Rethinking the Stock Market Participation Puzzle: A Qualitative Approach

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July 7, 2025

Abstract

We revisit the puzzle of limited stock market participation using qualitative methods common in other social sciences but rare in economics. Through in-depth interviews with investors and non-investors in Germany—a high-income country with low market participation—we elicit open-ended reflections on money without mentioning investing upfront. This allows beliefs and barriers to emerge naturally. We analyze these interviews using traditional human-led content analysis, complemented with a large language model (LLM)-based approach. We validate our findings using a representative survey of more than 7,000 individuals. While many known factors appear, we uncover a pervasive misconception: participation is believed to require selecting "safe" stocks, avoiding "bad" ones, and timing the market through monitoring and frequent trading. This inflates perceived costs and deters participation. Some investors overcome these barriers with support from family, friends, or trusted advisors. Notably, even active investors hold these beliefs, suggesting the misconception influences both entry and behavior in the market.

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1 Introduction

> *Any discipline creates a series of expectations; ultimately those expectations derive from theory. Hence the 'methodology' of looking for the surprise in the interviews, tracing its source in theory, and then trying to identify how the theory might be amended to incorporate the surprise is as applicable to social science in general as it is to economics.* (Piore, 2006, p. 20)

For several decades, financial economists have been puzzled by the relatively low rate of stock market participation, given the presence of a substantial equity premium (Mankiw and Zeldes, 1991, Haliassos and Bertaut, 1995, Heaton and Lucas, 2000). While many models and determinants have been proposed (for an overview, see Guiso and Sodini, 2013 and Gomes et al., 2021), existing explanations largely stem from theoretical assumptions formulated by researchers, whose model-implied implications are validated econometrically using registry, survey, or experimental data. Consequently, the questions posed and the frameworks used to interpret data have been shaped by established economic paradigms rather than by individuals' own perceptions of investment decisions. While this has led to a rich quantitative body of knowledge, it may have overlooked critical real-life drivers of financial decision-making—factors that never entered economists' introspections.

In this paper, we aim to uncover these overlooked aspects by exploring how individuals themselves understand and articulate their investment decisions with respect to the stock market. To do so, we adopt a mixed methods approach, combining qualitative research through in-depth interviews and human-led as well as LLM-based analyses of these interviews with a large population survey. In the interviews, we ask individuals not participating in the stock market (non-investors) as well as stock market participants (investors) in a structured, but undirected way to explain in their own words *why they do what they do*. Importantly, during these 90-minute, in-depth interviews we do not alert interviewees that we are interested in stock market participation, but we let interviewees bring up the issue and explain their thought process regarding their decision to participate in the stock market or not. We analyze these statements using qualitative research methods and validate the findings in a representative survey. This approach, widely used in other social sciences but much less so in finance and economics, provides new insights into the mental models shaping individuals' investment decisions.[1]

[1] Bewley (1995, 1999) and Blinder et al. (1998) use qualitative research to analyze wage and price rigidities, while Lerner and Tirole (2002) conduct interviews in the context of the emergence of open source software. In finance research, Lintner (1956) and Brav et al. (2005) interview a small number of financial executives to understand the determinants of corporate payout policies, while Tuckett and Taffler (2012) speak with 52 asset managers to understand decision making in the asset management industry.

We find a Piore (2006) "surprise," namely in form of a perception of surprisingly high entry and participation costs required for stock ownership, which are significantly beyond previously assumed levels of such costs and are rooted in a widely held belief, even among stock market investors, that through a lot of knowledge, effort, and time one can identify "safe stocks," time the market, significantly shape returns, and avoid losses. While household finance research has typically focused on objective costs and assumed that entry and participation barriers apply mainly at the lower ends of the wealth and income distributions, this view may be too narrow. The sheer scope and intensity of effort perceived as necessary for effective participation in the stock market suggest that perceived costs are relevant for a much wider population segment. Moreover, as we uncover in our mixed methods approach, the belief that knowledge, effort, and time are critical for participating in the stock market characterizes both non-participants and a large segment of participants. The configuration of factors that we uncover is thus relevant not only for non-participation but can also lead to underdiversification and overtrading among participants.

Our qualitative research approach does not restrict interviewees to selecting from prespecified, narrowly defined answers. Instead, it allows for an open-ended and interactive dialogue. Rather than hypothesizing and testing possible mechanisms, in-depth interviews enable us to learn directly about interviewees' subjective assessments of relevant factors for investing in the stock market, based on their own experiences, expectations, and perceptions. We conduct our analysis in Germany, a financially developed country with an average household saving rate between 2000 and 2019 of 10.30%, but with only 15% (21%) of households owning individual stocks (mutual funds), based on the ECB 2021 Household Finances and Consumption Survey. Stock market participation is low even among college-educated households with abundant financial resources and even at a time when objective transactions costs have decreased significantly, and when savings accounts offer interest rates of zero percent. The qualitative interviews are conducted at the end of 2021, while our population-wide survey is collected between July and August 2024.

Applying a purposeful sampling approach, we require that all potential interviewees save regularly or have liquid financial assets, have a college degree or a completed apprenticeship, and are employed. We conduct interviews with non-investors until reaching thematic saturation—that is, the point at which additional interviews no longer generated novel insights into the decision not to participate in the stock market. Our final qualitative sample includes 16 non-investors. For comparison, we also interview 9 individuals who started investing within a few years prior to the interview. In contrast to the non-investor group, we do not aim for thematic saturation among investors, as they serve primarily as a reference group to contextualize the findings from the non-investors.

The interviews start with a general question about "money." Interviews are semi-structured, that is, they follow a detailed interview guideline. Differently from a survey based on preset questions, however, interviews are interactive and allow for probing and follow-up questions, using the wording of interviewees to understand the meaning of interviewees' responses (Cairns-Lee et al., 2022). Throughout the interviews, follow-up questions are crafted using the interviewees' own expressions, especially for terms that might otherwise be technical.

For each interview, which on average contains about 10,000 words, we match the specific reasons for or against stock market participation mentioned by the interviewee to a detailed coding scheme that we have built, based on factors identified in existing literature and complemented by new factors derived from the interviews. Our scheme consists of three main categories: (i) entry and participation costs, (ii) preferences and beliefs, and (iii) the economic environment and intended equity holdings. Each category is further subdivided into more specific and detailed codes and possibly sub-codes.

The qualitative content analysis of our coded interviews reveals several surprising insights. First, non-investors not only mention equities as a potential investment option without being prompted, they are generally aware of potentially attractive equity returns. However, non-investors believe that a lot of knowledge is needed to enter the stock market and to invest successfully, especially to avoid losses. Before entering the stock market, it is necessary to acquire knowledge on how to identify "good" companies or funds and how to avoid "bad" ones, as well as when to buy and when to sell. According to our respondents, such knowledge exists and is obtainable, but its acquisition requires considerable effort and time.

Second, non-investors also expect that once one enters the market, one needs to be monitoring and trading almost continually to improve returns and avoid losses. This perception of necessary monitoring and trading reduces the attractiveness of equity investing, due to the opportunity costs and mental load of monitoring and the expected trading costs that are high due to the high frequency of trading even if per-trade costs are low.

A surprisingly large component of perceived entry and participation costs arise because - in the mind of non-investors - without knowledge, time, and effort returns are lower, risks higher, and, in particular losses more likely. Entry and participation costs are therefore rooted in the lack of awareness ("ignorance") of market efficiency. Given that expertise and effort often yield better outcomes in many areas of life, non-investors assume that this is the case for the stock market as well, not appreciating that in competitive financial markets expertise and effort, especially by retail investors directly holding stocks, are unlikely to improve investment performance.

Our third insight is that surprisingly many of the recent investors we interview also believe that knowledge, monitoring, and trading are required to participate successfully in the stock market. The underlying misconception of how equity markets work therefore not only creates perceived entry and participation costs but also contributes to investment mistakes, such as underdiversification, overtrading, and familiarity bias. Even when investors delegate portfolio management, they often assume that their advisors are monitoring and trading extensively on their behalf.

The final insight from our interviews concerns ways in which even individuals who perceive entry and participation costs as high can become investors. Many follow the advice of close family members, peers, or financial advisers. However, given the low participation rate in Germany, interactions with peers that invest in the stock market are unlikely, in particular, for lower socio-economic status individuals. At the same time, many individuals do not trust traditional financial institutions and financial professionals due to perceived high fees, lack of competence, or conflicts of interest, making online resources a welcome alternative, especially for those with a keen interest in learning about and following financial markets.

Given recent advances in large language models (LLMs) and the ongoing discussion about LLM's ability to comprehend human language and to potentially replace human data analysis (Kaikaus et al., 2023), we also examine whether a general-purpose large language model, when provided with our qualitative interview data, surfaces themes related to (non-)participation in the stock market that align with or extend our main results that build on established qualitative methods of human-led coding and content analysis. While the LLM uncovers many "reasonable" factors and challenges that are stressed by the existing literature, such as the need for information about the stock market and stocks and the need to monitor one's investments, without additional and more specific prompting the LLM does not reveal the unreasonable amount of fact finding, monitoring, and trading individuals perceive as necessary to avoid low returns and, in particular, losses. It is therefore difficult to know if a researcher solely relying on the LLM-based synthesis of the interviews would have recognized that difficult-to-find knowledge and ongoing effort act as substantial barriers to investing in the stock market.

To validate the key insights from our qualitative interviews, we survey a sample of more than 7,000 individuals that is representative of the German adult population below the age of 68. To assess survey participants' beliefs about entry and participation costs and their understanding of market efficiency and its implications for acquiring knowledge and information as well as monitoring and trading, we ask participants to agree or disagree with various statements. Some statements reflect the misconceptions emerging from our inter-

views, while others are grounded in views of market efficiency. We find that the majority of non-investors perceive entry and participation costs to be high and linked to the ability to shape investment outcomes. In response to several knowledge-related statements, especially non-investors indicate that acquiring the knowledge necessary to invest in the stock market requires considerable time and effort. Among investors, there is more heterogeneity, with some acknowledging that less knowledge and effort may be sufficient to enter and participate in the stock market. When specifically asked how closely one has to monitor stocks, mutual funds, or ETFs, at least 70% of non-investors and 50% of investors state that an equity investment requires attention at least once a week. Our final piece of evidence on beliefs about the value of knowledge and effort in investing comes from a vignette study. Participants evaluate three hypothetical investors who each invest EUR 10,000 in the German stock market for five years, differing in financial knowledge and active involvement. Analysis-P is highly informed, actively monitors stocks, and selects what she considers the 10 best companies from the DAX index (the 40 largest firms). Random-P selects one company per industry at random and holds the portfolio unchanged. Passive-P, unfamiliar with the market, invests in a DAX ETF. Respondents rank the three investors by expected return, risk, and loss probability (ties allowed). The results show that both non-investors and investors—especially recent ones—strongly believe that financial knowledge and active management increase returns and lower risk and the likelihood of losses.

Finally, our survey examines how investors and non-investors reflect on the actual pathways to stock market participation. The results confirm the central role of peers, financial advice, and self-directed research—and underscore persistent belief in the value of active involvement.

Overall, our survey results are consistent with the insights from our qualitative interviews. Misconceptions about how stock markets work, combined with the difficulty and cost of acquiring financial knowledge and managing one's portfolio, create substantial perceived costs of stock market entry and participation.

We contribute new insights to the extensive literature on stock market (non)participation and reveal previously unknown connections to other financial puzzles. We demonstrate that fixed costs of entry and participation play a significant role in people's perceptions (Haliassos and Bertaut, 1995; Luttmer, 1999; Vissing-Jorgensen, 2002). However, these costs have an under-appreciated component linked to misperceptions about how stock markets function, particularly in terms of the implications of informational efficiency. These misperceptions are present not only among non-investors but also within a subset of investors. The lack of understanding we document contributes to the broader literature on mental models of "how

the world works“ (Hirshleifer, 2020), and aligns with recent evidence from U.S. households and even financial professionals (Andre et al., 2023), indicating gaps in their mental models regarding the concept of equilibrium. This type of thinking is also reflected in the ongoing importance of active investment recommendations and strategies among professionals (Schoar and Sun, 2024).

Our findings resonate with the results of Briggs et al. (2021), who, using a structural model estimated on Swedish registry data, show that large entry barriers are necessary to explain non-participation. While their model quantifies the distribution of implied entry costs, it does not specify the exact nature of these barriers. Our qualitative approach complements their findings by providing deeper insights into the beliefs that drive these perceived barriers. Specifically, we highlight how misconceptions about asset selection and market timing together with loss aversion (Tversky and Kahneman, 1991) create a perceived need for research, monitoring, and trading, thereby inflating perceived entry and participation costs. This suggests that combining both structural and qualitative approaches can provide a fuller understanding of the barriers to stock market participation.

Additionally, we show that many investors share the same misperceptions as non-investors regarding the stock market.[2] Our findings suggest that non-participation is possibly linked to other puzzles, such as over-trading by participants (Barber and Odean, 2000, 2001), underdiversification (Blume et al., 1974; Huberman, 2001), and home equity bias (French and Poterba, 1991; Ivković and Weisbenner, 2005; Tesar and Werner, 1995).

Our findings support much of the literature on factors that can mitigate perceived entry and participation costs and encourage stockholding, such as trust in the stock market (Guiso et al., 2008), social interactions with knowledgeable peers (Duflo and Saez, 2002; Hong et al., 2004), and advice from trusted financial advisors (Gennaioli et al., 2015).[3]

We also contribute to the growing interest in economics and finance in obtaining data directly from economic actors, often in terms of their preferences and beliefs, and typically through surveys to gain insights into what is on top of their minds (see Ferrario and Stantcheva (2022); Haaland et al. (2024) for an overview). Chinco et al. (2022) use an open-ended survey question to test whether textbook risk factors, such as correlation with consumption growth, arise spontaneously in respondents' reasoning when asked what they consider important in making investment decisions. Choi and Robertson (2020) use a survey

[2]In a study of investors but not non-investors in Germany, published in German, Walter and Welbers (2017) also document the time and effort investors feel they need to spend on research.

[3]The relevance of time that we uncover is consistent with recent work on the effects of restrictions in time availability, due to Covid or to motherhood (see, Fatima Zahra Filali Adib, Steffen Andersen, and Kasper Meisner Nielsen, 2025; Olafsson and Westerheide, 2025).

to confront individuals with lessons from existing research on stock market participation. Our approach differs in that we use semi-structured interviews, allowing participants to articulate their own reasons for stock market non-participation within the broader context of discussions on "money and finance." This approach lets the actors speak, allows them to confirm insights also present in existing research, but also to surprise us with considerations that academics have not thought of to date. This provides deep insights into not only the importance but also the specific nature of factors discouraging stock market participation, encouraging overtrading among participants, and inducing under-diversification. In a follow-up study to this paper, Chopra and Haaland (2023) use a chatbot to explore the potential for automating and enriching the collection of open-text survey responses, using stock market participation as an illustration of their method.[4] They find that participants often provide 'superficial' explanations when asked only one open-ended question about barriers to stock market participation by a chatbot. However, when presented with follow-up prompts, some of which ask individuals to consider the "complexity of stock markets" or the "accessibility of resources and support", participants' responses align well with our findings.

2 A Mixed Methods Approach

Our mixed methods approach combines qualitative research, a foundational approach in the social sciences to understand complex phenomena, with a representative survey. Through the in-depth study of a small sample, qualitative research allows us to explore individuals' reasoning, beliefs, or decision-making processes (National Science Foundation, 2004). Even for well-researched phenomena, qualitative research can offer more granular insights into the concrete workings of known determinants or deliver a surprise in the form of aspects overlooked by existing theory.[5]

Specifically, we conduct in-depth, person-to-person, qualitative interviews of a small sample of both individual investors and non-investors to better understand why they do what they do in the context of stock market participation. We code and analyze these interviews following established methods from the social sciences as well as an exploratory approach leveraging recent advances in large language models. Finally, we conduct a representative survey to validate the new insights and aspects that emerge from the analysis of the interviews.

