

Financial Socialization and the Gender Investment Gap

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Abstract

Women are significantly less likely to participate in the stock market than men. Using data from a large and representative survey among 2,132 Germans, we find a gender investment gap of 14.6 percentage points. We show that financial socialization plays an important role in explaining this gap. Within German households, financial matters are less frequently discussed with daughters than with sons, and women report more frequently that they did not acquire financial competences at school. This results in lower financial literacy and lower financial confidence of women later in life, and explains why they are less likely to participate in the stock market than men. Financial socialization is a stronger predictor of women's propensity to participate in the stock market, than of men's.

JEL-Classification Codes: G11, G41, G53

Keywords: Gender investment gap, Financial socialization, Financial literacy, Stock market participation

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1 Introduction

Historically, investing in the stock market was a man's domain. Figure 1 displays the trading floor of the New York stock exchange in 1939, which was clearly dominated by men at that time. This has changed and, in more recent years, we observe that more and more fearless girls are entering Wall Street (see Figure 2).

In Germany, the introduction of the equality act of 1958 paved the pathway for women to open their own bank account and thus make decisions about their own money. However, despite this legal equality, there still are significant gender disparities even today. They are particularly pronounced when it comes to financial investments and asset accumulation. In 2022, only about 13.3 % of women compared to 23.4% of men participated in the stock market.¹ We corroborate this finding based on data from a large and representative survey among 2,132 Germans from the year 2023, and find that only 17.7% of female survey respondents indicate that they invest in the stock market, while 32.2% of male survey respondents do. This gender investment gap is economically large and statistically significant.

Understanding the reasons for the gender investment gap is important. According to the German federal statistical office, in 2022, women in Germany faced a 25% higher risk of old-age poverty and the gender overall earnings gap amounted to 39%.² This gap takes into account several dimensions of gender inequality. First, women face unique financial challenges due to occupational segregation and career interruptions for childcare (Chhaochharia, Ghosh, Niessen-Ruenzi, and Schneider (2023), Kleven, Landais, and Sogaard (2019), and Kleven, Landais, Posch, Steinhauer, and Zweimuller (2019)) leading to a pronounced gender pay gap of 18%.³ Second, the state pension system suffers from demographic change, and there is a gender pension gap of 26% for the state pension system (Niessen-Ruenzi and Schneider (2022)). The gender pension gap becomes even larger and amounts to 59.6% if all three pillars of the German pension system are considered (Niessen-Ruenzi and Schneider

¹see Aktionärszahlen, Deutsches Aktieninstitut (2023)

²see Statistik zur Armutsgefährdung, Destatis (2022)

³see Statistik zum Gender Pay Gap, Destatis (2022)

(2011)). Finally, divorce rates have increased over time and alimony laws have been reformed in 2008, leaving divorced partners responsible for their own living expenses, if no children under the age of three are cared for. This means that the traditional male breadwinner model has broadly lost its insurance-like component.

Thus, it is of utmost importance for women to engage more actively in retirement planning and financial decision making. According to the German Stock Institute's return triangle, the German stock index (DAX) has delivered an average annual return of 7.5 % over the past three decades.⁴ Considering the potential of stock market investments to mitigate gender wealth gaps, and eventually decrease the risk of old age poverty, it is important to understand the barriers that women (perceive to) face when it comes to stock market participation.

In this paper, we dig deeper into the reasons for women's lower stock market participation, financial literacy, and financial confidence by looking at financial socialization during childhood and adolescence. Based on a representative survey among 2,132 Germans, we show that women are less exposed to financial role models in their childhood than men are. Specifically, a significantly higher fraction of female than male survey respondents reports that their parents did not discuss financial matters with them during childhood and that there were no regular conversations about financial matters in the family.

When directly asked about financial role models, we observe gender differences in the type of role models that female and male respondents name. Women are more likely to name immediate family members, including their father, mother, and partner, while men only consider their fathers as financial role models, and then mention their financial advisor or famous investors like Warren Buffet or Elon Musk.

Female survey respondents are also more likely to indicate that they did not learn any helpful competences at school that would help them to manage their finances later in life. In addition, we observe significantly weaker peer effects among female compared to male

⁴see Renditedreiecke, Deutsches Aktieninstitut (2023)

survey respondents, i.e., women are less likely to know friends, colleagues, or people of the same gender who invest in the stock market.

In the next step, we run a principal component analysis across all survey items capturing the presence of financial role models during childhood, and across all survey items capturing peer effects later in life (for example, having friends and/or colleagues investing in stocks). We then show that financial literacy and financial confidence are significantly lower for female than male respondents, and that the presence of family role models and peer effects are more important for increasing women's financial literacy and confidence than for men's. In other words, the lack of financial role models during childhood and the weaker peer effects later in life both predict lower financial literacy and confidence of women.

Finally, we run a multivariate regression on the cross-section of survey participants with stock market participation as the dependent variable. The main independent variables are our proxies for financial socialization and demographic control variables, including respondents' age, education, marital status, occupational status, income, and location (East vs. West Germany).

We find that female survey respondents are significantly less likely to participate in the stock market than male survey respondents. While 32.3% of male respondents indicate that they actively invest in stocks, equity funds, or ETFs, only 17.6% of female respondents do so. Most importantly, financial role models during childhood increase the likelihood that women participate in the stock market later in life. This is true for more indirect proxies of financial role models, such as growing up with a working mother, but also for direct proxies derived from respondents' ability to recall a specific financial role model.

Interestingly, financial socialization through regular conversations about financial matters during childhood is a much stronger predictor of stock market participation for female respondents compared to male respondents. While it doesn't matter for male respondents' stock market participation whether they grew up in a household with a working mother, or a household where parents regularly discussed financial matters with them, female respon-

dents are significantly more likely to participate in the stock market if they grew up with a working mother or in households where they were actively included in conversations about financial matters. Being able to recall a financial role model is also predictive for women's stock market participation, but not for men's.

Finally, we find that peer effects later in life (friends or colleagues invest etc.) are equally predictive for male and female stock market participation.

Our paper contributes to the literature on gender differences in stock market participation, financial literacy, and financial confidence. Using data from an American app-based consumer stock brokerage, Itzkowitz, Itzkowitz, and Schwartz (2023) use stock gift cards and show that encouragement to enter the stock market helps to overcome gender differences in stock market participation. At the same time, they show that boys receive more stock gift cards than girls, i.e. girls are less encouraged to participate. These findings nicely mirror the results in our paper, where encouragement is measured by financial socialization and peer effects. Almenberg and Dreber (2015) use Swedish data and show that gender differences in financial literacy can explain a significant part of the gender gap in stock market participation. Finally, Bucher-Koenen, Alessie, Lusardi, and van Rooij (2021) show that about one-third of the financial literacy gender gap can be explained by women's lower confidence levels. They then show that both, financial knowledge and confidence, explain stock market participation.

The novel aspect in this paper is to show that gender differences in financial socialization during childhood and adolescence is a driving force of the gender investment gap and contributes in explaining why women have lower financial literacy and confidence later in life.

