*Cover Letter, including Author Details

Do Women Panic More Than Men?

An Experimental Study of Financial Decisions[*]

Hubert J. Kiss

Eötvös Loránd University - Department of Economics, 1117 Budapest,
Pázmány Péter sétány 1/a, Hungary. Email: hubert.kiss@tatk.elte.hu
and MTA KRTK

Ismael Rodriguez-Lara

Middlesex University London. Business School
Hendon Campus, The Burroughs, London NW4 4BT, UK. Email: I.Rodriguez-Lara@mdx.ac.uk
and Research Fellow at LUISS Guido Carli University, Rome (Italy)

Alfonso Rosa-Garcia[*]

Facultad de Ciencias Juridicas y de la Empresa, Universidad Catolica San Antonio.
Campus de Los Jeronimos, s/n, Guadalupe 30107, Murcia, Spain. Email: arosa@ucam.edu

[*] We thank the detailed comments of two anonymous referees and the associate editor, Douglas Davis, which enormously contributed to improve the quality of the manuscript. We also benefited from interaction with Nicholas Ziebarth, Rosemarie Nagel, Helga Fehr-Duda, Frank Heinemann and Elmus Wicker. Financial support from the Spanish Ministry of Education under the projects ECO2011-25349 (Hubert Janos Kiss), ECO2011-29230 (Ismael Rodriguez-Lara), ECO2010-19830 (Alfonso Rosa García), as well as from the Hungarian Scientific Research Fund (OTKA) under the project PD 105934 (Hubert Janos Kiss) is kindly acknowledged.
[*] Corresponding autor. Phone number: (+34) 968278662.

Highlights

- We study gender differences in a bank run situation.
- We consider a coordination problem with sequential decisions.
- Position in the line, the fact of being observed and the observed decisions are key determinants.
- Being observed has a greater effect on women's decisions.
- Men and women are equally likely to panic if a bank run is underway.
- Risk aversion has no predictive power on depositor's behaviour in bank runs.

*Manuscript
Click here to view linked References

Do Women Panic More Than Men?

An Experimental Study of Financial Decisions

Abstract

We report experimental evidence on gender differences in financial decision-making that involves three depositors choosing whether to keep their money deposited or to withdraw it. We find that one's position in the line, the fact that one is being observed and observed decisions are key determinants in explaining the subjects' behavior. Our main result is that men and women do not react differently to what is observed. However, there are gender differences regarding the effect of being observed: women value the fact of being observed more, while men value the number of subsequent depositors who observe them. Interestingly, risk aversion has no predictive power on depositors' behavior.

Keywords: bank run, gender difference, strategic uncertainty, experimental evidence, coordination.

JEL Classification: C91, D03, D8, G02, J16

1. Introduction

Starting with the run on Northern Rock in the UK in 2007, the financial crisis has shown that bank runs are still a topic of first-order importance worldwide. Other examples include the experiences of Washington Mutual, Bear Stearns, IndyMac Bank, the Bank of East Asia and the fourth largest lender in Spain, Bankia.

During the previous waves of bank runs (the last occurred during the Great Depression), the proportion of male depositors was higher than that of female depositors. However, due to social progress and changes in labor conditions, the gap in the proportion of men and women among banks' depositors is closing. Currently, roughly half of the customers with an account at a formal financial institution in the US are women; this finding is in contrast to past data (e.g., according to Wright (1999), in 1828, only 11% of the customers of a bank in Philadelphia were women).[1] Similar changes are taking place in developing countries, so it is interesting to determine whether there are gender differences in depositors' behavior.

Gender differences in preferences have been identified in several dimensions (see Croson and Gneezy, 2009 for a review), and these results may have relevant implications concerning how bank runs unfold. More concretely, episodes of bank runs involve depositors observing (at least partially) what other depositors have done (Iyer and Puri, 2012; Kelly and O'Grada, 2000), and men and women may react differently to their observations of others' actions or the fact that they are being observed. Moreover, women generally exhibit a higher degree of risk aversion (e.g., Charness and Gneezy, 2012; Croson and Gneezy, 2009), making them possibly more likely to withdraw funds early to guarantee a sure payoff.

We report experimental evidence on gender differences in depositor decision-making. Our experimental design is based on the coordination problem formulated by Diamond and

1 Data from the World Bank indicate that in the US, 84.1% of women and 92% of men over age 15 have an account at a formal financial institution. These amounts (female / male) are fairly close to other developed countries (e.g., 88.8% / 92.5% in the Euro area and 96.8% / 96% in Japan), but there are sizable differences in less developed countries (e.g., 2.6% /15.4% in Afghanistan and 17% / 32.7% in North Africa).

Dybvig (1983), which we modify to allow for different levels of observability. We consider the simplest model, where one impatient depositor needs to withdraw funds immediately and two patient depositors with no urgent liquidity needs decide between keeping their funds deposited (which we also call "waiting") and withdrawing their funds, with the former action yielding the highest payoff if they both choose it. We define a bank run as a situation in which at least one of the patient depositors withdraws funds. In line with Diamond and Dybvig (1983), liquidity needs are private information, and there is no aggregate uncertainty about the number of patient and impatient depositors. One noteworthy aspect of our design, however, is that depositors choose sequentially between waiting or withdrawing their money, implying that i) depositors may observe what other depositors have done before making their decision, and ii) depositors know whether other depositors will observe their decisions.[2]

Based on previous results in the literature (Garratt and Keister 2009; Kiss et al. 2014), we hypothesize that in addition to gender, three forces may affect the decisions of the patient depositors. The first concerns their observations of other depositors' decisions. For example, knowing that another depositor has already withdrawn funds may foster panicking behavior and favor further withdrawals because a patient depositor observing that someone else withdraws funds does not know if (s)he is observing an impatient or a patient depositor. On the other hand, depositors at the beginning of the line may behave differently if subsequent depositors are observing their actions. More precisely, if a patient depositor is observed by the other depositors, then (s)he may decide to wait to induce the other patient depositor to wait as well, guaranteeing the highest possible payoff. Finally, we aim to analyze whether attitudes toward risk have some predictive power in depositors' decisions because risk aversion has been frequently considered a key determinant in financial decisions.

[2] Sequential decisions have recently been considered in bank run experiments (see Schotter and Yorulmazer, 2009; Garratt and Keister, 2009; Kiss et al. 2012, 2014).

In addition to the previously mentioned factors, this paper also examines whether there are gender differences in withdrawal decisions after controlling for risk preferences. Gender differences in other financial settings (apart from depositor behavior) have been studied extensively. Many studies analyze gender differences in different investment decisions and in portfolio selection (e.g., Bernasek and Shwiff, 2001; Sunden and Surette, 1998; Watson and McNaughton, 2007; Dwyer, Gilkeson and List, 2002; Felton, Gibson and Sanbonmatsu, 2003; and Martenson, 2008), finding that women are more risk averse and choose more conservative investment strategies. Other papers find gender differences in the way people reacted to the recent financial crisis (see, for instance, Söderberg and Wester, 2012), finding that women were less likely to take action in response to the distress. Although there is a growing experimental and empirical literature on bank runs (see Schotter and Yorulmazer, 2009; Garratt and Keister, 2009; Starr and Yilmaz, 2007; Iyer and Puri, 2012; Brown, Trautmann and Vlahu, 2012, for some recent examples, and Dufwenberg, 2012, for a survey on experimental banking, including a section on bank runs), to the best of our knowledge, this is the first experimental study that specifically investigates gender differences in this context. We are only aware of two empirical studies that refer to gender differences in bank run situations (Kelly and O'Grada, 2000; O'Grada and White, 2003). Both study two bank runs in New York in 1854 and 1857, and gender was not clearly found to play a role in explaining panicking behavior.

The remainder of the paper is organized as follows. In Section 2, we present the bank run game that is played in our experiment, which is detailed in Section 3. We summarize our research questions in Section 4. Section 5 contains the experimental results, and Section 6 concludes.

2. The bank run game with observability of actions

In this section, we describe the coordination problem that is played in each round of the experiment. We extend the model of Diamond and Dybvig (1983) to allow for observability of actions, following Kiss et al. (2014). The game has three different stages, as detailed below.

Time t=0. Deposits

At t=0, a bank with three depositors is formed. Each depositor deposits her/his initial endowment (in our experiment, 80 ECUs) in this bank, which therefore initially has 240 ECUs to be invested in a project. The project yields a guaranteed high return in period t=2, but the investment can be liquidated at no cost at t=1.

Time t=1. Types, network structure and depositors' decisions.

At t=1, the depositors must choose whether they want to withdraw their money from the bank or keep it deposited. We assume that one of the depositors is hit by a liquidity shock at the beginning of t=1 and is forced to withdraw money. We follow Diamond and Dybvig (1983) and further assume that there is no aggregate uncertainty about the liquidity demand; i.e., it is common knowledge that one of the three depositors will need the money and will withdraw with certainty. We refer to this depositor as the impatient depositor, whereas the depositors who can wait to withdraw their money are called patient depositors.