[4]Initial findings from our interviews were presented and discussed during a PhD workshop at the University of Copenhagen, co-organized by Chopra and Haaland in March 2023.

[5]Standard textbooks for qualitative research include Maxwell (2005) and Creswell (2014). For a recent review, see Mohajan et al. (2018).

In this section, we provide a detailed account of how we conducted and analyzed the qualitative interviews and designed the representative survey. We discuss details of our data as well as the institutional context in which both the interviews and the survey were conducted in the next section below.

2.1 Qualitative Interviews

2.1.1 Data Collection

We conduct the interviews in close collaboration with Séissmo, a market research firm based in Mannheim, Germany, with extensive experience in qualitative research. The firm was responsible for recruiting interviewees, conducting the interviews, and transcribing the conversations. The sample size for non-investors was determined by thematic saturation — that is, interviews continued until additional interviews no longer revealed substantively new themes or mechanisms related to stock market participation (Saunders et al., 2018; Glaser and Strauss, 1967). Our qualitative sample also includes a smaller number of recent stock market investors that allow us to gain comparative insights into contrasting perspectives. We focus on recent investors, as their experiences and motivations are likely to be more readily recalled and articulated than those of long-standing participants.

All interviews, conducted via video conference by one of two experienced interviewers from Séissmo, follow a semi-structured interview guide of open-ended questions that allow participants to shape the direction and emphasis of the conversation (see Appendix A.1). After a brief introduction, interviewees are asked about their associations with the word "money." Their responses serve as an entry point into three key topics: (i) spending money, (ii) saving money, and (iii) stock market participation. While interviewers are prepared to introduce the topic of stock market investing if necessary, all interviewees brought it up on their own. The timing and length of the stock market discussion vary somewhat depending on when and how the topic is introduced by the interviewee. Once introduced, interviewers ask open-ended follow-up questions to explore interviewees' reasoning in greater depth.

Both investors and non-investors discuss the opportunities and concerns they associate with stock market participation and how these concerns might be addressed. Although the interviews are free-flowing and conversational in style, interviewers guide the discussion toward key topics, including how participants would explain the stock market to an elementary school student or an alien (Guitard et al., 2005). Investors are additionally invited to share how they began investing and to reflect on their experiences up to the time of the interview.

Throughout the approximately 90-minute interview, care is taken to mirror participants'

own wording and expressions. Follow-up questions aim to clarify meanings and explore underlying assumptions, emotions, and rationales behind financial decisions and to understand interviewees' relevant experiences, including childhood influences, sources of financial information, and the role of peers and broader social environments. Unlike empirical studies relying on field, survey, or experimental data, this approach does not require assumptions about participants' mental models, information sets, or the rationality of their preferences and beliefs. For example, when an interviewee stated that extensive knowledge is needed to invest in the stock market, follow-up questions explore what type of knowledge they deem important, what they feel they lack, and why they believe knowledge is crucial, including the perceived consequences of investing without it.

2.1.2 Coding and Analysis

In settings like ours, where the research context is already well studied, qualitative data are typically analyzed deductively, that is, the analysis is guided by theoretical expectations or empirical patterns derived from the previous literature and aims to assess whether these previously identified themes are confirmed, challenged, or expanded by the respondents' own explanations. In practice, this analysis is based on a structured coding process in which segments of interview transcripts are assigned to thematic categories. These categories are developed in advance based on existing theory but refined during the coding process.

Our approach is guided by determinants of stock market participation documented in the literature, including preferences, beliefs, perceived costs, and features of the economic environment. While the coding scheme is grounded in theory, it remains open to identifying variations in known factors or unanticipated aspects that emerge through the interviews.

Based on the extensive literature, we distinguish three broad categories of determinants: (i) entry and participation costs, (ii) preferences and beliefs, and (iii) the economic environment and intended equity holdings. Each category is further subdivided into subcategories. For example, entry and participation costs include both monetary and non-monetary costs as well as skills and knowledge needed to participate,while preferences and beliefs capture attitudes towards risk, losses, and time as well as expectations about returns and trust in financial institutions. See Appendix A1 for our full coding scheme.

Next, we review all interview transcripts and label each relevant statement by interviewees, consisting of one or multiple sentences, with all applicable codes [6]. A subset of

[6]Coding is conducted in MaxQDA, a standard software for qualitative data analysis. The coding unit is a section, defined as the interviewer's prompt and the corresponding response. Additional memos are used to capture contextual nuance or coder reflections where needed.

transcripts was independently coded by multiple researchers, and inter-coder reliability was assessed using Cohen's kappa, yielding values of at least 0.61, which according to Landis and Koch (1977) indicates substantial inter-coder agreement and suggests that the coding scheme is well-defined allowing for objectivity and consistency in the coding process.

Once coding is complete, we could interpret the frequency of various codes as evidence for the relevance of the corresponding determinants and the underlying theories of stock market participation. However, traditional qualitative research instead uses qualitative content analysis to examine the coded material in greater depth (Mayring, 2010, 2015, 2021; Kuckartz, 2019). In our case, at least three authors independently review, paraphrase, and summarize all coded statements, separately for non-investors and recent investors, identifying both typical and unexpected responses. These summaries are then discussed among the team to achieve intersubjective agreement. This process enables us to assess where the reasoning of non-investors and recent investors seems to align with theoretical assumptions, where it provides new insights into known determinants of stock market participation, and where it delivers a surprise in form of aspects overlooked by the existing theory. We then select the new and surprising aspects that advances our understanding of stock market (non-) participation the most and present them as the main results of our qualitative interviews.

2.1.3 Exploratory LLM-based Analysis

Given recent advances in large language models' (LLMs) ability to comprehend human language and to understand context and nuances, we explore an LLM-based approach to synthesize and interpret the interview material. This approach allows us to examine whether a general-purpose large language model, when provided with the qualitative interview data, uncovers themes related to (non-)participation in the stock market that align with our main results that build on established qualitative methods of human-led coding and content analysis.

While some researchers have explored LLMs' ability in applying a predefined coding scheme (e.g., Chew et al. (2023)), we focus on LLM's potential role for content analysis, applied directly to the interview transcripts. Similar to the approach by Geiecke and Jaravel (2024) and due to processing constraints of existing LLMs, we proceed in two steps. For a given question or topic, we first employ the LLM to summarize and analyze each interview separately. In a second step, separately for the group of non-investors and investors, we concatenate the interview-level summaries and input them into another LLM instance for further synthesis.

While many different large language models exist, we use the open-source LLaMA 3.3,[7] which can be used without usage fees and which allows us to store all data locally. Importantly, the model was pretrained on German language texts such that we can process our interview transcript in the original German version. We set the temperature, a parameter in language models that controls the randomness of the model's responses, to zero in order to obtain deterministic and replicable outputs.

Given the importance of prompts in the application of LLMs, each query begins with a system prompt of contextual framing aligned with our research question. Specifically, the prompt reads:

> *You are a professor of economics at one of the world's leading universities. Your research focuses on stock market participation, i.e. the participation of private households in the stock market via shares, ETFs or funds. In order to gain in-depth insights into the evaluation of the stock market and the decision to participate in the stock market, you have conducted in-depth qualitative interviews with several individuals on the topic of money and finance.*

In additional prompts, which we report in Appendix B, the specific topic is introduced and the LLM is instructed to analyze individual interviews, summaries of interviews, separately for non-investors and investors, or to compare interview summaries between non-investors and investors. In all instances, we remind the LLM to exclusively rely on the provided text and not to invent any data. The final output typically consists of a list of key words together with a one-sentence explanation.

2.2 Representative Survey

Even though our conclusions are based on consistently observed patterns, our qualitative sample is small and not representative. We therefore design a population-wide survey to verify whether in particular the novel insights emerging from our qualitative interviews are reflected in broader patterns across the population.

In the survey, we ask survey respondents to agree or disagree with statements as well as arguments made by the interviewees in our qualitative interviews. We also test the paradigms and mechanisms we reconstruct from the qualitative interviews. The large number of observations as well as the representative sampling framework allow us analyse the survey

[7] LLaMA 3.3–70B–Instruct model (based on LLaMA 3.1–70B), quantized (Q4_K_M), deployed locally via Ollama.

data, including comparisons between investors and non-investors, with traditional statistical methods.

3 Institutional Setting and Data

3.1 Institutional Setting

Germany is a high-income country with a GDP per capita of USD 58,757 in 2021 (PPP-adjusted) and a household savings rate of 10.3% (2000–2019 average; OECD, 2024). Despite this high savings rate, stock market participation remains low. According to the Deutsche Aktieninstitut (DAI), only about 17% of individuals in Germany participated in the stock market—either directly or via mutual funds or ETFs—in 2021 (German Stock Institute, 2023).[8] Other surveys, such as the ECB's Household Finance and Consumption Survey, report slightly higher household-level participation rates of 15% for individual stocks and 21% for mutual funds (European Central Bank, 2023). Other surveys report higher participation rates among younger adults, with around 35% of individuals aged 18 to 35 investing in stocks or equity funds.

While low relative to the U.S.—where over 50% of households invest in equities—stock market participation in Germany is among the higher rates within the Eurozone, albeit well below levels in countries like Sweden or Denmark (Kaustia et al., 2023).

Germany's retirement system is based on three pillars: (i) a pay-as-you-go public pension with an average replacement rate of about 55(ii) optional employer-sponsored pension plans covering around half of the working population, and (iii) individual retirement savings, including government-subsidized products. In 2002, the government introduced the "Riester-Rente," a tax-advantaged private pension plan with modest maximum annual contributions (EUR 2,100) and optional mutual fund investment. However, take-up has been limited: in 2020, only about 25% of working-age individuals contributed, and just 20% of those contributions were allocated to mutual funds (Federal Ministry of Finance, 2023). Instead, traditional insurance products remain more popular: around 40% of households hold voluntary life or pension insurance, and the majority of Riester contributions flow into such products.

Despite low participation, Germany has a well-developed public equity market. In 2021, about 450 companies were listed on German stock exchanges, with a total market capitaliza-

[8]Participation is particularly low in the former East German states (approx. 15% of the population), but even in former West Germany, participation reached only about 20% in 2021.

tion equivalent to roughly 50% of GDP. The average annual equity premium between 1980 and 2021 was approximately 6%, and German households have access to a wide range of equity mutual funds and ETFs with domestic and international exposure.

3.2 Data: Interviews

For the interviews, we apply a purposeful sampling approach. That is, our sampling is not designed to achieve societal representativeness but instead aims to better understand why even educated individuals who actively save do not invest in the stock market. To be eligible for participation in our qualitative study, interviewees must: (i) be between 25 and 54 years of age, (ii) have completed a college degree or a 2–3 year vocational training program, (iii) be employed (including individuals on parental leave), and (iv) actively save money each month or own financial assets. We also ensure a balanced gender distribution and include only residents of former West Germany to abstract from the potential effects of past exposure to communism (Fuchs-Schündeln and Haliassos, 2021; Laudenbach et al., 2024).

Our sample includes both individuals who do not participate in the stock market—hereafter, non-investors—and recent stock market participants, referred to as investors. Investors are required to have entered the stock market within two years prior to the interview, increasing the likelihood that they can accurately recall the context and motivations behind their initial investment decision.

Interviewees are recruited from a pool of individuals who occasionally participate in market research studies. Participants are invited to a 90-minute online interview on the broad topic of money and finance; however, the invitation does not mention stock market participation as the research focus. All interviewees receive a fixed compensation of EUR 55. Participation is conditional on self-reported information meeting the sampling criteria outlined above.

Table 1 provides an overview of the 25 interviewees: 16 non-investors (Panel A) and 9 recent investors (Panel B). For each interviewee, we report their pseudonymized first name, gender, and age, as well as information collected during the interview, including marital status, number of children, household size, highest education level, current occupation, and approximate monthly savings amount.[9]

In the last column of the table, we report the word count of each interview. All interviews

[9]One of the investors, Uta (17), states during the interview that she has been investing for seven years—outside of our preferred two-year window. Additionally, Oliver (16) was born in former East Germany, now resides in former West Germany, and was undergoing bankruptcy at the time of the interview. We include both cases in our final sample.

were conducted in December 2021 and lasted on average 90 minutes (ranging from 85 to 95 minutes). The conversations were recorded and transcribed verbatim, including notations for pauses, interruptions, and special expressions. On average, each transcript contains approximately 10,000 words, with no systematic difference in length between non-investors and investors. As shown in the last column, we applied just over 100 codes per interview on average, with the number of codes approximately 20% higher for investors than for non-investors.

3.3 Data: Survey

To test which insights from our interviews apply to the wider population, we survey 7,780 individuals living in Germany via the polling firm Bilendi between July and August 2024. Bilendi operates an online panel of about 300,000 individuals out of which it draws customized samples for its clients. Participation is compensated and incentivized through a bonus program, resulting in an average response rate of 35%. A registration key ensures that no respondent polls in the survey multiple times.

To ensure that survey participants pay attention to the details of each our questions, we incorporate two attention checks in the survey. Participants that fail the first attention check receive a warning. For all participants that fail the second attention check the survey is terminated, their incomplete answers are removed from the survey, and participants do not receive any compensation for their participation. We also remove participants for whom the total time spent on the survey falls below the 1^{st} or exceeds the 99^{th} percentile as well as participants who provide inconsistent responses with respect to their current or past stock market participation, such that our final survey sample contains 7,475 individuals.

Participants are selected based on specific quotas, such that the survey is representative of the adult population below age 68 in Germany regarding gender, age profile (18-29, 30-39, 40-49, 50-59, 60-67 years), residency by state, including former East Germany, and net household income per month (<EUR 1,000, EUR 1,000 - EUR 2,000, EUR 2,000 - EUR 3,000, EUR 3,000+).

We label an individual an investor if the individual participates in the equity market directly (through the ownership of stocks) or indirectly (through the ownership of equity mutual funds or ETFs) at the time of the survey. Among investors, we further distinguish between recent investors with up to two years of experience, intermediate investors with 3 to 10 years experience, and long-term investors with more than 10 years of experience. Individuals that do not invest in the equity market at the time of the survey are either non-investors that have never invested in the equity market or past investors that participated

in the past but no longer do. In most of our analysis below, we contrast investors and non-investors.

Table 2 reports summary statistics and reveals that about 39% of individuals surveyed are investors. The relatively high participation rate seems to be due to the almost 10% of participants that entered the stock market recently as well as to the exclusion in our survey of individuals older than 67 whose participation rate is low. About 50% of individuals have never invested in the stock market, while about 11% are past investors. Comparing investors and non-investors, we can see that non-investors are less likely to be men, married, college-educated, or employed, and have lower income and lower net-worth.

The survey includes a range of questions developed on the basis of insights from our qualitative interviews. Participants are asked about their beliefs regarding the stock market, perceived barriers to participation, and expectations about returns, risk, and effort. A dedicated module presents respondents with selected statements — primarily quotes from our interview study — and asks them to indicate agreement or disagreement. We also include a vignette study contrasting different types of hypothetical investors to assess perceptions about investment strategies and outcomes like return and loss probability expectations. Further details are presented in the Results section where relevant.

4 Qualitative Results

During the qualitative content analysis of our coded interviews, we review the interview segments assigned to the different categories of our coding scheme, separately for non-investors and recent investors, looking for, in particular, new and surprising insights.