2 Data and summary statistics

Our study is based on a representative survey, conducted among 2,132 Germans in February 2023 by the opinion polling institute Norstat. All respondents who constitute our database belong to Norstat’s online panel, which consists of more than 670,000 panelists in total. They participated in the survey online. Participation is incentivized by Norstat. Respondents receive bonus points for participating in surveys. These can be redeemed for cash, vouchers or donations. Norstat’s sampling approach ensures that our sample is representative of the German population in terms of gender, age, and federal states.

2.1 Construction of main variables

Our survey includes several items to proxy for financial socialization through the presence of financial role models during childhood and adolescence. These items are questions on parental employment, family conversations about financial matters, a question whether respondents’ acquired financial competence at school, and questions about peer effects (for example, knowing friends or colleagues who invest in the stock market).

Respondents can agree or disagree on a 4 point Likert scale. All items are displayed in the Appendix of this paper. We then compute dummy variables for agreements to a statement. They are set equal to one if a respondent fully agrees or rather agrees with a statement, and zero if a respondent rather disagrees or fully disagrees with a statement.

We also measure respondents’ financial literacy. Financial literacy, often used interchangeably with financial knowledge or education, lacks a universally accepted definition. Scholars typically adopt either a ‘thin’ or ‘thick’ definition. The OECD’s comprehensive definition sees financial education as a process where individuals enhance their understanding of financial products, develop skills, and gain confidence to make informed financial decisions. For measurement, we rely on the seminal paper by Van Rooij, Lusardi, and Alessie (2011) and include the ‘Big Three’ questions on compound interest, inflation, and diversification

in our survey. We then compute a dummy variable, financial literacy, which is equal to one, if all three questions are answered correctly, and zero otherwise.

Bucher-Koenen, Alessie, Lusardi, and van Rooij (2021) show that about one-third of the financial literacy gender gap can be explained by women’s lower confidence levels. Therefore, we elicit respondents’ confidence in answering a given financial literacy question immediately after the literacy question is posed. For example, we first elicit financial literacy regarding compound interest and then ask respondents’ how confident they are that they answered the question correctly. We then define a count variable, financial confidence, which ranges from one to three and captures respondents’ overall financial confidence.

To measure respondents’ engagement in the stock market, we first ask them directly about whether they currently invest in stocks (comprising equity funds and ETFs) and define a dummy variable, stock market participation, which is equal to one for respondents’ who answer “yes” and zero otherwise. As an alternative measure, we ask whether respondents consider stocks, equity funds, and ETFs if they choose between different financial products. The corresponding dummy variable, equity holdings, is equal to one if respondents consider at least one of the three components, and zero otherwise. Finally, we ask non-participants whether they could imagine to participate in the stock market in the future. This variable helps us to disentangle wealth effects from a general preference for non-participation. For example, a respondent may not be able to afford participation today, but maybe would consider participating in the future if more liquid funds were available. We define a dummy variable, would never invest, which is equal to one if a respondent indicates that she does not invest today and also could not imagine to invest in stocks in the future.

We use further variables in our regressions, for example we include a battery of socio-demographic control variables. They are not described here in detail for brevity, but are listed in detail in Appendix A.

2.2 Summary statistics

Table 1 shows summary statistics of our sample. Average stock market participation in our sample, surveyed in 2023, amounts to 24.9%. This number is slightly higher than the 18.3% stock market participation reported by the German stock institute (DAI) for 2022.⁵ 50.2% (1,070) of respondents in our sample are female, 49.2% (1,050) are male, and 0.6% (12) are diverse. 15.7% of respondents live in East Germany.

The sample spans several additional demographic variables, including age, marital status, and income categories. The measurement of all variables is described in Appendix A.

3 Financial socialization

We start by examining gender differences in financial socialization, which is likely to be one reason for the gender investment gap and has been overlooked in the literature so far. According to Chowdhury, Sutter, and Zimmermann (2020), there is a large degree of intergenerational persistence of economic preferences. They show that both, mothers' and fathers' risk, time and social preferences are positively correlated with their children's economic preferences. In addition, Sutter, Weyland, Untertrifaller, and Froitzheim (2020) show that teaching financial literacy at school has significant short-term and longer-term effects on adolescents' risk and time preferences.

Based on these earlier findings, we hypothesize that financial socialization at home and at school has a strong influence on individuals' financial habits, values, and attitudes later in life. For example, children raised in households where financial matters are frequently discussed and financial decision making is very transparent may be more likely to prioritize savings, investments, and responsible spending as adults. More importantly, a differential

⁵see Aktionärszahlen, Deutsches Aktieninstitut (2023)

treatment of daughters and sons with respect to financial socialization may explain gender gaps in investment behavior later in life.

3.1 Financial role models during childhood

We start by examining whether and what type of financial role models male or female survey participants consider. Specifically, we develop several proxies for the presence of financial role models during childhood and test for significant gender differences.

Our first proxies are based on parental labor supply during childhood. We argue that growing up with both parents being in the labor force is associated with a higher likelihood that financial matters regarding investments and savings are discussed at home, due to the mere fact that more liquid funds should be available if both parents are working. To better capture gender role model effects, we also define a dummy variable specifically capturing whether the mother was working during a respondent's childhood.

In addition, we ask respondents' directly whether they can name a financial role model, and if so, whom they consider a financial role model. Overall, only 8.6% of respondents were able to recall and name a financial role model (see Table 1. Finally, we ask respondents whether their parents currently invest in stocks or did so at some point in the past. We then conduct two-sided t-tests to examine whether there are any gender differences for these variables. Results are presented in Table 2.

Results in Panel A show that a majority of both men (55.5%) and women (56.5%) were raised in households with two employed parents. 66.4% of respondents report that they grew up with a mother who was employed at least in a part-time position at some point during their childhood, while roughly 33.6% of survey respondents report that the mother was not employed at all. Most importantly, and as expected if one assumes a random distribution of childrens' gender across families, there are no significant differences between female and male survey respondents with respect to being exposed to a certain family structure (i.e.,

both parents working or a working mother). However, there still can be a differential impact of growing up with a working mother on girls vs. boys. Interestingly, a significantly lower fraction of female versus male survey respondents reports that their parents invest(ed) in stocks. This result is likely driven by differences in communication with sons and daughters (see blow) rather than an unequal distribution of sons and daughters across parents who invest in stocks.

In the next step, we directly asked survey respondents whether they can name a person serving as financial role model to them. Panel B of Table 2 lists the most frequently given responses by gender. For both, men and women, their fathers are most frequently mentioned as financial role model. Interestingly, the subsequently named role models differ significantly across genders. For women, other immediate family members such as their mother (top 2), partner (top 3), or both parents (top 4) are considered as financial role model. Finally, a female finfluencer, Madame Money Penny, is named as financial role model. Men do not consider other family members as financial role models. They rather consider more generally financial advisors (top 2) or specific famous investors such as Warren Buffet (top 3), André Kostolany (top 4), or Elon Musk (top 5) as financial role models. This is a first hint that there are pronounced differences in financial socialization between women and men, with potential implications for their investment behavior later in life.

