.2 Experimental Results (Study 2)

We have 110 high finance interest subjects, 84 of them study business or economics; 244 subjects are low finance interest subjects, 95 of them study business or economics; 46 of all subjects and 35 of the business or economics students have professional experience in the financial industry;²⁴ 60.9 percent of finance experience subjects are high finance interest subjects, while only 26.1 percent of no finance experience subjects are classified as high finance interest subjects (the corresponding numbers for the sample of business and economics students are 71.4 percent and 27.3 percent, respectively).

The data largely confirm our results from Study 1. Focusing on all subjects, we find that low finance interest subjects contribute on average 9.95 (sd = 6.44) tokens to the public good. In comparison, high finance interest subjects contribute on average only 7.66 (sd = 7.11) tokens. The difference in contributions is significant (t-test, p-value = 0.003; MW, p-value = 0.002). Similarly, no finance experience subjects contribute on average 9.57 (sd = 6.54) tokens, while finance experience subjects on average only contribute 6.93 tokens (sd = 7.48; t-test, p-value = 0.013; MW, p-value = 0.008).²⁵

If we focus on the subsample of business and economics students, the main qualitative results are the same. Low finance interest subjects contribute on average 9.25 (sd = 6.71) tokens

²⁴ Six subjects worked at firms that belong to the sub-category “Insurance, reinsurance, and pension funding”. We exclude these subjects in our analysis on finance experience. The share of subjects who are interested in working in finance within the sample of business and economics students is higher in Frankfurt than in Cologne (59.8 percent versus 46.9 percent). Similarly, in Frankfurt business and economics students are more likely to have experience in the financial industry than in Cologne (27.3 percent versus 20.2 percent).

²⁵ In line with the literature, we find that business and economics students contribute less to the public good than students of other majors (8.41 versus 10.17 tokens; t-test, p-value = 0.014; MW, p-value = 0.013).

to the public good, while high finance interest subjects on average contribute only 7.46 tokens (sd = 7.02; t-test, p-value = 0.083; MW, p-value = 0.077). No finance experience subjects contribute on average 8.68 (sd = 7.63) tokens, while finance experience subjects only contribute on average 6.51 tokens (sd = 6.63; t-test, p-value = 0.096; MW, p-value = 0.054).

[INSERT TABLE 3 ABOUT HERE]

To test the robustness of these results, we run a number of OLS regressions using contributions as dependent variable. The main independent variables are either *finance interest* or *finance experience*. As shown in Table 3, we find a negative and statistically significant coefficient for finance interest (Panel A) as well as for finance experience (Panel B). Including a dummy set to one if a subject studies business or economics and controlling for age and gender has a slight impact on the size of the coefficients, but the effect remains economically and statistically significant. We summarize the results:

Result 2. *Within the sample of business and economics students, subjects with previous professional experience in finance contribute around 25 percent less in the public goods game than subjects with no experience in finance, and subjects with high interest in working in finance contribute around 21 percent less than subjects with low interest in working in finance.*

5. Study 3: Trust, Professional Preferences, and Experiences

If the financial industry attracts more selfish individuals or if working there makes individuals more selfish, we should observe that subjects in the trust game distrust their fellow students when they are eager to work or have accumulated experience in finance. The goal of Study 3 is to find out whether this is the case.

5.1 Experimental Design and Procedures (Study 3)

We recruited students from all faculties of *Goethe-University* Frankfurt except from business and economics.²⁶ They played a prediction game that is strategically equivalent to the first-mover decision in the trust game. Specifically, subjects played the trust game as first-mover against randomly chosen subjects from Study 1 (from whom we have recorded all choices through the strategy method). Subjects from Study 1 did not get any additional payments or feedback from Study 3, and we made this clear to Study 3 participants. The only motive for sending positive amounts to the second-mover is trust. Altruism, a taste for discrimination or in-group bias should not matter for the decision.

Each subject played against three randomly chosen second-movers from the set of Study 1 participants who had some professional experience. After the experiment, one of them was randomly selected to be decisive for the subject's final payoff. Before subjects made their choices, they received the following information about each of the three second-movers: their age, their response to the preference question for finance, audit, and retail business (the three industries where most Study 1 subjects acquired professional experience), and the industry in which they obtained professional experience.²⁷

The experiment was programmed using z-Tree. We recruited 189 subjects via ORSEE.²⁸ To make sure that all subjects understood the experimental game, we asked several control questions. If a subject did not correctly answer all control questions, he or she received additional assistance from the experimenters. Payments were made right after the experiment. Each session lasted about 60 minutes (including time needed for instructions and payments). On average, subjects earned 14.90 Euros (including a show-up fee of 8 Euros).

²⁶ We adopted this procedure in order to make sure that no subject was invited to both studies.

²⁷ See the Online Appendix for an example.

²⁸ In Study 3, most of our subjects study humanities (59.8 percent), law (13.8 percent), or science (12.8 percent).

5.2 Experimental Results (Study 3)

Comparing the average amounts sent to the different subject groups, we find that second-movers with high finance interest receive on average 4.43 (sd = 2.67) Euros, while second-movers with low finance interest receive 4.80 (sd = 2.44) Euros. This difference is borderline significant (p-value = 0.085; MW, p-value = 0.130). Second-movers with finance experience on average receive 4.57 (sd = 2.48) Euros, while second-movers without finance experience receive 4.64 (sd = 2.58) Euros. This difference is not significant (t-test, p-value = 0.757; MW, p-value = 0.675). These descriptive results have to be taken with caution, as we treat the three amounts sent by each subject as independent observations.