Our results are derived from the reasoning of interviewees that we did not expect given the existing literature. While we present quotes and references from the qualitative interviews to support each insight, there is no quantitative analysis of the interviews nor do we claim that the insights obtained from the interviews should be generalized. Instead, our interview-based results are best understood as new ideas or inspirations that — if supported by additional evidence from our large-scale survey — could be incorporated in futures models of stock market participation or tested as causal determinants of stock market (non-)participation.

We first provide an overview over our qualitative results, followed by a more detailed discussion of the findings from the interviews of non-investors as well as investors. We provide selected quotes from our interviews in the main text and additional quotes in Appendix C. Before turning to our survey results in Section 5, we explore the insights that are obtainable when we employ a large language model to synthesize and interpret our qualitative interviews.

4.1 Overview

The main insights from our qualitative content analysis can be summarized as follows:

First, non-investors appear generally well aware of the higher returns equity investing can offer. Not only do all non-investors mention equities as a potential investment option without any prompting from the interviewer, but many also seem to have a reasonable understanding of equity returns, estimating them to be between 5% and 10% annually (e.g., Resit (14, 246), Ralf (10, 181), Ingrid (9, 210), Pia (6, 204–205)). They generally view these returns as attractive, especially in light of the zero-interest rate environment at the time of the interviews in late 2021. Ralf (10, 179) articulates this sentiment clearly:

> *Yes, in that respect of course, because it's simply the only form of investment at the moment, from what we're seeing, where it's also possible to get a good return at the end of the day or year. All other forms of savings are worth almost nothing, due to this interest rate policy and all that. Paying negative interest yourself, penalty interest..., when you read all that, my goodness.*

However, many non-investors are deterred from participating in the equity market due to surprisingly large perceived entry and participation costs (Insights 1 & 2). In particular, non-investors, who are generally averse to risk and, in particular, loss, believe that substantial prior knowledge as well as considerable time and ongoing effort are needed to successfully participate. That is, many non-investors assume that without knowledge, time, and effort equity returns are lower, risks higher, and losses more likely. Entry and participation costs are therefore not isolated determinants of stock market participation but — in the mind of the interviewees — shape investment outcomes, especially on the downside. We therefore suggest that an important and so for underappreciated aspect of stock market participation is the lack of awareness ("ignorance") of market efficiency.

Potentially even more surprisingly, recent investors seem to have similar beliefs, and consequently often exert substantial effort on research, monitoring, and trading (Insight 3). Ignorance of market efficiency might therefore not only create substantial barriers for non-participants but could also contribute to other possibly costly investment behaviors such as over-trading.

Our final result (Insight 4) is that investors often start investing in the stock market not because they have a better understanding of the implications of market efficiency but rather because they find ways to overcome the entry and participation barriers with the help of family members, peers, or advisors or because their personal interests or personality traits reduce the disutility associated with these entry and participation costs.

Overall, our qualitative research results offer a reassessment of determinants of stock market participation through a deeper understanding of their nature as well as a possibly unifying interpretation of their relevance.

Our results emerge from the ability to probe interviewees during the interviews about the reasons behind their stated beliefs. While coding the interviews, often with multiple codes for the same text segments, allows us to organize the textual evidence, it is the qualitative content analysis that allows us to uncover our main results.

Indeed, the codes derived from the existing literature allow us to label almost all relevant statements, suggesting that the direct determinants of stock market participation as such are known.[10] Furthermore, while we can notice the large frequency with which both investors and non-investors refer to entry and participation costs — especially non-monetary ones such as required knowledge (see Table 3), without additional insights into interviewees' reasoning, it is impossible to understand why, for example, knowledge is so important.

Finally, Table 3 reveals that all codes of our coding scheme appear at least once across the 25 interviews, suggesting that a mono-causal explanation for stock market non-participation seems unlikely.

4.2 Interviews with Non-Investors

4.2.1 Insight 1: Perceived Entry Costs

Many non-investors correctly describe stocks as firm ownership shares that pay dividends and are traded on stock markets. However, they also express a lack of confidence in their financial knowledge and the need to educate themselves more about the stock market before investing in it (Bianca (2, 305)). For example, Luise (4, 155), college educated and financially literate, explains

> *Stocks are a very complex thing that you really must deal with before you start investing in stocks. It's not something where I say, yes, I'll do it today. Maybe I'll just pick up a stock or something. You can't do that. (Shakes head). There has to be a lot of preparation*

To reach what they consider an acceptable starting point, non-investors stress the importance of acquiring expertise by studying (Madeline (1, 172)), searching the internet (Esther (13, 252)), and talking to as many people as possible (Luca (5, 426)).

[10] We add only three new codes to our coding scheme, representing interviewees' "Interest and excitement" with respect to the stock market, their "Desire for control and independence" and the "Perceived irreversibility" of some equity investments.

Underlying the emphasis on learning about and being prepared for the stock market is the assumption that algorithms to select the "right" stocks at the "right" time exist, are known to investors, and can be uncovered at cost by non-investors who have some ability to handle financial matters. With the knowledge of such algorithms, it becomes possible to distinguish between good and bad companies or stocks (Nadine (7, 159)), to predict future price movements (Pia (6, 151), Nadine (7, 137)), avoid losses (Madeline (1, 8), (Luise (4, 136-137)), to anticipate market trends and to time the market (Oliver (16, 214)).

Some like Ingrid (9, 206) compare the necessary preparation for distinguishing between good and bad companies to the research they undertake before purchasing kitchen appliances based on customer ratings and the experience of others:

> *What would have to happen is that I would have to look into it more intensively. I would never invest in stocks with the knowledge I have now. But if I did, then I would look into it. Just like when I buy a new kitchen appliance, I look into it first. How it works or what the reviews are like, what the experience is like and so on.*

Some believe that they need to study the fundamentals of different firms, such as the likely future demand for their product, the way the business is run, and its corporate strategy for successful stock market participation (Kirstin (8, 250)). For example, Luca (5, 446) explains:

> *And if you have studied it well, let's say how stocks work. Then you know your way around it. For example, to see which product or which stock will be really good in two or three years' time.*

Several interviewees believe that it is possible to predict the likely future movements of individual stocks and assign great value to being able to time the market. When asked what specifically one must learn, Oliver (16, 266) says:

> *Strategies. When is the best time, when is it better or worse to buy, when does it go up or down? A lot of economics and math to master. I only have the basics, but you have to master more than that.*

Some hope that intensely reading the newspaper or specialized stock market newsletters will eventually allow them to recognize stock price trends (Silke (12, 107)). Jacob (15, 88), expresses the quest for clairvoyance needed to succeed in the stock market as follows:

> *Yes, in principle you must know, because you can't be clairvoyant, but somehow you must know how shares will develop if you could be clairvoyant. So what*

should you buy and for what reasons? Could it make sense for the share to rise further now? You must inform yourself somehow, I would perhaps do this via stock market magazines or something like that.

Regardless of how non-investors plan to prepare themselves for the stock market, investing in stocks without being fully prepared is considered "dangerous" (Luise (4, 135)) and acts as a deterrent to stock market participation. Indeed, several non-investors seem to have a guilty conscience because they have not educated themselves (yet or enough) about the stock market (Silke (12, 109)).

While many non-investors believe that successful investing in equity requires thorough preparation and ongoing attention, individuals differ in how they evaluate these activities, where evaluations include mental aspects such as fun or stress.

Some, like Bianca (2, 220), find the topic generally interesting. Luise goes further and thinks that following the stock market is fun and exciting and that it provides new experiences similar to following sports (Luise (4, 143, 163)). Oliver (16, 224) believes that basic knowledge about the stock market makes himself more interesting when meeting new people. However, for other non-investors, equity markets are associated with a headache (Esther (13, 216)). Some believe that the lack of interest in the topic explains why they either do not fully understand it or why they do not get to it (Ingrid (9, 117), Pia (6, 466)).

Many non-investors seem ambivalent about familiarizing themselves with companies and following the stock market, as Resit (14, 294) explains:

Sometimes people say, I don't want to have anything to do with the whole thing. Do you understand? Why do you have to deal with it as a normal person? Sometimes you get this feeling that you just want to be left alone. And then you see completely different ordinary people. He knows almost every big company with their short-term stories and all that.

Insight 1: Non-investors believe that much knowledge is needed to enter the stock market and to invest successfully, in particular to avoid losses. Acquiring this knowledge, while in their mind possible, requires substantial effort and time.

4.2.2 Insight 2: Perceived Participation Costs

In addition to the perceived entry costs, the expected net benefits from participating are an important consideration of whether to participate in the stock market. While non-investors

generally find the higher returns compared to alternative investments attractive, when comparing costs and benefits of participation some find that the latter are not worth the former. Kirstin (8, 228), for example, states:

> *Although I could invest, the risks and effort just aren't worth it.*

Risk and effort seem to be connected in the perception of non-investors, who - not surprisingly - dislike the risk and, in particular, the possibility of losses associated with equity investing. In particular, non-investors believe that the dynamic nature of the stock market would require them to keep an eye on the market (Ingrid (9, 170)). As Bianca (2, 396) explains, continued engagement is necessary to avoid losses:

> *Nothing really, but you must be after it. I don't know, I think if you let it slip, things can go wrong quickly, but you can lose money, and some people can cope with that better than others.*

Michaela (11, 141) refers to investing as "Sudoku for advanced players" which requires time and effort, and according to Luise (4, 143), participating in the stock market necessitates active engagement:

> *You must predict very much in advance, so you have to know what developments to expect now. How will the market behave? When do I take my stock, when do I sell it? So that's really the predictive aspect and you really must be very active.*

Given that some of these participation costs scale with the number of investments, for Oliver (16, 288), they directly conflict with the goal to hold a diversified portfolio:

> *Three companies are enough for me. With 10 companies, I have to find out even more about each individual company. 10? No. I don't have a good gut feeling about it. I can lose sight of everything. No, no.*

Some non-investors recognize that mutual funds and ETFs can reduce the perceived costs associated with trading and monitoring stocks (Resit (14, 296)). Luise (4, 185) describes the distinction as follows:

> *With trading and stocks, I have the feeling that it is very dynamic. So you must sit at it every day and say, I look at the market every day. So I'm up-to-date on a daily basis and I take care of it. Whereas with funds, I have the feeling that it's more of a monthly thing. So I pay my monthly salary or my monthly money into it and then I'm fine. So it doesn't involve as much work as trading or stocks...*

However, despite the delegation that investing in a mutual fund allows, even the selection of the right fund and when to buy or sell appears daunting to some non-investors (Resit (14, 231-236)).

Some non-investors directly compare stocks to other asset classes and find that the latter are a superior choice (Cathleen (3, 309). Indeed, from the perspective of non-investors, one of the advantages of traditional savings or annuity products is that, once set up, they do not require constant engagement. As Silke (12, 155) explains, substantial ongoing participation costs distinguish equity investing from more traditional savings products:

> *I mean, you must be on your toes if you have stocks. Because there are an incredible number of external factors that influence that. So political or historical. That something happens. Environmental influences, so I can't just sit back and say, ah, I'll wait until the Schwäbisch Hall building society savings contract is fully saved, but I really must keep a regular eye on what's happening. What are the risks? Looking ahead and being informed. And that's all something that takes time, of course.*

In addition to participation costs, the riskiness of stocks is directly compared to the absence of (nominal) risk in other products, for example, by Silke (12, 91):

> *So you see, I have a savings account. I have a very classic alternative, i.e. tried and tested, conservative things. So I have a savings account, and I have a building society savings contract. That means I don't lose any money.*

Insight 2: Non-investors assume that equity market investments require ongoing time and effort as well as almost constant attention to improve returns and avoid losses.

4.3 Interviews with Investors

4.3.1 Insight 3: Investors' Perspective on Entry and Participation Costs

Surprisingly, the recent investors in our sample often confirm the perception of the non-investors. For example, with respect to the knowledge and skills required for participation, David (20, 219A) recalls:

> *In the beginning, you're overwhelmed, or you're told by respect that you must pay attention to so many things, look at how the company is doing, what are the figures, do I have to be able to read the balance sheet, what does the balance sheet tell me?*

Dennis, who invests in individuals stocks, confirms the importance of participation costs. Specifically, he states that he checks news about the stocks in his portfolio about twice a month and then decides whether to hold or sell a given stock (Dennis (18, 71)). Uta, who invests in ETFs, compares equity investing to a work project (Uta (17, 353)), stresses the need to understand what one invests in (Uta (17, 27)) and confirms that an ETF investment requires more monitoring than a traditional life insurance product (Uta (17, 369)).

Adam delegates the monitoring and trading to an asset manager, as he does not have the time nor expertise to manage his investments himself (Adam (24, 96 and 104)). However, only few investors seem to pursue a passive buy and hold strategy. David and Manuel appear to be two outliers. David (20, 219B) describes his experience over time as follows:

> *But at some point I realized that I didn't need to go that deep, or that it wouldn't do me any good to go that deep, because I can't see what will happen to the stock tomorrow or the day after tomorrow either way.*

And when asked what he will do with the stocks in his portfolio, Manuel (25, 163) replies:

> *You simply let them rest for a longer period of time. You keep track of it. And when you know you're in the positive zone, you're happy and buy yourself an ice cream, for example.*

Finally, among investors there is, like among non-investors, considerable variation in how the effort related to investing is perceived: Some develop a keen interest in the topic (Oscar (21, 14)), while others, like Uta, who holds ETFs that her sister recommended, generally dislike the topic of finance (Uta (17, 6)).

Insight 3: Investors often share non-investors' beliefs that knowledge, monitoring, and trading are needed for successful participation in the stock market.

4.3.2 Insight 4: Becoming an Investor

Our results so far suggest that substantial perceived entry and participation costs arise from the assumption that knowledge and effort are necessary to successfully select, monitor, and time stock market investments and that without knowledge and effort investing in the stock market is unattractive or even dangerous. Since this belief is not limited to non-investors but is also held by recent investors, it raises the question of how some individuals overcome these barriers and start investing. When analyzing this question, we find support for the role of peers and advisors as well as personality traits such as trust and conscientiousness. While

prior literature has often shown significant associations with stock market participation, our results suggest that a major channel through which effects operate is a reduction in perceived entry and participation costs.[11] Given the prior literature, we provide only a brief summary of the findings emerging from our qualitative interviews.

Social environment. Interviewees consistently point to the important role that family and peers play in shaping both their perceptions of the stock market and their actual investment decisions, consistent with research on social networks and peer effects in household finance. Uta (17, 229), whose parents had been investing in the stock market for a long time, started investing in equity ETFs with the help of her sister, a former business consultant, whose advice she trusts. Oscar (21, 77), on the other hand, had been deterred from investing in the stock market due to his father's negative views of stocks. However, discussions with college friends who had majored in business helped him to learn about and then start investing in equity ETFs.

Several interviewees, especially those of lower socio-economic status, point to the distributional implications of peer effects. They point out that equity investing is uncommon among their family members or friends (Anika (22, 156), David (20, 95), Pia (6, 462 & 466)), such that even those with a desire to discuss equity investing with peers find it difficult to do so (Resit (14, 266), Madeline (1, 220), Kirstin (15, 288)).

Financial institutions and financial advice. While interviewees mention financial advisors as a potential source of information, many non-investors are reluctant to seek advice, especially from traditional banks or savings institutions (Resit (14, 266)), questioning their incentives (Luca (5, 524)) or their competence (Bianca (2, 325), Pia (6, 279-280)). Uta, who invests with the support of her family, points out that even finding a good advisor—and then actively engaging with them—requires effort and can be exhausting (Uta (17, 263, 357)). Finally, Silke (12, 111) and Dennis (18, 4) express a strong desire to not delegate financial decisions.

The experience of investors suggests that personal recommendations or longer-term interactions with an advisor can build trust (Anika (22, 117-126)). Indeed, several investors participate in the stock market with the help of a financial advisor (Monique (19, 89)). While Manuel (25, 271-273) values the expertise and personalized service of his long-term bank advisor, Adam (24, 146) is content delegating investment decisions to an advisor so that he does not have to do anything.