Both the patient and impatient depositors choose their actions in an exogenously determined sequence. Depositor i chooses in position i, where i = 1,2,3. Before choosing between withdrawing or waiting, depositor i learns whether a subsequent depositor $j > i$ will observe his/her choice. If depositor j does observe the choice of depositor i, we say that the link ij exists, for $i,j \in \{1,2,3\}$, and $i < j$. [3]

We model the information flow among the depositors through a network. A network is the set of existing links among the depositors. In our setup, there are 8 possible networks: (12, 13, 23), (12, 13), (12, 23), (13, 23), (12), (13), (23), (∅), where (∅) stands for the empty network that has no links at all, whereas the structure (12, 13, 23) contains all of the possible links; i.e., the link 12, the link 13 and the link 23. This later network therefore represents a fully sequential setup, meaning that the depositors observe all of their predecessors' actions. In particular, i) depositor 1 knows that depositors 2 and 3 will observe his/her decision, ii) depositor 2 chooses after learning what depositor 1 has done and is aware that depositor 3 will observe his/her decision, and iii) depositor 3 makes his/her decision after learning what depositors 1 and 2 have done. The empty network (∅) represents the opposite situation. This network resembles the simultaneous move in Diamond and Dybvig (1983), where depositors decide with no information about the other depositors' actions.[4] In our model, depositors have only local knowledge of the information structure; that is, they know their own links but do not know whether the other two depositors are linked.[5]

The depositors' payoffs are independent of their type and of the network structure, but their payoffs do depend on their position in the line and their decisions. If a depositor decides to withdraw, (s)he immediately receives 100 ECUs as long as there is enough money in the bank to pay this amount (out of this amount, 80 ECUs correspond to the initial endowment and 20 ECUs are obtained in the form of interest). In our experiment, if depositors 1 or 2 withdraw, they definitely receive 100 ECUs. However, if depositor 3 decides to withdraw after two

[3] As a natural consequence of the existence of the link ij, depositor j chooses after learning what depositor i has done, for $i < j$ and $i,j \in \{1,2,3\}$.

[4] However, position in the line is known in our setup.

[5] For instance, in the complete network (12,13,23) depositor 3 chooses after observing what depositors 1 and 2 have done. Because depositor 3 does only know his/her own links, (s)he does not know whether depositor 2 has observed depositor 1's decision or not. In that regard, when depositor 3 chooses, (s)he does not know whether (s)he is in network(12,13,23) or (13,23). Both possibilities are equally likely in our framework.

withdrawals, (s)he only receives 40 ECUs (because the first two depositors who withdrew received 100 ECUs each, and the bank has only 40 ECUs to pay depositor 3). However, if depositor 3 withdraws after less than two withdrawals, the bank pays her/him 100 ECUs.

Time t=2. Depositors who waited receive their payoffs.

Depositors who decide to wait at t=1 receive their payoff in period t=2. The amount that the depositors receive in t=2 depends on the total number of waitings. If only one depositor keeps her/his money deposited, (s)he receives 60 ECUs. If two depositors wait, then their payoff is 140 ECUs.[6]

Coordination problem and strategic uncertainty

Our game is such that for patient depositors, the payoff consequences of each decision can be summarized in the following table.[7]

Table 1: The payoff table

Given these payoffs, depositor 3 should always wait if (s)he is patient.[8] For a patient depositor in position 1 or 2, it pays off to wait if (s)he knows or believes that the other patient depositor

[6] Remember that one of the three depositors is impatient and always withdraws at t=1.
[7] The subjects received a copy of this table in the instructions for the experiment, where the computer that acted as the impatient depositor was programmed to always withdraw (see Section 3).
[8] In our setup, waiting in position 3 yields 140 ECUs (60 ECUs) if only the impatient depositor has withdrawn (if in addition to the impatient depositor, the other patient depositor has withdrawn), whereas withdrawing yields 100 ECUs (40 ECUs). We note that the amount that a patient depositor receives if (s)he waits alone (60 ECUs) is smaller than her initial endowment (80 ECUs) but larger than the amount that remains in the bank after two withdrawals (40 ECUs). The rationale for these payoffs can be related to the idea of partial deposit insurance. If a bank run is already underway, depositors who decided to wait may receive more than what remains in the bank after paying all of the depositors in t=1, although these depositors may not receive their initial endowment. Kiss et al. (2012) investigate how the level of deposit insurance affects depositors' decisions, depending on whether the decisions are sequential or simultaneous. Another possible interpretation of the payoffs (that we use in our experiment) is that the amount not withdrawn from the bank earns money on the project that it was invested in. The project yields a sure return, but benefits will depend upon the amount that is invested in the project till the end.

does so as well. We define a bank run as a situation in which at least one of the patient depositors withdraws.

Although this situation resembles the coordination problem in Diamond and Dybvig (1983), one distinctive feature of our model is that other depositors' decisions can be observed, depending on the network structure, which substantially affects the degree of *strategic uncertainty*. As is standard in the literature, we define strategic uncertainty as uncertainty regarding the purposeful decision of players in an interactive situation. More precisely, in a setup in which a patient depositor observes a withdrawal, (s)he will not know if the withdrawal was due to the impatient depositor or to the patient depositor who decided to run the bank. If a patient depositor observes a waiting, there is no doubt about the action of the other patient depositor (i.e., *strategic uncertainty* disappears). This feature is absent in the study by Diamond and Dybvig (1983), where decisions are taken simultaneously (i.e., patient depositors always choose without knowing what other depositors do).

3. Experimental Design and Procedures

We recruited a total of 60 subjects (30 men and 30 women) with no previous experience in coordination problems or experiments on financial decisions. We ran two sessions at the Laboratory for Research in Experimental Economics (LINEEX) of Universidad de Valencia in June 2013, with an even distribution of genders within each session. All of the participants in the experiment were students from the Economic and Business School at the university. The men and women who participated in the experiment did not differ by background, minimizing the possibility of a selection bias.[9]

The experiment was programmed using the z-Tree software (Fischbacher, 2007). Instructions were read aloud and the bank run game described in Section 2 was played for 15 rounds. At

[9] The Kruskal-Wallis test indicates that there are no gender differences with regard to age or major (p-values = 0.5535 and 0.8416, respectively). See Appendix B for further details.

the beginning of each round, each subject was informed that (s)he had been matched randomly with another subject and assigned a third depositor (simulated by the computer) to form a three-depositor bank. Likewise, each subject was told that (s)he had deposited her/his initial endowment (80 ECUs) in the common bank. All of this information was known publicly, as was the fact that the computer was programmed to always withdraw and would act as the impatient depositor. Appendix A contains the instructions.

In each round, each depositor was privately informed about her/his position in the sequence of decisions (i=1,2,3). It was common knowledge that this position was randomly and exogenously determined, so subjects were equally likely to be at any position. The depositors then decided in sequence (according to their position in the line) whether to withdraw their money from the bank or keep it deposited. If the action of a depositor would be observed by some subsequent depositor, (s)he was also informed. Similarly, if a depositor was observing a predecessor in the line, (s)he was informed about that depositor's action before making her/his own decision. In Figure 1, we present some screenshots from our experiment.

Figure 1. Screenshots for depositors 1 and 2.

As shown in Figure 1, the network structure was presented graphically to the subjects on the right-hand side of the screen. On the left-hand side, a block of text informed the subjects about their position in that round and verbally summarized the (local) information flow among the depositors. In Figure 1A, we illustrate the case of depositor 1, who knows that depositor 2 will observe her/his decision. Because there is no link between depositor 1 and depositor 3, depositor 1 knows that depositor 3 will not observe her/his action. The fact that the information is local implies that depositor 1 is unaware whether depositor 3 observes depositor 2 (note the "?" symbol on the line that connects depositors 2 and 3). Figure 1B presents the case of a depositor 2 who has observed a waiting and must then decide what to do. Depositor 2 knows that depositor 3 will observe her/his decision. At the bottom of the screen, the subjects were reminded of the payoff consequences of each possible action and the fact that the computer was programmed to always withdraw (acting as the impatient depositor).

In each round, the subjects were asked to choose between waiting or withdrawing, with their position in the line and the information structure changing across rounds (i.e., in each round, the subjects were placed in a different position and / or they were placed in a different network so that their links were different).[10]

In both sessions, the subjects were divided into three matching groups of 10. Subjects from different matching groups never interacted with each other during the session. Subjects within the same matching group were randomly and anonymously matched in pairs at the end of each round.