In trust games, there is usually large cross-individual heterogeneity in the amounts sent by first-movers, while the intra-personal differences in the amount sent to various second-movers are smaller (see, e.g., Falk and Zehnder 2013). Trusting other players is risky and may depend on risk preferences and subjective beliefs about the trustworthiness of others. One advantage of our experimental design is that we observe three decisions for each subject. The only variations for a first-mover in the three trust games are the second-movers' characteristics. This allows us to include a first-mover fixed effect in our regressions that captures (to a large extent) the invariant level of trust in Study 1 participants. Our dependent variable is the amount sent by the first-mover to the second-mover. As the main independent variable, we include either *finance interest*²⁹ or *finance experience*.

[INSERT TABLE 4 ABOUT HERE]

Results for finance interest are presented in Panel A of Table 4. As shown in column 1a, the coefficient for our main variable of interest is negative and significant. The size of the

²⁹ One concern may be that we interpret the ordinal finance interest scale in a cardinal way. To deal with this concern, we regress seven dummy variables (one dummy for each value of finance interest) on the amount sent. A second concern may be that our dependent variable is not normally distributed. We thus conduct a tobit regression. As shown in Table F and G in the Online Appendix, the main qualitative results are similar to our regression results above.

coefficient indicates that, whenever a second-mover is one point more interested in working in finance, the first-mover sends 0.10 Euros less. In column 2a, we include the second-movers' age. While the coefficient for age turns out to be positive and significant, we find that the size of the finance interest coefficient is almost unchanged.³⁰ We conclude that subjects indeed anticipate both the negative correlation between finance interest and returns as well as the positive correlation between the second-mover's age and returns.

In Panel B of Table 4, we report our results for finance experience. The coefficient for finance experience turns out to be insignificant, indicating that the second-movers' professional experience in the financial industry has no impact on first-movers' trust.

Result 3. *The amount sent by first-movers decreases in the second-movers' stated interest for working in the financial industry. The second-movers' professional experience has no effect on the amount sent. In line with the results from Study 1, we find a positive effect of the second-movers' age on the amount sent.*

Do subjects differ in their ability to anticipate the negative correlation between finance interest and trustworthiness? To find out, we run our fixed-effects regression for different subsamples of subjects. We find that gender and cognitive ability (as measured by the Raven test) are related to the anticipation of relative differences in trustworthiness (see Table I in the Online Appendix). Whenever a second-mover is one point more interested in working in the financial industry, female subjects and subjects with above-median cognitive ability send 14 cents less. The coefficient for male subjects and subjects with below-median cognitive ability decreases

³⁰ Subjects in Study 3 were informed about the second-mover's finance interest as well as her interest in working in the retail and auditing industry. To control for the interest in the two other industries, we ran our baseline regression, including one variable that captures retail and one that captures auditing interest. Our qualitative results remain the same (see Online Appendix, Table H). When we include age and the two other interest variables, the coefficient for finance interest turns out to be slightly insignificant (t-test, p-value = 0.133).

substantially compared to the baseline regressions and turns out to be insignificant. This indicates that these groups do not anticipate the relative differences in trustworthiness between low and high finance interest subjects.³¹

6. Discussion

The main conclusion from Result 1 and 2 is that the financial industry attracts selfish individuals and/or pursuing a career in finance makes people more selfish. In this section, we discuss the assumptions under which this conclusion is valid and whether the results are driven by treatment or selection.

6.1 Is there selection into the lab based on social preferences?

The above conclusion only holds under the assumption that there is no differential selection into the lab based on social preferences. In principle, it could be the case that low finance interest subjects/no finance experience subjects participate in the experiment because of pro-social motivations (e.g., helping the researcher), while high finance interest/finance experience subjects participate only for monetary gains. A number of studies show that selection based on social preferences is rather unlikely. Abeler and Nosenzo (forthcoming) vary the content of invitation mails (rewards versus helping research). They find that the subject pools in each treatment exhibit the same distribution over social preferences. Cleave et al. (2013) compare the behavior in the trust game of a representative sample of the student population and participants of lab experiments. Subjects who participate in experiments are less trustworthy than non-participants, but the difference is rather small. Falk et al. (2013) show that students who donate more in the field are not more likely to participate in laboratory experiments.

6.2 Does the financial industry attract more selfish people?

³¹ We conduct the same regressions with the second-mover's finance experience as independent variable. In none of these regressions does the effect of finance experience turn out to be significant.

Our datasets do not allow us to distinguish between the treatment and the selection mechanism in a clean way. Nevertheless, they are rich enough to provide some indicative evidence. In this subsection, we provide a number of results that are in line with selection but arguably difficult to explain by a pure treatment mechanism.

First, we observe that high finance interest subjects behave significantly different from low finance interest subjects even if they have had no working experience in finance so far. In Panel A of Table 5, we split our sample from Study 1 into four groups: subjects with no finance experience and low finance interest ($n = 94$), subjects with finance experience and low finance interest ($n = 12$), subjects with no finance experience and high finance interest ($n = 95$), and subjects with finance experience and high finance interest ($n = 59$). The table shows for each group the average of the mean amount returned.