3.2 Gender differences in financial socialization

To dig deeper into the nature of financial socialization, we asked survey participants to what extent conversations about financial matters were present during their childhood. First, we asked them whether their parents made financial decisions together. Being able to answer this question at the same time reflects whether children actively observed financial decision making and the person who was in charge of it. We also elicit whether respondents had the impression that financial matters were openly discussed in the family, and whether parents included their child in these conversations and actively discussed financial matters with

them. Finally, we asked whether these conversations took place on a regular basis. Gender differences in responses are shown in Panel A of Table 3.

We find that there are no significant gender differences in the observation whether or not parents made financial decisions together or whether they discussed these matters openly. A substantial percentage of respondents (56.4% of men and 57.9% of women) reported that their parents discussed and jointly made financial decisions. Similarly, 46.2% of women and 44.7% of men report that financial matters were not openly discussed in their families.

However, a significantly lower fraction of women (24.8%) than men (28.4%) report that their parents actively discussed financial matters with them. Similarly, only 24.2% of women but 28.6% of men report that there were regular discussions about financial matters in their family. What is the reason for this difference? It could either be the case that finance, as a traditionally male topic, is indeed less discussed with daughters than with sons (parental effect). Alternatively, it could be the case that daughters are less interested in the topic and therefore are less likely to involve their parents in discussions about it (child effect). In any case, we hypothesize that these differences are predictive for financial behavior later in life.

Stock market participation is influenced by social interaction, and recent stock returns that local peers experience affect an individual's stock market entry decision (Hong, Kubik, and Stein (2004), Kaustia and Knüpfer (2012)). Brown, Ivković, Smith, and Weisbenner (2008) establish a causal relation between an individual's decision whether to own stocks and average stock market participation of the individual's community. Therefore, we also examine gender differences in peer effects, by asking whether respondents know a friend, colleague, or person of their same gender who invests in the stock market. Results are reported in Panel B of Table 3.

We find that 51.2% of men, but only 38.4% of women know friends who invest in stocks. Similarly, a significantly lower fraction of women know colleagues or a person of their gender who invests in the stock market. 17.0% of men and 17.8% of women mentioned that their

partners invest in stocks. In this case, there's a relatively small gender difference, with women being slightly more likely to have partners involved in stock investments.

Women are significantly less likely to indicate that they regularly talk to friends about the stock market (10.0% of women vs. 24.0% of men), or that friends convinced them to participate in the stock market. Finally, only 16.1% of women, but 25.6% of men report that they acquired financial competences at school.

Overall, these findings indicate that, on average, men are exposed to a stronger financial socialization than women. They tend to have more connections and exposure to stock market investments through friends, family, colleagues, and people of their same gender compared to women. This could potentially influence individuals' decisions and attitudes toward stock market participation, with men having a somewhat higher financial literacy and confidence later in life, due to a more intense exposure to this topic during childhood and adolescence. This underscores the importance of ongoing financial education and increasing awareness to improve personal financial well-being and financial literacy of women.

4 Implications for financial literacy and confidence

4.1 Gender differences in financial literacy

Van Rooij, Lusardi, and Alessie (2011) report that individuals that lack financial knowledge may be less likely to participate in the capital market. Similarly, Balloch, Nicolae, and Philip (2015) identify being financially literate as a predominant driving factor for stock ownership. Analyzing data on Italian households, Guiso and Jappelli (2005) report that awareness of stocks and their operation are paramount for capital market participation. Therefore, it is alarming that the literature almost unanimously reports that women, on average, are less financially literate than men are. Bucher-Koenen and Knebel (2021), for instance, as well as Driva, Lührmann, and Winter (2016) and Lusardi and Mitchell (2014) report that

substantial gender differences in financial literacy exist and that they are irrespective of age, nationality, education, and other socio-economic criteria. In addition, Klapper and Lusardi (2020) uncover that the gender gap in financial literacy can be observed in developing as well as in developed countries. Bucher-Koenen, Lusardi, Alessie, and Van Rooij (2017) find that single and widowed women are especially likely to be financially illiterate. Furthermore, Mahdavi and Horton (2014) find that the level of financial literacy is also considerably low among young, educated women that have strong labor market attachment.

Backing the previous literature, our survey data show that women are less financially literate than men are (see Figure 3). While 54.6 % of the male participants were able to correctly answer all three questions on financial literacy, only 36.3 % of their female counterparts were able to do so.

Panel B of Figure 3 shows that the gender gap in financial literacy holds for each individual question and is most pronounced for the concept of risk diversification. While more than 80% of male survey respondents correctly answer the literacy question on compound interest and inflation, only 73.7% and 72.5% of women answer these questions correctly. Financial knowledge regarding diversification is lowest among both, men and women. 64.6% of male survey respondents correctly state that an equity fund provides more risk diversification than a single stock, but only half of the female survey respondents do so.

4.2 Gender differences in financial confidence

Bucher-Koenen, Alessie, Lusardi, and van Rooij (2021) show that part of the gender gap in financial literacy is driven by lower financial confidence of women. Specifically, women tend to disproportionately respond “do not know” to the questions measuring financial knowledge, but when this response option is unavailable, they often choose the correct answer. Motivated by these findings, our survey included a separate question after each financial literacy question, which elicits whether or not a respondent is confident that she answered the literacy question correctly.

Figure 4 shows that a significantly lower fraction of female respondents than male respondents (36.3% vs. 54.6%) was confident that they answered a given literacy question correctly. This result holds for each individual literacy question. At the same time, men are more overconfident than women. While 20.4% of male respondents indicated that they were confident in answering a question correctly while, in fact, they answered the question wrongly, only 16.4% of female respondents showed this type of miscalibration. The difference is statistically significant at the 10% level (t-stat 1.79).

Taken together, we find that female survey respondents have lower financial literacy and confidence than male survey respondents. In the next step, we examine whether financial socialization explains these gender differences, i.e. whether the gender gap in financial literacy and confidence is mitigated if women grew up in households where financial role models were present.

5 Does financial socialization mitigate the gender gap in financial literacy and confidence?

Growing up in a household where financial matters are regularly discussed with children irrespective of their gender may reduce gender differences in financial literacy and confidence later in life. Similarly, knowing peers who invest in the stock market and regularly talking to them about investments should increase individuals' financial literacy and confidence.

To test this conjecture, we run a principal component analysis on the variables displayed in Tables 2 and 3. The first analysis includes all variables displayed in Table 2 and Panel A of Table 3. We then take the first principal component as a proxy for the presence of family role models. The second analysis includes all variables displayed in Panel B of Table 3 and we again take the first principal component as a proxy for peer effects later in life.

We then run a multivariate regression with either financial literacy or financial confidence as dependent variable and relate it to one of the proxies for financial socialization, family role model or peer effects. We interact each of the proxies with a female dummy variable to investigate whether financial socialization has a differential impact on women's and men's financial literacy later in life.

To account for the fact that other demographic variables may drive financial literacy and confidence, we include respondents' age, education, location (West or East Germany), income, marital status and fixed effects for occupation status as control variables.

Results are reported in Table 4 and corroborate the findings in Figures 3 and 4 in that female respondents display significantly lower financial literacy and confidence than male respondents, as indicated by the negative and statistically significant coefficient on the female dummy.

