

Financial Socialization and the Gender Investment Gap

Alexandra Niessen-Ruenzi, Vanessa Mueden and Leah Zimmerer*

August 19, 2025

Abstract

Women are significantly less likely to participate in the stock market than men. We show that financial socialization plays an important role in explaining this gap. Survey data from Germany and the U.S. indicate that parents discuss financial matters less frequently with their daughters than with their sons. Women also report fewer financial role models and less exposure to peers who invest in the stock market. We find that this early-life difference in financial socialization leads to lower financial literacy and lower financial confidence of women later in life, and also explains why they are less likely to participate in the stock market than men.

JEL-Classification Codes: G11, G41, G53

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

*Corresponding author: Alexandra Niessen-Ruenzi, University of Mannheim, niessen@uni-mannheim.de; Vanessa Mueden, University of Mannheim, vanessa.mueden@uni-mannheim.de; Leah Zimmerer, University of Mannheim, leah.zimmerer@uni-mannheim.de. We would like to thank the MEAG Munich Ergo Asset-management GmbH for financial support, and particularly Katja Lammert and Anke Schaks for a fruitful collaboration. All errors are our own.

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. 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. Our survey data show that only 17.7% of women report participating in the stock market, compared to 32.2% of men. This gender investment gap is both statistically significant and economically meaningful.

Understanding the reasons for the gender investment gap is important. In 2024, the German Federal Statistical Office reported that women at retirement age face a 26% higher risk of old-age poverty.¹ This gap stems from multiple dimensions of gender inequality. Occupational segregation and career interruptions due to caregiving responsibilities (Chhaochharia et al., 2023; Kleven et al., 2019) contribute to an 16% gender pay gap.² For the state pension system, Niessen-Ruenzi and Schneider (2022) document a gender pension gap of 26%. This gap becomes even larger and amounts to 59.6% if all three pillars of the German pension system are considered (Flory, 2011). Reforms to alimony laws and rising divorce rates have further eroded the insurance function of the traditional male breadwinner model. In light of these factors, it is vital for women to engage more actively in long-term financial planning.

Stock market participation is important for narrowing wealth gaps. According to the German Stock Institute, the DAX has yielded an average annual return of 7.1% over the past three decades.³ To leverage this opportunity, we must understand the barriers that hinder women's participation.

¹see Statistik zur Armutsgefährdung, Destatis (2025).

²see Statistik zum Gender Pay Gap, Destatis (2025).

³see Renditedreiecke, Deutsches Aktieninstitut (2024).

This paper focuses on a novel barrier that has not been documented before: gender differences in early-life financial socialization. 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. Female survey respondents are also more likely to indicate that they did not learn any helpful financial competences at school and they are also less likely to report knowing friends, colleagues, or people of the same gender who invest in the stock market.

To assess whether this pattern is unique to Germany or reflects a more general phenomenon, we supplement our German data with new survey evidence from the U.S. Using data from the 2025 RAND Youth Panel, we show that girls in the United States are also slightly less likely than boys to report discussing financial matters with their parents. This gender gap is particularly pronounced in more traditional households and persists among siblings of different gender within the same family. These findings suggest that early-life gender differences in financial socialization are not country-specific but reflect broader social norms across industrialized countries.

Our data further show that male and female respondents differ in whom they perceive as financial role models. 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.

We then proceed to examine how these early differences shape later-life financial confidence, literacy, and investment behavior. Specifically, we run a principal component analysis on survey items measuring the presence of financial role models during childhood and on items capturing peer effects during adolescence and adulthood, such as knowing friends or colleagues who invest in stocks. Our results show that women who lack financial role models

early in life and are less exposed to financially engaged peers exhibit significantly lower financial literacy and confidence later in life.

Furthermore, our multivariate regression results show that financial socialization is a strong predictor of women’s stock market participation. Women who grew up in households where financial topics were discussed are 57% more likely to invest in the stock market later in life, while those whose mothers were employed are 25% more likely. Similarly, the ability to name a financial role model is positively associated with stock market participation among women. Notably, regular conversations about financial matters during childhood are a much stronger predictor of investment behavior for women than for men. For male respondents, neither growing up with a working mother nor experiencing financial discussions at home significantly influences their likelihood of stock market participation. While family-based financial socialization has a gender-specific effect, peer effects during adolescence exert a similarly strong influence on stock market participation for both women and men.

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 et al. (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. Previous research has established a positive impact of financial literacy on stock market participation (e.g. Van Rooij et al., 2011; Klapper et al., 2013; Bellofatto et al., 2018). In particular, 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 et al. (2024) show that women’s lower financial confidence accounts for about one-third of the literacy gap and influences their stock market participation. We further extend this strand by integrating a new dimension of household

gender norms rooted in childhood socialization. Similar to our analysis, Liao et al. (2024) document that individuals raised in male-dominated households—where fathers have higher socio-economic status than mothers—are more likely to invest in stocks in adulthood. The effect is stronger for men than for women, indicating that childhood gender socialization within the household may constrain women to traditionally feminine task. Our findings align closely with theirs and our survey data allow us to also identify concrete mechanisms—namely, financial role models within the family and peer influences—shaping these gendered socialization processes and their direct impact on women’s later financial behavior.

By uncovering how unequal exposure to financial discussions and role models contributes to persistent gender gaps in financial literacy, confidence, and investment behavior, our study underscores the long-term consequences of gendered financial socialization. Our results point to a previously underexplored mechanism behind the gender investment gap and suggest that closing it will require targeted interventions not only in financial education but also in how families, schools, and peer environments engage with boys and girls from an early age.

2 Data and summary statistics

Our study is based on two representative surveys: (1) a German survey conducted among 2,132 respondents in February 2023 by the opinion polling institute Norstat, and (2) the 2025 RAND American Youth Panel, to which we contributed two original questions on financial socialization.

The German survey data comprise a representative sample of respondents included in Norstat’s online panel, which consists of more than 670,000 panelists in total. Participants completed the survey online and were incentivized through a points-based system, where points can be redeemed for cash, vouchers, or charitable donations. Norstat’s sampling procedure ensures representativeness with respect to gender, age, and federal state distribution in the German population.

The U.S. survey data come from the RAND Youth Panel, a nationally representative panel of adolescents maintained by the RAND Corporation. The panel includes youth aged 12 to 21 and is designed to reflect the demographic and regional diversity of the U.S. adolescent population. To ensure representativeness and avoid within-household clustering, RAND applies stringent sampling protocols, including stratified random sampling and household-level controls. Participants received \$5 for taking the survey.