[INSERT TABLE 5 ABOUT HERE]

If we focus on subjects without finance experience, we find that those who have low finance interest on average return 24.6 percent, while those with high finance interest on average return only 18.4 percent. This difference is highly significant (t-test, p -value = 0.009; MW, p -value = 0.014) and robust in an OLS regression.³² Thus, high finance interest subjects appear to be more selfish than low finance interest subjects, even if they have had no experience in finance so far.³³

Second, we find that the extent of professional experience in the financial industry has no impact on behavior. Again, consider Panel A of Table 5. If we keep finance interest constant, the numbers suggest that finance experience reduces the average mean amount returned. However, both differences are insignificant (t-test, p -value = 0.273 for high finance interest, p -

³² We run our baseline regression for finance interest, including only subjects who have no finance experience. As shown in Table J in the Online Appendix, the main results turn out to be the same as in our baseline regression.

³³ Focusing on subjects with finance experience, we find that those with high finance interest on average return 15.4 percent, while the 12 subjects who have finance experience, but only low finance interest, return on average 21.1 percent. The difference is not significant (t-test, p -value = 0.271; MW, p -value = 0.172), which is not surprising, given the low number of observations.

value = 0.453 for low finance interest). Nevertheless, assume that working in the financial industry lowers one's trustworthiness. We would then expect that the amount of time spent in finance has a negative effect on the mean amount returned. In Panel B of Table 5, we compare subjects with little finance experience (less than 4.5 weeks), intermediate finance experience (4.5 to 100 weeks), and high finance experience (more than 100 weeks, usually through vocational training). We find no indication that subjects who have more finance experience behave more selfishly.³⁴ If anything, the opposite is true: subjects who have worked for a longer time in finance return more on average. However, this may be due to the fact that subjects with more professional experience are older on average. To investigate this, we re-examine our finance experience baseline regression, including a variable capturing the duration of experience in the financial industry.

[INSERT TABLE 6 ABOUT HERE]

As shown in Table 6, controlling for the duration of the working relationship has no impact on the estimated coefficient for finance experience in our baseline regression. The coefficient for duration is almost zero and statistically not significant. We conclude:

Result 4. *Among subjects with no experience in finance, we find that subjects with high interest in working in the financial industry return around 25 percent less in the trust game than subjects with low finance interest. There is no evidence that the extent of finance experience has a negative effect on the amounts returned.*

6.3 Does the financial industry select more selfish people?

³⁴ We obtain similar results in Study 2, see Section "Results from Study 2, P-Experiment" in the Online Appendix.

Having purely selfish people in a company may be a problem for two reasons. First, there are many ways in which employees can take advantage of the employer (Bewley 1999). In the financial industry, fraud against the employer can be very costly as the trading scandals around Jérôme Kerviel³⁵ and others suggest. Second, for the success of a large company employees must exchange information and cooperate with each other despite potential conflicts of interests. Such exchange and cooperation depend on trust (La Porta et al. 1997, Kramer 1999). It could therefore make sense for the financial industry to screen applicants with respect to social preferences. In this subsection, we examine whether there is any evidence that this happens.

We first compare high finance interest subjects who applied, but do not (yet) have finance experience, and high finance interest subjects with finance experience.³⁶ If the financial industry screens out selfish applicants, we should see that subjects who applied but have no finance experience return less in the trust game than those with experience.

In our Study 1 sample, 47 percent of high finance interest subjects with no finance experience have already applied for a job in finance (compared to 23 percent of low finance interest subjects without finance experience).³⁷ On average these subjects behave similarly to those with high finance interest and finance experience (mean returns = 16.3 (sd = 16.1) percent versus 15.4 (sd = 16.3) percent; t-test, p-value = 0.791; MW, p-value = 0.924). We find no significant differences in the returns of subjects with low finance interest who have applied in the industry but have no finance experience (yet) and low finance interest subjects with experience (mean returns = 23.9 (sd = 15.9) percent versus 21.1 (sd = 15.1) percent; t-test, p-

³⁵ Mr. Kerviel engaged in rogue trading for two years, which resulted in a loss of 4.9 billion Euros for *Société Générale* (see, e.g., Clark 2010).

³⁶ In the questionnaire of Study 1, we asked our subjects whether they have applied in the financial industry for vocational training, internships, or student jobs.

³⁷ One may ask why some subjects have applied in finance when they have only a low interest in working in this sector. One reason could be that they just search for some job and therefore send their application to firms from different industries.

value = 0.603; MW, p-value = 0.759).³⁸ Thus, there is no evidence that the financial industry screens out less trustworthy individuals in the hiring process. Subjects who were selected for a three-year long vocational training program, for a student job, or an internship are as trustworthy as subjects who applied but have no experience (yet).

Next, to find out what matters most for a successful application, we conducted a number of interviews with human resource managers from financial companies located in Frankfurt (see the Online Appendix for details). In the interviews, we listed the nine personal characteristics that most frequently appear as required skills in recent job postings of the financial industry.³⁹ Then we added “trustworthiness” to this list (it was almost never mentioned in the job postings). We asked our interview partners to pick three personal characteristics that they think are “very important” (two points) for a job in the company and four skills they think are “important” (one point). The other skills are rated as “neutral” (zero points).

The three most important personal characteristics are communication skills with an average score of 1.57, ability to work in teams with an average score of 1.43, and analytical skills with an average score of 1.43. Trustworthiness scores a seventh place with an average score of 0.86 (see Table L in the Online Appendix). This suggests that an applicant’s trustworthiness is not particularly important in the hiring process. Instead, skills that are relevant for the daily business and that can easily be tested in a job interview are more important for a successful application.