Most importantly, women's financial literacy and confidence is higher if they grew up in households where financial role models were present and if they are exposed to stronger peer effects later in life. While peer effects seem to be important for both, women's and men's financial literacy and confidence (as indicated by the positive and significant coefficient on the baseline peer effects variable and its interaction with the female dummy), the presence of financial role models within the family seem to only matter for women, but not for men.

Combining results from the previous section with the results displayed in Table 4, the picture that emerges is worrisome: While the presence of financial role models and peer effects is more important for women's financial literacy and confidence than for men's, they are at the same time less present and weaker during girls' childhood and adolescence, than boy's.

6 Financial socialisation and stock market participation

In the last step, we again use ordinary least squares (OLS) regression and examine the direct and indirect effects of financial socialization on stock market participation.

Our data show that a significantly lower fraction of female than male survey respondents indicates that they participate in the stock market (see Figure 5). This holds for direct stock market participation, equity holdings (based on a question regarding the choice of different financial products), and also for non-participants who are asked whether they could imagine to participate in the stock market in the future. The letter helps to mitigate concerns that wealth effects are fully explaining the gender difference in stock market participation. Even hypothetically, fewer women than men can imagine to participate in the stock market.

In the next step, we use stock market participation as the dependent variable and relate it to our direct measures of financial role models and peer effects, as well as respondents' financial literacy and confidence. Our main model has the following form:

$$(1) \quad y_i = \alpha + \beta X_{i1} + X'_{i2}\gamma + \varepsilon_i$$

y_i captures stock market participation of respondent i . It takes a value one if a respondent indicates that she currently invests in stocks (including single stocks, equity funds, and ETFs), and zero otherwise. α is the regression constant. β is the coefficient on the main independent variable, X_{i1} , reflecting one of the proxies of financial socialization. X'_{i2} is a broad set of control variables including a survey respondents' financial literacy, confidence and further demographic control variables. In addition, we include a variable capturing the estimated effort a respondent estimates to need if she wanted to buy a stock. Answer options included several hours, several days, several weeks, and several month. We also include a dummy variable reflecting whether a respondent ever participated in a financial workshop.

Results are reported in Tables 5 and 6. Note that, although we include an extensive set of control variables in our regressions, it is likely that there are still some unobserved confounds. Therefore, the results should be interpreted as a correlation rather than applying a causal interpretation.

In Table 5, we investigate whether the presence of financial role models in respondents' families has an impact on their stock market participation later in life. Panel A shows results for the subsample of male respondents, and Panel B shows results for the subsample of female respondents. We find that, for male respondents, the presence of financial role models during childhood and being able to financial role model today have no predictive power for their future stock market participation. The only significant coefficients we observe are on whether there were regular conversations about financial matters in the family and whether the parents invest(ed) in stocks themselves. Thus, financial role models during childhood seem less relevant for men's financial decision making later in life.

In contrast, results in Panel B show that the presence of financial role models in families with daughters has a strong impact on women's future investment behavior. All seven proxies are positive and statistically significant. Daughters in households where both parents worked or in households with working mothers are significantly more likely to participate in the stock market later in life. This also holds for daughters with parents who invest(ed) in the stock market, made financial decisions together, and regularly talked to their daughters about financial matters.

Our control variables are in line with the previous literature. We find that older survey participant and those living in East Germany are less likely to participate in the stock market (Laudenbach, Malmendier, and Niessen-Ruenzi (2023)). Education, higher income, and higher financial literacy are significantly positively associated with stock market participation. The same holds for participation in a financial workshop.

Thus, we find evidence for both, direct and indirect effects of financial socialization on stock market participation, which are stronger for women and for men. For women, the presence of

financial role models during childhood has a direct and significant impact on the likelihood that they participate in the stock market later in life. At the same time, women with higher financial literacy are more likely to participate in stock market, which is again increased if they are exposed to financial role models early in life.

In Table 6, we repeat our analysis but replace our proxies for the presence of financial role models early in life by our proxies for peer effects later in life. We again split the sample into male (Panel A) and female (Panel B) survey respondents and run the same regression specifications as in Table 5.

Results show that the presence of peers who invest in the stock market is significantly and positively related to an individual's likelihood to participate in the stock market. Knowing friends, colleagues, or people of the same gender who invest in stocks increases the probability that a survey respondent participates in the stock market as well, irrespective of gender. This positive effect holds consistently across all model specifications, emphasizing the importance of peer influence in financial decision-making. The only coefficient that remains insignificant is the one capturing whether respondents' acquired financial knowledge at school.

Financial literacy and confidence in financial decision-making is again positively correlated with stock market participation, and all other control variables are in line with findings from the previous table.

7 Discussion and Conclusion

This paper shows that financial socialization matters for financial decision making later in life. Those who are exposed to financial matters through interactions with their parents, friends, or other peers early in life are more likely to participate in the stock market as adults. At the same time, we find significant gender differences in financial socialization,

with daughters experiencing fewer interactions with the topic of finance during childhood than sons.

This leads to a disadvantage for women when it comes to investment behavior later in life, which manifests in lower financial literacy and confidence. Eventually, gender differences in financial socialization can explain gender gaps in wealth accumulation, and thus have monetary consequences: we show that women are significantly less likely to participate in the stock market, and that part of this difference is driven by a different financial socialization of daughters compared to sons.

The gender difference in financial socialization may not come as a surprise, given that the world of finance has historically been predominantly perceived as the domain of men. It may thus seem more natural within households that fathers discuss financial matters with their sons, but less with their daughters. Given the considerable magnitude of the gender investment gap that we document, together with the potential of the stock market to alleviate gender pay and pension discrepancies, warrants a call for a more structured approach of financial education for the benefit of boys and girls in our society.

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Figure 1: The New York stock exchange in 1939

This figure shows the New York stock exchange in 1939. Photo: Underwood Archives/Getty Images



Figure 2: Fearless girl at Wall Street

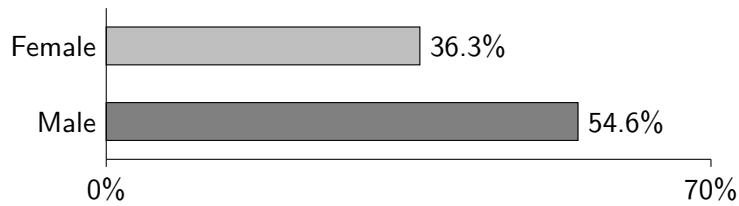
This figure shows the fearless girl statue, created by the sculptor Kristen Visba and erected in Bowling Green in honor of International Women's Day 2017. Photo: Mark Lennihan/Associated Press



Figure 3: Financial literacy by gender

Panel A of this figure shows the fraction of female and male survey participants who answered all three questions on financial literacy (compound interest, inflation, diversification) correctly. The difference between female and male respondents across all three questions amounts to -18.3pp, t-stat:-8.61. In Panel B, we show the fraction of female and male survey respondents who correctly answer a question for each financial literacy question separately. The differences are all statistically significant and as follows: Compound interest: -11.1pp, t-stat: -6.32; inflation: -9.7pp, t-stat: -5.36; diversification: -14.7pp, t-stat: 6.90. The precise wording of the questions is provided in Appendix A.