In 2025, we added two questions on financial socialization to the ongoing RAND survey wave. The first question was phrased as follows: “How much do you agree or disagree with the following statement? – My parents talk with me about how to manage and save money.” Participants were then asked to indicate whether they strongly disagree, disagree, agree, or strongly agree to the statement. The second question asked “In your family, who makes the decisions about money most of the time?” and participants were offered the following response options: “My father (1), my mother (2), both parents about the same (3), Other family members (4), I make the decisions (5), I do not know who makes the decisions (6)”

We obtained survey responses to these questions from RAND, as well as demographic control variables such as respondents’ gender, age, education, geographic region, race/ethnicity, household size, nativity (U.S.-born vs. foreign-born), parental education and marital status.

2.1 Construction of main variables

The German 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 et al. (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 et al. (2024) 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 zero 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.

The RAND survey data allow us to measure financial socialization among the youth in the United States. First, we ask participants to rate their agreement with the statement "My parents talk with me about how to manage and save money" using a scale from strongly disagree to strongly agree. We compute a dummy variable to capture agreement with the statement. The dummy variable is set to one if a respondent agrees or strongly agrees, and zero if a respondent disagrees or strongly disagrees. Second, we ask participants about financial decision-making within their family. Respondents indicate who in their family makes financial decisions most of the time, i.e. the father, the mother, both parents about the same, the respondent, other family members or the respondents does not know who makes the decisions

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 Table 1 and in the Appendix A.

2.2 Summary statistics

Table 1 shows summary statistics of our German survey data in Panel A. Average stock market participation in our sample, surveyed in 2023, amounts to 24.9%. This number is slightly higher than the 17.6% stock market participation reported by the German stock institute (DAI) for 2023.⁴ 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.

⁴see Aktionärszahlen, Deutsches Aktieninstitut (2023)

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 early financial socialization. According to Chowdhury et al. (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 et al. (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 treatment of daughters and sons with respect to financial socialization may explain gender gaps in investment behavior later in life.

3.1 Financial socialization during childhood - Evidence from Germany

We start by examining whether and what type of financial role models male or female survey participants in Germany 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 rather indirect and 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. 64.9% 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 compared to boys. Interestingly, a significantly lower fraction of female than male survey respondents (14.1% vs. 21.5%) reports that their parents invest(ed) in stocks. This result is likely driven by differences in communication with sons and daughters (see below) 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 influencer, 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.

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 (56.5% 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 et al., 2004; Kaustia and Knüpfer, 2012). Brown et al. (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 (11.5% of women vs. 16.5% of men). 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.

3.2 Financial socialization during childhood - Evidence from the U.S.

To confirm that our finding—that men experience stronger financial socialization than women during childhood—is not country-specific and also holds in a different institutional and cultural setting, we complement our German data with evidence from the United States. The U.S. provides a valuable comparative case due to its distinct educational system, family structures, and financial market environment, while still representing a highly developed, industrialized economy. If similar gender patterns in early financial socialization emerge in both countries, this would suggest that the phenomenon is not merely the result of German-specific norms or policies but rather reflects broader social dynamics found in advanced economies.

We use data from the RAND Youth Panel, a nationally representative sample of adolescents in the United States, to which we added two questions in 2025. We construct our sample according to RAND’s sampling guidelines to ensure representativeness with respect to the demographic profile of the U.S. youth population and to control for multiple respondents from the same household. We show summary statistics in Table 1 Panel B. The sample is evenly split by gender (50% female), and respondents are between 12 and 21 years old, with an average age of 16. Approximately 17% of participants are already enrolled in college, while the remaining respondents are, on average, in the 10th grade. The majority (81%) attend public schools, while 9% are enrolled in private and 9% in home schools. In terms of racial and ethnic composition, 51% of respondents identify as White, 25% as Hispanic, 13% as Black, and the remaining 11% as other racial or ethnic groups. The sample is geographically dispersed across the United States, with 40% residing in the South, 23% in the West, 21% in the Midwest, and 17% in the Northeast. On average, participants live in households with four members. 53% of the parents are married, and approximately half of the parents have completed at least some college education or hold an associate’s degree.

According to our survey data, a significant share of adolescents (81.4%) report that their parents talk to them about how to manage and save money. Regarding household financial

decision-making, 44.0% of respondents indicate that both parents share this responsibility, while 29.0% report that the mother is the primary decision-maker, 21.4% cite the father, 5.6% attribute this role to someone else (e.g., themselves or a third party) and 2.6% do not know who is the primary decision-maker. These patterns may reflect differences in household structure. According to the U.S. Census Bureau, in 2023, 20.2% of children live with their mother only, compared to 4.6% who live with their father only. This disparity in custodial arrangements likely contributes to the greater share of respondents identifying mothers as the primary financial decision-makers. Because our survey does not directly capture living arrangements in cases of parental separation, we analyze the reported financial decision-making by marital status. In married households, joint decision-making is most prevalent (53.2%), followed by individual decision-making by fathers (23.3%) and mothers (18.8%). In unmarried households mothers are more frequently identified as the financial decision-makers (40.4%), followed by joint decision-making (33.8%), fathers (19.2%) and others (6.6%). Taken together, these findings suggest that household structure and parental marital status are important correlates of adolescents' perceptions of financial decision-making within families.

In the next step, we analyze whether there are gender differences in the likelihood that parents talk to adolescents about how to manage and save money. We estimate the following regression model:

$$(1) \quad y_i = \alpha + \beta Female_i + X_i' \gamma + \varepsilon_i$$

where y_i is a dummy variable that is equal to one if the respondent (strongly) agrees with the statement that their parents talk with them about how to manage and save money, and zero otherwise. $Female_i$, is the main variable of interest and equal to one if a respondent identifies as female, and zero otherwise. X_i' denotes a vector of control variables, including respondents' age, education, geographic region, race/ethnicity, household size, nativity, and parental marital status and education, unless otherwise noted.

Table 4 shows the results. In column (1), we report results for the full sample of respondents. The coefficient on the female indicator is negative (-0.024) suggesting that, on average, girls are slightly less likely than boys to report discussing financial matters with their parents; however, the difference is not statistically significant.

Recognizing that family dynamics and socialization practices may vary by household structures, column (2) restricts the sample to respondents whose parents are married. Married households are generally associated with more traditional gender norms. Ke (2021) and Guiso and Zaccaria (2023) show that households adhering more strongly to traditional gender identity norms are significantly more likely to allocate financial decision-making to male household members. Hence, sons may be more likely to be perceived as future financial decision-makers, and as a result, more frequently targeted in parental financial discussions than daughters. In this subsample, the female coefficient is indeed larger in absolute terms (-0.060), and statistically significant at the 10% level. This result suggests that within more traditional family settings, daughters are less likely than sons to be engaged in financial conversations with their parents.