³⁸ We also run a regression where we only include subjects with no finance experience and regress the mean amount returned on a dummy, which is set to one if a subject has applied for a job in finance in the past. Results are provided in the Online Appendix, Table K. The coefficient of the variable of interest is negative and statistically significant, indicating that subjects who applied in the financial industry return five percentage points less than subjects who have not applied in this sector. Thus, in the trust game, subjects who applied for a job in finance behave similarly to subjects who already have finance experience.

³⁹ These personal characteristics were “communication skills”, “analytical skills”, “ability to work in teams”, “ability to work independently”, “conceptual skills”, “performance motivation”, “readiness”, “mobility/flexibility”, and “determination.” We identified all job postings on the leading German online job market (“monster.de”), two days before the first interview took place. We checked 50 randomly selected postings that appeared when we searched for jobs in the financial industry and identified all personal characteristics that are important for applicants according to the job postings of financial companies.

One reason why applicants' social preferences are not important for human resource managers may be that companies can control their employees and align interests through incentives. Whenever financial companies suffered huge losses through employee fraud, important monitoring systems did not work or were circumvented. Indeed, we find in the repeated public goods game of Study 2 that the gap in contributions between the different subject groups is much smaller than in the one-shot version. In the first period of the game, low finance interest subjects contribute on average 11.40 tokens to the public good, while high finance interest subjects contribute on average 10.78 tokens. The difference in contributions is not significant (t-test, p-value = 0.421; MW, p-value = 0.405). A similar pattern is obtained if we compare subjects with and without finance experience (10.61 tokens compared to 11.38 tokens; t-test, p-value = 0.464; MW, p-value = 0.371).⁴⁰ However, as soon as reputational concerns vanish, i.e., in the last periods of the game, we find significant differences between the subject groups again.⁴¹

6.4 Who gets a job in finance?

Unfortunately, we have no information about where our subjects work after graduation. However, we know that financial companies request substantial professional experience in the financial industry from their applicants. In the interviews, we presented eight résumés from Study 1 to our interview partners, four résumés from finance experience subjects, and four résumés from no finance experience subjects.⁴² For each résumé we asked our interview

⁴⁰ This corroborates recent research that indicates that social preferences do not matter in repeated interactions when cooperation is optimal (Dreber et. al 2014).

⁴¹ The main results are the same if we focus only on business and economics students. In the Online Appendix, we provide a detailed overview of the results from the C-Experiment.

⁴² To ensure that the extent of professional experience is comparable between finance and no finance experience résumés, we adopted the following procedure. For each interview, we randomly chose résumés such that two out of four résumés from the (no) finance experience subjects show vocational training and the two other résumés show at least one internship of more than four weeks. One résumé could be selected several times. In the chosen sample of résumés, finance experience subjects with vocational training have on average 171.6 weeks (sd = 50.64) of professional experience, no finance experience subjects with vocational training 217.83 weeks (sd = 126.6). The corresponding numbers for subjects without vocational training are 77.0 (sd = 73.2) for finance experience subjects and 78.0 weeks (sd = 126.0) for no finance experience subjects. We re-wrote the résumés in uniform style

partners to indicate the probability with which this subject would get a job in the company if he or she applied (at the most relevant division for his or her specialization). Interview partners responded either “quite likely” (two points), “eventually” (one point) or “no chance” (zero points). In total, we have 64 ratings.

The responses to this question yield a clear picture. Subjects with vocational training in an industry other than finance get an average score of 0.27 (sd = 0.57), and subjects with experience through internships in an industry other than finance get an average score of 0.25 (sd = 0.55). In most cases, these subjects would not even be invited to a job interview. However, subjects with vocational training in finance get an average score of 1.17 (sd = 0.83), and subjects with experience through internships in the financial industry score highest with 1.36 (sd = 0.81) points on average. When we ask directly for the share of economists who completed an internship in the financial industry before they were hired by the company, the response was in most cases 100 percent. This indicates that it is almost impossible to get a job in the financial industry without relevant professional experience. Thus, finance experience subjects have a much higher probability of being successful in the finance job market than no finance experience subjects.

Moreover, our subject pool is highly relevant for the finance job market. At *Goethe-University Frankfurt* 35 percent of business and economics graduates find their first job in the financial industry (at the *University of Cologne* the number is only 11 percent). Most employees in the financial industry have a university degree (in the interviews, 63 percent), and most employees with a university degree are economists (in the interviews, 80 percent). Our interview partners indicated that the ideal age of an applicant is around 25 years (the average age of our finance experience subjects is 22.1 years).

and deleted any information about the subjects' age and extracurricular activities (see the Online Appendix for an example).

One concern may be that social preferences change when our student subjects find a job and get upgraded to non-student subjects. This clearly limits the generalizability of our results to employees in the financial industry. In general, trustworthiness increases with age (Fehr et al. 2003, Bellemare and Kröger 2007, Sutter and Kocher 2007), however, at a slow pace. We therefore expect no substantial behavioral differences between a 23-year-old student of business or economics and a 25-year-old young professional in the financial industry.

7. Conclusion

Financial companies frequently emphasize the role of trust in their business. For example, *Goldman Sachs* writes at the very top of its “Code of Business Conduct and Ethics” that “[...] we believe the best way to build and to maintain trust is to conduct every element of our business according to the highest standards of integrity.” Nevertheless, recent corporate scandals and the low reputation of the financial industry in the public indicate that there may be a trustworthiness problem. Our experimental results suggest that one cause of this problem could be the self-selection of more selfish individuals into the finance workforce.