Panel A: All financial literacy questions



Panel B: Correctly answered questions by subject

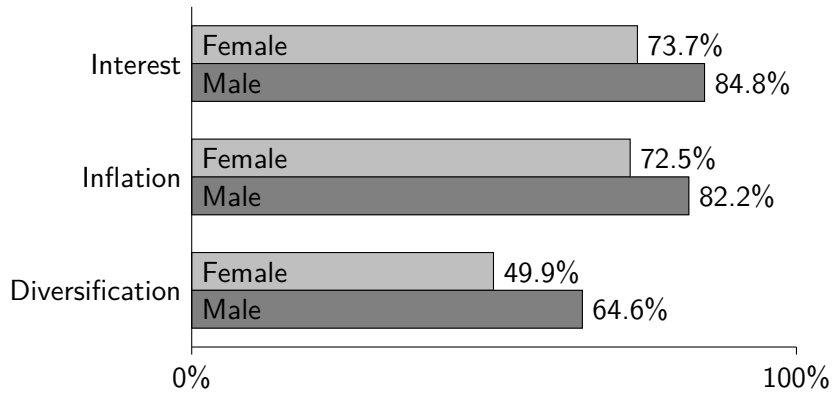
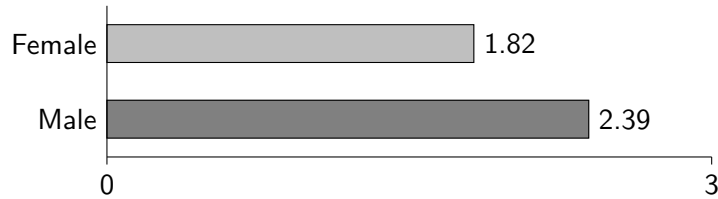


Figure 4: Financial confidence by gender

Panel A of this figure shows the average number of questions on financial literacy (compound interest, inflation, diversification), that a survey respondent was confident to answer correctly. The difference between female and male respondents across all three questions amounts to -0.57, t-stat:-12.85. In Panel B, we display the fraction of survey respondents who are confident in answering one question correctly. Differences between female and male survey respondents are all statistically significant and as follows: Compound interest: -15.4pp, t-stat: -8.86; inflation: -19.4pp, t-stat: -10.46; diversification: -22.4pp, t-stat: -10.71. The precise wording of the questions is provided in Appendix A.

Panel A: All financial confidence questions



Panel B: Financial confidence by subject

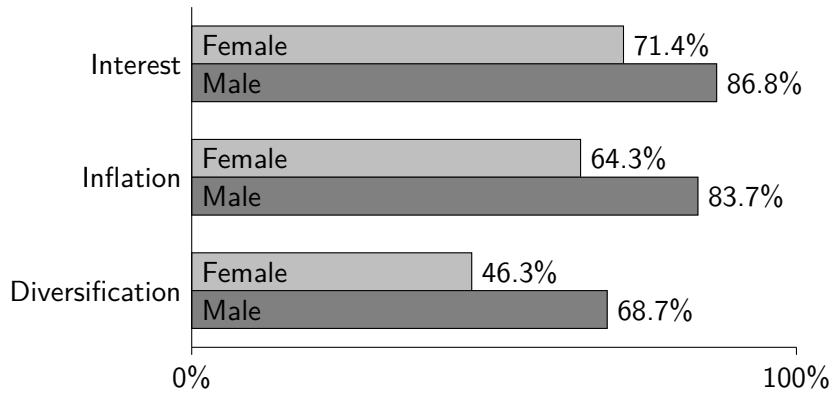


Figure 5: The gender investment gap

This figure shows the fraction of female and male survey respondents who agree to the following statements: “I currently participate in the stock market” (Stock market participation), “When it comes to financial products, I also buy stocks, exchange traded funds, or equity funds” (Equity holdings), “I am currently not participating in the stock market and can’t imagine to do so in the future” (Would never invest). The exact values for female and male survey respondents are: 17.6% vs. 32.3% for stock market participation, 21.3% vs. 42.6% for equity holdings, 37.2% vs. 25.4% for would never invest. All differences are statistically significant at the 1% level with the following t-stats: -7.95 for stock market participation, -10.79 for equity holdings, -5.88 for would never invest. The precise wording of the questions is shown in Appendix A.

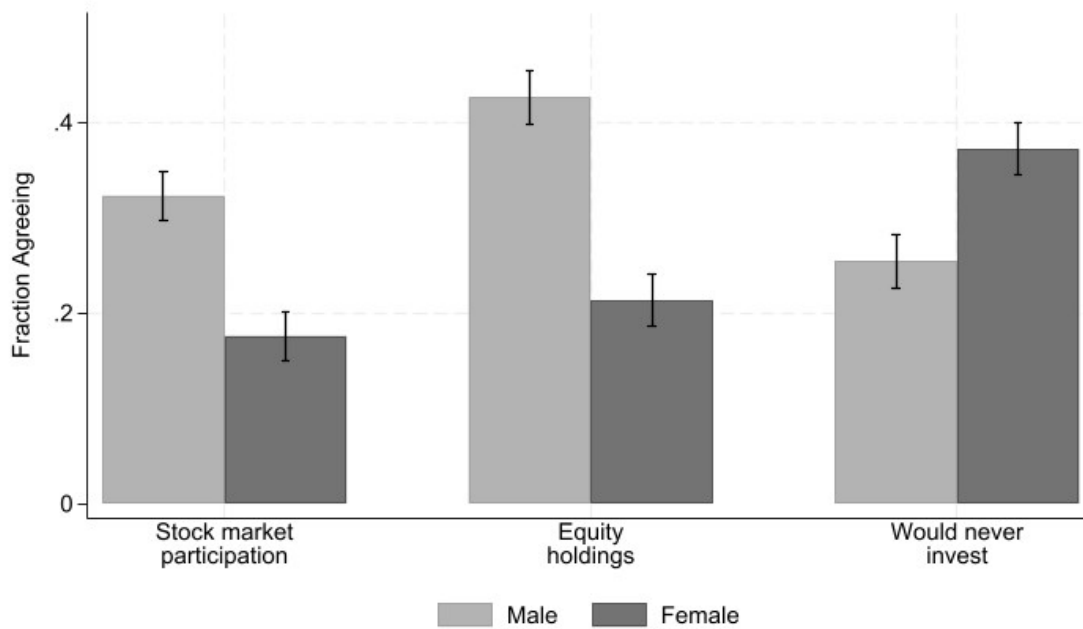


Table 1: Summary statistics

This table shows descriptive statistics of all variables used in the paper. We show average values (column 1), standard deviations (column 2), median (column 3), bottom 1% and top 99% (columns 4 and 5), as well as the number of observations (column 6). All variables are described in detail in Appendix A.