To further examine heterogeneity by cultural and socioeconomic background, column (3) restricts the sample to respondents who self-identify as either White or Black. In this subgroup, the estimated gender gap increases in magnitude (-0.069) and is statistically significant at the 5% level. This larger gender gap may reflect a stronger adherence to traditional gender roles in financial socialization within these populations. By contrast, both our findings and prior literature (e.g., Rabow and Rodriguez 1993) suggest that Hispanic families tend to socialize male and female children more similarly with respect to financial attitudes and behaviors.

In column (4), we restrict the sample to respondents younger than 15 years old. Within this younger cohort, the estimated gender gap remains negative and statistically significant (-0.076), suggesting that differential treatment in parental financial discussions emerges early.

Finally, column (5) exploits within-household variation by comparing respondents from the same family, thereby controlling for all shared family-level characteristics such as parental income, and financial behavior. The sample includes 41 families with mixed-gender siblings: 40 families have two children, and 1 family has five children. This sibling fixed effects specification yields the strongest result. Female siblings are 14.1 percentage points less likely than their male siblings to report discussing financial matters with their parents, a difference that is statistically significant at the 5% level. This finding provides further evidence that the observed gender gap is not solely attributable to differences across households, but also reflects within-household differences in parental engagement by child gender.

Next, we ask respondents who in their family typically makes financial decisions. We include all respondents in the analysis; however, the results are qualitatively similar when restricting the sample to those whose parents are married. As shown in Table 5, the largest share of respondents—regardless of gender—reports that both parents make financial decisions jointly. However, notable gender differences emerge: a higher proportion of male adolescents (24.7%) than female adolescents (18.1%) report that the father is the primary decision-maker, while significantly more female adolescents (34.1%) than male adolescents (23.8%) indicate that the mother holds this role. These gendered patterns suggest a substantial gap in how adolescents perceive financial authority within households.

These perceptions may influence how young people internalize gendered financial roles, with long-term implications for economic behavior and identity. One possible explanation for this gender gap lies in the differing salience of financial decision-making depending on the gender of the decision-maker. Individuals tend to pay greater attention to the behaviors of role models and counter-stereotypical behavior of people who share salient identity traits, such as gender. For example, Beaman et al. (2012) find that counter-stereotypical female leaders are more salient and influential for girls. In our context, girls may be particularly attuned to instances where mothers assume traditionally male-typed roles such as financial decision-making. The presence of such counter-stereotypical behavior may heighten its salience,

making girls more likely to notice and report financial authority when it is exercised by their mothers.

Taken together, our survey data from the U.S. also suggest that girls are less likely than boys to engage in conversations with their parents about how to manage and save money. Additionally, the observed gender differences in reported household financial decision-making may reflect greater salience and awareness among girls when mothers occupy this role—potentially due to the influence of counter-stereotypical female role models. Hence, gender seems to be an important determinant in shaping early financial socialization and our results suggests that differential exposure to financial discussions may contribute to the gender gaps in financial literacy, confidence and decision-making later in life.

4 Implications for financial literacy and confidence

4.1 Gender differences in financial literacy

Van Rooij et al. (2011) report that individuals that lack financial knowledge may be less likely to participate in the capital market. Similarly, Balloch et al. (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 et al. (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 et al. (2017) find that single and widowed women are especially likely to be financially illiterate. Furthermore, Mahdavi and Horton (2014) find that the level of finan-

cial 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 2). 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 2 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 49.9% of the female survey respondents do so.

4.2 Gender differences in financial confidence

Bucher-Koenen et al. (2024) 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 3 shows that a significantly lower fraction of female respondents than male respondents 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.

4.3 Does financial socialization increase women’s 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 6 and corroborate the findings in Figures 2 and 3 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 6, 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.

5 Financial socialization and stock market participation

In the last step, we again use multivariate regressions to 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 4). 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:

$$(2) \quad y_i = \alpha + \beta FinSoz_i + X_i' \gamma + \varepsilon_i$$

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, $FinSoz_i$, reflecting one of the proxies of financial socialization. X_i' 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 7 and 8. 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 7, 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.

Coefficient estimates on 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 et al. (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 than 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 8, 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 7.

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.

6 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.

References

- Almenberg, J. and A. Dreber (2015). Gender, stock market participation and financial literacy. *Economic Letters* 137, 140–142.
- Balloch, A., A. Nicolae, and D. Philip (2015). Stock market literacy, trust, and participation. *Review of Finance* 19(5), 1925–1963.
- Beaman, L., E. Duflo, R. Pande, and P. Topalova (2012). Female leadership raises aspirations and educational attainment for girls: A policy experiment in India. *Science* 335(6068), 582–586.
- Bellofatto, A., C. D’Hondt, and R. De Winne (2018). Subjective financial literacy and retail investors’ behavior. *Journal of Banking & Finance* 92, 168–181.
- Brown, J., Z. Ivković, P. A. Smith, and S. Weisbenner (2008). Neighbors matter: Causal community effects and stock market participation. *The Journal of Finance* 63, 137–163.
- Bucher-Koenen, T., R. Alessie, A. Lusardi, and M. van Rooij (2024). Fearless woman: Financial literacy, confidence, and stock market participation. *Management Science* 0(0).
- Bucher-Koenen, T. and C. Knebel (2021). Finanzwissen und Finanzbildung in Deutschland: Was wissen wir eigentlich? Technical report, ZEW Discussion Papers.
- Bucher-Koenen, T., A. Lusardi, R. Alessie, and M. Van Rooij (2017). How financially literate are women? An overview and new insights. *Journal of Consumer Affairs* 51(2), 255–283.
- Chhaochharia, V., S. Ghosh, A. Niessen-Ruenzi, and C. Schneider (2023). Child care provision and the motherhood penalty. Working paper.
- Chowdhury, S., M. Sutter, and K. F. Zimmermann (2020). Economic preferences across generations and family clusters: A large-scale experiment. *Global Financial Literacy Excellence Center, The George Washington University School of Business* 130, 2361–2410.
- Driva, A., M. Lührmann, and J. Winter (2016). Gender differences and stereotypes in financial literacy: Off to an early start. *Economics Letters* 146, 143–146.
- Flory, J. (2011). Gender pension gap - Entwicklung eines Indikators für eine faire Einkommensperspektive von Frauen und Männern. Bundesministerium für Familie, Senioren, Frauen und Jugend.
- Guiso, L. and T. Jappelli (2005). Awareness and stock market participation. *Review of Finance* 9(4), 537–567.
- Guiso, L. and L. Zaccaria (2023). From patriarchy to partnership: Gender equality and household finance. *Journal of Financial Economics* 147(3), 573–595.