At the end of the experiment, the subjects filled out a questionnaire that was used to collect additional information about gender and degree of risk aversion. We elicited risk attitudes using the investment decision in the study by Gneezy and Potters (1997). Each subject hypothetically received 10 Euros and was asked to choose how much of it, \$x, (s)he wanted to invest in a risky option and how much (s)he wished to keep. The amount invested yielded a dividend \$2.5x with ½ probability; it was otherwise lost. The money not invested in the risky option \$(10-x) was kept by the subject. In this situation, the expected value of investing is higher than the expected value of not investing; therefore, a risk-neutral (or risk-loving) subject should invest the 10 Euros, whereas a risk-averse subject will invest less. The amount not invested in the risky asset is a natural measure of risk aversion.[11]

---

[10] Observations are balanced across networks so that men and women are equally likely to decide in any particular network (see Appendix B)

[11] Our questionnaire also contained four different lotteries in the spirit of Holt and Laury (2002). Although henceforth we use the risk aversion elicited á la Gneezy and Potters (1997), we can also proxy risk aversion by

Each session lasted approximately 90 minutes, and the subjects received on average 16 Euros. For the payment, we used a random lottery incentive procedure by which one choice (i.e., one of the rounds) was paid out, with ECUs transformed into Euros using the exchange rate 10 ECUs = 1 Euro.

4. Research questions

We want to explore gender differences in behavior in a bank run situation, where depositors may observe other depositors' actions. Kiss et al. (2014) show that if they are being observed, depositors tend to wait to induce other depositors to follow suit.[12] Our first research question is therefore to investigate gender differences in behavior when depositors know that subsequent depositor(s) will observe their decisions.

Q1. *How do men and women behave when nobody observes their choices? How do they choose when they know that subsequent depositor(s) will observe their decisions?*

In our game, patient depositors receive the highest possible payoff if they coordinate on waiting, but they can observe what another depositor has done before only if the network structure allows them to do so. In turn, depositors' decisions can take place in the presence (absence) of strategic uncertainty. As noted in Section 2, strategic uncertainty is absent if a subject can infer the decision of another subject in the room without a problem before deciding what to do. Depositor 1 has no information about what other depositors have done when making his/her choice, so (s)he always decides in an environment of strategic uncertainty. Depositors 2 and 3, however, make their decisions in the absence of strategic

---

the number of times that a subject made the risky choice in the Holt and Laury task. The results presented in the next section are invariant to the measure of risk aversion that we use because both measures are correlated (Correlation coefficient = 0.26, p-value < 0.0000). Appendix B presents further details about our measures of risk aversion.

[12] This finding is in line with experimental evidence in public good games showing that if they are set in a network structure, subjects may decide to contribute to show their strategic commitment (Choi et al., 2011).

uncertainty if they observe a waiting, or if depositor 3 observes the two previous actions. When depositor 2 or depositor 3 observes either nothing or a withdrawal, their decisions are made in a context of strategic uncertainty. Our second research question is aimed at assessing the importance of strategic uncertainty as well as investigating how men and women react to what they observe.[13]

Q2. *Does strategic uncertainty (e.g., the observation of a withdrawal) favor withdrawals? Do men and women react differently to what they observe?*

One of the areas in which gender differences have been observed is risk attitudes. In that vein, an interesting question to be addressed concerns the predictive power of risk aversion. Consider a patient depositor at position 1. Upon withdrawal, (s)he definitely receives 100 ECUs, while waiting may yield 140 ECUs or 60 ECUs, depending on the decision of the other patient depositor. Let p denote the probability that the patient depositor in position 1 assigns to the event that the other patient depositor will wait. Depositor 1 will be indifferent between waiting and withdrawal if

$$u(100) = pu(140) + (1-p)u(60) \tag{1}$$

If we assume that utilities are described by the constant relative risk aversion utility function[14] $u(c) = \frac{c^{1-\gamma}}{1-\gamma}$, where $\gamma > 1$ represents the degree of risk aversion, then we can substitute it into the above expression and obtain:

$$p = \frac{(100)^{1-\gamma} - (60)^{1-\gamma}}{(140)^{1-\gamma} - (60)^{1-\gamma}}$$

The derivative of p with respect to γ is positive, indicating that the probability assigned to the event that the other depositor waits should be higher for more risk-averse depositors, so that

[13] To the best of our knowledge, there are no other studies that investigate how men and women react when varying the degree of strategic uncertainty, although there are studies that investigate gender differences in games that are characterized by strategic uncertainty (e.g., in the ultimatum game, strategic uncertainty arises because the proposer does not know the minimum acceptable offer of the responder). In these games, no clear, general difference in choices between men and women has been identified.

[14] This assumption is common in the theoretical literature on bank runs. For instance, Green and Lin (2003) and Ennis and Keister (2009) use this utility function that cleanly captures risk aversion through γ.

the indifference relation holds.[15] Therefore, more risk-averse depositors are willing to wait only if they are more optimistic about the other depositor's decision. More precisely, if two depositors have the same belief about the likelihood of successful coordination, and for the less risk-averse depositor relation (1) holds, then the more risk-averse depositor prefers withdrawal to waiting.[16] Heinemann et al. (2009) find that risk aversion is negatively correlated with the likelihood of choosing the risky choice in a coordination game (for further evidence, see Goeree et al. 2003), although gender differences are not analyzed.

Q3. *Does risk aversion predict withdrawal decisions? Do women (who are generally more risk averse than men) withdraw more often than men do, ceteris paribus?*

5. Experimental Results

5.1. Aggregate Data

This section presents our main results. In Figure 2, we report the likelihood of withdrawal in each position by gender. Figure 2 shows that the position in the line affects the depositors' behavior, with depositors more likely to withdraw in position 1 or 2 than in position 3. Remember that depositor 3 has a dominant strategy and should always wait if patient. Gender does not seem to systematically affect depositors' behavior. We observe that women (men) withdraw more frequently in position 2 and position 3 (position 1), but gender differences are never significant (p-values > 0.146).[17]

Figure 2: Decisions in each position by gender

[15] This result does not depend on the specific payoffs, and it holds for any payoff scheme that has the same relationship between payoffs: the highest payoff goes to the patient depositors if both wait, followed by the payoff related to withdrawal, and the lowest payoff corresponds to waiting alone.

[16] Heinemann et al. (2009) find evidence that supports the idea that participants decide as if they have probabilistic beliefs about the outcome of coordination games. There is scarce empirical or experimental evidence about the relationship between risk aversion and belief about another individual's decision. Fehr-Duda et al. (2006) elicit probability weights using gambles and find that on average, women are more pessimistic than men in the gain domain, and they are also more risk averse. Translated to our environment, this result would imply that women believe less in obtaining the largest payoff (140 ECUs) through successful coordination.

[17] Unless otherwise noted, the tests refer to the t-test and the Mann–Whitney U.

As noted above, we are interested in looking at the depositors' behavior and gender differences in behavior with regard to strategic uncertainty. In Figure 3, we group the data according to the cases in which depositors 2 and 3 choose in the presence (absence) of strategic uncertainty. We do not consider this distinction for depositor 1 because (s)he always decides in a context of strategic uncertainty.

In line with Figure 2, we observe that men and women behave similarly once we condition on the presence or absence of strategic uncertainty and on a particular position in the line (p-values > 0.443).

Figure 3: Decisions by gender in presence/absence of strategic uncertainty

This finding is in line with previous evidence in the literature on coordination problems that reports no gender differences (e.g., Dufwenberg and Gneezy, 2005; Heinemann et al. 2009), although our game differs from the previous studies in that we allow for the observability of actions that are conditional on the information structure. Along these lines, one interesting insight from Figure 3 is that strategic uncertainty increases the withdrawal rate for both men and women in positions 2 and 3 (p-values < 0.0080). This finding highlights the importance of strategic uncertainty, although gender differences are not crucial in explaining the depositors' behavior.

5.2. Depositors' behavior and observability of actions

In our context, the position in the line and the information structure determine what depositors observe and whether subsequent depositors can observe their actions. To disentangle whether there are gender differences in the effects of these variables on the withdrawal decision, we analyze the depositors' behavior in more detail by performing an econometric analysis. We estimate a logit model on the probability of withdrawal in each position. The set of independent variables includes the subject's gender, the observation possibilities and the interaction effects. Our regressions also control for risk aversion, which is measured using the investment decision in Gneezy and Potters (1997).[18] Because the subjects are asked to make decisions during 15 rounds, we also control for the history of decisions, as in the study by Garratt and Keister (2009). In particular, the variable *History* measures the proportion of previous rounds in which the subject witnessed a bank run. Next, we analyze the behavior of each depositor separately by focusing on the observability of actions in Sections 5.2.1, 5.2.2 and 5.2.3. We discuss the predictive power of the history of decisions and the degree of risk aversion in Section 5.2.4.