Variable	Mean	SD	p50	p1	p99	Obs.
	(1)	(2)	(3)	(4)	(5)	(6)
Stock market part.	0.249	0.432	0.000	0.000	1.000	2132
Female	0.502	0.500	1.000	0.000	1.000	2132
Age	3.623	1.692	4.000	1.000	6.000	2132
Married	0.454	0.498	0.000	0.000	1.000	2132
Education	4.871	1.436	5.000	2.000	8.000	2132
Income	4.482	2.615	4.000	0.000	10.000	2132
East German	0.157	0.364	0.000	0.000	1.000	2132
Financial literacy	0.451	0.498	0.000	0.000	1.000	2132
Financial confidence	2.097	1.067	2.000	0.000	3.000	2132
Estim. time to buy stocks	2.412	0.658	2.500	1.000	4.000	2132
Participation in workshop	0.125	0.331	0.000	0.000	1.000	2132
Both parents worked	0.560	0.496	1.000	0.000	1.000	2132
Mother worked	0.649	0.477	1.000	0.000	1.000	2132
Financial role model	0.086	0.281	0.000	0.000	1.000	2132
Parents invest(ed)	0.178	0.383	0.000	0.000	1.000	2132
Parents dec. together	0.572	0.495	1.000	0.000	1.000	2132
Parents talked to child about Finance	0.265	0.442	0.000	0.000	1.000	2132
Regular discussions about finance	0.264	0.441	0.000	0.000	1.000	2132
Friends invest	0.447	0.497	0.000	0.000	1.000	2132
Colleague invests	0.245	0.430	0.000	0.000	1.000	2132
Own gender invests	0.456	0.498	0.000	0.000	1.000	2132
Partner invests	0.174	0.379	0.000	0.000	1.000	2132
Discuss stock market w. friends	0.170	0.376	0.000	0.000	1.000	2132
Friends convinced me	0.140	0.347	0.000	0.000	1.000	2132
Finance at school	0.208	0.406	0.000	0.000	1.000	2132

Table 2: Availability of Financial Role Models

Panel A of this table shows the fraction of female (column 1) and male (column 2) survey respondents who indicate that they agree or rather agree to the statements displayed at the beginning of each row. Differences between female and male respondents are displayed in column (3) and t-statistics from a two-sided test are reported in column (4). Significance is denoted as follows: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Panel B lists the five most frequently mentioned financial role models by female (column 1) and male (column 2) survey respondents. The question was phrased as follows: “With respect to financial investments, the following person is my role model:”, and respondents were free to enter one or multiple names. All variables are described in detail in Appendix A.

Panel A: Financial Role Models (Family)				
	Women	Men	Diff.	t-stat.
	(1)	(2)	(3)	(4)
Both parents worked (full- or part-time)	0.565	0.555	0.010	0.47
Mother worked (full- or part-time)	0.664	0.634	0.029	1.41
Respondent has a financial role model	0.089	0.082	0.007	0.57
Parents invest(ed) in stocks	0.141	0.215	-0.074	-4.47***

Panel B: Financial Role Models (self-reported)		
	Women	Men
	(1)	(2)
Top 1	Father	Father
Top 2	Mother	Financial Advisor
Top 3	Partner	Warren Buffet
Top 4	Both parents	André Kostolany
Top 5	Madame Money Penny	Elon Musk

Table 3: Gender Differences in Financial Socialization

This table show the fraction of female (column 1) and male (column 2) survey respondents who indicate that they agree or rather agree to the statements displayed at the beginning of each row. Differences between female and male respondents are displayed in column (3) and t-statistics from a two-sided test are reported in column (4). Significance is denoted as follows: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. All variables are described in detail in Appendix A.

Panel A: Financial Socialization at Home				
	Women	Men	Diff.	t-stat.
	(1)	(2)	(3)	(4)
Parents made financial decisions together	0.579	0.565	0.015	0.68
Parents didn't discuss financial matters	0.462	0.447	0.015	0.69
Parents discussed financial matters with me	0.248	0.284	-0.036	-1.88*
Regular discussions about finance in family	0.242	0.286	-0.044	-2.28**
Panel B: Financial Socialization among Peers				
	Women	Men	Diff.	t-stat.
	(1)	(2)	(3)	(4)
Friends invest in the stock market	0.384	0.512	-0.128	-5.98***
My colleagues invest in the stock market	0.168	0.323	-0.155	-8.40***
I know people of my gender who invest	0.338	0.578	-0.240	-11.41***
My partner invests in the stock market	0.178	0.170	0.008	0.49
I regularly talk to friends about stock market	0.100	0.240	-0.140	-8.72***
My friends convinced me to invest	0.115	0.165	-0.050	-3.31***
I learned about finance at school	0.161	0.256	-0.095	-5.44***

Table 4: The impact of financial socialization on financial literacy and confidence

This table shows results from a multivariate regression with financial literacy as the dependent variable in columns 1 and 2, and financial confidence as dependent variable in columns 3 and 4. The sample consists of all male and female survey respondents (12 survey respondents indicate their gender as “diverse” and are omitted from the regression). Female is a dummy variable equal to one for female survey respondents, and zero for male respondents. Family role model is the first principal component from a PCA analysis including all family role models displayed in Panel A of Tables 2 and 3. Peer effects is the first principal component from a PCA analysis including all variables measuring peer effects (displayed in Panel B of Table 3). The regression further includes respondents’ age, education, location (West or East Germany), education, income, marital status and occupational status fixed effects. All variables are described in detail in Appendix A. Significance is denoted as follows: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

<i>Dependent variable:</i>	Financial literacy		Financial confidence	
	(1)	(2)	(3)	(4)
Female × Family role model	0.034** (0.015)		0.035 (0.031)	
Female × Peer effects		0.028* (0.014)		0.051* (0.027)
Family role model	-0.005 (0.011)		0.052*** (0.020)	
Peer effects		0.017* (0.010)		0.105*** (0.017)
Female	-0.146*** (0.024)	-0.130*** (0.024)	-0.445*** (0.047)	-0.379*** (0.047)
Age	0.020*** (0.008)	0.025*** (0.008)	0.069*** (0.015)	0.084*** (0.015)
Education	0.060*** (0.009)	0.055*** (0.009)	0.147*** (0.017)	0.130*** (0.017)
East German	-0.036 (0.031)	-0.022 (0.031)	-0.180*** (0.066)	-0.111* (0.064)
Income	0.017*** (0.005)	0.015*** (0.005)	0.052*** (0.009)	0.042*** (0.009)
Married	0.004 (0.024)	-0.001 (0.024)	0.097** (0.047)	0.076 (0.046)
Occupational status FE	Yes	Yes	Yes	Yes
Adj. R ²	0.082	0.088	0.170	0.196
Observations	1796	1796	1796	1796

Table 5: Financial Role Models and Stock market participation

This table shows results from a multivariate regression with stock market participation as dependent variable. The sample consists of all male and female survey respondents (12 survey respondents indicate their gender as “diverse” and are omitted from the regression). The regressions include various proxies for financial role models during childhood and demographic controls such as respondents’ age, education, location (West or East Germany), education, income, marital status and occupational status fixed effects. In addition, we include survey respondents’ financial literacy and financial confidence, as well as a variable capturing the amount of time they estimate to need to buy a stock and a variable capturing whether a survey respondent ever participated in a financial workshop. All variables are described in detail in Appendix A. Significance is denoted as follows: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: Cont'd