Own research and planning A few investors report that they found their way to equity in-

[11] For peer effects, see Kaustia and Knüpfer, 2012; Haliassos et al., 2020; Kuchler and Stroebel, 2021; Fagereng et al., 2021; Balakina, 2022; Han et al., 2022; Knüpfer et al., 2023. For advisors, see Inderst and Ottaviani, 2009; Inderst and Ottaviani, 2012; Egan et al., 2019; Linnainmaa et al., 2021; Bucher-Koenen et al., 2023.

vesting through their own planning and research in response to some external stimulus. For example, due to concerns about inflation eroding his savings, David (20, 93) educated himself by reading books and watching online videos before deciding to invest in the stock market. During a longer illness, which lowered the opportunity cost of time, Dennis (18, 21 & 57) reviewed his public pension statement and decided to increase his expected retirement income. He familiarized himself with different investment options and decided to invest in individual stocks through a monthly savings plan. Finally, Monique (19, 101-102) began following a German influencer and joined a women-focused finance group on Facebook, which ultimately led her to open an online brokerage account and invest in an MSCI World ETF. Both investors and non-investors highlight the value of online resources and social media (Oscar (21, 209), Madeline (1, 151), Luise (4, 129)). Dennis (18, 75) appreciates that social media allows him to exchange investment ideas with other equity investors. Resit (14, 186), who has not started investing, values the Youtube videos by financial influencers.

Insight 4: Family and friends, financial advisers, and one's own research can help overcome entry barriers and participation costs. However, differences in access to knowledgeable peers and variation in personality traits, such as trust, the desire for control, as well as cognitive and execution skills, are associated with variation in stock market participation.

4.4 Evidence from the Exploratory LLM-based Analysis

As discussed in Section 2.1.3, we also employ a large language model (LLMs) to analyze our qualitative interviews. We begin by asking the LLM about the positive and negative aspects interviewees associate with the stock market. Table 4, Panel A, summarizes the most relevant positive and negative aspects. Non-investors and investors recognize the stock market's attractiveness given relatively high long-term returns but express concerns about possible losses, the complexity of equity investing, as well as the time and the costs associated with participating in the stock market.

We next ask the LLM to analyze the interviews specifically with respect to the difficulties with participating in the stock market. Panel B lists the most relevant answers for both groups. When we ask the LLM to compare both groups, it provides the following list of similarities:

- Lack of knowledge about the stock market: Both non-participants and participants express uncertainty and lack of understanding about how the stock market works.
- Risk awareness: Both groups are aware of the risks associated with investing in stocks and want to minimize them.

- Fear of losses: Fear of losing money is a common concern for both groups.
- Importance of security: Both non-participants and participants value security and want to protect their investments.
- Time and effort: Both groups recognize that investing in stocks requires time and effort.

In terms of differences, the LLM notes that investors tend to have more experience and confidence in making investment decisions and are more willing to invest time and patience in managing their investments, while non-participants often see this as a hindrance.

Although the LLM-summaries include several of the key factors identified through our own human-led qualitative analysis, it is unclear with which likelihood a researcher would have noticed the connection between, on the one hand, entry and participation costs in form of the specific knowledge to be acquired (knowledge of each company, its products, and its prospects), the level and focus of monitoring needed, and the level of trading, as well as, on the other hand, the objective to time the market and to eliminate losses. Whereas this link emerged naturally from the qualitative content analysis, a researcher relying on LLM-summaries would have to decide to probe further into the nature of the necessary knowledge, the type of effort needed, and what can be achieved through such knowledge and effort. It is also possible, however, that the researcher would consider the list of key words rather generic and confirmatory of existing research and would decide not to probe further. When we do ask the LLM to analyze the role of knowledge and effort, the LLM reports that indeed all interviewees mention knowledge or ongoing effort as a difficulty with investing in the stock market. We then ask the LLM to analyze what, based on the interviewed non-investors and investors, can be achieved with knowledge and effort. Panel C of Table 4 reports the results for each group.

While it is again not entirely clear what a reasonable researcher would conclude from these findings, we go one step further and ask the LLM to explicitly evaluate whether interviewees seem to believe in market efficiency, that is, that "all available information is already included in the stock price." We further state that "[a]n implication of stock market efficiency is that one can always buy or sell stocks at prices that reflect all the information and that you therefore never buy too expensively and never sell too cheaply." The LLM (Appendix B) reports that none of the interviewees believe in the market efficiency of the stock market. However, when reviewing the evidence the LLM provides, it is clear that the LLM struggles making this assessment accurately. While it correctly recognizes that the belief that information collection and monitoring will lead to higher returns is inconsistent with a belief in market efficiency, it also provides interviewees' perception that the stock market

is unpredictable as evidence against their belief in market efficiency. We therefore conclude that this type of higher-order reasoning can be challenging for LLMs at their present state of development.

In a final step, we ask the LLM to analyze the interviews of investors to answer the question of how they became investors, in particular, given that investors share the perception that knowledge and effort are necessary in order to invest in the stock market. In Panel D of Table 4, we list the main factors that according to the LLM allowed the investors to enter the stock market. Again, we find that the LLM comes up with factors similar to the results of our human-led qualitative content, without offering any new factors.

In several robustness checks, we examine whether our main conclusions regarding the reasons for non-participation in the stock market among non-investors and the factors contributing to difficulties with stock market participation for investors are sensitive to the specific prompts we have used above or whether changing the order in which the individual interviews are analyzed by the LLM as well as the language of the interviews and prompts from German to English materially changes our conclusions. Results in Appendix Table B1 and Appendix Table B2 show that while there is variation with respect to the specific aspects and difficulties mentioned, there is substantial overlap between the possible insights from these robustness checks and the results in Table 4.

Overall, our LLM-based approach to synthesize the interviews appears to deliver a list of factors that are common with our human-led qualitative content analysis but also an impression that rather generic, known factors are relevant. The nuances that we are able to uncover through direct contact with the text of the interviews are consistent with the list produced by the LLM and yet they paint a more interesting and novel picture of the misperceptions that govern stock market non-participation. While it raises the possibility of accelerating the analysis of qualitative interviews through the employment of LLMs, it is important to note that it is not clear if a researcher would have recognized the particular role that knowledge and the effort of continual monitoring and trading seem to play as barriers to participating in the stock market, simply from reviewing the LLM-generated list of difficulties associated with investing in the stock market. Furthermore, our LLM-based analysis of whether interviewees believe in stock market efficiency shows the LLM's current limitations with respect to assessing the consistency of real-world beliefs with a specific scientific hypothesis.

It should, of course, be stressed that a number of LLMs exist, and they keep evolving. Our results are based on Llama 3.3, and preliminary tests we performed with DeepSeek-

R1[12] and with Microsoft Copilot operating on GPT-4 Turbo yielded broadly similar results. We cannot rule out that other AI/LLMs already have or in the future will have superior performance, but our findings suggest that it is premature to abandon human-led coding and interpretation before accumulating sufficient evidence on the reliability of analysis based solely on LLMs.

5 Survey Results

5.1 Overview

We use our survey data to test whether the insights that emerge from the analysis of our in-depth interviews hold in the broader population. Only 12% of the non-investors in our survey state that they are unfamiliar with all forms of equity investments, i.e., stocks, mutual funds, or ETFs. Consistent with our first insight from our interviews, non-investors expect an average equity premium of 3.25% p.a., which is very close to the estimate of recent investors (3.27%), though lower than that of long-term investors (4.54%) (see Table 2).

When allocating 100 points across positive aspects of the stock market (see Table 5, Panel A), both investors and non-investors emphasize return potential. Non-investors focus on "making money fast," whereas investors value capital preservation and long-term risk-return trade-offs. About one third of non-investors can imagine investing in stocks, mutual funds, or ETFs in the future, and 41% report having at some point looked into participating in the stock market.

To identify the main perceived barriers, we asked non-investors to also allocate 100 points across various negative aspects of stock market investing. Panel B of Table 5 reveals that entry and participation costs—particularly in the form of required knowledge—and fear of losing money are the dominant concerns. Investors' relative rankings of these concerns are broadly similar.

While these initial survey results mirror the frequency of themes identified in our interviews, we aim to better understand how perceptions of entry and participation costs arise. Specifically, we test the interpretation derived from our qualitative data that the perceived need for substantial financial knowledge and ongoing portfolio monitoring reflects a misunderstanding of how equity markets function.

To this end, we begin by assessing participants' agreement with a set of quotes—primarily drawn from our in-depth interviews, but also including selected statements from financial

[12]DeepSeek-R1-Distill-Llama-70B (deepseek-r1:70b)

researchers—that reflect perceived entry and participation costs as well as beliefs about market efficiency. We then turn to structured survey questions and a vignette study in which participants estimate the expected outcomes for three hypothetical investors with different levels of financial knowledge following different strategies that vary with respect to the investor's active involvement.

Given that investors, too, appear to believe that successful participation in the stock market requires continuous effort, monitoring, and information acquisition, we subsequently examine participants' reported pathways into investing.

5.2 Knowledge, Active Involvement, and Market Efficiency

5.2.1 Thematic Statements

For this analysis, we focus on 26 statements—19 quotes drawn from our qualitative interviews and 7 formulated by financial researchers. Randomly assigned subsets of participants evaluate one of these statements and indicate whether they (strongly) agree, disagree, or neither agree nor disagree.

Table 6 reports the results. Panel A includes two quotes that capture the diversity of attitudes toward the stock market. Investors are significantly more likely to agree than disagree with Luise's statement that she enjoys following the stock market, while non-investors and, interestingly, recent investors are significantly more likely to agree with Resit's more resigned view—that, at times, he does not want to have anything to do with the stock market but wants to have peace and quiet. Statistical significance for this and all subsequent agreement comparisons is assessed using Wilcoxon signed-rank tests.

Panel B of Table 6 reports results for 12 interview quotes emphasizing the perceived need for knowledge and effort to invest. In all cases, a significantly larger share of non-investors agrees than disagrees. Investors generally show a similar pattern; only for the quote that a lot of economics and math are needed, the difference between the fractions of agreeing and disagreeing investors is insignificant.

Finally, Panel C Table 6 includes 12 statements reflecting views consistent with market efficiency, seven of which (italicized) are not from the interviews but from conversations with finance researchers. Non-investors agree significantly with only five of these, and in six cases are more likely to disagree than agree. Investors are more supportive: they agree with 8 out of 12 statements, particularly those suggesting that anyone can invest and that opening a brokerage account is easy. However, many still disagree with statements minimizing the need for firm-level information or regular monitoring. Finally, for both non-investors and investors,

the average net agreement across all 12 statements is substantially smaller compared to Panel B.

In sum, non-investors' responses align closely with the insights from our qualitative interviews: they tend to view entry and participation costs as high and believe these can influence outcomes. Among investors, beliefs are more heterogeneous, with some appreciating that less knowledge and effort might be sufficient.

5.2.2 Structured Survey Questions

Given the perceived importance of knowledge for stock market participation, we design a set of statements, posed to a randomly selected subset of participants. Most items are based on how interviewees described the nature, acquisition, and purpose of financial knowledge; a few additional items reflect market efficiency assumptions, suggesting that knowledge has limited value for investment success. Table 7 reports agreement and disagreement rates. Items are grouped into three panels: A (Importance of Knowledge), B (Acquisition of Knowledge), and C (Purpose of Knowledge).

Panel A reveals that the vast majority of non-investors agree that substantial knowledge is needed to participate in equity markets, and most disagree with the idea that one can participate with little knowledge. Investors generally view knowledge as important for avoiding losses but are split on its necessity: roughly half agree that extensive knowledge is needed, while the other half believe one can participate with limited knowledge.

Panel B reveals that both groups are more likely to agree that it is possible to acquire the necessary knowledge, but see it as time- and effort-intensive. Few are convinced by the idea that it can be gained quickly through learning by doing.

Panel C focuses on what can be accomplished with knowledge. At least half of both investors and non-investors agree that it helps avoid losses, time the market, and select better-performing assets, with disagreement rarely exceeding 10%. Consistent with this, there is little support for the idea that knowledge has limited relevance. Finally, there is substantial support for views that knowledge allows one to understand the risks of investing in the equity market better, to be prepared for eventual outcomes, and thereby to experience less stress.

Taken together, the results in Table 7 show that both non-investors and investors view financial knowledge as time-consuming to acquire and important for investment outcomes. This belief is particularly pronounced among non-investors with regard to the effort required, while investors place stronger emphasis on the role of knowledge in shaping performance and the investment experience.

In our final set of survey questions, we examine participants' beliefs about the ongoing effort and costs involved in managing equity investments—both for direct stock holdings and for potentially lower-effort alternatives like mutual funds or ETFs. Table 8 presents participants' beliefs about how frequently equity investments require active management: Panel A for individual stocks, Panel B for mutual funds or ETFs. At least 70% of non-investors and 50% of investors state that at least weekly attention is required for any type of equity investment, and 25% of non-investors and about 10% of investors even believe that daily attention is needed. These results are consistent with the assumption that equity investing requires significant ongoing effort. Finally, we also explore participants' actual or intended investment strategies. A majority of investors (58%) report primarily holding individual stocks rather than mutual funds or ETFs. Among them, 14% hold exactly one stock, 42% hold between two and four, and only 18% hold more than ten (Table 9, Panel A). When asked why they do not diversify more broadly, 43% cite the effort involved in following many companies, followed by difficulties in selecting additional firms and trading costs (Panel B). Non-investors express similar concerns. When asked how they would invest, 57% say they do not know, and 11% indicate a preference for individual stocks. Among those who do, 86% expect to hold fewer than five, with 51% citing monitoring effort and trading costs as key constraints. Overall, these results are consistent with the insight from the our in-depth interviews that non-investors as well as investors perceive substantial ongoing participation costs and that these can reduce the number of stocks investors hold and thereby the benefits of diversification.

5.2.3 Knowledge, Effort, and Outcomes: Vignette Evidence on Investment Strategies

The survey responses broadly support the view that equity investment outcomes can be influenced by knowledge—both about how and when to invest—and by effort in the form of active portfolio management. To explore this further without imposing assumptions, we implement a vignette study featuring three hypothetical, gender-neutral investors: Analysis-P, Random-P, and Passive-P. Participants are told to assume that each invests €10,000 for five years in the German equity market.

Analysis-P has extensive financial knowledge, follows blue-chip firms closely, and reads media and financial statements. This type selects the 10 subjectively "best" companies, allocating €1,000 to each. Over the course of the five years, this type actively monitors the portfolio and makes adjustments based on news and corporate reports. Random-P is broadly familiar with German blue chips but does not follow them closely. This type randomly selects one firm from each of ten industries, invests €1,000 per firm, and makes no further changes.

Passive-P lacks specific knowledge and invests the entire €10,000 in an ETF tracking the DAX, which consists of the 40 largest German firms.

We ask participants to rank all three investors based on expected returns, risk in terms of return variance, and loss probabilities, allowing participants to rank two or all three investors equally.[13]

Table 10 Panel A reports the results related to returns and reveals that the majority of non-investors (87%) and investors (73%) expect Analysis-P to achieve the highest—or one of the highest—returns. Only 17% of non-investors and 31% of investors believe this to be true for Passive-P. Among investors, assessments vary by experience: 85% of recent investors rank Analysis-P highest, compared to 63% of long-term investors, while support for Passive-P rises from 22% to 38%. These patterns remain stable when considering the fraction of participants that rank Analysis-P strictly higher than Passive-P . When asked to quantify return differences, those who expect Analysis-P to outperform Passive-P estimate a gain of €607 among non-investors and more than twice that among investors.