5.2.1. Depositor 1's behavior

When depositor 1 chooses whether to wait or withdraw, (s)he has no information about what will occur in the bank. However, depositor 1 does know whether subsequent depositors will observe her/his decision, which can affect depositor 1's decision because a patient depositor would like to wait to induce the other patient depositor to follow suit. Our data are consistent with such a behavioral pattern. When they are not being observed, men withdraw 57% of the time, and women withdraw 64% of the time. These withdrawal rates decrease to 32% and 24%, respectively, when one other depositor will observe the action of the first depositor, and to 11% and 16%, respectively, when depositor 1 knows that the two subsequent depositors will observe her/his action.

[18] Our data for risk aversion are consistent with previous evidence (see Croson and Gneezy, 2009 or Charness and Gneezy 2012 for a summary of results) that finds that men invest significantly more than women. In our sample, women invest on average 4.97 and men 5.80 (p-value= 0.064). Along these lines, we find that men make more risky choices in lotteries than women in the Holt and Laury task (p-value= 0.001). Both the investment decision and the Holt and Laury task yield a measure of risk aversion that is significantly correlated with gender (p-values = 0.044 and 0.007, respectively), with women being more risk averse using both measures.

In the logit specification, the independent variables are the subject's gender (W is equal to 0 for men and 1 for women), the number of subsequent followers observing the depositors (F1 equals 1 if depositor 1 is observed by only one depositor, and F2 equals 1 if depositor 1 is observed by two depositors) and the interaction effects, controlling for risk aversion and history (*History)*. In Table 2, we report our estimates, the standard errors of the parameters (which take into account the matching group clustering) and the marginal effects for three different models. In the first model, we consider the pooled data and control for gender differences in behavior using dummy variables. Men and women's behavior are analyzed separately in the remaining two specifications.

Table 2: Logit regression for depositor 1.

We do not find gender differences in the baseline model where the depositors' actions are not observed (F1 = F2 = 0). Our estimates indicate that both men and women value that their actions will be observed because they are less likely to withdraw if one or two other depositors observe their actions (p-values < 0.0186).[19] We also find that men and women react differently to the fact of being observed, with a decrease in the withdrawal rate that is higher for women when we compare the case in which no action is observed with the case in which one action is observed ($\chi^2 = 3.36$, p-value = 0.0669). The marginal effects show that having one link decreases the probability of withdrawing in 44% for women and 24.8% for men.

[19] All of the tests in this section refer to the χ^2 test after running our first specification, which is the only one in which we can test for gender differences. All of the insights about men and women's behavior are consistent when we analyze their behaviors in the separate regressions.

Result 1.

i) Women initiate bank runs as frequently as men when their decisions are not observed.

ii) When one subsequent depositor observes their decisions, the likelihood of withdrawal decreases for both men and women, although the decrease is higher for women, ceteris paribus.

We can also study the depositor 1's behavior when (s)he has two links. When both subsequent depositors observe their decision, both men and women are significantly less likely to withdraw compared with the case in which the decision is not observed. Statistically, we reject the null hypothesis that the withdrawal rate of men when they have one subsequent observing depositor is the same as the withdrawal rate when they have two observing depositors (χ^2 = 5.69, p-value = 0.0171), while women do not care about the number of subsequent depositors that observe their choices; i.e., we cannot reject the previous null hypothesis for women at any common significance level (χ^2 = 0.01, p-value = 0.9390). This finding seems to indicate that men are more concerned about the number of subsequent depositors who will observe their decisions.

5.2.2. Depositor 2

Depositor 2 may choose after observing nothing (ObsNo) or after having observed what depositor 1 has already done. In the latter case, depositor 2 can either observe a waiting (ObsWa) or a withdrawal (ObsWi). Interestingly, the observation of a withdrawal arises in a context of strategic uncertainty because depositor 2 is not able to identify if the withdrawal was made by the computer or by the other subject in the room. Figure 3 already suggests that strategic uncertainty may play an important role. Depositor 2 is more likely to withdraw upon observing nothing or observing a withdrawal than upon observing a waiting. Being observed may also influence depositor 2's decision.

To determine whether there are gender differences in depositor 2's behavior, we perform an econometric analysis. Our baseline model relies on the case in which depositor 2 observes nothing. The dummy variable ObsWi (ObsWa) takes the value 1 if a withdrawal (a waiting) is observed, with W standing for the depositor's gender. We interact these dummies to investigate whether men and women react differently to what is being observed. We also take into account that depositor 2's decision may be observed by depositor 3 (i.e., the dummy variable F1 takes the value 1 in this case). To distinguish between men and women's reactions to what is being observed when there is (not) a link with depositor 3, we interact depositor 2's gender and what is being observed with F1. Finally, we control for the degree of risk aversion and what the subjects observed in previous rounds (*History*), as we did in the case of depositor 1. Our estimates for this specification are reported in Table 3, which also presents the regressions in which men and women's behavior is studied separately.[20]

Table 3: Logit regression for depositor 2.

Our estimates indicate that observing a withdrawal does not have any influence on men's or women's behavior (p-values>0.2526), whereas the observation of a waiting significantly decreases their likelihood of withdrawal (p-values<0.0000).[21] This result implies that we can easily reject the null hypothesis that the depositors' decisions are invariant to what is being observed (p-values<0.0000). When we look at gender differences in behavior, we do not find any evidence that men and women behave differently, either in the baseline model where nothing is observed (p-value=0.218), or when a waiting or a withdrawal is observed (p-

[20] We note that the dummy variables F1ObsWa, WObsWa and WF1ObsWa have been eliminated from the analysis because i) men who observed a waiting and know that their actions will be observed, and ii) women who observe a waiting (regardless of whether they are linked with depositor 3) never withdraw their money from the bank; i.e., F1ObsWa, WObsWa and WF1ObsWa predict waiting perfectly.

[21] In fact, depositor 2 waits in 53 out of the 54 cases when (s)he observes a waiting, while depositor 2 waits in only 39 out of the 94 occasions in which (s)he observes a withdrawal.

values>0.2259). Overall, these findings are in line with our description of Figure 3 and highlight that strategic uncertainty is the major force driving depositors' behavior, with men and women withdrawing more frequently when nothing or a withdrawal is observed. Thus, women and men react similarly to what they observe.

Result 2.

Withdrawal rates increase in situations of strategic uncertainty (i.e., when nothing or a withdrawal is observed), but we do not find evidence of gender differences in behavior.

One interesting insight from our regression analysis is that men do care about their link with depositor 3 (p-values < 0.0050), whereas women do not value the fact that they are being observed by depositor 3 (p-values > 0.6028). This finding is in line with our previous finding, men being affected by the number of links.

5.2.3. Depositor 3

Depositor 3 is always better off waiting, and the subjects did so in 90% of the cases. Interestingly, the descriptions of our data in Figures 2 and 3 indicate that withdrawals in position 3 occur when there is strategic uncertainty and depositor 3 is not able to infer what the other patient depositor has done.

To investigate whether gender differences are important for depositor 3, we estimate a logit model in which the baseline specification assumes that there is no strategic uncertainty; i.e., we pool the cases in which a waiting or the two previous actions are observed.[22] We then define the dummy variable StrUnc, which takes the value 1 if a withdrawal or nothing is

[22] Observing two withdrawals or a waiting and a withdrawal predicts waiting perfectly for both men and women. Men never withdraw if a waiting and a withdrawal is observed, whereas 4 out of the 32 women withdraw in this scenario. We note that these 4 choices are due to 2 subjects.

observed. Our specification controls for gender, risk aversion and the history of decisions, and our estimates are presented in Table 4.[23]

Table 4: Logit regression for depositor 3.

We observe that strategic uncertainty does not have any significant effect on men's behavior, and the same is true for women. Along similar lines, gender has no predictive power in explaining withdrawal rates because the hypothesis that men and women behave in the same manner both when there is strategic uncertainty (p-value = 0.9642) and when there is not (p-value = 0.8811) cannot be rejected.

Result 3.

We find that neither gender nor strategic uncertainty have an effect on the depositors' behavior in position 3.

5.2.4. History of decisions and risk aversion

In addition to the described effects of gender, observability and strategic uncertainty, one other important finding is that risk aversion is not significant in any of the regressions. On the contrary, the history of decisions seems to have predictive power because the frequency of bank runs that the subject witnessed tends to increase the likelihood of withdrawal in any position. While the latter result is in line with Garratt and Keister (2009) and Kiss et al. (2014), the former result notes that the decisions in our setup are not driven by attitude toward risk.[24]

---

[23] We define only a dummy for the case of strategic uncertainty because we have a very small number of withdrawals for depositor 3, and therefore there is little variability in the data. With a more detailed model, we would require more regressors and hence a more complicated specification, without any additional insight.

[24] Even when we omit risk aversion from the regressions, gender does not become significant in the baseline cases.

Result 4. *Women are more risk averse than men, but they are not more likely to participate in a bank run (i.e., risk aversion does not predict withdrawal decisions).*

Risk aversion is often related to subjects' behavior in financial decisions. In the particular case of depositor decision-making, the fact that women are usually more risk averse may suggest that they are more likely to withdraw early to secure a sure payoff instead of facing strategic uncertainty and thus an uncertain payoff. Hence, women may be expected to initiate or participate in bank runs more. We find that women are more risk averse than men, but risk aversion seems to play no role in withdrawal decisions.