Given the importance of the financial industry for the economy, it seems desirable from a policy perspective to avoid this selection. We can only speculate how this could be achieved.

In a recent paper, Dal Bó et al. (2013) show that the pool of applicants for public sector jobs can be improved (in terms of cognitive ability, personality, and motivation) through higher wages. We conjecture that the financial industry attracts many talented students through its high wages and bonuses. Indeed, we observed in the survey that those with high interest in working in the financial industry also have a relatively high valuation for monetary rewards (as compared to subjects with other job preferences). Thus, making employment in finance less attractive in terms of remuneration may also change the pool of applicants. A number of policy measures are available to reduce workers’ earnings in the financial industry, see Bell and Van Reenen (2014) for a discussion. One can pursue a tighter regulation that constrains profits and

thereby reduces earnings (such as higher equity requirements) or increase taxes on very high incomes. In both cases, the policy measure may not only have a direct effect (reduction of incomes), but it may also change the pool of applicants, perhaps for the better. Hence, policy-makers should take into account the self-selection of workers into occupations based on social preferences in their decisions on regulation.

There does not seem to be a simple way for the financial industry to select less selfish individuals. Companies may choose to hire from a different pool, e.g., applicants with professional experiences in industries other than finance. Our results suggest that this would not change much. Within the sample of subjects without finance experience, those who are most eager to work in the financial industry are just as selfish as those with finance experience and high finance interest.

At the very least, our results indicate that consumer protection and the promotion of product transparency is even more important in the financial industry than in other industries. Since monetary incentives and reputational concerns seem to work well for individuals interested in working in finance, effective regulation is feasible.

References

- Abeler, Johannes, and Daniele Nosenzo (forthcoming): “Self-Selection into Economics Experiments is Driven by Monetary Rewards,” *Experimental Economics*.
- Aghion, Philippe, Yann Algan, Pierre Cahuc, and Andrei Shleifer (2010): “Regulation and Distrust,” *Quarterly Journal of Economics* 125(3), 1015-1049.
- Baran, Nicole M., Paola Sapienza, and Luigi Zingales (2010): “Can we infer social preferences from the lab? Evidence from the trust game,” NBER Working Paper No. 15654.
- Bauman, Yoram, and Elaina Rose (2011): “Selection or indoctrination: Why do economics students donate less than the rest,” *Journal of Economic Behavior and Organization* 79(3), 318-327.
- Bell, Brian, and John Van Reenen (2014): “Bankers and Their Bonuses,” *Economic Journal* 124(574), F1-F21.

Bellemare, Charles, and Sabine Kröger (2007): “On representative social capital,” *European Economic Review* 51(1), 183-202.

Bénabou, Roland, and Jean Tirole (2013): “Bonus Culture: Competitive Pay, Screening, and Multitasking,” NBER Working Paper No. 18936.

Berg, Joyce, John Dickhaut, and Kevin McCabe (1995): “Trust, Reciprocity, and Social History,” *Games and Economic Behavior* 10(1), 122-142.

Besley, Timothy, and Maitreesh Ghatak (2005): “Competition and Incentives with Motivated Agents,” *American Economic Review* 95(3), 616-636.

Bewley, Truman F. (1999): *Why Wages Don't Fall During a Recession*, Harvard University Press.

Bors, Douglas A., and Tonya L. Stokes (1998): “Raven’s Advanced Progressive Matrices: Norms for First-Year University Students and the Development of a Short Form,” *Educational and Psychological Measurement* 58(3), 382-398.

Burks, Stephen, Jeffrey Carpenter, and Eric Verhoogen (2003): “Playing both roles in the trust game,” *Journal of Economic Behavior and Organization* 51(2), 195-216.

Burks, Stephen, and Erin Krupka (2012): “A Multimethod Approach to Identifying Norms and Normative Expectations Within a Corporate Hierarchy: Evidence from the Financial Services Industry,” *Management Science* 58(1), 203-217.

Carpenter, Jeffrey, and Caitlin Knowles Meyers (2010): “Why volunteer? Evidence on the role of altruism, image, and incentives,” *Journal of Public Economics* 94(11-12), 911-920.

Carpenter, Jeffrey, and Erick Gong (2013): “Motivating Agents: How Much Does the Mission Matter?,” IZA Discussion Papers 7602, Institute for the Study of Labor.

Carter, John, and Michael Irons (1991): “Are Economists Different, and If so, Why?,” *Journal of Economic Perspectives* 5(2), 171-177.

Clark, Nicola (2010): “Rogue Trader at Société Générale Gets Jail Term,” *New York Times* 05.10.2010, retrieved 09.03.2014.

Cleave, Blair L., Nikos Nikiforakis, and Robert Slonim (2013): “Is there selection bias in laboratory experiments? The case of social and risk preferences,” *Experimental Economics* 16(3), 372-382.

Cohn, Alain, Ernst Fehr, and Michel André Maréchal (2014): “A Culture of Cheating? Dishonesty and Business Culture in the Banking Industry,” *Nature* 516, 86-89.

Cohn, Alain, Ernst Fehr, and Lorenz Goette (forthcoming): “Fair Wages and Effort: Evidence from a Field Experiment,” *Management Science*.