In Panel B, we report results for the perceived riskiness of each of the three portfolios. Almost half of non-investors (47%) believe that Analysis-P has the least risky portfolio, while 42% believe this to be true for Passive-P. However, investors, in particular long-term investors, seem more likely to rank the riskiness of Passive-P's portfolio lowest.

Finally, in Panel C, we report corresponding results for the probability that after five years the portfolio is worth less than the initial investment amount of EUR 10,000. Among non-investors, 53% believe that Analysis-P's portfolio has the lowest loss probability, while 39% believe this to be the case for Passive-P. In the case of investors, the results are mixed. As a group, 51% rank Passive-P lowest in expected loss probability, while 43% rank Analysis-P lowest. However, a majority of recent investors (52%) believe that Analysis-P has the lowest loss probability compared to 45% who believe that this is case for Passive-P.

We also ask participants to estimate loss probabilities for each investor. Non-investors as well as investors assign roughly a 15% loss probability to Analysis-P. However, non-investors estimate Passive-P's loss probability at 28%, while investors place it closer to 18%. As shown in Figure 1, the gap in estimated loss probabilities between Passive-P and Analysis-P narrows with investment experience.

In summary, while the views of some long-term investors are closer to those consistent with efficient markets (List, 2003), overall our vignette study provides further support for the perception of substantial entry and participation cost arising from the belief that financial

[13]To ensure that participants understand the task and its implementation they have to first participate in a sports-related practice task.

knowledge as well as selecting and monitoring investment assets increase returns and lower loss probabilities.

5.3 Becoming an Investor

Finally, we seek to validate the insights from our qualitative interviews regarding the path to becoming an investor. While a full breakdown is provided in Appendix D, we summarize the main results here.

Results confirms the overall importance of the social environment, financial advice, as well as own research among the factors that led to the initial participation among the investors in our survey sample.

We again present survey participants with quotes from our qualitative interviews and ask whether they agree with each statement. The results suggest notable differences between investors and non-investors—especially regarding whether they talk to peers about stocks and how difficult they find it to access reliable financial advice. (Further details and exact response shares are reported in Appendix Table D2.)

We also explore two influences in greater detail: peers and financial advisors. More than half (56%) of non-investors say they have no peers who invest, compared to just 10% of investors—highlighting the distributional relevance of peer advice (Appendix Table D3).

Finally, both investors and non-investors believe that financial advisors behave in line with the active investment strategies, reinforcing the broader perception that ongoing effort and expertise are necessary for success (Appendix Table D4).

6 Conclusion

Our results from in-depth interviews and a population-wide survey reveal that many non-investors have a basic understanding of equity markets, the equity premium, and diversification. However, they often fail to recognize that in informationally efficient markets — where prices reflect all known information — screening and monitoring equity investments are unlikely to significantly impact returns and loss probabilities.

The lack of understanding market efficiency and the unawareness of buy-and-hold strategies lead to the assumption that successful participation in the stock market requires the time-consuming and challenging acquisition of substantial knowledge before entering the market as well as substantial ongoing effort and attention related to continuous monitoring as well as frequent decision-making and trading after entry. This misconception of how equity

markets work results in a so far underappreciated high level of perceived entry and participation costs relative to what economists typically consider necessary or objective costs, based on their knowledge of how the stock market works.

While these perceived entry and participation costs discourage stock market participation, we find that many investors share these beliefs about the stock market. However, often with the help of peers or trusted financial advisors, they have found a way to overcome these costs. Nevertheless, as our survey results highlight, the same misconception can lead to costly mistakes among investors, in the form of under-diversification and overtrading.

Our results suggest that policies to increase stock market participation could take two distinct but complementary approaches. First, educational initiatives could demystify stock market investing, emphasize the principles of market efficiency, and highlight the benefits of passive investment strategies. Such policies would benefit both non-investors and investors, leading to higher participation rates as well as more diversified portfolios and lower portfolio turnover. Second, improving access to reliable financial advice or providing default low-cost and broadly diversified investment options could facilitate stock market participation without requiring a deep understanding of market efficiency, while still reducing the need for extensive knowledge acquisition and frequent monitoring.

Finally, our study underscores the potential of qualitative research as a tool for addressing puzzles in finance and economics where beliefs and perceptions play a critical role. Combining qualitative research, possibly facilitated by continuously improving large language models (LLMs), with quantitative survey-based research appears to be a promising direction for future studies.

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Figure 1: Vignette Study: Estimates of Loss Probabilities by Investor Experience

This figure shows the estimated loss probabilities from the vignette study in the survey, assigned to two of the hypothetical investors, Analysis-P and Passive-P, across varying levels of stock market experience as reported by respondents in a structured question on investment experience.

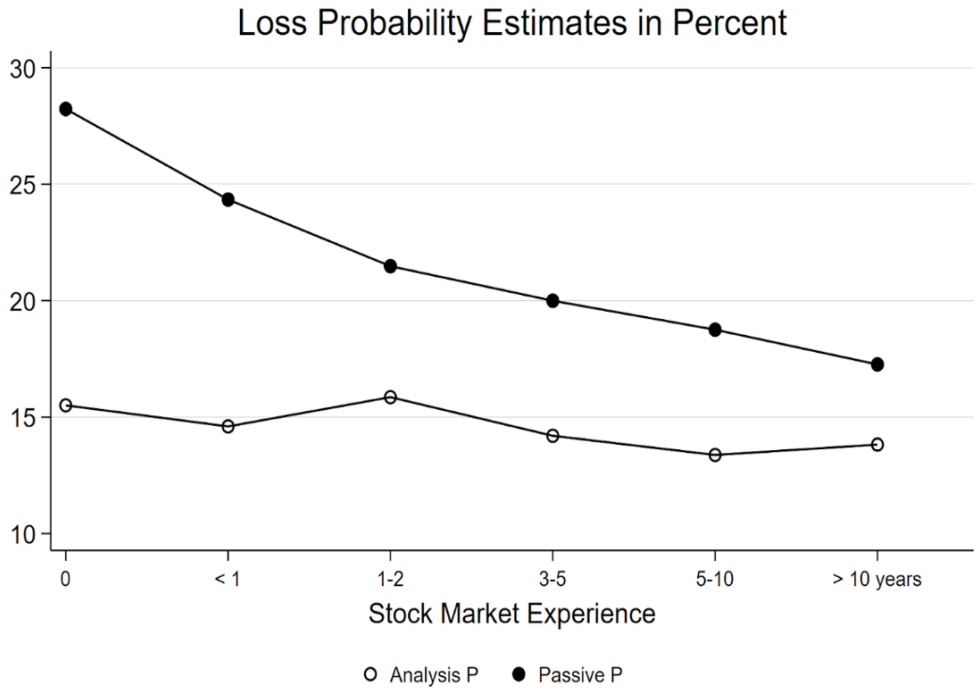


Table 1: Overview Interviewees

This table describes participants in the interviews. The information was collected prior to the interviews or revealed during the meeting. FT and PT indicate whether the profession is full-time or part-time, PL means parental leave.

Panel A: Non-Participants

ID	First Name	Gender, Age	Marital Status Children, Hh size	Education Occupation	Monthly Savings (EUR)	Word Count Interview	Assigned Codes
1	**Madeline**	Female, 51	N.A. 2, 2	Apprenticeship FT: IT Sales	50-100	10,492	85
2	**Bianca**	Female, 27	Single 0, 1	College (Law) FT: Attorney	100-200	9,722	137
3	**Cathleen**	Female, 41	Single 0, 1	College PT: Retail, Eldercare	50-100	11,112	61
4	**Luise**	Female, 25	Single 0, 3	College (Sport) FT: PhD Student	300-400	10,556	93
5	**Luca**	Male, 40	Divorced 1, 3	Apprenticeship FT: Carpenter	100-200	9,077	138
6	**Pia**	Female, 35	Married 2, 4	Apprenticeship PT: Pub. Sector Accountant	50-100	11,316	157
7	**Nadine**	Female, 25	Single 0, 2	Apprenticeship PT: Pub. Sector Student	150-200	8,592	82
8	**Kirstin**	Female, 52	Single 4, 3	Apprenticeship PT: Administrative Clerk	100-200	11,292	99
9	**Ingrid**	Female, 51	Married 0, 2	College PT: Sales Medical Devices	300-350	10,503	70
10	**Ralf**	Male, 51	Single 0, 2	Apprenticeship FT: Sports Coach	100-200	10,919	100
11	**Michaela**	Female, 31	Single 0, 2	College FT: Legal Administrator	100-200	6,498	72
12	**Silke**	Female, 45	N.A. N.A., 2	College (Teacher) FT: Teacher	>400	10,638	145
13	**Esther**	Female, 45	Married 5, 3	Apprenticeship PT: Accounting Manager	100-200	12,779	95
14	**Resit**	Male, 44	Single 0, 2	College FT: Sales Tech. Sector	>200	9,519	132
15	**Jacob**	Male, 47	Married 2, 4	College FT: Self-employed City Guide	N.A.	9,784	72
16	**Oliver**	Male, 31	Single 0, 1	Apprenticeship FT: Employee in Textile Industry	100-200	7,636	98
Average						10,027	102

Table 1 (continued): Overview Interviewees

Panel B: Participants

ID	First Name	Gender, Age	Marital Status Children, Hh size	Education Occupation	Monthly Savings (EUR)	Word Count Interview	Assigned Codes
17	**Uta**	Female, 48	Divorced 0, 1	Apprenticeship FT: Printing House	100-200	12,868	119
18	**Dennis**	Male, 32	Single 0, 1	Apprenticeship FT: Geriatric Nurse	>100	8,073	119
19	**Monique**	Female, 34	Married 1, 3	Apprenticeship PL: Flight Attendant	>200	9,235	122
20	**David**	Male, 36	Single 0, 1	Apprenticeship FT: Office Clerk in Logistics	>200	7,231	99
21	**Oscar**	Male, 25	Single 0, 1	College (Tourism Management) FT: Hotel Employee	50-100	9,911	135
22	**Anika**	Female, 40	Married 0, 2	Apprenticeship FT: Secretary in Real Estate	>200	9,930	140
23	**Lukas**	Male, 38	Married 1, 2	College FT: Public Sector Officer	>200	9,910	90
24	**Adam**	Male, 45	Single 0, 2	College FT: Employee in Tourism	N.A	12,153	152
25	**Manuel**	Male, 50	Married N.A., 3	College FT: HR Manager	100-200	11,995	151
Average						10,145	125

Table 2: Summary Statistics Survey

This table presents the means for various variables derived from the survey data, segmented by different participant groups. The categories include all participants, as well as distinct investor groups. Non-investors are individuals who have never invested in the stock market. Investors encompass all individuals actively investing at the time of the survey - within this group, recent investors are a subgroup who began investing within the last two years, and long-term investors are a subgroup who started over ten years ago. Past investors refer to individuals who have invested in the stock market at some point in the past but are not currently invested. The indication Mainly hold ETF/MF for non-investors is a hypothetical scenario of what they would choose if they participated in the stock market.

	All	**Non-Investors**	**Investors**			**Past Investors**
				Recent	Long-term	
Number of Participants	7,475	3,703	2,967	739	916	805
Fraction (in %)	100.00	49.54	39.69	9.89	12.25	10.77
Male	48.51	35.97	63.03	54.40	70.31	52.67
Age	45.51	45.80	43.79	35.86	54.42	50.56
College	22.54	11.94	36.84	29.09	35.04	18.63
Apprenticeship	62.89	67.73	54.13	50.74	61.46	72.92
Married	45.94	40.13	52.44	38.97	62.23	48.70
Employed	67.22	58.71	78.23	72.12	76.31	65.84
Self-employed	3.72	3.19	4.08	1.89	6.11	4.84
Unemployed	3.72	5.83	1.15	1.89	0.66	3.48
Retired	11.02	13.61	6.77	2.57	13.21	14.78
Income: < €3k	43.37	56.98	25.72	36.94	20.85	45.84
Income: €3k < €7k	51.18	41.13	63.63	53.59	67.36	51.55
Income: > 7k	5.44	1.90	10.65	9.47	11.79	2.61
Saves regularly	62.42	52.69	86.72	79.84	88.65	64.10
Saves occasionally	15.90	20.85	8.10	14.48	6.99	18.51
Net worth: <€50k	47.34	65.87	25.04	42.90	14.19	44.35
Net worth: €50-200k	24.82	19.77	30.23	28.96	26.20	28.07
Net worth: €200-450k	13.06	8.43	18.71	12.58	23.91	13.54
Net worth: €450-950k	10.10	4.64	16.82	9.34	22.82	10.43
Net worth: >€950k	4.68	1.30	9.20	6.22	12.88	3.60
Homeowner	38.11	27.09	50.59	35.05	67.58	42.86
Mortgage	23.32	17.90	30.03	26.12	28.60	23.48
Consumer credit	20.03	20.47	19.41	21.79	14.74	20.25
Fin. literacy, out of 3	2.15	1.83	2.48	2.23	2.71	2.37
Confidence fin. knowl.	47.95	29.25	71.05	55.62	78.82	48.82
Trust others	29.54	22.74	38.86	37.21	37.45	26.46
Exp. equity premium	3.47	3.25	3.67	3.27	4.54	3.73

Table 3: Code Frequencies

Code	All	All %	Non-Investors %	Investors %
ITEM 1: Entry and Participation Costs	**1,269**	**45.9%**	**44.9%**	**47.4%**
1.1 Financial expenditure	35	1.3%	0.5%	2.4%
1.1.1 Fixed monetary entry costs	3	0.1%	0.1%	0.1%
1.1.2 Fixed monetary participation costs	12	0.4%	0.1%	0.9%
1.1.3 Proportional monetary costs	20	0.7%	0.2%	1.4%
1.2 Non-monetary costs and benefits	294	10.6%	11.6%	9.3%
1.2.1 Opportunity costs (time) and effort	196	7.1%	8.2%	5.5%
1.2.2 Interest/excitement	62	2.2%	2.4%	1.9%
1.2.3 Desire for control/independence	31	1.1%	0.7%	1.7%
1.2.4 Status quo bias	5	0.2%	0.2%	0.2%
1.3 Abilities and Knowledge	940	34.0%	32.9%	35.7%
1.3.1 Cognitive, recall, and math skills	12	0.4%	0.4%	0.5%
1.3.2 Financial literacy	527	19.1%	18.5%	19.8%
1.3.3 Confidence in financial ability and knowledge	44	1.6%	2.0%	1.1%
1.3.4 Peer effects (operating through fixed entry or participation costs)	144	5.2%	5.1%	5.4%
1.3.5 Information sources	213	7.7%	6.9%	8.9%
ITEM 2: Preferences and Beliefs	**1,055**	**38.2%**	**38.7%**	**37.4%**
2.1 Preferences	430	15.6%	16.5%	14.2%
2.1.1 Risk and ambiguity	59	2.1%	2.4%	1.8%
2.1.2 Loss aversion	78	2.8%	2.8%	2.8%
2.1.3 Disappointment, regret aversion	4	0.1%	0.1%	0.2%
2.1.4 Time horizon and preferences	118	4.3%	4.0%	4.7%
2.1.5 Peer effects (operating through preferences)	37	1.3%	1.8%	0.7%
2.1.6 Religion, culture, values, political orientation, stereotypes	134	4.8%	5.4%	4.0%
2.2 Beliefs	625	22.6%	22.2%	23.2%
2.2.1 Return perception	266	9.6%	9.4%	10.0%
2.2.2 Risk perception	187	6.8%	7.8%	5.2%
2.2.3 Past exposure to adverse stock market events	42	1.5%	1.4%	1.7%
2.2.4 Perceived probability of disaster or significant loss of wealth	19	0.7%	0.3%	1.2%
2.2.5 Peer effects (operating through subjective beliefs)	40	1.4%	1.4%	1.5%
2.2.6 Trust	71	2.6%	1.9%	3.5%
ITEM 3: Economic Environment and Intended Equity Holding	**439**	**15.9%**	**16.3%**	**15.2%**
3.1 Life cycle and background risks	52	1.9%	1.8%	2.0%
3.1.1. Life-cycle aspects	27	1.0%	0.9%	1.2%
3.1.2. Health status and risk	11	0.4%	0.2%	0.6%
3.1.2. Unemployment and labor income risk	14	0.5%	0.7%	0.3%
3.2 Constraints	48	1.7%	2.1%	1.2%
3.2.1. Borrowing constraints	1	0.0%	0.0%	0.1%
3.2.2. Perceived irreversibility and liquidity considerations	40	1.4%	1.8%	1.0%
3.2.3. Consumption and financial commitments	7	0.3%	0.3%	0.2%
3.3 Substitutes, comparisons to other classes and liabilities	141	5.1%	5.1%	5.0%
3.4 Intended holdings	198	7.2%	7.3%	6.9%
Sum	**2,763**	**100%**	**100%**	**100%**

Table 4: LLM Results: Stock Market Participation

This table reports outputs from several applications of a Large Language Model (LLM) to synthesize the qualitative interviews of non-investors and investors with respect to the positive and negative aspects of investing in the stock market (Panel A), difficulties with participating in the stock market (Panel B), the purpose of knowledge and ongoing effort (Panel C), and—based on interviews with only investors—the mechanisms of becoming an investor (Panel D). For additional explanations and the prompts used, see Online-Appendix Section B.