Panel A: Male respondents							
<i>Dependent variable:</i>	Stock market participation						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Both parents worked (full- or part-time)	0.023 (0.029)						
Mother worked (full- or part-time)		-0.004 (0.031)					
Respondent has a financial role model			0.039 (0.060)				
Parents invest(ed) in stocks				0.183*** (0.043)			
Parents made financial decisions together					-0.013 (0.028)		
Parents discussed financial matters with me						0.035 (0.034)	
Regular discussions about finance in family							0.067* (0.036)
Age	-0.032*** (0.010)	-0.034*** (0.010)	-0.033*** (0.010)	-0.019* (0.010)	-0.034*** (0.009)	-0.031*** (0.010)	-0.031*** (0.010)
Education	0.039*** (0.011)	0.039*** (0.011)	0.039*** (0.011)	0.032*** (0.011)	0.039*** (0.011)	0.038*** (0.011)	0.037*** (0.011)
East German	-0.032 (0.039)	-0.025 (0.039)	-0.027 (0.038)	-0.016 (0.037)	-0.025 (0.038)	-0.027 (0.038)	-0.027 (0.038)
Income	0.019*** (0.006)	0.019*** (0.006)	0.019*** (0.006)	0.018*** (0.006)	0.019*** (0.006)	0.019*** (0.006)	0.019*** (0.006)
Married	0.001 (0.031)	0.003 (0.031)	0.004 (0.031)	0.002 (0.030)	0.004 (0.031)	0.000 (0.031)	-0.004 (0.031)
Financial literacy	0.060 (0.037)	0.059 (0.037)	0.059 (0.037)	0.074** (0.037)	0.058 (0.037)	0.061* (0.037)	0.066* (0.037)
Financial confidence	0.072*** (0.019)	0.073*** (0.019)	0.073*** (0.019)	0.064*** (0.019)	0.074*** (0.019)	0.072*** (0.019)	0.068*** (0.019)
Estimated time needed to buy stocks	-0.149*** (0.023)	-0.150*** (0.023)	-0.149*** (0.023)	-0.141*** (0.023)	-0.151*** (0.023)	-0.150*** (0.023)	-0.147*** (0.023)
Participation in workshop	0.092** (0.045)	0.093** (0.045)	0.091** (0.045)	0.070 (0.044)	0.094** (0.045)	0.090** (0.045)	0.084* (0.045)
Occupational status FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.203	0.202	0.203	0.222	0.202	0.203	0.206
Observations	908	908	908	908	908	908	908

Table 5: Cont'd

Panel B: Female respondents							
<i>Dependent variable:</i>	Stock market participation						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Both parents worked (full- or part-time)	0.053** (0.024)						
Mother worked (full- or part-time)		0.044* (0.025)					
Respondent has a financial role model			0.122** (0.049)				
Parents invest(ed) in stocks				0.145*** (0.046)			
Parents made financial decisions together					0.039* (0.023)		
Parents discussed financial matters with me						0.058** (0.029)	
Regular discussions about finance in family							0.101*** (0.030)
Age	-0.010 (0.008)	-0.011 (0.008)	-0.012 (0.008)	-0.006 (0.008)	-0.013 (0.008)	-0.011 (0.008)	-0.012 (0.008)
Education	0.040*** (0.010)	0.040*** (0.010)	0.039*** (0.010)	0.037*** (0.010)	0.040*** (0.010)	0.040*** (0.010)	0.040*** (0.010)
East German	-0.069** (0.029)	-0.073** (0.029)	-0.060** (0.029)	-0.062** (0.029)	-0.066** (0.029)	-0.069** (0.029)	-0.066** (0.029)
Income	0.018*** (0.006)	0.018*** (0.006)	0.017*** (0.006)	0.017*** (0.006)	0.018*** (0.006)	0.018*** (0.006)	0.017*** (0.006)
Married	-0.006 (0.024)	-0.004 (0.024)	-0.004 (0.024)	-0.005 (0.024)	-0.005 (0.024)	-0.008 (0.024)	-0.011 (0.024)
Financial literacy	0.145*** (0.033)	0.146*** (0.033)	0.148*** (0.032)	0.136*** (0.033)	0.147*** (0.033)	0.147*** (0.032)	0.144*** (0.032)
Financial confidence	-0.008 (0.013)	-0.008 (0.013)	-0.008 (0.012)	-0.008 (0.013)	-0.009 (0.013)	-0.010 (0.013)	-0.009 (0.012)
Estimated time needed to buy stocks	-0.168*** (0.024)	-0.170*** (0.024)	-0.171*** (0.025)	-0.158*** (0.025)	-0.169*** (0.025)	-0.167*** (0.025)	-0.168*** (0.025)
Participation in workshop	0.115** (0.051)	0.116** (0.051)	0.111** (0.051)	0.104** (0.051)	0.118** (0.052)	0.110** (0.051)	0.103** (0.051)
Occupational status FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.198	0.196	0.202	0.208	0.196	0.198	0.206
Observations	888	888	888	888	888	888	888

Table 6: Peer effects and Stock market participation

This table shows results from a multivariate regression with stock market participation as dependent variable. The sample consists of all male and female survey respondents (12 survey respondents indicate their gender as “diverse” and are omitted from the regression). The regressions include various proxies for peer effects and demographic controls such as respondents’ age, education, location (West or East Germany), education, income, marital status and occupational status fixed effects. In addition, we include survey respondents’ financial literacy and financial confidence, as well as a variable capturing the amount of time they estimate to need to buy a stock and a variable capturing whether a survey respondent ever participated in a financial workshop. All variables are described in detail in Appendix A. Significance is denoted as follows: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 6: Cont'd

Panel A: Male respondents							
<i>Dependent variable:</i>	Stock market participation						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Friends invest in the stock market	0.119*** (0.031)						
My colleagues invest in the stock market		0.202*** (0.035)					
I know people of my gender who invest			0.179*** (0.032)				
My partner invests in the stock market				0.336*** (0.043)			
I regularly talk to friends about stock market					0.296*** (0.039)		
My friends convinced me to invest						0.213*** (0.044)	
I learned about finance at school							0.010 (0.034)
Age	-0.028*** (0.010)	-0.017* (0.010)	-0.022** (0.010)	-0.016 (0.010)	-0.014 (0.009)	-0.022** (0.010)	-0.034*** (0.010)
Education	0.036*** (0.011)	0.037*** (0.011)	0.034*** (0.011)	0.028** (0.011)	0.034*** (0.011)	0.034*** (0.011)	0.039*** (0.011)
East German	-0.019 (0.038)	-0.020 (0.037)	-0.016 (0.038)	-0.013 (0.037)	-0.011 (0.037)	-0.021 (0.038)	-0.026 (0.038)
Income	0.017*** (0.006)	0.015*** (0.006)	0.017*** (0.006)	0.016*** (0.006)	0.015** (0.006)	0.018*** (0.006)	0.019*** (0.006)
Married	-0.005 (0.030)	-0.014 (0.030)	-0.010 (0.030)	-0.051* (0.030)	-0.010 (0.030)	-0.012 (0.030)	0.002 (0.031)
Financial literacy	0.061* (0.037)	0.077** (0.036)	0.049 (0.036)	0.089** (0.036)	0.087** (0.035)	0.074** (0.037)	0.060 (0.037)
Financial confidence	0.060*** (0.019)	0.054*** (0.018)	0.054*** (0.019)	0.052*** (0.018)	0.047*** (0.018)	0.063*** (0.019)	0.073*** (0.019)
Estimated time needed to buy stocks	-0.144*** (0.023)	-0.148*** (0.022)	-0.139*** (0.023)	-0.132*** (0.022)	-0.136*** (0.023)	-0.144*** (0.023)	-0.150*** (0.023)
Participation in workshop	0.092** (0.045)	0.066 (0.044)	0.085* (0.044)	0.075* (0.042)	0.066 (0.043)	0.085* (0.045)	0.092** (0.045)
Occupational status FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.216	0.237	0.231	0.264	0.264	0.227	0.202
Observations	908	908	908	908	908	908	908