- Croson, Rachel, and Uri Gneezy (2009): "Gender Differences in Preferences," *Journal of Economic Literature* 47(2), 448-474.
- Dal Bó, Ernesto, Frederico Finan, and Martín Rossi (2013): "Strengthening State Capabilities: The Role of Financial Incentives in the Call to Public Service," *Quarterly Journal of Economics* 128(3), 1169-1218.
- Delfgaauw, Josse, and Robert Dur (2007): "Signaling and Screening of Workers' Motivation," *Journal of Economic Behavior and Organization* 62(4), 605-624.
- Dohmen, Thomas, Armin Falk, David Huffman, Uwe Sunde, and Gert G. Wagner (2011): "Individual Risk Attitudes: New Evidence from a Large, Representative, Experimentally-Validated Survey," *Journal of the European Economic Association* 9(3), 522-530.
- Dreber, Anna, Drew Fudenberg, and David Rand (2014): "Who cooperates in repeated games: The role of altruism, inequity aversion, and demographics," *Journal of Economic Behavior and Organization* 98, 41-55.
- European Commission (2012): "Consumer Markets Scoreboard – Making markets work for consumers," 8th Edition, Brussels.
- Falk, Armin, and Christian Zehnder (2013): "A city-wide experiment on trust discrimination," *Journal of Public Economics* 100, 15-27.
- Falk, Armin, Stephan Meier, and Christian Zehnder (2013): "Do lab experiments misrepresent social preferences? The case of self-selected student samples," *Journal of the European Economic Association* 11(4), 839-852.
- Fehr, Ernst, Urs Fischbacher, Bernhard von Rosenblatt, Jürgen Schupp, and Gerd G. Wagner (2003): "A Nation-Wide Laboratory: Examining Trust and Trustworthiness by Integrating Behavioral Experiments into Representative Surveys," IZA Discussion Papers 715, Institute for the Study of Labor.
- Fehr, Ernst, and Karla Hoff (2011): "Introduction: Tastes, Castes and Culture: The Influence of Society on Preferences," *Economic Journal* 121(556), F396-F412.
- Fershtman, Chaim, and Uri Gneezy (2001): "Discrimination in a Segmented Society: An Experimental Approach," *Quarterly Journal of Economics* 116(1), 351-377.
- Fischbacher, Urs (2007): "Z-Tree: Zurich toolbox for ready-made economic experiments," *Experimental Economics* 10(2), 171-178.
- Fischbacher, Urs, Simon Gächter, and Ernst Fehr (2001): "Are people conditionally cooperative? Evidence from a public goods experiment," *Economics Letters* 71(3), 397-404.
- Fischbacher, Urs, and Simon Gächter (2010): "Social Preferences, Beliefs, and the Dynamics of Free Riding in Public Goods Experiments," *American Economic Review* 100(1), 541-556.

- Frank, Björn, and Günther Schulze (2000): “Does economics make citizens corrupt?,” *Journal of Economic Behavior and Organization* 43(1), 101-113.
- Frey, Bruno, and Stephan Meier (2003): “Are political economists selfish and indoctrinated? Evidence from a natural experiment,” *Economic Inquiry* 41(3), 448-462.
- Gerhards, Leonie (2013): “Incentives for Motivated Agents – An Experiment with Employees from a Non-Profit Organization,” Working Paper Aarhus University.
- Gregg, Paul, Paul A. Grout, Anita Ratcliffe, Sarah Smith, and Frank Windmeijer (2011): “How important is pro-social behavior in the delivery of public services?” *Journal of Public Economics* 95(7-8), 758-766.
- Greiner, Ben (2004): “An online recruitment system for economic experiments,” in: Kurt Kremer and Volker Macho (Eds.): *Forschung und wissenschaftliches Rechnen 2003*. GWDG Bericht 63, 79-93. Goettingen: Gesellschaft für wissenschaftliche Datenverarbeitung mbH.
- Guiso, Luigi, Paola Sapienza, and Luigi Zingales (2008): “Trusting the Stock Market,” *Journal of Finance* 63(6), 2557-2600.
- Guiso, Luigi (2010): “A Trust-Driven Financial Crisis. Implications for the Future of Financial Markets,” EIEF Working Paper Series 1006, Einaudi Institute for Economics and Finance.
- Hanna, Rema, and Shing-Yi Wang (2014): “Dishonesty and Selection into Public Service: Evidence from India,” NBER Working Paper No. 19649.
- Inderst, Roman, and Marco Ottaviani (2012): “How (not) to pay for advice: A framework for consumer financial protection,” *Journal of Financial Economics* 105(2), 393-411.
- Karlan, Dean S. (2005): “Using Experimental Economics to Measure Social Capital and Predict Financial Decisions,” *American Economic Review* 95(5), 1688-1699.
- Kosfeld, Michael, and Ferdinand von Siemens (2009): “Worker Self-Selection and the Profits from Cooperation,” *Journal of the European Economic Association* 7(2-3), 573-582.
- Kosfeld, Michael, and Ferdinand von Siemens (2011): “Competition, cooperation, and corporate culture” *RAND Journal of Economics* 42(1), 23-43.
- Kramer, Roderick M. (1999): “Trust and Distrust in Organizations: Emerging Perspectives, Enduring Questions,” *Annual Review of Psychology* 50(1), 569-598.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny (1997): “Trust in Large Organizations,” *American Economic Review Papers and Proceedings* 87(2), 333-338.
- Maniadis, Zacharias, Fabio Tufano, and John List (2014): “One Swallow Doesn’t Make a Summer: New Evidence on Anchoring Effects,” *American Economic Review* 104(1), 277-290.
- Marwell, Gerald, and Ruth Ames (1981): “Economists free ride, does anyone else?,” *Journal of Public Economics* 15(3), 295-310.