Panel A: Positive and Negative Aspects			
Non-Investors		**Investors**	
Positive Aspects			
1	Opportunity to generate wealth	1	Opportunity to multiply money
2	Diversification of investments	2	Diversification of investments
3	Long-term investment strategy	3	Long-term perspective
4	Flexibility	4	Flexibility
5	Opportunity to participate in company profits	5	Opportunity to participate in the development of companies
Negative Aspects			
1	Risk	1	Risk of losses
2	Complexity of the market	2	Market complexity
3	Uncertainty	3	Dependence on external factors
4	Time required	4	Uncertainty and loss of control
5	Fees and costs	5	Time required
Panel B: Difficulties with Participation			
Non-Investors		**Investors**	
1	Lack of knowledge and understanding	1	Lack of experience and knowledge
2	Risk awareness	2	Risk awareness
3	Market complexity	3	Complexity of the topic
4	Security concerns	4	Fear of loss
5	Fees and costs	5	Lack of self-confidence
6	Time and effort	6	Information overload and confusion
7	Risk awareness	7	Psychological factors
8	Concerns about returns	8	Time and effort
9	Uncertainty about the future	9	Dependency on external factors
10	Lack of experience	10	Lack of support
Panel C: The Purpose of Knowledge and Ongoing Effort			
Non-Investors		**Investors**	
1	Better understanding of the stock market and how it works	1	Wealth accumulation and financial independence
2	Ability to earn or save money	2	Long-term asset building and retirement planning
3	Greater confidence in own abilities	3	Risk minimization and opportunity maximization
4	The ability to participate in the stock market and benefit from market opportunities	4	Better return on investments
5	A good diversification of assets to minimize risk	5	Flexibility and adaptability
6	The ability to choose the right stocks	6	Understanding of the market and financial products
7	The ability to invest for the long or short term	7	Time and effort for research and analysis
8	A better understanding of the risks and opportunities of the stock market		
Panel D: Becoming an Investor (Investors only)			
1	A long-term perspective	6	Financial independence
2	Risk awareness	7	Self-reflection and self-awareness
3	Education and self-education	8	Technology and digital platforms
4	Diversification	9	Social environment and support
5	Trust in financial advisors or experts	10	Experiences and learning processes

Table 5: Positive and Negative Aspects of Equity Investing

This table reports respondents' answers to a question about positive (Panel A) and about negative (Panel B) aspects of investing. For each question, participants are asked to allocate 100 points among pre-selected factors: in the positive question, participants focused on what makes stock market investing more appealing than saving in a savings account; in the negative question, they highlighted concerns that make a savings account preferable to stock market investing. The order of the two questions was counterbalanced.

Panel A: Positive Aspects				
	Non-Investors	**Investors**		
			Recent	Long-term
Financial Returns	**56.79**	**60.17**	**56.80**	**64.81**
Earn lot's of money quickly	19.15	10.01	12.36	7.70
Regular dividend pay-outs	13.59	13.91	12.51	16.06
Long-term preservation of capital	13.14	15.89	15.40	16.86
Attractive long term returns relative to risks	10.91	20.37	16.53	24.19
Entry and Participation	**21.78**	**26.03**	**28.55**	**22.73**
Fun, interest, and excitement	6.46	7.05	7.61	6.44
Low effort to participate	6.40	6.99	7.82	5.87
Simple and easy access to the stock market	5.99	8.36	8.65	8.32
Ability to discuss the stock market with peers	2.94	3.63	4.47	2.10
Others				
Get money back quickly if necessary	16.85	9.93	10.10	9.80
Have a say in corporate policies through voting rights	4.58	3.87	4.55	2.65
N	3,703	2,967	739	916

Panel B: Negative Aspects				
	Non-Investors	**Investors**		
			Recent	Long-term
Entry and Participation Costs	**42.36**	**42.36**	**45.01**	**39.84**
Knowledge required for participation	14.21	12.50	13.73	11.37
Dealing with topics that do not interest me	8.68	5.45	6.38	4.45
Concern that I cannot do it on my own and have no support	8.21	6.05	8.72	3.69
Brokerage and trading fees	5.83	12.38	10.03	15.53
High effort of participating in the stock market	5.43	5.98	6.16	4.80
Risks and Losses	**30.84**	**27.51**	**25.45**	**30.59**
Fear of having less money at the end than at the beginning	24.72	20.03	18.32	22.79
Unattractive long term returns relative to risks	6.12	7.48	7.12	7.80
Others				
Very difficult to get my money back if I need it	11.51	7.98	8.27	7.60
Necessary investment amount	6.31	6.99	7.77	5.70
Need for a long-term investment horizon	5.21	10.54	8.27	12.40
Conflict with my values	3.77	4.63	5.23	3.87
N	3,703	2,967	739	916

Table 6: Quotes on Entry and Participation Costs and Market Efficiency

This table reports respondents' (dis-)agreement with quotes that were taken from our qualitative interviews or obtained from finance colleagues and that are grounded in an understanding of market efficiency. We randomly assigned subsets of survey participants to a subset of quotes to avoid survey fatigue. Regarding entry and participation cost we grouped quotes with respect to proof of concept (Panel A), Need for Knowledge, Market Timing, and Monitoring (Panel B), and Market Efficiency (Panel C)

Panel A: Proof of Concept

Quote	Investor Type	N	Fraction (in %)		Diff.	Sig.
			Agree	Disagree		
Enjoy following the stock market	**Non-Investors**	**350**	**18.57**	**50.86**	**-32.29**	***
"And I enjoy following the stock market, and I have a lot of interest in it and find it exciting in general. It's a bit like a sport. I experience a lot of new things."	**Investors**	**325**	**58.15**	**19.38**	**38.77**	***
	- Recent	71	54.93	16.90	38.03	***
	- Long-term	109	57.80	20.18	37.61	***
I don't want to have anything to do with the stock market	**Non-Investors**	**439**	**52.85**	**13.90**	**38.95**	***
"Sometimes you say, I don't want anything to do with the whole thing.' Do you understand? Why should an ordinary person necessarily deal with it? Sometimes you get this feeling that you just want to have peace and quiet."	**Investors**	**410**	**38.29**	**35.12**	**3.17**	
	- Recent	93	47.31	24.73	22.58	**
	- Long-term	120	25.00	47.50	-22.50	***

Panel B: Need for Knowledge, Market Timing, and Monitoring

Quote	Investor Type	N	Fraction (in %)		Diff.	Sig.
			Agree	Disagree		
Knowledge: Research just like Kitchen Applicance	**Non-Investors**	**379**	**89.71**	**2.37**	**87.34**	***
"Before investing in stocks, one should familiarize oneself with them. Just like I would research a new kitchen appliance before buying it—how it works, its reviews, user experiences, and so on."	**Investors**	**303**	**87.79**	**4.62**	**83.17**	***
	- Recent	60	90.00	3.33	86.67	***
	- Long-term	99	73.23	7.87	65.35	***
Knowledge: Stocks are complex	**Non-investors**	**453**	**80.35**	**3.97**	**76.38**	***
"Stocks are a very complex matter that you should really look into before you start investing in them."	**Investors**	**392**	**87.79**	**4.62**	**83.17**	***
	- Recent	81	90.00	3.33	86.67	***
	- Long-term	127	73.23	7.87	65.35	***
Knowledge: Want to understand	**Non-investors**	**349**	**75.64**	**9.74**	**65.90**	***
"Yes, I want to do it right; I want to understand what I'm doing. I don't want to just invest blindly just because everyone says you should just invest in ETFs or stocks."	**Investors**	**318**	**79.56**	**7.23**	**72.33**	***
	- Recent	60	70.00	11.67	58.33	***
	- Long-term	109	86.24	7.34	78.90	***
Monitoring: Read balance sheets	**Non-investors**	**355**	**71.83**	**7.32**	**64.51**	***
"You have to pay attention to so many things, look at how the company is doing, what are the figures, do I have to be able to read the balance sheet, what does the balance sheet tell me?"	**Investors**	**308**	**57.79**	**18.83**	**38.96**	***
	- Recent	83	49.40	22.89	26.51	**
	- Long-term	83	62.65	16.87	45.78	***
Monitoring: Have to keep up with it	**Non-investors**	**474**	**69.83**	**5.70**	**64.14**	***
"But you have to keep up with it. If you let it slide, things can go wrong quickly, and you can lose money."	**Investors**	**384**	**58.07**	**16.93**	**41.15**	***
	- Recent	91	53.85	16.48	37.36	***
	- Long-term	126	60.32	15.08	45.24	***

Table 6 (continued): Quotes on Entry and Participation Costs and Market Efficiency

Panel B (continued): Need for Knowledge, Market Timing, and Monitoring

Quote	Investor Type	N	Fraction (in %)		Diff.	Sig.
			Agree	Disagree		
Monitoring: Always have to do research	**Non-investors**	**467**	**68.74**	**6.85**	**61.88**	***
"You have to inform yourself about which stocks you can buy... So you always have to research. It's about research, it's about diligent work. You have to deal with it and make a concrete plan."	**Investors**	**373**	**64.88**	**10.19**	**54.69**	***
	- Recent	91	67.03	7.69	59.34	***
	- Long-term	117	63.25	10.26	52.99	***
Monitoring: Keep an eye on	**Non-investors**	**453**	**64.02**	**5.96**	**58.06**	***
"Because I also think ETFs (or mutual funds) are not a sure-fire thing like a building society savings contract or life insurance. Investments in the stock market are something you should at least keep an eye on."	**Investors**	**375**	**68.00**	**14.40**	**53.60**	***
	- Recent	96	70.83	12.50	58.33	***
	- Long-term	114	73.68	12.28	61.40	***
Market Timing: Need to know how stocks will develop	**Non-investors**	**457**	**66.08**	**8.32**	**57.77**	***
"Yes, you basically need to know that since you can't see the future, you need to somehow know how stocks will develop if you could see the future. So, what should you buy and for what reasons? Could it be sensible that a certain stock will continue to rise? You have to inform yourself somehow."	**Investors**	**381**	**66.67**	**7.87**	**58.79**	***
	- Recent	88	67.05	9.09	57.95	***
	- Long-term	110	66.36	5.45	60.91	***
Knowledge: Need to know which firms inside fund	**Non-investors**	**368**	**66.30**	**10.33**	**55.98**	***
"In the case of funds/ETFs, I would still like to know which companies are behind them. So I wouldn't do without research completely."	**Investors**	**293**	**74.74**	**10.92**	**63.82**	***
	- Recent	75	81.33	6.67	74.67	***
	- Long-term	91	76.92	8.79	68.13	***
Knowledge: Lots of economics and math	**Non-investors**	**361**	**53.74**	**14.40**	**39.34**	***
"A lot of economics and math that you have to master if you want to invest in stocks."	**Investors**	**328**	**39.02**	**37.50**	**1.52**	
	- Recent	83	43.37	33.73	9.64	
	- Long-term	96	31.25	44.79	-13.54	*
Knowledge: What is a safe stock	**Non-investors**	**425**	**47.06**	**24.00**	**23.06**	***
"Stocks are really like playing with fire if you don't know what you're doing. That's why I'm spending a lot of time on it because I want to understand what is a safe investment in stocks and what is not."	**Investors**	**404**	**53.96**	**17.33**	**36.63**	***
	- Recent	95	49.47	14.74	34.74	***
	- Long-term	121	52.07	19.83	32.23	***
Market Timing: Study how the market works	**Non-investors**	**456**	**34.87**	**18.42**	**16.45**	***
"Once you have studied how the stock market works, you can see which product or stock will be really good in two or three years."	**Investors**	**381**	**35.70**	**27.82**	**7.87**	**
	- Recent	87	35.63	21.84	13.79	
	- Long-term	121	23.14	35.54	-12.40	*
Average (dis-)agreement across Quotes	**Non-investors**		**60.67**	**9.00**	**51.68**	
	Investors		**58.48**	**14.10**	**44.39**	

Table 6 (continued): Quotes on Entry and Participation Costs and Market Efficiency

Panel C: Market Efficiency

Quote	Investor Type	N	Fraction (in %)		Diff.	Sig.
			Agree	Disagree		
Everybody can invest	**Non-investors**	**465**	**45.38**	**16.99**	**28.39**	***
"Today, anyone can invest. There are many ways to open a portfolio online even as a layperson. I think it is now open to the general public."	**Investors**	**400**	**77.75**	**5.75**	**72.00**	***
	- Recent	95	76.84	7.37	69.47	***
	- Long-term	124	76.61	5.65	70.97	***
Fluctuations are unavoidable	**Non-investors**	**444**	**40.77**	**20.05**	**20.72**	***
"Fluctuations in the stock market are hard to predict and unavoidable, so it is not necessary to monitor the companies in your portfolio or the economy. These fluctuations (the risk of the stock market) are the reason that, in the long term, the stock market yields higher returns than a savings account."	**Investors**	**398**	**56.78**	**19.10**	**37.69**	***
	- Recent	111	53.15	17.12	36.04	***
	- Long-term	117	47.86	24.79	23.08	***
Can't predict what will happen	**Non-investors**	**432**	**35.88**	**20.83**	**15.05**	***
"But eventually I realized that I don't need to go so deep because it doesn't help me to go so deep since I can't predict what will happen with the stock tomorrow or the day after."	**Investors**	**400**	**52.00**	**16.50**	**35.50**	***
	- Recent	85	44.71	18.82	25.88	***
	- Long-term	122	45.90	17.21	28.69	***
No perfect time to buy or sell	**Non-investors**	**437**	**39.82**	**24.94**	**14.87**	***
"There is no perfect time to buy or sell. In hindsight, you know better, but you can't predict it. Even professionals can't predict which stocks will perform best next year. Therefore, it is unnecessary to inform yourself about companies or economic forecasts."	**Investors**	**393**	**47.84**	**23.92**	**23.92**	***
	- Recent	86	44.19	26.74	17.44	*
	- Long-term	118	52.54	24.58	27.97	***
Let the portfolio rest	**Non-investors**	**382**	**31.15**	**22.77**	**8.38**	
"You simply let the portfolio rest on its own for a longer period of time. You keep track of it. And when you know you're in positive territory, you're happy and buy yourself an ice cream, for example."	**Investors**	**297**	**52.86**	**18.52**	**34.34**	***
	- Recent	72	61.11	13.89	47.22	***
	- Long-term	87	41.38	21.84	19.54	**
Active vs. passive	**Non-investors**	**460**	**18.04**	**11.30**	**6.74**	**
"Funds are managed, so there is a fund manager, and ETFs are unmanaged. So you really only have the index, but you have lower fees. The performance of ETFs is usually just as good, if not better."	**Investors**	**380**	**52.37**	**8.42**	**43.95**	***
	- Recent	78	48.72	12.82	35.90	***
	- Long-term	133	48.12	6.02	42.11	***
Opening a brokerage account is easy	**Non-investors**	**370**	**26.76**	**34.05**	**-7.30**	**
"I think opening a brokerage account would be quite easy for me. It's basically like opening a bank account, I suppose. You just have to submit an application, probably through an app or something like that."	**Investors**	**305**	**69.18**	**11.48**	**57.70**	***
	- Recent	67	56.72	10.45	46.27	***
	- Long-term	107	78.50	9.35	69.16	***