6. Concluding remarks

After the recent financial turmoil, researchers have shown keen interest in studying what factors affect the widespread appearance and propagation of bank runs. One interesting question to be addressed is how men and women behave in this context, an issue that has been disregarded by the literature.

We present experimental data where depositor decision-making is modeled as a coordination game (as originally proposed by Diamond and Dybvig, 1983), with depositors choosing sequentially between waiting and withdrawing after potentially observing previous decisions.

Similarly to Kiss et al. (2014), our results highlight that the information structure is a key element in explaining the subjects' behavior. Our main contribution is to show that men and women are equally likely to initiate bank runs, and they react to observations of previous decisions in a similar manner. We find that both men and women value the fact that their actions will be observed, although there are gender differences worth noting: whereas women are more affected than men by the fact of being observed, men are more concerned about the number of subsequent depositors who will observe their decisions.

When we investigate how men and women react to what is being observed, we find that strategic uncertainty (e.g., observing nothing or a withdrawal) has predictive power in our sample by increasing the likelihood of withdrawal, but again no gender difference in behavior is found.

One interesting finding in our paper relates to attitudes toward risk. There is a robust literature on the existence of a gender difference regarding risk aversion. Consistent with previous findings, our data indicate that women are more risk averse than men (e.g., Charness and Gneezy, 2012; Croson and Gneezy, 2009), but this risk aversion does not translate into more panicky behavior. Numerous studies show that women and men behave differently when making financial decisions due to differences in risk aversion. We provide evidence that this behavioral difference does not occur in our particular setup, which resembles depositor decision-making.

References

[1] Bernasek, A. and S. Shwiff. “Gender, Risk, and Retirement.” *Journal of Economic Issues*, 35 (2001), pp. 345-356.

[2] Brown, Martin, S.T. Trautmann and R. Vlahu. "Contagious Bank Runs: Experimental Evidence." (2012), mimeo.

[3] Charness, G., and U. Gneezy. “Strong Evidence for Gender Differences in Risk Taking.” *Journal of Economic Behavior & Organization*, 83 (2012), pp. 50-58

[4] Choi, S., D. Gale, S. Kariv and T. Palfrey. "Network architecture, salience and coordination." *Games and Economic Behavior* 73.1 (2011): 76-90.

[5] Croson, R. and U. Gneezy. “Gender Differences in Preferences.” *Journal of Economic Literature*, 47 (2009), pp. 1-27.

[6] Diamond, D.W. and P.H. Dybvig. “Bank runs, deposit insurance and liquidity”. *Journal of Political Economy*, 91 (1983), pp. 401-419.

[7] Dufwenberg, M. “Banking on Experiments?” Report, Norwegian Ministry of Finance (2012).

[8] Dufwenberg, M. and U. Gneezy. “Gender and Coordination”, in: Rapoport, A., Zwick, R. (Eds.), Experimental Business Research, vol. 3, Boston: Kluwer (2005), pp. 253-262.

[9] Dwyer, P. D., J.H. Gilkeson and J.A. List. “Gender differences in revealed risk taking: evidence from mutual fund investors.” *Economics Letters*, 76 (2002), pp. 151-158

[10] Ennis, H. M. and T. Keister. “Run equilibria in the Green-Lin model of financial intermediation.” *Journal of Economic Theory*, 144 (2009), 1996-2020.

[11] Fehr-Duda, H., M. De Gennaro and R. Schubert. “Gender, financial risk, and probability weights.” *Theory and Decision*, 60 (2006), 283-313.

[12] Felton, J., B. Gibson and D.M. Sanbonmatsu. “Preference for risk in investing as a function of trait optimism and gender.” *The Journal of Behavioral Finance*, 4 (2003), pp. 33-40.

[13] Fischbacher, U. “z-Tree: Zurich toolbox for readymade economic experiments.” *Experimental Economics*, 10 (2007), pp. 171-178.

[14] Garratt, R. and T. Keister. “Bank runs as coordination failures: An experimental study.” *Journal of Economic Behavior and Organization*, 71 (2009), pp. 300-317.

[15] Gneezy, U. and J. Potters. "An Experiment on Risk Taking and Evaluation Periods," *Quarterly Journal of Economics*, 112 (1997), 631-645.

[16] Goeree, J. K., Holt, C. A., and T. R. Palfrey. "Risk averse behavior in generalized matching pennies games," Games and Economic Behavior, 45 (2003) 97–113

[17] Green, E. J., and P. Lin. "Implementing efficient allocations in a model of financial intermediation." *Journal of Economic Theory*, 109 (2003), 1-23.

[18] Heinemann, F., R. Nagel, and P. Ockenfels. "Measuring strategic uncertainty in coordination games." *The Review of Economic Studies*, 76 (2009), 181-221.

[19] Holt, C and S. Laury. "Risk Aversion and Incentive Effects." *American Economic Review*, 92 (2002), pp. 1644-1655.

[20] Iyer, R. and M. Puri. "Understanding bank runs: The Importance of depositor-bank relationships and networks." *American Economic Review*, 102 (2012), pp. 1414-1445.

[21] Kelly, M. and C. O Grada. "Market contagion: Evidence from the panics of 1854 and 1857." *American Economic Review*, 90 (2000), pp. 1110-1124.

[22] Kiss, H. J., I. Rodriguez-Lara and A. Rosa-Garcia. "On the effects of observability and deposit insurance on bank runs: An experimental study." *Journal of Money, Credit and Banking,* 44 (2012), pp. 1651-1665.

[23] Kiss, H. J., I. Rodriguez-Lara and A. Rosa-Garcia. "Do social networks prevent or promote bank runs?." *Journal of Economic Behavior and Organization*, 101 (2014), pp. 87-99.

[24] Martenson, R. "Are men better investors than women? Gender differences in mutual fund and pension investments." *Journal of Financial Services Marketing*, 13(2008), pp. 72-81.

[25] O' Grada, C. and E. N. White. "The Panics of 1854 and 1857: A View from the Emigrant Industrial Savings Bank." *The Journal of Economic History* 63.1 (2003), pp. 213-240.

[26] Schotter, A. and T. Yorulmazer. "On the dynamics and severity of bank runs: An experimental study." *Journal of Financial Intermediation,* 18 (2009), pp. 217-241.

[27] Söderberg, I.-L., and M. Wester. "Lay actions in the face of crisis-Swedish citizens' actions in response to the global financial crisis of 2008." *The Journal of Socio-Economics*, 41:6 (2012), pp. 796-805.

[28] Starr, M.A. and R. Yilmaz. "Bank runs in emerging-market economies: Evidence from Turkey's special finance houses." *Southern Economic Journal*. 73 (2007), pp. 1112-1132.

[29] Sunden, A.F., and B.J. Surette. "Gender Differences in the Allocation of Assets in Retirement Savings Plans." *American Economic Review*, 88 (1998), pp. 207-211.

[30] Watson, J. and M. McNaughton. "Gender differences in risk aversion and expected retirement benefits." *Financial Analysts Journal*, (2007), pp. 52-62.

[31] Wright, R. E. "Bank ownership and lending patterns in New York and Pennsylvania, 1781–1831." *Business History Review*, 73 (1999), pp. 40-60.

Appendix A: Experimental Instructions (originally in Spanish)

Welcome to the experiment!

This is an experiment to study decision making, so we are not interested in your particular choices but in individuals' average behavior. Therefore, during the experiment, you will be treated anonymously. Neither the experimenters nor the people in this room will ever know your particular choices.

You will find the instructions on the computer screen explaining how the experiment will unfold. The instructions are the same for all of the subjects in the laboratory and will be read aloud by the experimenters. It is important that you understand the experiment before beginning because the money that you will earn will depend on your choices.

Should you have any problem during the experiment, please raise your hand and remember that you are not allowed to speak with anyone except the experimenter.

Number of rounds

This experiment has 18 rounds in total. The first 3 rounds are for you to become familiar with the software. The remaining 15 rounds will be used to determine your final payoff, so please ensure that you understand the experiment before starting the 4th round; this will help you earn more money.

Deposits

At the beginning of each round, you will be provided a certain amount of money (80 ECUs) to be deposited in a bank. The bank in which you will invest your money will be formed by 3 depositors: one of them is you, one is someone else in this room and the third depositor is simulated by the computer. Therefore, the bank in which you deposit your money will have 240 ECUs per round in total.

Decisions and earnings

In principle, your decision is to choose whether to withdraw your money from the common bank in the first period or to wait until the second period, taking into account that your earnings will depend not only on your choice but also on other depositors' choices. It is important that you know that the computer will always withdraw its money; thus, your earnings in each round will depend only on your choice and the choice of the other depositor in this room.