- Hong, H., J. D. Kubik, and J. C. Stein (2004). Social interaction and stock-market participation. *The Journal of Finance* 59, 137–163.
- Itzkowitz, J., J. Itzkowitz, and A. Schwartz (2023). The gender gap in stock market participation: Evidence from stock gifting. Working paper.
- Kaustia, M. and S. Knüpfer (2012). Peer performance and stock market entry. *Journal of Financial Economics* 104, 321–338.
- Ke, D. (2021). Who wears the pants? Gender identity norms and intrahousehold financial decision-making. *The Journal of Finance* 76(3), 1389–1425.
- Klapper, L. and A. Lusardi (2020). Financial literacy and financial resilience: Evidence from around the world. *Financial Management* 49(3), 589–614.
- Klapper, L., A. Lusardi, and G. A. Panos (2013). Financial literacy and its consequences: Evidence from Russia during the financial crisis. *Journal of Banking & Finance* 37(10), 3904–3923.
- Kleven, H., C. Landais, and J. E. Søgaaard (2019). Children and gender inequality: Evidence from Denmark. *American Economic Journal: Applied Economics* 11, 181–209.
- Laudenbach, C., U. Malmendier, and A. Niessen-Ruenzi (2023). The long-lasting effects of experiencing communism on financial risk-taking. Working paper.
- Liao, Y., S. Liu, and X. Lu (2024). Gender norms in the family and stock market participation. SSRN Working Paper.
- Lusardi, A. and O. S. Mitchell (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature* 52(1), 5–44.
- Mahdavi, M. and N. J. Horton (2014). Financial knowledge among educated women: Room for improvement. *Journal of Consumer Affairs* 48(2), 403–417.
- Niessen-Ruenzi, A. and C. Schneider (2022). The gender pension gap in Germany – Reasons and remedies. CESifo Forum paper.
- Rabow, J. and K. A. Rodriguez (1993). Socialization toward money in Latino families: An exploratory study of gender differences. *Hispanic Journal of Behavioral Sciences* 15(3), 324–341.
- Sutter, M., M. Weyland, A. Untertrifaller, and M. Froitzheim (2020). Financial literacy, risk and time preferences: Results from a randomized educational intervention. IZA Discussion Paper No. 13566.
- Van Rooij, M., A. Lusardi, and R. Alessie (2011). Financial literacy and stock market participation. *Journal of Financial Economics* 101(2), 449–472.

Figure 1: The New York stock exchange in 1939

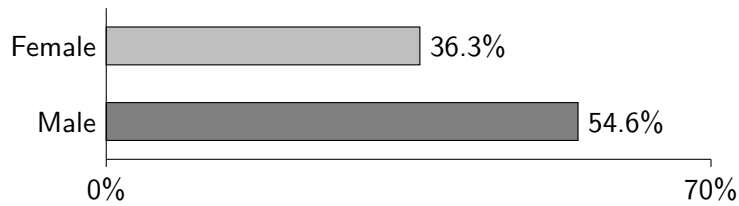
This figure shows the New York stock exchange in 1939. Photo: Underwood Archives/Getty Images



Figure 2: 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

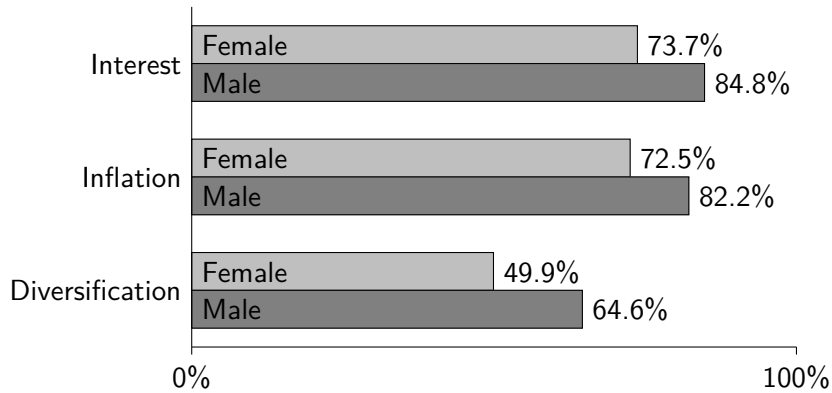
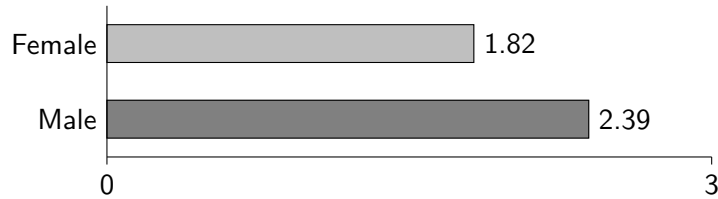


Figure 3: Financial confidence by gender

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

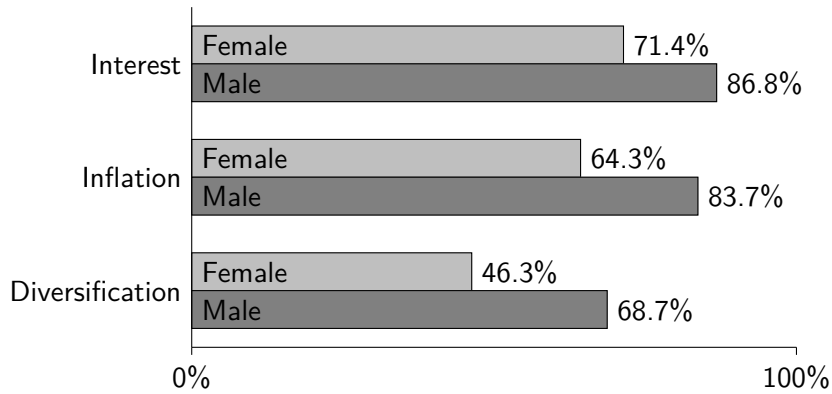


Figure 4: The gender investment gap

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.