Table 6 (continued): Quotes on Entry and Participation Costs and Market Efficiency

Panel C (continued): Market Efficiency

Quote	Investor Type	N	Fraction (in %)		Diff.	Sig.
			Agree	Disagree		
Low-cost ETF & better off than most	**Non-investors**	**471**	**21.87**	**30.57**	**-8.70**	***
"It's pretty simple. You don't have to be a stock market guru. Boring is better. Just automatically save through a savings plan into a low-cost ETF, and you'll already be ahead of most people."	**Investors**	**379**	**59.89**	**15.30**	**44.59**	***
	- Recent	86	62.79	12.79	50.00	***
	- Long-term	110	54.55	16.36	38.18	***
Can't predict prices	**Non-investors**	**464**	**23.28**	**42.24**	**-18.97**	***
"Since I can't predict stock prices anyway, I don't need to inform myself about individual companies or the economy."	**Investors**	**376**	**26.60**	**53.46**	**-26.86**	***
	- Recent	93	29.03	49.46	-20.43	**
	- Long-term	121	24.79	60.33	-35.54	***
Participating is easy	**Non-investors**	**347**	**15.56**	**47.84**	**-32.28**	***
"Participating in the stock market is easy and not stressful: You buy a well-diversified fund or ETF, leave it alone, and only need to select the products once at the beginning or when making new investments. After that, minimal effort is required."	**Investors**	**309**	**51.46**	**16.83**	**34.63**	***
	- Recent	84	50.00	16.67	33.33	***
	- Long-term	79	54.43	17.72	36.71	***
Only little knowledge is needed	**Non-investors**	**451**	**16.63**	**54.99**	**-38.36**	***
"To participate in the stock market, you don't need to be informed about individual companies or the overall economy. You only need a little knowledge: diversify widely, choose low-cost products, trade little - and you're done."	**Investors**	**374**	**33.69**	**38.77**	**-5.08**	*
	- Recent	88	35.23	34.09	1.14	
	- Long-term	111	27.93	47.75	-19.82	***
Look at portfolio once a year	**Non-investors**	**363**	**10.47**	**58.68**	**-48.21**	***
"It's enough to look at your stock or fund/ETF portfolio once a year. And that's just for information, not to trade."	**Investors**	**314**	**26.43**	**50.96**	**-24.52**	***
	- Recent	67	26.87	52.24	-25.37	***
	- Long-term	96	19.79	55.21	-35.42	***
Average (dis-)agreement across Quotes	**Non-investors**		**27.81**	**27.25**	**0.56**	
	Investors		**46.57**	**21.45**	**25.12**	

Table 7: Role of Financial Knowledge

This table reports answers to knowledge-related statements to a subset of randomly selected survey participants. Statements are grouped by topic - the importance of knowledge for participation (Panel A) the acquisition of knowledge (Panel B) and the purpose of knowledge in the context of investing (Panel C). Within each panel, statements are sorted based on the difference between the fractions of non-investors that agree and those that disagree. Differences of the fractions of those agreeing and disagreeing are tested using a Wilcoxon signed-rank test, which is displayed in the last Column

Panel A: Importance of Knowledge

Statement	Investor Type	N	Fraction (in %)		Diff.	Sig.
			Agree	Disagree		
Irresponsible without knowledge	**Non-Investors**	**1,891**	**72.92**	**5.45**	**67.48**	***
Participating in the stock market without	**Investors**	**1,417**	**62,24**	**9.88**	**52.36**	***
the necessary knowledge is irresponsible	- Recent	378	57.41	12.17	45.24	***
because with the required knowledge, losses can be avoided.	- Long-term	438	63.47	8.22	55.25	***
Lot's of knowledge required	**Non-Investors**	**1,891**	**68.27**	**7.30**	**60.97**	***
Participating in the stock market requires a	**Investors**	**1,417**	**49.12**	**19.97**	**29.15**	***
lot of knowledge.	- Recent	378	49.47	20.63	28.84	***
	- Long-term	438	45.89	21.00	24.89	***
Knowledge does not matter that much	**Non-Investors**	**1,891**	**21.68**	**24.11**	**-2.43**	**
The return you can achieve does not depend	**Investors**	**1,417**	**46.58**	**16.37**	**30.20**	***
so much on your own knowledge of the	- Recent	378	41.53	17.99	23.54	***
subject as long as you pay attention to a few basic aspects.	- Long-term	438	47.95	13.70	34.25	***
Little knowledge required	**Non-Investors**	**1,891**	**19.04**	**43.52**	**-24.48**	***
You can participate in the stock market	**Investors**	**1,417**	**53.35**	**17.57**	**35.78**	***
with a little knowledge.	- Recent	378	51.06	20.37	30.69	***
	- Long-term	438	54.79	15.30	39.50	***

Panel B: Acquisition of Knowledge

Statement	Investor Type	N	Fraction (in %)		Diff.	Sig.
			Agree	Disagree		
Acquisition is time consuming	**Non-Investors**	**1,891**	**66.79**	**5.61**	**61.18**	***
Acquiring the knowledge required to	**Investors**	**1,417**	**51.16**	**17.50**	**33.66**	***
participate in the stock market takes a lot	- Recent	378	52.91	17.99	34.92	***
of time.	- Long-term	438	45.21	20.32	24.89	***
Acquisition requires a lot of work	**Non-Investors**	**1,891**	**64.78**	**6.56**	**58.22**	***
Acquiring the knowledge required to	**Investors**	**1,417**	**49.75**	**17.71**	**32.04**	***
participate in the stock market requires a	- Recent	378	50.26	17.46	32.80	***
lot of work.	- Long-term	438	45.43	20.32	25.11	***
Acquisition is possible	**Non-Investors**	**1,891**	**64.04**	**6.13**	**57.91**	***
It is generally possible to acquire the	**Investors**	**1,417**	**80.73**	**3.95**	**76.78**	***
knowledge required to participate in the	- Recent	378	74.60	7.14	67.46	***
stock market.	- Long-term	438	86.99	1.14	85.84	***
Acquisition through "learning by doing"	**Non-Investors**	**1,891**	**17.66**	**38.60**	**-20.94**	***
The knowledge required to participate in	**Investors**	**1,417**	**39.59**	**26.18**	**13.41**	***
the stock market can be acquired relatively	- Recent	378	36.77	26.19	10.58	***
quickly through trial and error ("learning by doing").	- Long-term	438	36.99	27.17	9.82	***

Table 7 (continued): Role of Financial Knowledge

Panel C: Purpose of Knowledge

Statement	Investor Type	N	Fraction (in %) Agree	Disagree	Diff.	Sig.
By acquiring the necessary knowledge, one can on the stock market: ...						
better understand the possible risks.	**Non-Investors**	**1,891**	**69.96**	**5.13**	**64.83**	***
	Investors	**1,417**	**83.98**	**2.47**	**81.51**	***
	- Recent	378	79.37	4.23	75.13	***
	- Long-term	438	91.78	0.46	91.32	***
better determine when to buy and sell.	**Non-Investors**	**1,891**	**63.72**	**6.40**	**57.32**	***
	Investors	**1,417**	**72.62**	**6.49**	**66.13**	***
	- Recent	378	74.07	6.61	67.46	***
	- Long-term	438	73.29	5.71	67.58	***
be better prepared for all possible scenarios that may come your way.	**Non-Investors**	**1,891**	**54.52**	**10.63**	**43.89**	***
	Investors	**1,417**	**64.50**	**8.96**	**55.54**	***
	- Recent	378	61.64	9.52	52.12	***
	- Long-term	438	69.63	6.39	63.24	***
avoid stocks, ETFs and funds with a high probability of loss.	**Non-Investors**	**1,891**	**49.07**	**7.83**	**41.25**	***
	Investors	**1,417**	**69.23**	**6.92**	**62.31**	***
	- Recent	378	69.84	7.67	62.17	***
	- Long-term	438	67.81	7.53	60.27	***
select stocks, ETFs and funds with particularly high returns.	**Non-Investors**	**1,891**	**46.38**	**8.41**	**37.97**	***
	Investors	**1,417**	**65.35**	**6.00**	**59.35**	***
	- Recent	378	63.23	6.35	56.88	***
	- Long-term	438	64.84	7.76	57.08	***
avoid losses.	**Non-Investors**	**1,891**	**49.39**	**13.43**	**35.96**	***
	Investors	**1,417**	**60.13**	**9.67**	**50.46**	***
	- Recent	378	62.43	10.05	52.38	***
	- Long-term	438	57.08	10.27	46.80	***
have less stress.	**Non-Investors**	**1,891**	**49.44**	**13.91**	**35.54**	***
	Investors	**1,417**	**66.90**	**8.12**	**58.79**	***
	- Recent	378	63.23	11.90	51.32	***
	- Long-term	438	69.41	6.39	63.01	***
hardly influence the return of the portfolio.	**Non-Investors**	**1,891**	**24.01**	**18.09**	**5.92**	***
	Investors	**1,417**	**30.77**	**34.44**	**-3.67**	
	- Recent	378	33.33	29.63	3.70	
	- Long-term	438	26.71	39.50	-12.79	***
reduce price fluctuations.	**Non-Investors**	**1,891**	**27.71**	**26.92**	**0.79**	
	Investors	**1,417**	**44.95**	**24.56**	**20.40**	***
	- Recent	378	44.18	26.98	17.20	***
	- Long-term	438	46.58	23.52	23.06	***

Table 8: Frequency of Managing Stocks, Mutual Funds, and ETFs

This table reports responses to a structured question on how often respondents believe an investment in stocks (Panel A) or mutual funds/ETFs (Panel B) needs to be monitored after the investment has been made. Each respondent was randomly assigned to answer questions about only one of the two investment products (either single stocks or mutual funds/ETFs)

Panel A: Individual Stocks

Investments need to be monitored (Fraction in %)	**Non-Investors**	**Investors**	Recent	Long-term
Daily	25.46	11.86	13.92	12.62
At least once per week	47.06	49.14	51.55	42.52
At least once per month	14.20	23.57	24.74	22.43
At least once per half-year	5.17	11.86	6.70	15.89
Once per year or less	8.11	3.57	3.09	6.54
Observations	986	700	194	214

Panel B: Mutual Funds or ETFs

Investments need to be monitored (Fraction in %)	**Non-Investors**	**Investors**	Recent	Long-term
Daily	23.98	9.48	15.22	6.25
At least once per week	49.83	40.31	44.02	34.82
At least once per month	13.70	26.50	25.00	26.79
At least once per half-year	5.30	16.32	11.41	20.98
Once per year or less	7.18	7.39	0.43	11.16
Observations	905	717	184	224

Table 9: Number of Stocks Invested In and Barriers to Diversification

This table reports the number of companies respondents would invest in (Panel A) and the reasons that prevent them from investing in a larger number of companies (Panel B). The responses are divided between non-investors, investors, and further split into recent and long-term investors.

Panel A: Number of Companies Invested In

How many different companies would you choose/did you choose	**Non-Investors**	**Investors**		
			Recent	Long-term
Exactly 1	16.39	14.26	16.44	17.35
More than 1 but less than 5	69.60	42.17	53.08	29.64
Between 5 and 10	11.64	25.33	21.23	26.27
More than 10	2.38	18.24	9.25	26.75
Observations	421	1,283	292	415

Panel B: Barriers to Investing in More Companies

What prevents you from investing in a larger number of companies?	**Non-Investors**	**Investors**		
			Recent	Long-term
Fees associated with buying and selling	50.61	28.88	32.08	24.67
Difficulty of selecting additional companies	23.36	33.37	37.74	25.33
Effort involved in following many companies	50.61	42.61	42.64	34.87
Concentration on existing companies	28.71	24.79	19.62	25.33
Lack of knowledge of other companies	10.41	11.15	9.43	16.45
Satisfied with current companies	16.79	13.46	11.81	25.99
Uncertainty about timing to buy/sell stocks	-	21.45	27.55	17.43
Waiting for the right time to buy/sell	-	21.64	16.98	26.32
Other	4.14	3.81	3.02	7.24
Observations	411	1,049	265	304

Table 10: Vignette Study: Investor Types

This table reports results from a vignette study, in which we describe three potential investors (Analysis-P, Random-P and Passive-P and asked participants to rank their portfolios with regard to returns (Panel A), risk (Panel B), and loss probabilities (Panel C)

Panel A: Expected Returns

	Non-Investors	**Investors**	Recent	Long-term
Highest Ranked: Fraction (in %)				
Analysis-P	86.70	73.10	85.32	63.18
Random-P	16.39	14.26	13.57	11.51
Passive-P	17.11	31.03	22.16	37.66
Active vs. Passive: Fraction (in %)				
Analysis-P > Passive-P	80.91	67.74	77.01	60.88
Analysis-P = Passive-P	10.04	9.74	10.80	6.07
If Analysis-P > Passive-P				
Expected Return Difference (in €)	607.64	1,287.20	1,360.39	1,520.23

Panel B: Risk

	Non-Investors	**Investors**	Recent	Long-term
Lowest Ranked: Fraction (in %)				
Analysis-P	47.02	35.29	44.04	31.80
Random-P	20.47	19.23	18.28	19.67
Passive-P	41.67	53.16	46.26	56.49
Active vs. Passive: Fraction (in %)				
Analysis-P < Passive-P	47.35	35.35	39.89	33.47
Analysis-P = Passive-P	10.87	9.48	12.74	7.11

Table 10 (continued): Vignette Study: Investor Types

Panel C: Loss Probabilities

	Non-Investors	**Investors**	Recent	Long-term
Lowest Ranked: Fraction (in %)				
Analysis-P	53.48	42.90	51.52	41.00
Random-P	16.72	14.77	17.17	12.55
Passive-P	38.85	51.42	44.88	53.56
Active vs. Passive: Fraction (in %)				
Analysis-P < Passive-P	53.97	39.81	45.43	38.08
Analysis-P = Passive-P	11.37	12.39	17.17	10.25
Subjective Loss Probability				
Analysis-P	15.67	14.02	15.84	13.31
Random-P	30.99	27.88	30.34	25.90
Passive-P	28.46	18.20	20.13	16.71
Observations	1,812	1,550	361	478

Online Appendix

Rethinking the Stock Market Participation Puzzle: A Qualitative Approach

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Content:

- A. Interviews: Data Collection and Coding
  - A.1. Interview Guide
  - A.2. Coding Scheme
- B. Exploratory LLM-based Analysis: Details
- C. Interview Quotes Referenced in Section 4
- D. Survey Results: Becoming an Investor

A Interviews: Data Collection and Coding

We present the detailed interview guide that used in the semi-structured interviews as well as the coding scheme used to code the transcribed interviews.