Specifically, if you both wait until the second period to withdraw your money, you will receive 140 ECUs, corresponding to your initial investment (80 ECUs) plus interest generated during the first period (during which you decided to wait).

If only one of you withdraws the money, then the one who withdraws takes 100 ECUs (which is the same amount that the computer will take in this case). The depositor who waits will receive 60 ECUs (corresponding to the remaining amount in the bank after two withdrawals – 40 ECUs plus an additional 20 ECUs interest).

Finally, it might be the case that both of you withdraw your money in the first period. As a result, your earnings will depend on the available amount of money in the bank and your position in the line. Therefore, if you are at Position 1 or Position 2 in the line and decide to withdraw, you will receive 100 ECUs, but if you are the last one in the line (Position 3), only 40 ECUs remain in the bank, and that is the amount that you will receive.

Therefore, your payoffs can be summarized in the following table:

Table 1: The payoff table

Please remember that the depositor simulated by the computer will always withdraw its money in the first period.

Before beginning, please consider that:

1. The person with whom you are linked will change every round. As a result, do not think that you are going to play the whole game with the same person.

2. You will always know your position in the line, but this position might change in each round. In particular, you may be located in Position 1, Position 2 or Position 3 with the same probability. The same is true for the computer.

3. In each round, you will have different information about what the other depositors at your bank have done. Therefore, in some cases, you will know what has happened before you arrived at the bank (number of waitings and withdrawals), but in some other cases, you will not. When you make your choice, you will also know whether someone else will observe your action. It may be in your interest to consider this information when making your decision. This information will appear on the left-hand side of the computer screen.

E.g.: You are at Position 1. Depositors at Position 2 and Position 3 will observe your action.

E.g.: You are at Position 2. The depositor at Position 1 has waited. The depositor at Position 3 will not observe your action.

On the right-hand side of your screen, a small graph shows with whom you are linked (that is, who do you observe and who will observe you). If there is no link between two depositors, the text on the screen indicates that the depositor who decides later cannot observe the action of the other depositor. If you see "?", it indicates that you do not know if the other two depositors are linked.

Final payoff

When the experiment ends, we randomly choose one of the 15 rounds and pay you according to the earnings from that round. We convert your earnings in that round at a rate 10 ECUs = 1 Euro.

We are now going to start with the first three rounds. At the end of the three rounds, you can ask any questions to ensure that you understand the procedure. If you have any doubts after the first three rounds, please raise your hand and remain silent. You will be attended by the experimenters as soon as possible. Talking is forbidden during this experiment.

Appendix B: Description of the Data

Selection Bias

One possible concern in studies that investigate gender differences is the possibility of *selection bias*; i.e., men and women recruited for the experiment may differ in their background and this feature, rather than gender *per se*, can explain the observed differences in behavior. To illustrate that this bias does not apply in our framework, we show below that women and men participating in our experiment come from the same distribution. In particular, men and women recruited for our experiment do not differ in their age (figure in the left), or the field of studies (figure on the right). Statistically, the Kruskal-Wallis test reported in footnote 8 supports that there are no gender differences with regard to age or major (p-values = 0.5535 and 0.8416 respectively).

Figure 4: Field of studies and Age

Observations across networks

We show below that observations are balanced across the different network structures and that men/women are equally likely to be taking the decision when we look at a particular network structure. In each cell, we report the numbers of observations that correspond to men/women choosing in the network. The last column reports the p-values of a test of proportion that tests the null hypothesis that the probability of a men (women) deciding in the network structure is 0.5.

Table 5: Observations across networks

Risk Aversion

Gneezy and Potters (1997). We use the investment decision in Gneezy and Potters (1997) to measure risk aversion. Next we show the histogram of decisions for both men and women separately. The table above the figure summarizes the descriptive statistics. In line with other studies (see Croson and Gneezy 2009, Charness and Gneezy 2012) we observe that women are more risk averse than men, as they invest significantly less (Z = 1.849, p-value = 0.064, two-tailed).

Figure 5: Histogram of decisions

Table 6: Invested amount in the investment game in Gneezy and Potters (1997).

Holt and Laury (2002). A series of 4 binary lotteries is presented to subjects, who have to choose which is their preferred option. Next, we summarize the number of times that men/women made the risky choice. We present the lotteries below the table.

Table 7: Number of times that subjects choose the risky choice.

Recall that this is another possible measure for risk aversion. It is correlated with the previous one (Correlation coefficient = 0.26, p-value <0.000) and again, women are more risk averse than men (p-value = 0.001)

<u>Lottery 1</u>
Option A: Receive 1000€ regardless of the outcome of tossing a coin.
Option B: Receive 2000€ if head and nothing (0€) if tail.

<u>Lottery 2</u>
Option A: Receive a lottery ticket with a 80% probability of earning 45€ and 20% probability of earning nothing.
Option B: Receive 30€.

<u>Lottery 3</u>
Option A: Receive a lottery ticket with a 20% probability of earning 130€ and 80% probability of earning nothing.
Option B: Receive a lottery ticket with a 25% probability of earning 100€ and 75% probability of earning nothing.

<u>Lottery 4</u>
Option A: Receive a lottery ticket with a 2% probability of earning 3000€ and 98% probability of earning nothing.
Option B: Receive a lottery ticket with a 1% probability of earning 6000€ and 99% probability of earning nothing.

Table 1

Table 1

		In you decide to wait in the first year and withdraw in the second, the…	
Number of previous withdrawals	If you withdraw the first year	If you both wait and only the computer withdraws	If, in addition to the computer, the other depositor withdraws
0	100	140	60
1	100	140	60
2	40	Not applicable	60

Table 1: The payoff table

Table 2

Table 2

	Logit Coefficients			Marginal Effect		
	Pooled	**Women**	**Men**	**Pooled**	**Women**	**Men**
W	-0.413			-0.070		
	(1.54)			(0.27)		
F1	-1.424***	-2.550***	-1.424***	-0.246***	-0.440***	-0.248***
	(0.52)	(0.58)	(0.52)	(0.07)	(0.13)	(0.07)
F2	-3.623***	-2.614**	-3.623***	-0.365***	-0.284**	-0.380***
	(0.99)	(1.11)	(0.99)	(0.05)	(0.13)	(0.05)
Risk Aversion	0.116	0.120	0.116	0.020	0.020	0.020
	(0.14)	(0.16)	(0.14)	(0.02)	(0.03)	(0.02)
History	7.178***	7.626***	7.178***	1.226***	1.273**	1.252***
	(0.99)	(1.88)	(0.99)	(0.24)	(0.51)	(0.28)
WF1	-1.125			-0.164		
	(0.92)			(0.13)		
WF2	1.009			0.208		
	(1.62)			(0.36)		
WRiskAv	0.004			0.001		
	(0.24)			(0.04)		
WHistory	0.448			0.076		
	(2.52)			(0.43)		
Intercept	-3.635***	-4.048***	-3.635***			
	(0.88)	1.01	(0.88)			
Log-Likelihood	-112.14	-54.06	-58.08			
Pseudo R^2	0.41	0.41	0.42			
N	299	144	155			

Note. In italics, Robust Std. Error for the Logit regression and Std. Error for Marginal effects. Significant at the *10%, **5%, ***1%.

Table 2: Logit regression for Depositor 1.

Table 3

Table 3

	Logit Coefficients			Marginal Effect		
	Pooled	**Women**	**Men**	**Pooled**	**Women**	**Men**
W	1.684			0.376		
	(1.98			0.39		
ObsWi	0.713	0.680	0.713	0.169	0.168	0.150
	(0.95)	(0.54)	(0.95)	(0.23)	(0.13)	(0.21)
ObsWa	-3.909***	(Excl.)	-3.909***	-0.429***	(Excl.)	-0.398***
	(0.65)		(0.65)	(0.05)		(0.08)
F1	-1.568***	-0.413	-1.568***	-0.354***	-0.103	-0.309***
	(0.32)	(0.80)	(0.32)	(0.07)	(0.20)	(0.08)
F1ObsWi	0.378	0.396	0.378	0.091	0.099	0.080
	(0.78)	(0.94)	(0.78)	(0.19)	(0.23)	(0.17)
Risk Aversion	0.078	-0.162	0.078	0.018	-0.040	0.016
	(0.16)	(0.17)	(0.16)	(0.03)	(0.04)	(0.03)
History	7.644***	5.103***	7.644***	1.795***	1.273***	1.553***
	(1.54)	(1.25)	(1.54)	(0.38)	(0.32)	(0.38)
WObsWi	-0.033			-0.008		
	(1.20)			(0.28)		
WF1	1.155			0.278		
	(1.01)			(0.24)		
WF1ObsWi	0.018			0.004		
	(1.12)			(0.26)		
WRiskAv	-0.240			-0.056		
	(0.25)			(0.06)		
WHistory	-2.541*			-0.597**		
	(1.34)			(0.30)		
Intercept	-4.044**	-2.359*	-4.044**			
	(1.64)	(1.27)	(1.64)			
Log-Likelihood	-109.44	-66.71	-42.73			
Pseudo R^2	0.37	0.25	0.48			
N	252	129	123			

Note. In italics, Robust Std. Error for the Logit regression and Std. Error for Marginal effects.
Significant at the *10%, **5%, ***1%.
WObsWa, F1ObsWa and WF1ObsWa (and ObsWa) are excluded because they predict waiting perfectly (for Women).