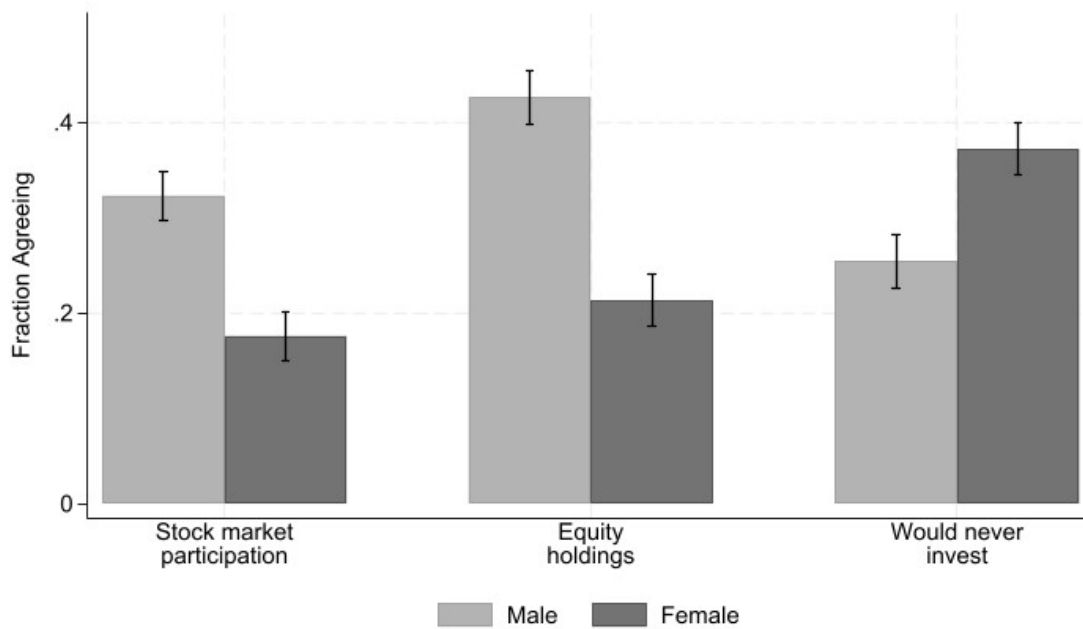


Table 1: Summary Statistics

This table shows descriptive statistics of all variables used in the paper. In Panel A we show the descriptive statistics for the German survey data and in Panel B for the RAND American Youth Panel survey data. 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.

Panel A: German survey data						
	Mean	SD	p50	p1	p99	Obs.
	(1)	(2)	(3)	(4)	(5)	(6)
Stock market participation	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 1: Cont'd

Panel B: RAND survey data						
	Mean	SD	p50	p1	p99	Obs.
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.503	0.500	1.000	0.000	1.000	1058
Age	16.249	2.580	17.000	12.000	21.000	1058
Nativity	0.957	0.202	1.000	0.000	1.000	1058
Race: White	0.513	0.500	1.000	0.000	0.000	1058
Race: Black	0.129	0.339	0.000	0.000	1.000	1058
Race: Hispanic	0.252	0.434	0.000	0.000	1.000	1058
Race: Other	0.105	0.307	0.000	0.000	1.000	1058
Not enrolled in school or college	0.174	0.379	0.000	0.000	1.000	1055
School Type: Public	0.530	0.499	1.000	0.000	1.000	1055
School Type: Home school	0.059	0.236	0.000	0.000	1.000	1055
School Type: Private	0.057	.0232	0.000	0.000	1.000	1055
School Type: Other	0.011	0.106	0.000	0.000	1.000	1055
School Grade Level	10.415	2.527	11.000	6.000	16.000	922
Attending College	0.169	0.375	0.000	0.000	1.000	1055
Region: South	0.397	0.490	0.000	0.000	1.000	1058
Region: West	0.229	0.421	0.000	0.000	1.000	1058
Region: Northeast	0.169	0.375	0.000	0.000	1.000	1058
Region: Midwest	0.205	0.404	0.000	0.000	1.000	1058
Parental Education	3.047	1.208	3.000	1.000	5.000	1058
Parental Marital Status: Married	0.526	0.500	1.000	0.000	1.000	1058
Parental Marital Status: Never married	0.374	0.484	0.000	0.000	1.000	1058
Parental Marital Status: Separated	0.100	0.301	0.000	0.000	1.000	1058
Household Size	4.224	1.369	4.000	1.000	8.000	1058
Parents talked to child about Finance	0.814	0.389	0.000	1.000	1.000	1055
Financial Decision-Maker: Father	0.213	0.410	0.000	0.000	1.000	1058
Financial Decision-Maker: Mother	0.290	0.454	0.000	0.000	1.000	1058
Financial Decision-Makers: Both Parents	0.440	0.497	0.000	0.000	1.000	1058
Financial Decision-Maker: Other	0.002	0.048	0.000	0.000	0.000	1058
Financial Decision-Maker: Self	0.028	0.165	0.000	0.000	1.000	1058
Financial Decision-Maker: Unknown	0.026	0.159	0.000	0.000	1.000	1058

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 - Germany

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: Gender Differences in Financial Socialization - U.S.

This table shows results from a multivariate regression as shown in equation 1. The dependent variable is a dummy variable that is equal to one if the respondent (strongly) agrees with the statement that their parents talk with them about how to manage and save money, and zero otherwise. In column (1), we include the full sample. Column (2) restricts the sample to respondents with married parents; column (3) to those who identify as White or Black; column (4) to respondents younger than 15; and column (5) to those with siblings also participating in the survey. Female is a dummy variable equal to one for female survey respondents, and zero for male respondents. Age is the age of the respondent. The regression further includes respondents' education, location, race, household size, nativity, parents' marital status and parents' education fixed effects. In column (5), we additionally add family fixed effects. All variables are described in detail in Appendix A. R^2 in columns (1)-(4) and adjusted R^2 in column (5). Significance is denoted as follows: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

	All (1)	Married Parents (2)	Black and White (3)	Younger 15 (4)	within Household (5)
Female	-0.024 (0.78)	-0.060* (1.95)	-0.069** (2.01)	-0.076** (2.21)	-0.141** (2.50)
Age	-0.008 (1.00)	-0.014 (1.41)	-0.005 (0.50)	-0.003 (0.13)	-0.011 (0.40)
Nativity	Yes	Yes	Yes	Yes	No
Race	Yes	Yes	Yes	Yes	No
Enrolled	Yes	Yes	Yes	Yes	Yes
School Type	Yes	Yes	Yes	Yes	Yes
Region	Yes	Yes	Yes	Yes	No
Household Size	Yes	Yes	Yes	Yes	No
Parental Marital Status	Yes	No	Yes	Yes	No
Parental Education	Yes	No	Yes	Yes	No
Family FE	No	No	No	No	Yes
(Adj.) R^2	0.061	0.062	0.072	0.038	0.368
Observations	1050	695	675	431	85

Table 5: Financial Decision-Making within U.S. Families

Panel A of this table shows the fraction of female (column 1) and male (column 2) survey respondents who indicate that the person displayed at the beginning of each row is usually making the financial decisions. 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: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