Mullainathan, Sendhil, Markus Noeth, and Antoinette Schoar (2012): "The Market for Financial Advice: An Audit Study," NBER Working Paper No. 17929.

Pinotti, Paolo (2012): "Trust, Regulation and Market Failures," *Review of Economics and Statistics* 94(3), 650-658.

Ronen, Simcha (1994): "An underlying structure of motivational need taxonomies: a cross-cultural confirmation," in: Harry C. Triandis, Marvin D. Dunnette and Leaetta M. Hough (Eds.): *Handbook of industrial and organizational psychology Vol. 4* (2nd edition), 241-269. Palo Alto: Consulting Psychologists Press.

Rubinstein, Ariel (2006): "A sceptic's comment on the study of economics," *Economic Journal* 116(510), C1-C9.

Rustagi, Devesh, Stefanie Engel, and Michael Kosfeld (2010): "Conditional Cooperation and Costly Monitoring Explain Success in Forest Commons Management," *Science* 330, 961-965.

Serra, Daniela, Pieter Serneels, and Abigail Barr (2011): "Intrinsic motivations and the non-profit health sector: Evidence from Ethiopia," *Personality and Individual Differences* 51(3), 309-314.

Sutter, Matthias, and Martin Kocher (2007): "Trust and trustworthiness across different age groups," *Games and Economic Behavior* 59(2), 364-382.

Thanassoulis, John (2012): "The Case for Intervening in Bankers' Pay," *Journal of Finance* 67(3), 849-895.

Thanassoulis, John (2013): "Industry Structure, Executive Pay, and Short-Termism," *Management Science* 59(2), 402-419.

Vischer, Thomas, Thomas Dohmen, Armin Falk, David Huffman, Jürgen Schupp, Uwe Sunde and Gert G. Wagner (2013): "Validating an ultra-short survey measure of patience," *Economic Letters* 120(2), 142-145.

Figures and Tables

Figure 1: Distribution of subjects' interest in working in the financial industry (Study 1)

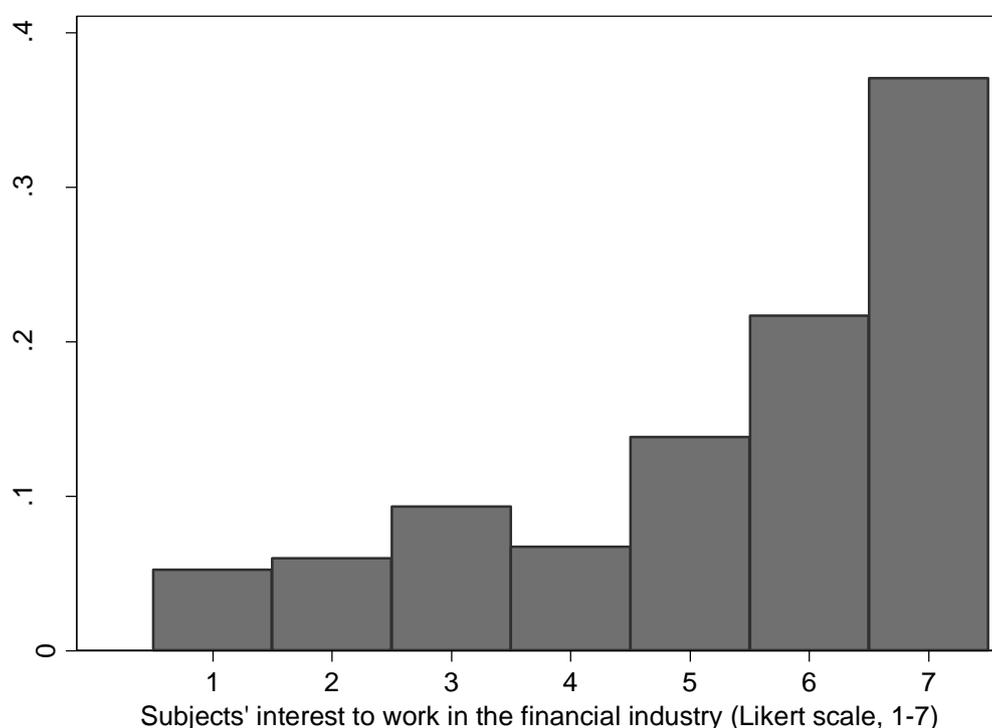


Table 1: Descriptive statistics (Study 1) - Amount sent and mean amount returned, by finance interest and experience

	Finance interest:		Finance experience:	
	Low	High	No	Yes
Observations	110	157	189	71
Mean amount sent (SD)	3.05 (2.61)	3.14 (3.14)	3.24 (2.92)	2.82 (3.03)
Mean amount returned as a fraction of amount received (SD)	24.1% (15.4)	17.4% (16.7)***	21.5% (16.4)	16.4% (16.1)**