Table 3: Logit regression for Depositor 2.

Table 4

Table 4

	Logit Coefficients			Marginal Effect		
	Pooled	**Women**	**Men**	**Pooled**	**Women**	**Men**
W	0.424			0.019		
	(2.84)			(0.13)		
StrUnc	1.751	1.199	1.751	0.083	0.063	0.072
	(1.24)	(0.80)	(1.24)	(0.07)	(0.07)	(0.04)
Risk Aversion	-0.071	-0.091	0.071	0.003	-0.005	(0.003
	(0.48)	(0.11)	(0.15)	(0.01)	(0.01)	(0.01)
History	4.755***	6.007*	4.755***	0.209***	0.305***	0.180**
	(0.96)	(3.12)	(0.96)	(0.05)	(0.10)	(0.08)
WStrUnc	-0.552			-0.022		
	(1.43)			(0.05)		
WRiskAv	-0.162			-0.007		
	(0.15)			(0.01)		
WHistory	1.252			0.055		
	(3.49)			(0.15)		
Intercept	-6.619***	-6.195***	-6.619***			
	(1.81)	(1.98)	(1.81)			
Log-Likelihood	-78.04	-43.54	-34.50			
Pseudo R^2	0.26	0.25	0.26			
N	312	159	153			

Note. In italics, Robust Std. Error for the Logit regression and Std. Error for Marginal effects.
Significant at the *10%, **5%, ***1%.

Table 4: Logit regression for Depositor 3.

Table 5

Table 5

Network	Men	Women	Total	Test proportion
(12,13,23)	63	63	126	1.000
(12,13)	48	40	88	0.394
(12,23)	59	55	114	0.708
(13,23)	59	63	122	0.727
(12)	58	58	116	1.000
(13)	59	51	110	0.446
(23)	51	61	112	0.345
$\varnothing$	53	59	112	0.571
	450	450	900	

Table 5: Observations across networks.

Table 6

Table 6

	Mean	Std. Dev.	Min	Max
Men	5.80	1.94	0	10
Women	4.97	1.52	0	8

Table 6: Invested amount in the investment game in Gneezy and Potters (1997).

Table 7

	Mean	Std. Dev.	Min	Max
Men	2.07	1.05	0	4
Women	1.33	0.99	0	3

Table 7: Number of times that subjects choose the risky choice.