	Girls	Boys	Diff.	t-stat.
	(1)	(2)	(3)	(4)
Father decides	0.181	0.247	-0.066	-2.12**
Mother decides	0.341	0.238	0.103	3.00***
Both parents decide	0.408	0.472	-0.064	-1.69*
Other family members decide	0.003	0.002	0.001	0.43
I decide	0.031	0.025	0.006	0.37
I don't know who decides	0.036	0.015	0.021	1.61

Table 6: 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 7: 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 7: 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 7: 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 8: 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 8: 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 8: 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
Age ^{RAND}	Age of the respondent.	RAND
Both parents worked	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	Q35r1
Colleague invests	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	Q34r3
College ^{RAND}	Dummy variable equal to one if respondent already goes to college, and zero otherwise.	RAND
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
Enrolled ^{RAND}	Dummy variable equal to one if a respondent indicates that she is currently enrolled in any type of school or college, and zero otherwise.	RAND
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.	Q40r3

Variable name	Measurement	Survey question number
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
Female ^{RAND}	Dummy variable equal to one if respondent is female, and zero if respondent is male.	RAND
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 Making ^{RAND} Decision-	Respondents indicate who in their family makes the decisions about money most of the time, i.e. father, mother, both parents about the same, other family members, the respondents, and the respondent does not know who makes the decisions.	RAND ANR2
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
Household Size ^{RAND}	Household size (including respondent).	RAND
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.	Q35r3, Q35r4
Nativity ^{RAND}	Dummy variable equal to one if respondent was born in the US, and zero otherwise.	RAND

Variable name	Measurement	Survey question number
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
Parental Education ^{RAND}	Parents' highest education level as a categorical variable with 5 groups, i.e. no high school diploma or GED, High school graduate, some college or Associate's degree, Bachelor's degree and Master's degree or higher.	RAND
Parental Status ^{RAND} Marital	Current living situation of parent as a categorical variable with 5 groups, i.e. married, separated, divorced, widowed and never married.	RAND
Parents decide together	Dummy variable equal to one if respondent agrees or rather agrees to one of the two statements, and zero otherwise.	Q35r6
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.	Q35r9
Parents talked with me about Finance ^{RAND}	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	RAND ANR1
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
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.	–
Race ^{RAND}	Race/ethnicity of the respondent as categorical variable with 4 groups, i.e. White, Black, Hispanic and Other.	RAND
Region ^{RAND}	Region where the respondent lives as categorical variable with 4 groups, i.e. Midwest, Northeast, South and West.	RAND
Regular discussions about finance in family	Dummy variable equal to one if respondent agrees or rather agrees to the statement, and zero otherwise.	Q35r10
School Grade ^{RAND}	School grade of the respondent.	RAND
School Type ^{RAND}	Type of school the respondent attends as a categorical variable with 4 groups, i.e. Public School, Private school, Home-school and Other.	RAND

Variable name	Measurement	Survey question number
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

B Original survey questions

B.1 German survey - original questions

[D1] Mit welchem Geschlecht identifizieren Sie sich?

[r1] Männlich [r2] Weiblich [r3] Divers

[D2] Alter

[D3] In welchem Bundesland leben Sie?

[r1] Baden-Württemberg [r2] Bayern [r3] Berlin [r4] Brandenburg [r5] Bremen [r6] Hamburg [r7] Hessen [r8] Mecklenburg-Vorpommern [r9] Niedersachsen [r10] Nordrhein-Westfalen [r11] Rheinland-Pfalz [r12] Saarland [r13] Sachsen [r14] Sachsen-Anhalt [r15] Schleswig-Holstein [r16] Thüringen

[D5] Wie ist Ihr Familienstand?

[r1] Ledig, alleinlebend [r2] Ledig, mit Partner zusammenlebend [r3] Verheiratet, zusammenlebend [r4] Verheiratet, getrennt lebend [r5] Geschieden [r6] Verwitwet

[Q01] Welche der folgenden Finanzprodukte nutzen Sie derzeit persönlich? Bitte kreuzen Sie alle genutzten Finanzprodukte an.

[r1] Girokonto [r2] Festverzinsliche Finanzprodukte (z.B. Sparverträge, Festgeld, Tagesgeld) [r3] Immobilien [r4] Immobilienfonds [r5] Fondgebundene Lebens- oder Rentenversicherung(en) [r6] Einzelaktie(n) von Unternehmen [r7] Exchange traded funds (ETFs) [r8] Aktienfonds [r9] Kryptowährungen (z.B. Bitcoin, Ethereum) [r10] Andere, und zwar: [r11] Keine von diesen [r12] Weiß nicht

[Q11] Nehmen Sie an, Sie hätten 100 Euro auf einem Sparkonto und erhalten pro Jahr 2% Zinsen. Welchen Betrag haben Sie in 5 Jahren auf dem Sparkonto, wenn Sie den Betrag nicht anrühren?

[r1] Mehr als 102 Euro [r2] Genau 102 Euro [r3] Weniger als 102 Euro [r4] Weiß nicht

[Q11a] Wie sicher sind Sie sich, dass Sie die letzte Frage richtig beantwortet haben?

[r1] Sicher [r2] Eher sicher [r3] Weder sicher noch unsicher [r4] Eher unsicher [r5] Unsicher

[Q12] Stellen Sie sich vor, dass Sie für Einlagen auf Ihr Sparkonto 1% Zinsen pro Jahr erhalten und dass die Inflation 2% pro Jahr beträgt. Wären Sie nach einem Jahr in der Lage, mehr, genau so viel oder weniger als heute mit den Spareinlagen zu kaufen?

[r1] Mehr [r2] Genau so viel [r3] Weniger [r4] Weiß nicht

[Q12a] Wie sicher sind Sie sich, dass Sie die letzte Frage richtig beantwortet haben?

[r1] Sicher [r2] Eher sicher [r3] Weder sicher noch unsicher [r4] Eher unsicher [r5] Unsicher

[Q13] Ist die folgende Aussage nach Ihrer Einschätzung richtig oder falsch: Eine einzelne Aktie zu kaufen erbringt üblicherweise eine sicherere Rendite als einen Aktienfonds zu kaufen.

[r1] Richtig [r2] Falsch [r3] Weiß nicht

[Q13a] Wie sicher sind Sie sich, dass Sie die letzte Frage richtig beantwortet haben?

[r1] Sicher [r2] Eher sicher [r3] Weder sicher noch unsicher [r4] Eher unsicher [r5] Unsicher

[Q19] Haben Sie schon einmal an einer Schulung/Coaching zum Thema Finanzen/Geldanlage teilgenommen?