In the survey, subjects were asked to indicate “to what extent can you imagine to work in the following industries in the future: (...) Finance (...)” on a scale from “certainly not” (1) to “definitely” (7). *Low* means that the subject stated an interest in working in the financial industry of (5) or less; *High* means an interest of (6) or (7). Finance experience subjects have experience in firms that belong to the NACE two-digit industry sub-category “financial service activities” according to their résumé. We exclude in column 3 and 4 subjects who had experience in the following two industries: “Activities auxiliary to financial services and insurance activities”, “Insurance, reinsurance and pension funding”. Row 2 presents the mean amount sent, by finance interest and finance experience. Row 3 shows the average mean amount returned as a fraction of the amount received. Standard deviations are in parenthesis. In case of significant differences between the two groups the results of a two-sided t-test are reported. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2: Baseline regression (Study 1) - Mean amount returned

Specifications	Panel A: Independent variable: Finance interest		Panel B: Independent variable: Finance experience	
	(1a)	(2a)	(1b)	(2b)
Constant	0.303*** (0.030)	0.010 (0.107)	0.215*** (0.011)	-0.156 (0.099)
Finance interest/experience	-0.019*** (0.005)	-0.014** (0.006)	-0.052** (0.023)	-0.050** (0.022)
Age		0.013*** (0.004)		0.016*** (0.004)
Gender		0.032 (0.021)		0.049** (0.020)
Ravens IQ		-0.002 (0.005)		-0.001 (0.005)
CV used in application		-0.007 (0.029)		-0.004 (0.030)
R ²	0.046	0.092	0.020	0.098
Sample Size	267	267	260	260

One observation is one subject. The dependent variable is the mean amount returned as a fraction of amount received. In Panel A, “Finance Interest/Experience” is the interest of a subject in working in the financial industry, on a scale from (1) to (7). In Panel B, “Finance Interest/Experience” is a dummy set to one if a subject has experience in the financial industry. In column 2, we include age, gender (set to one for women), the number of correctly solved questions in the Raven test, and a dummy set to one if subjects state that they have already used their résumé in an application for an internship or a job. * p<0.1, ** p<0.05, *** p<0.01. Huber-White standard errors are in parenthesis.

Table 3: Baseline regression (Study 2) – Contributions in the one-shot public goods game

Specifications	Panel A: Independent variable: Finance interest			Panel B: Independent variable: Finance experience		
	Constant	10.883*** (0.702)	11.026*** (0.710)	11.413*** (2.083)	9.572*** (0.702)	10.340*** (0.510)
Finance interest/experience	-0.425*** (0.156)	-0.327* (0.173)	-0.331* (0.174)	-2.637** (1.056)	-2.139** (1.072)	-2.186** (1.081)
Business/Economics student		-1.030 (0.784)	-0.995 (0.800)		-1.665** (0.729)	-1.586** (1.081)
Age	No	No	Yes	No	No	Yes
Gender	No	No	Yes	No	No	Yes
R ²	0.018	0.025	0.026	0.018	0.027	0.034
Sample Size	354	354	354	345	345	345

The regression is similar to our baseline regression in the trust game, except that the dependent variable is the contribution of the subject in the one-shot public goods game. *Business/Economics student* is a dummy set to one if the subjects studies business/economics, and zero otherwise. In Panel B, six subjects are excluded as they have professional experience at firms that belong to the sub-category “Insurance, reinsurance, and pension funding.” * p<0.1, ** p<0.05, *** p<0.01. Huber-White standard errors are in parenthesis.

Table 4: Baseline regression (Study 3) - Amount sent in the prediction game

Specifications	Panel A: Independent variable: Finance interest		Panel B: Independent variable: Finance experience	
	(1a)	(2a)	(1b)	(2b)
Constant	5.118*** (0.224)	2.713*** (0.831)	4.620*** (0.086)	2.127*** (0.785)
Finance interest/experience	-0.102** (0.044)	-0.089** (0.044)	0.023 (0.191)	0.013 (0.189)
Age		0.105*** (0.035)		0.112*** (0.035)
First-mover fixed effects	Yes	Yes	Yes	Yes
R ² (within)	0.014	0.037	0.000	0.031
Sample Size	567	567	567	567

One observation is one decision by the first-mover. The dependent variable is the amount sent. In Panel A, the independent variable is the interest of the second-mover in working in the financial industry (on a scale from 1 to 7). In column 2, we include age as a control. Regressions in Panel B are similar, except that the independent variable is a dummy set to one if the second-mover has experience in the financial industry. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Huber-White standard errors are in parenthesis. Clustering standard errors on the subject level does not change the main qualitative results.

Table 5: Descriptive Statistics (Study 1) - Mean amount returned, by finance interest and experience

Panel A: Interaction of finance experience and interest			
Finance experience	Finance interest	Number of observations	Mean amount returned
No	Low	94	24.6% (15.6)
Yes	Low	12	21.1% (15.1)
No	High	95	18.4% (16.8)
Yes	High	59	15.4% (16.3)

Panel B: Duration of experience			
Finance experience	Experience: Weeks in finance industry	Number of observations	Mean amount returned
Yes	<4.5	21	14.3 % (15.8)
Yes	4.5 - 100	26	15.3% (15.6)
Yes	>100	24	19.4% (17.1)

Table 6: Baseline regression (Study 1) - Mean amount returned, controlling for the time spent in the financial industry

Constant	-0.148 (0.095)
Finance experience	-0.061** (0.028)
Finance experience: Duration	0.001 (0.001)
Age	Yes
Gender	Yes
R ²	0.099
Sample Size	260

Finance experience baseline regression (as in Table 2), including a variable capturing the number of weeks a subject was in a working relationship with a financial company. * p<0.1, ** p<0.05, *** p<0.01. Huber-White standard errors are in parenthesis.