Table 6: Cont'd

Panel B: Female respondents							
<i>Dependent variable:</i>	Stock market participation						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Friends invest in the stock market	0.116*** (0.027)						
My colleagues invest in the stock market		0.161*** (0.039)					
I know people of my gender who invest			0.114*** (0.028)				
My partner invests in the stock market				0.298*** (0.041)			
I regularly talk to friends about stock market					0.396*** (0.053)		
My friends convinced me to invest						0.301*** (0.049)	
I learned about finance at school							-0.012 (0.033)
Age	-0.011 (0.008)	-0.008 (0.008)	-0.012 (0.008)	-0.001 (0.008)	-0.004 (0.008)	-0.000 (0.008)	-0.013 (0.008)
Education	0.038*** (0.010)	0.036*** (0.010)	0.037*** (0.010)	0.033*** (0.010)	0.036*** (0.010)	0.039*** (0.010)	0.040*** (0.010)
East German	-0.058** (0.029)	-0.051* (0.029)	-0.060** (0.029)	-0.048* (0.028)	-0.046* (0.026)	-0.047 (0.029)	-0.066** (0.029)
Income	0.016*** (0.006)	0.015*** (0.006)	0.016*** (0.006)	0.016*** (0.005)	0.013** (0.005)	0.016*** (0.005)	0.018*** (0.006)
Married	-0.007 (0.024)	-0.004 (0.024)	-0.011 (0.024)	-0.039* (0.023)	-0.009 (0.023)	-0.002 (0.024)	-0.004 (0.024)
Financial literacy	0.137*** (0.032)	0.142*** (0.032)	0.141*** (0.032)	0.146*** (0.031)	0.147*** (0.031)	0.158*** (0.032)	0.145*** (0.033)
Financial confidence	-0.012 (0.013)	-0.011 (0.013)	-0.013 (0.013)	-0.017 (0.012)	-0.023** (0.012)	-0.011 (0.012)	-0.007 (0.013)
Estimated time needed to buy stocks	-0.166*** (0.024)	-0.162*** (0.024)	-0.164*** (0.024)	-0.149*** (0.023)	-0.157*** (0.025)	-0.158*** (0.024)	-0.170*** (0.024)
Participation in workshop	0.099* (0.051)	0.091* (0.052)	0.102** (0.052)	0.093* (0.051)	0.058 (0.050)	0.078 (0.051)	0.115** (0.052)
Occupational status FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.213	0.217	0.211	0.273	0.279	0.247	0.194
Observations	888	888	888	888	888	888	888

Appendix

A Variable description

This table contains a description of all variables used in our empirical analyses. The original survey questions as well as an English translation are provided in the next section.

Variable name	Measurement	Survey question number
Age	Categorical variable with 6 age groups ranging from 18-29, 30-39, 40-49, 50-59, 60-69, >70	D2
Both parents worked	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	Q34r1
Colleague invests	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	Q34r3
Discuss stock market with friends	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	Q34r5
East German	Dummy variable equal to one if respondent lives in Brandenburg, Mecklenburg-Vorpommern, Sachsen, Sachsen-Anhalt, Thüringen, and zero otherwise.	D3
Education	Categorical variable with 8 groups ranging from (1) no degree to (8) PhD degree.	D13
Equity holdings	Dummy variable equal to one if a respondent indicates that she is using single stocks, ETFs, or equity funds, and zero otherwise.	Q01
Estimated time to buy stocks	Count variable indicating the amount of time a respondent estimated to need to buy a stock, ranging from (1) several hours, (2) several days, (3) several weeks, (4) several months (5) I don't know. Respondents indicating don't know receive a value at the midpoint, i.e., 2.5.	Q40
Family role model	First principal component from a pca analysis including the following variables: Both parents worked, mother worked, financial role model, parents invest(ed), parents decide together, parents talked with me about Finance, Regular discussions about finance in family	–
Female	Dummy variable equal to one if respondent is female, and zero if respondent is male.	D1

Variable name	Measurement	Survey question number
Finance at school	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	Q20
Financial confidence	Count variable indicating the number of literacy questions a respondent was confident or rather confident to answer correctly, and zero otherwise.	Q11a, Q12a, Q13a
Financial literacy	Dummy variable equal to one if a respondent answered all three literacy questions correctly, and zero otherwise.	Q11, Q12, Q13
Financial role model	Dummy variable equal to one if respondent provides at least one name, and zero if the field is left blank.	Q36
Friends convinced me to invest	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	Q34r6
Friends invest	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	Q34r1
Income	Categorical variable with 11 groups ranging from (1) no income to (10) 5.000 Euro and more. We attribute a value of zero to respondents indicating (11) that they don't want to disclose their income.	D6
Married	Dummy variable equal to one if respondent is married, and zero otherwise.	D5
Mother worked	Dummy variable equal to one if respondent agrees or rather agrees to one of the two statements, and zero otherwise.	Q34r3, Q34r4
Occupational status	Categorical variable with 7 groups, included in the paper as fixed effects	D15
Own gender invests	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	Q34r4
Parents decide together	Dummy variable equal to one if respondent agrees or rather agrees to one of the two statements, and zero otherwise.	Q34r6
Parents invest(ed)	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	Q34r2
Parents talked with me about Finance	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	Q34r9
Participation in workshop	Dummy variable equal to one if respondent answered yes, and zero otherwise.	Q19
Partner invests	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	Q34r7

Variable name	Measurement	Survey question number
Peer effects	First principal component from a pca analysis including the following variables: Friends invest, colleague invests, own gender invests, partner invests, discuss stock market with friends, friends convinced me to invest, finance at school	–
Regular discussions about finance in family	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	Q34r10
Stock market participation	Dummy variable equal to one if a respondent indicates that she currently participates in the stock market, and zero otherwise.	Q21
Would never invest	Dummy variable equal to one if a respondent indicates that she never invested in stocks in the past and also cannot imagine to do so in the future, and zero otherwise.	Q21