[c1] Ja [c2] Nein

[Q20] Inwieweit stimmen Sie der folgenden Aussage zu: „In der Schule wurden mir Kompetenzen vermittelt, die ich heute für meine persönliche Finanzplanung nutzen kann.“

[c1] Stimme zu [c2] Stimme eher zu [c3] Stimme eher nicht zu [c4] Stimme nicht zu. [c5] Weiß nicht.

[Q21] Kommen wir nun zum Thema Aktien. Welche der folgenden Aussagen trifft auf Sie zu?

Unter Aktien werden im Folgenden sowohl Einzelaktien von Unternehmen als auch ETFs und Aktienfonds verstanden.

[r1] Ich investiere aktuell in Aktien. [r2] Ich investiere aktuell nicht in Aktien, kann mir aber vorstellen, dies zukünftig zu tun. [r3] Ich investiere aktuell nicht in Aktien und kann mir auch nicht vorstellen, dies zukünftig zu tun. [r4] Ich habe in der Vergangenheit in Aktien investiert und kann mir vorstellen, dies zukünftig erneut zu tun. [r5] Ich habe in der Vergangenheit in Aktien investiert und kann mir nicht vorstellen, dies zukünftig erneut zu tun. [r6] Weiß nicht

[Q34] Welche der folgenden Aussagen treffen auf Sie zu?

Unter Aktien werden im Folgenden sowohl Einzelaktien von Unternehmen als auch ETFs und Aktienfonds verstanden.

Spalte:

[c1] Trifft zu [c2] Trifft eher zu [c3] Trifft eher nicht zu [c4] Trifft nicht zu [c5] Weiß nicht
Zeile: [r1] In meinem Freundes- und Bekanntenkreis kenne ich einige Personen, die in Aktien investieren. [r2] Meine Eltern investieren aktuell in Aktien und/ oder haben es in der Vergangenheit getan. [r3] Meine Kollegen investieren in Aktien. [r4] Ich kenne Menschen meines eigenen Geschlechts, die in Aktien investieren. [r5] Ich spreche regelmäßig mit meinen Freunden und/ oder Verwandten über den Aktienmarkt. [r6] Meine Freunde und/oder Verwandten haben mich überzeugt, in Aktien zu investieren. [r7] Mein Partner investiert in Aktien.

[Q35] Welche der folgenden Aussagen treffen auf Sie zu?

Spalte: [c1] Trifft zu [c2] Trifft eher zu [c3] Trifft eher nicht zu [c4] Trifft nicht zu [c5] Weiß nicht

Zeile: [r1] Ich bin mit zwei erwerbstätigen Elternteilen aufgewachsen (Voll- oder Teilzeit). [r2] Ich bin mit einem erwerbstätigen Elternteil aufgewachsen (Voll- oder Teilzeit). [r3] Zu der Zeit meines Aufwachsens war meine Mutter in Vollzeit berufstätig. [r4] Zu der Zeit meines Aufwachsens war meine Mutter in Teilzeit berufstätig. [r5] Zu der Zeit meines Aufwachsens war meine Mutter nicht berufstätig. [r6] In meinem familiären Umfeld haben beide Elternteile finanzielle Fragen besprochen und gemeinsam entschieden. [r7] In meinem familiären Umfeld hat maßgeblich ein Elternteil die finanziellen Entscheidungen getroffen. [r8] In meinem familiären Umfeld haben meine Eltern finanzielle Fragen nicht offen besprochen/ war die finanzielle Situation für mich eher intransparent. [r9] Meine Eltern haben mit mir finanzielle Dinge, wie z.B. Altersvorsorge besprochen und mich über Finanzanlagen aufgeklärt. [r10] In meinem Familienkreis wird regelmäßig über finanzielle Themen und Anlagen/Investitionen gesprochen.

[Q36] Im Hinblick auf Finanzanlagen ist die folgende Person mein Vorbild:

[Q40] Bitte schätzen Sie im Folgenden, wie viel Zeit Sie in etwa aufbringen müssen um sich für den Kauf der folgenden Produkte zu entscheiden (z.B. für die Auswahl des richtigen Produkts, der Kosten, der Eignung oder Ähnlichem)

Spalte: [c1] Mehrere Stunden [c2] Mehrere Tage [c3] Mehrere Wochen [c4] Mehrere Monate [c5] Weiß nicht

Zeile: [r1] Auto [r2] Küche [r3] Aktie [r4] Immobilie [r5] Computer, Laptop, Tablet oder Ähnliches [r6] Größere Haushaltsgeräte (z.B. Spülmaschine, Waschmaschine etc.)

[D6] Wenn Sie einmal alles zusammenrechnen: Wie hoch ist dann in etwa Ihr monatliches Netto-Einkommen, das Ihnen persönlich im Monat zur Verfügung steht, nach Abzug der Steuern und Sozialversicherungsabgaben?

[r1] Kein eigenes Einkommen [r2] Bis unter 1.000 Euro [r3] 1.000 bis unter 1.500 Euro [r4] 1.500 bis unter 2.000 Euro [r5] 2.000 bis unter 2.500 Euro [r6] 2.500 bis unter 3.000 Euro [r7] 3.500 bis unter 4.000 Euro [r8] 4.000 bis unter 4.500 Euro [r9] 4.500 bis unter 5.000 Euro [r10] 5.000 Euro und mehr [r11] Keine Angabe

[D13] Welchen höchsten Ausbildungsabschluss haben Sie?

[r1] Kein Abschluss [r2] Volks-/Hauptschule ohne Lehre [r3] Volks-/Hauptschule mit Lehre [r4] Realschule oder polytechnische Oberschule [r5] Abitur, (Fach)Hochschulreife [r6] Abgeschlossenes Bachelor -Studium [r7] Abgeschlossenes Master -Studium, Staatsexamen, Diplom [r8] Abgeschlossene Promotion

[D15] In welchem Arbeitsverhältnis üben Sie Ihren derzeitigen Beruf aus? Als Rentner beziehen Sie sich bitte auf Ihre zuletzt ausgeübte Tätigkeit.

[r1] Arbeiter [r2] Angestellter [r3] Beamter [r4] Landwirt [r5] Selbständiger [r6] mithelfender Familienangehöriger [r7] Freiberufler

B.2 German survey - English translations

[D1] Which gender do you identify with?

[r1] Male [r2] Female [r3] Other

[D2] Age

[D3] In which federal state do you live?