Figure 1

Figure 1. Screenshots for depositors 1 and 2

Figure 1.A. Depositor 1

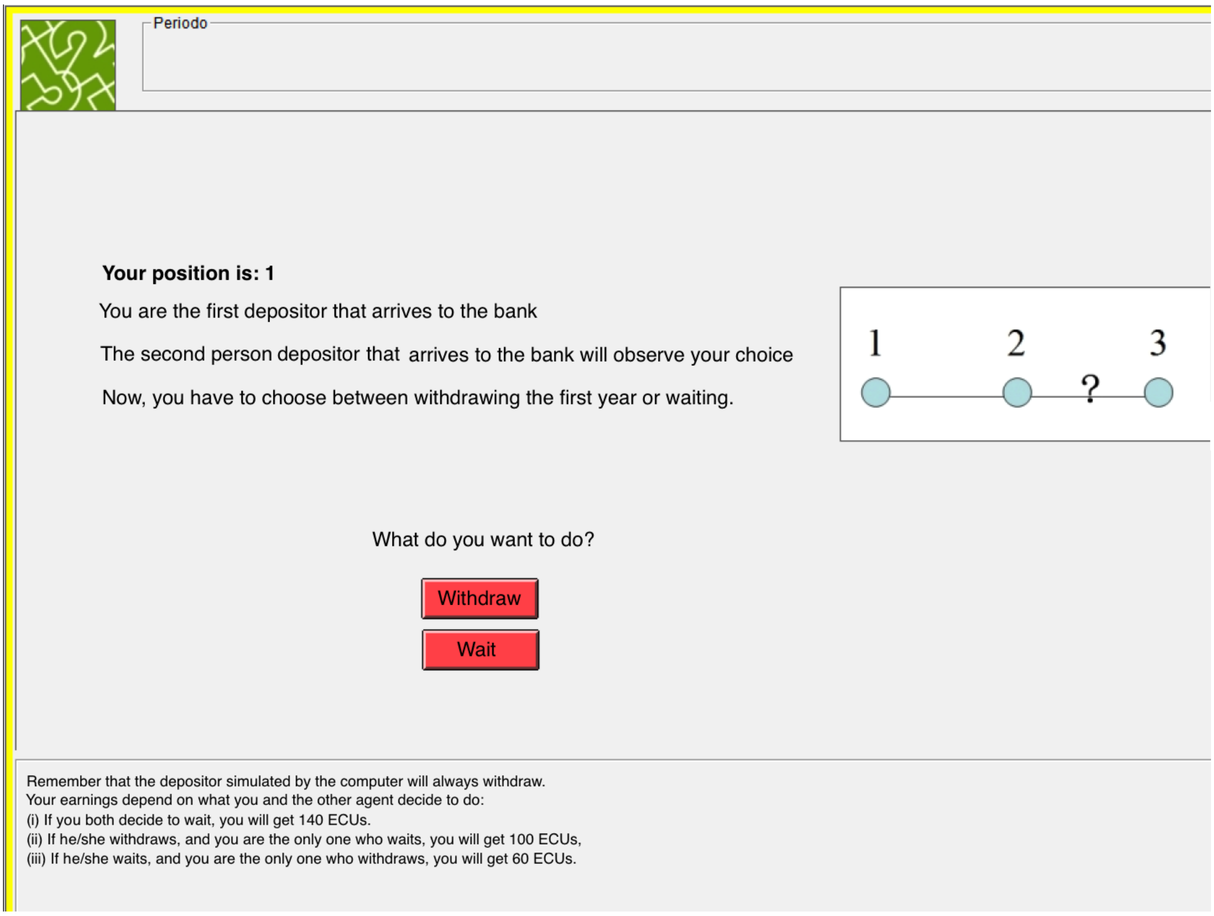

Figure 1.B. Depositor 2

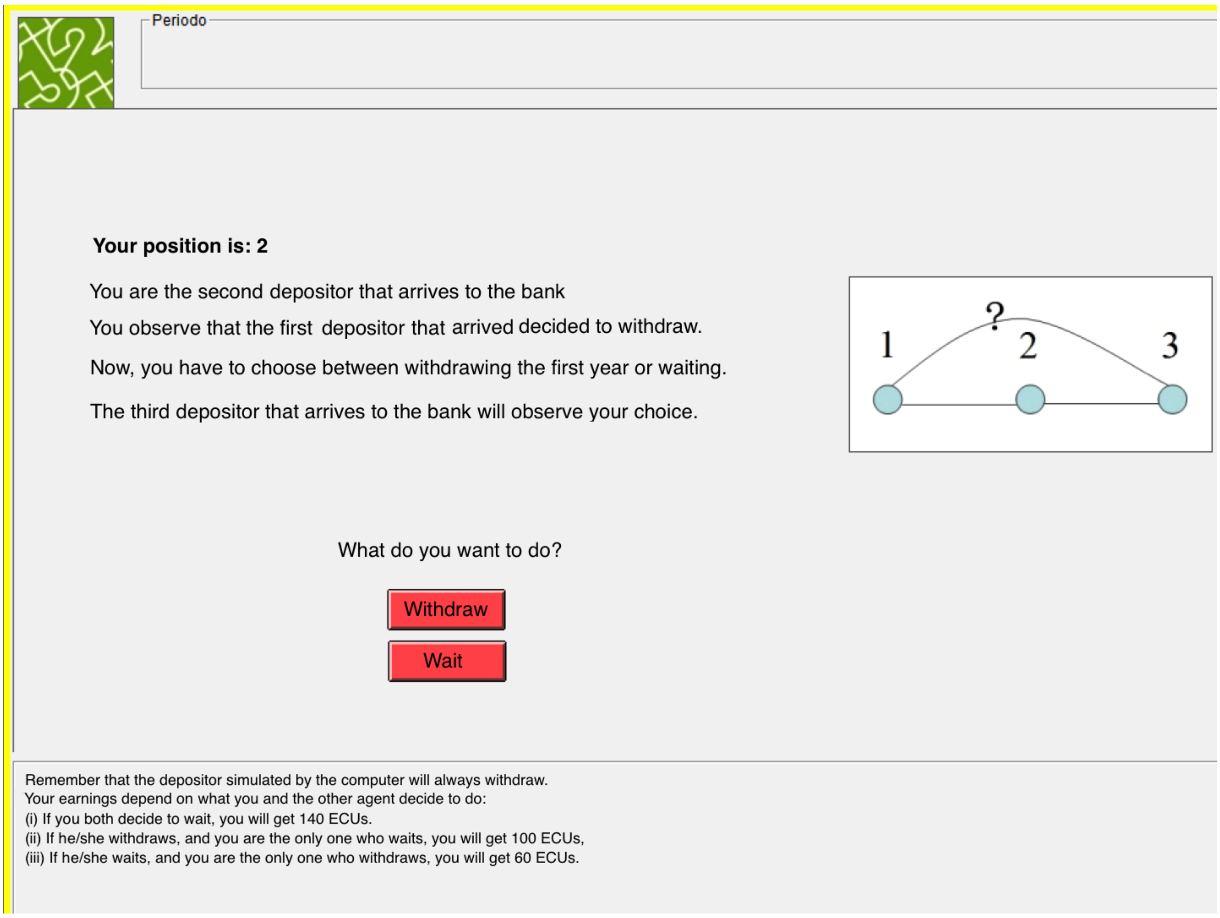

Figure 2

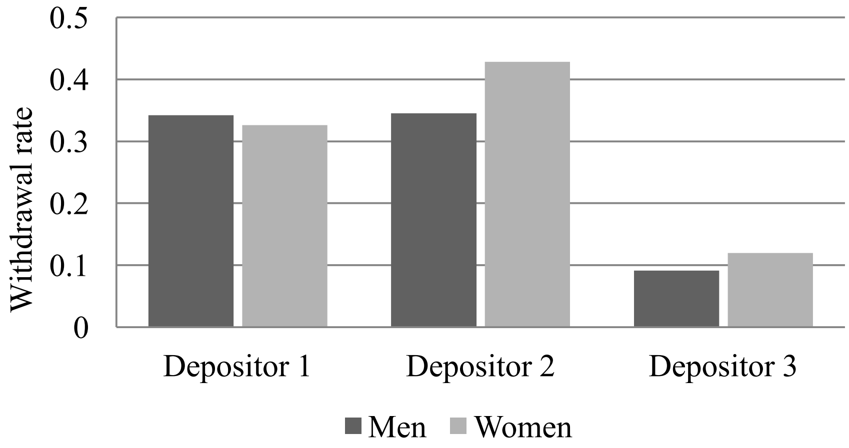

Figure 2: Decisions by gender in each position

Figure 3

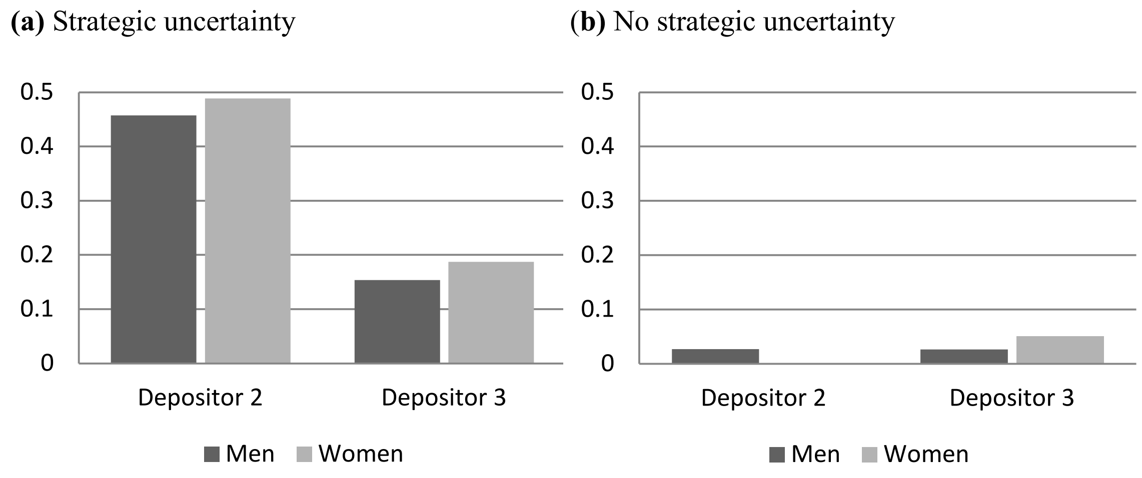

Figure 3: Decisions by gender in presence/absence of strategic uncertainty

Figure 4

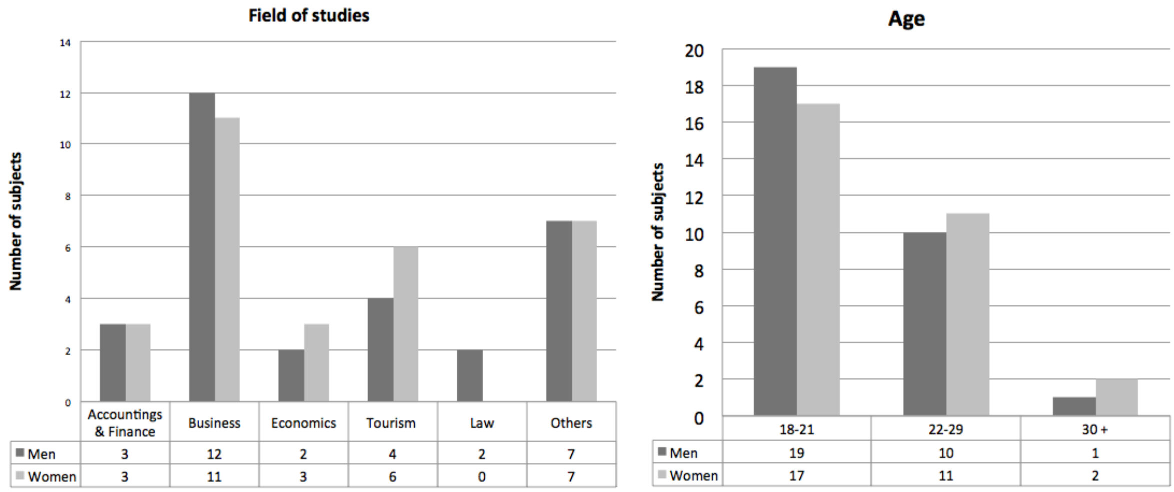

Figure 4: Field of studies and Age

Figure 5

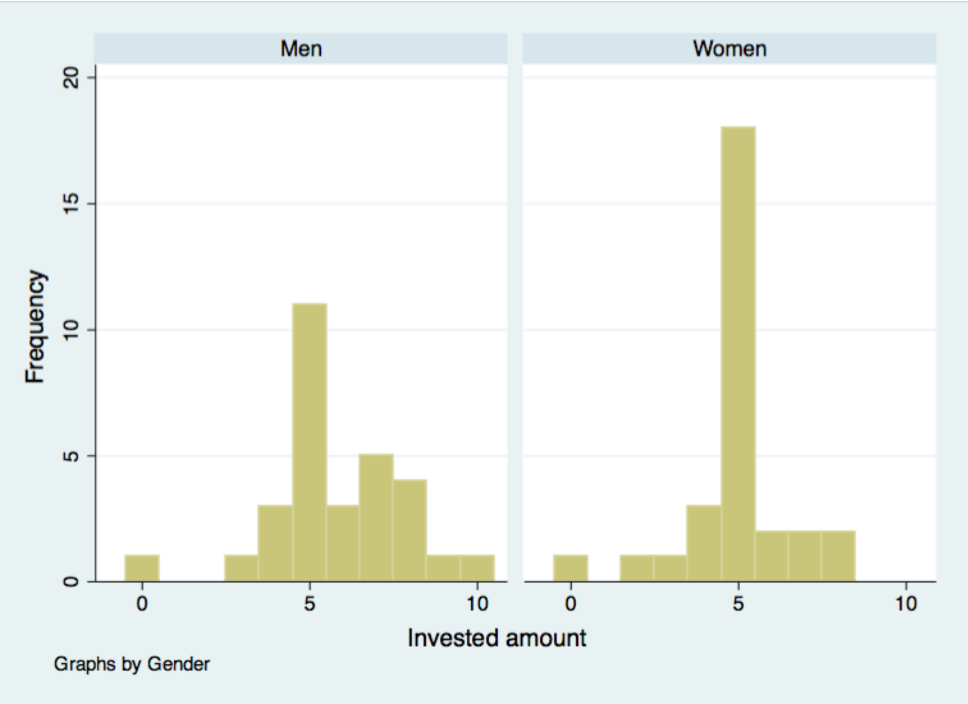

Figure 5: Histogram of decisions