[r1] Baden-Württemberg [r2] Bavaria [r3] Berlin [r4] Brandenburg [r5] Bremen [r6] Hamburg [r7] Hesse [r8] Mecklenburg-Western Pomerania [r9] Lower Saxony [r10] North Rhine-Westphalia [r11] Rhineland-Palatinate [r12] Saarland [r13] Saxony [r14] Saxony-Anhalt [r15] Schleswig-Holstein [r16] Thuringia

[D5] What is your marital status?

[r1] Single, living alone [r2] Single, living with a partner [r3] Married, living together [r4] Married, separated [r5] Divorced [r6] Widowed

[Q01] Which of the following financial products do you currently use personally? Please check all that apply.

[r1] Checking account [r2] Fixed-income financial products (e.g., savings contracts, term deposits, overnight money) [r3] Real estate [r4] Real estate funds [r5] Unit-linked life or pension insurance [r6] Individual stocks of companies [r7] Exchange-traded funds (ETFs) [r8] Equity funds [r9] Cryptocurrencies (e.g., Bitcoin, Ethereum) [r10] Other, namely: [r11] None of these [r12] Don't know

[Q11] Suppose you have 100 euros in a savings account and earn 2% interest per year. How much would you have in the account after 5 years if you do not touch the money?

[r1] More than 102 euros [r2] Exactly 102 euros [r3] Less than 102 euros [r4] Don't know

[Q11a] How confident are you that you answered the previous question correctly?

[r1] Confident [r2] Somewhat confident [r3] Neither confident nor unconfident [r4] Somewhat unconfident [r5] Not confident

[Q12] Imagine that you earn 1% interest per year on your savings account and that inflation is 2% per year. After one year, would you be able to buy more, exactly the same, or less than today with your savings?

[r1] More [r2] Exactly the same [r3] Less [r4] Don't know

[Q12a] How confident are you that you answered the previous question correctly?

[r1] Confident [r2] Somewhat confident [r3] Neither confident nor unconfident [r4] Somewhat unconfident [r5] Not confident

[Q13] In your opinion, is the following statement true or false: Buying a single stock usually provides a safer return than buying a stock fund.

[r1] True [r2] False [r3] Don't know

[Q13a] How confident are you that you answered the previous question correctly?

[r1] Confident [r2] Somewhat confident [r3] Neither confident nor unconfident [r4] Somewhat unconfident [r5] Not confident

[Q19] Have you ever participated in a training or coaching on finance/investing?

[c1] Yes [c2] No

[Q20] To what extent do you agree with the following statement: "In school, I was taught skills that I can use today for my personal financial planning."

[c1] Strongly agree [c2] Somewhat agree [c3] Somewhat disagree [c4] Strongly disagree [c5] Don't know

[Q21] Now let's move on to the topic of stocks. Which of the following statements applies to you?

For the purpose of this question, stocks include individual company shares, ETFs, and equity funds.

[r1] I currently invest in stocks. [r2] I do not currently invest in stocks, but I could imagine doing so in the future. [r3] I do not currently invest in stocks and cannot imagine doing so in the future. [r4] I have invested in stocks in the past and could imagine doing so again in the future. [r5] I have invested in stocks in the past and cannot imagine doing so again in the future. [r6] Don't know.

[Q34] Which of the following statements apply to you?

For the purpose of this question, stocks include individual company shares, ETFs, and equity funds.

Column:

[c1] Applies [c2] Somewhat applies [c3] Somewhat does not apply [c4] Does not apply [c5] Don't know

Row: [r1] I know some people in my circle of friends and acquaintances who invest in stocks. [r2] My parents currently invest in stocks and/or have done so in the past. [r3] My colleagues invest in stocks. [r4] I know people of my own gender who invest in stocks. [r5] I regularly talk with my friends and/or relatives about the stock market. [r6] My friends and/or relatives have convinced me to invest in stocks. [r7] My partner invests in stocks.

[Q35] Which of the following statements apply to you?

Column:

[c1] Applies [c2] Somewhat applies [c3] Somewhat does not apply [c4] Does not apply [c5] Don't know

Row: [r1] I grew up with two working parents (full-time or part-time). [r2] I grew up with

one working parent (full-time or part-time). [r3] At the time of my upbringing, my mother worked full-time. [r4] At the time of my upbringing, my mother worked part-time. [r5] At the time of my upbringing, my mother did not work. [r6] In my family environment, both parents discussed financial matters and made decisions together. [r7] In my family environment, one parent primarily made the financial decisions. [r8] In my family environment, my parents did not openly discuss financial matters / the financial situation was rather opaque to me. [r9] My parents discussed financial topics with me, such as retirement planning, and informed me about financial investments. [r10] In my family, financial topics and investments are discussed regularly.

[Q36] With regard to financial investments, the following person is my role model:

[Q40] Please estimate how much time you approximately need to decide on the purchase of the following products (e.g., for selecting the right product, costs, suitability, or similar).

Column:

[c1] Several hours [c2] Several days [c3] Several weeks [c4] Several months [c5] Don't know
Row: [r1] Car [r2] Kitchen [r3] Stock [r4] Real estate [r5] Computer, laptop, tablet, or similar [r6] Large household appliances (e.g., dishwasher, washing machine, etc.)

[D6] When you add everything together: approximately how much is your monthly net income that is personally available to you after taxes and social security contributions?

[r1] No personal income [r2] Up to under 1,000 euros [r3] 1,000 to under 1,500 euros [r4] 1,500 to under 2,000 euros [r5] 2,000 to under 2,500 euros [r6] 2,500 to under 3,000 euros [r7] 3,500 to under 4,000 euros [r8] 4,000 to under 4,500 euros [r9] 4,500 to under 5,000 euros [r10] 5,000 euros or more [r11] Prefer not to say

[D13] What is your highest educational qualification?

[r1] No degree [r2] Elementary/secondary school without vocational training [r3] Elementary/secondary school with vocational training [r4] Secondary school or polytechnic secondary school [r5] High school diploma (Abitur) or university entrance qualification [r6] Completed bachelor's degree [r7] Completed master's degree, state examination, diploma [r8] Completed doctorate (PhD)

[D15] In what type of employment do you currently work? If retired, please refer to your most recent occupation.

[r1] Worker [r2] Employee [r3] Civil servant [r4] Farmer [r5] Self-employed [r6] Assisting family member [r7] Freelancer

B.3 RAND American Youth Panel

[ANR1] How much do you agree or disagree with the following statement? My parents talk with me about how to manage and save money.

SELECT ONE RESPONSE

(1) Strongly disagree (2) Disagree (3) Agree (4) Strongly agree

[ANR2] In your family, who makes the decisions about money most of the time?

SELECT ONE RESPONSE

(1) My father (2) My mother (3) Both parents about the same (4) Other family members
(5) I make the decisions (6) I do not know who makes the decisions