A.1 Interview Guide

Introduction (5-10 minutes)

- Hello, my name is ... and I would like to thank you for taking the time to speak with me today.
- I am an **independent market researcher**, which means I do not work for a specific company or brand. I mention this because I want you to feel free to **speak openly with me**. There are **no right or wrong answers**, and **your statements will not be judged**.
- With your permission, I would like to record this interview for our research purposes. Even though I will be taking notes as we speak, I may not be able to capture everything, but it is important for me to gather all the details. The recordings will be deleted after the study is completed.
- Everything you say will be treated as **strictly confidential** and **evaluated in a strictly anonymized form**. Your name will never be mentioned in the results, meaning the results of this study will not allow any conclusions to be drawn about your personal data. Of course, we will not share any information with third parties. Are you comfortable with me recording the conversation?
- The interview will last **approximately 1.5 hours**. Is that okay with you? If so, I would suggest that you try to ensure we are undisturbed during our conversation so that you can fully focus on the interview.
- Do you have any questions at this point?
- The topic of today's interview concerns your living circumstances, habits, and your attitude and opinions on various **topics related to "money/finance".**
- **Brief introduction** of the participant.

Warm-Up (10-15 minutes)

Today, we're discussing the topic of **"money/finance"**

- What are your initial spontaneous thoughts when you hear the words "money/finance"? What comes to mind? (Allow free responses)

Now, I'd like to play a little game with you. In the center, we have the word MONEY. Surrounding it are Post-Its that you will fill out. It's super easy. Let's get started!

- What can you do with your money? You can... (e.g., "spend", "save", "invest", "give", "set aside", "buy things"... one thought per Post-It, exactly as stated). Empty Post-Its have already been prepared on the flip chart, and they will be labeled with the participants' responses – one thought per Post-It. The keywords collected will be further explored in the following topic areas of "spending money & purchases" and "saving/money set aside/investing."

First, let's collect everything on these Post-Its, and we will return to them shortly.

Topic Area: "Spending Money & Purchases" (10-15 minutes)

Address the Post-Its that mentioned expenditures, consumption, or purchases.

You mentioned that **money** can be "**spent**". CAUTION: Use the exact wording of the participants.

- **When we think about the things you spend money on**.
  - What do you like to spend money on? (and why)
  - What don't you like to spend money on? (and why)
  - How do you **feel about it**? What do you **experience**?
- What else has **influenced** you when it comes to the topic **of "spending money"**? What was it like in your own **childhood home**?

You also mentioned that you can **acquire things/purchase with money**. CAUTION: Use the exact wording of the participants.

- Please tell me about **2-3 recent purchases you've made**.
- For each purchase, go through the following:
  - **What** did you purchase **exactly**? How did the idea come about?
  - How did you **feel about it**? What did you **experience**?
  - How did **people in your surroundings react**?
- Were there any **purchases you would have liked to make but did not**? What were the **reasons** for that?
- What else has **influenced** you when it comes to the topic of "**acquiring things/purchasing**"? What was it like **in your own childhood home**?
- Today, you will receive a **tax-free compensation of â,¬55 for this conversation**. **What do you plan to do with the money?**

Topic Area: "Saving/Setting Money Aside/Investing" (20-25 minutes)

Disambiguation: Return to the Post-It or Post-Its labeled "saving money" and/or "setting money aside" and/or "investing money" and/or other related terms:

You mentioned that you can: CAUTION: Use the exact wording of the participants and address each mentioned term separately:

- **"Save money"/"set money aside"/"invest money"...**
- **What comes to mind when you hear the term** ...? What do you think about?
  - What does it mean?
  - What do you personally do in this regard?

Existing Financial Products

(Stockholders also go through this section when it comes to buying/deciding on their stocks)

You mentioned in the preliminary discussion that you currently own... Let's match the financial products from the screener and discuss 2-3 financial products individually.

- What exactly is it, and **how do you view it**? Which of the **terms we've just discussed would apply here**?
- **Since when have you owned**... (mention the specific financial product)?

Emergence of the need Let's go back even further to a time before you owned this financial product:

- Do you remember **how the idea of acquiring this financial product came about**?
  - What was the **trigger**?
- How, or through whom (by whom), did you even **discover** that such financial products exist?

Specification and decision for the acquired financial product **Please go back to that situation** and describe to me:

- **How did the decision in favor** of this specific financial product come about?
  - What was the **goal** here? What **specific objectives** did you want to achieve with it?
  - **How flexible** are you with this specific goal? (e.g., savings initially for a car but redirected to a new heating system)
- **How did you gather information**?

  - Which media did you use? The internet?
  - **Who did you discuss it with**? (e.g., Experts, friends/acquaintances. Do you always talk to the same people, or do you have different contacts or reference persons depending on the financial topic?)
- What **alternatives** did you learn about during this process?
- What was the **decisive factor** in choosing this specific financial product over the alternative(s)?
- What did this financial product have that the other **alternatives could not offer**?
- And **how and where did** you then **acquire** the financial product or conclude the contract?

Current status

- What **experiences have you had** since acquiring or signing the contract for this financial product? To what extent do you **discuss it with those around you**?
- How do you currently feel about this financial product? **Would you choose it again**?

Topic Area: "Participation in the Stock Market" (30-35 minutes)

This section will either be "fluid" (for the control group of stockholders, as it was mentioned earlier) or may need support (possibly for the non-user group).

Scenario 1: Stocks were explicitly mentioned. Address this. "You also **mentioned stocks/stock funds**." CAUTION: Use the exact wording of the participants.

Scenario 2: Stocks/stock funds were not explicitly mentioned. Explore the topic with support. Alternatively (with support): "**There's also participation in the capital market through stocks or stock funds**."

- When you specifically think about the **stock market, i.e., stocks or stock funds, what comes to mind**?
- Imagine you had to **explain the stock market** (or what stocks or stock funds are) **to an elementary school child**. What would you say?
- Imagine I come from another planet and want to understand what people mean by the **term stock market, stocks, or stock funds**. How would you explain or make it understandable to me? What do people on earth do with them?

Projective

- How would you picture a **typical owner** of stocks or stock funds? Who are these people?
- **Whom** would you **recommend** stocks or stock funds to?
  - It would be suitable **for**... because...
- **Whom** would you **not recommend** stocks or stock funds to?
  - It **wouldn't be suitable for**... because...

Personal

For Non-participants in the stock market/core target group

- How do you **personally view participation in the stock market**?
  - List all the **questions** one can ask about it.
  - And also, all the **concerns** one may have.
  - What **opportunities** can one expect from it?
  - Review the concerns again: **How could they be alleviated**?
- What else has **influenced** you when it comes to the topic of **"stocks or stock funds"**?
  - What was it like in your own **childhood home**?
  - And how do **those around you** behave? What kind of **exchange** do you have with with those around you about it?

For participants in the stock market/control group

- How do you **personally view participation in the stock market**?
  - List all the **opportunities** one can expect from it,
  - ... as well as all the **concerns** one may have.
  - For all concerns: **How could they be alleviated**?
- What else has **influenced** you when it comes to the topic of "**stocks or stock funds**"?
  - What was it like in your **own childhood home**?
  - And how do **those around you** behave? What kind of **exchange** do you have with with those around you about it?
- What **conclusions** do you draw **from your stock ownership so far**?

Future Outlook

- What **plans** do you have for the future regarding financial products? What **thoughts** are you entertaining? (Core target group) To what extent are **stocks a part of that**?

Thank you for your participation!

A.2 Coding Scheme

The coding scheme is developed based on an extensive review of the existing literature on stock market participation. It has been evaluated and refined to achieve sufficiently high intercoder reliability between three authors involved in the coding of at least some of the interviews.[1]

The coding scheme is summarized in Appendix Table A1. The complete coding scheme also provides an explanation as well as anchor examples from the interviews for each code. Below we provide an abbreviated version of the coding scheme, featuring a brief explanation and one anchor example.

ITEM 1: Entry and Participation Costs

1.1 Financial expenditure

1.1.1. Fixed monetary entry costs

Explanation: One-time monetary amounts which are needed to take part in the stock market. These costs can include expenses, for example, for the broker. Alan (2006, p. 590) states, concerning fixed entry costs: "It is important to note that this cost is paid (if ever paid) only once over the entire life cycle. Once it is paid, the household is free to re-enter the stock market (if exited some time after entry) without incurring any further cost."
Anchor example: "Yes, what I completely miss is that there is probably this brokerage fee. I still can't put a figure on it. Is it a one-off fee? What is it linked to? Who collects it in the end? Do I have to have access again?" (Madeline, ID: 1, sequence: 203)
Related literature: Haliassos and Bertaut (1995), Luttmer (1999), Vissing-Jorgensen (2002), Haliassos and Michaelides (2003), Gomes and Michaelides (2005), Alan (2006)

1.1.2. Fixed monetary participation costs

Explanation: Ongoing monetary amounts which are needed to take part in the stock market. These fixed amounts are independent of the size of the investment. This would include more complicated tax returns if filed through a tax advisor or continuous payments needed to manage a portfolio.
Anchor example: "Because I want to invest so that I get a return, not so that I have to pay fees somehow." (Oscar, 21, 223)
Related literature: Haliassos and Bertaut (1995), Luttmer (1999), Vissing-Jorgensen (2002), Haliassos and Michaelides (2003), Gomes and Michaelides (2005), Alan (2006), Andersen and Nielsen (2011)

[1] A sufficiently high intercoder reliability is defined by a Cohen's Kappa of at least 0.60 evaluated at the coding term level.

1.1.3. Proportional monetary costs

Explanation: Varying costs, expressed as a percentage, are associated with activities on the stock market (transaction costs). The costs are proportional to the size of investment.
Anchor example: "So let me take an example now, total €1000, I bought securities for €1000 (...), I have, I don't know, a foreign market simply, but a total of €18 for this trade, (...) and as long as these securities are not at €1018, because at €1018 I am only at zero. I also have to add the costs of selling on this platform" (Adam, 24, 142)
Related literature: Vissing-Jorgensen (2002), Peress (2005)

1.2. Non-monetary costs and benefits

1.2.1. Opportunity costs (time) and effort

1.2.1.1. Opportunity costs (time) and effort – entry

Explanation: Opportunity costs associated with one time expenditure to participate in the stock market, such as the effort required to acquire knowledge and the potential stress connected to it.
Anchor example: "Of course an ETF will always be good. But if you do invest your money, you probably want the best. You want to do a bit of groundwork to find the best product for you." (Resit, 14, 234)
Related literature: Haliassos and Bertaut (1995), Bertaut (1998), Alan (2006), Basak and Cuoco (2015)

1.2.1.2. Opportunity costs (time) and effort – participation

Explanation: Interview passages are coded when an ongoing effort is noted as other activities could be pursued during that time. This effort could involve acquiring knowledge and dealing with the associated stress. Furthermore, when there is a general reluctance, for example, towards finances, it should also be coded when stock market participation is encompassed under a term.
Anchor example: "You also have to deal with it a lot, speculatively, observe market developments. Corporate policy plays a big role here, which influences the stock price, which ultimately influences share prices and so on and so forth" (Bianca, 2, 220)
Related literature: Haliassos and Bertaut (1995), Bertaut (1998), Alan (2006), Basak and Cuoco (2015)

1.2.2. Interest and excitement

Explanation: Under this sub-code, references to (lack of) interest and excitement are

included.
Anchor example: "I'm not interested, that's why I don't understand it (laughs)" (Ingrid, 9, 117)

1.2.3. Desire for control and independence

Explanation: This sub-code refers to the desire to be independent and not rely on others, such as consultants or apps.
Anchor example: "Then there's really only something like that left [stocks], but as far as possible, I want to have it in my own hands. In principle, I want to manage it myself." (Ralf, 10, 229)

1.2.4. Status quo bias

Explanation: A general reluctance to think about finances (without time reference as an opportunity cost) is part of this code. It is important to distinguish this from other codes associated with costs. Individuals here generally do not want any change to the existing status quo and, therefore, do not include cost and benefit analyses.
Anchor example: "Sometimes people say I don't want anything to do with the whole thing. Do you understand? Why do you have to deal with it as a normal person? Sometimes you get this feeling that you just want to be left alone." (Resit, 14, 294)
Related literature: Kahneman et al. (1991), Samuelson and Zeckhauser (1988), Andersen and Nielsen (2011), Alvarez et al. (2012), Abel et al. (2013), Briggs et al. (2021)

1.3. Abilities and Knowledge

1.3.1. Cognitive, recall, and math skills

Explanation: This sub-code refers to statements where individuals themselves express or demonstrate that the hurdle in participating in the stock market persists because of their mathematical weaknesses, for example. It should encompass statements like "I can't do the math" or "it's too complicated to calculate," rather than statements like "I don't know about the stock market" or "I am not good with finances," which should be part of the sub-code "Financial literacy".
Anchor example: "With stocks, there are also different building blocks like Facebook, Amazon, that you have different playing cards that you play. And math, because it's complicated, exhausting, and stocks are also, if you don't really get behind it and read up on it properly and get advice, then they're also a bit difficult, complicated. I'm not that

imaginative." (Nadine, 7, 131)
Related literature: Christelis et al. (2010), Dohmen et al. (2010), Grinblatt et al. (2011), Korniotis and Kumar (2011), Lindqvist et al. (2018), Fagereng et al. (2020), Athreya et al. (2023), Kaustia et al. (2023)

1.3.2. Financial literacy

1.3.2.1. Basic institutional and financial knowledge (method): Fixed entry costs

Explanation: This subcode includes basic financial knowledge that would be necessary to navigate the stock market and influence their perception. It can be some basic financial sophistication regarding how one can participate, how the things are done, what to monitor and how to interpret it. This could refer to the time when one should invest, the stocks that one should choose or the process of learning by doing. The perception of required financial knowledge is also part of this code. Financial literacy serves as a prerequisite, representing a fixed entry cost for individuals seeking independence in the stock market.
Anchor example: "How a stock works at all or a fund, what does it all have to do with. I mean, before I invest in something, I need to know exactly how it works." (Luca, 5, 428)
Related literature: Guiso and Jappelli (2005), Campbell (2006), Lusardi and Mitchell (lusardimitchell2007, lusardimitchell2008, lusardimitchell2011, lusardi2014economic), Delavande et al. (2008), Calvet et al. (2009), Abreu and Mendes (2010), van Rooij et al. (2011), Hastings et al. (2013), Jappelli and Padula (2013), Almenberg and Dreber (2015), Balloch et al. (2015), Von Gaudecker (2015), Lusardi et al. (2017), Haliassos et al. (2020), Dong et al. (2023)

1.3.2.2. Financial sophistication (parameters/info-inputs to the method): Participation costs

Explanation: The financial knowledge (parameters/information as input for the method) includes the financial expertise and information that would have to be acquired repeatedly over time. This could be, for example, the tracking of economic developments or the examination of the offer for individual shares.
Anchor example: "So you should simply follow current events, the news situation, the world situation - you don't have to study the business section every day - but perhaps follow the world." (Ralf, 10, 155)
Related literature: van Rooij et al. (2011), Fagereng et al. (2017), Lusardi et al. (2017)

1.3.3. Confidence in financial ability and knowledge

Explanation: Lack of confidence in financial abilities includes doubts and questioning of

one's knowledge to participate in the stock market. Entries are coded when references are made to self-confidence.
Anchor example: "Yes, maybe you don't dare [to buy stocks] because there are so many technical terms and foreign words and yes." (Pia, 6, 462)
Related literature: Almenberg and Dreber (2015), Bucher-Koenen et al. (2017), Bucher-Koenen et al. (2021)

1.3.4. Peer effects (operating through fixed entry or paticipation costs)

1.3.4.1. Peer effects (operating through fixed entry or paticipation costs) - Entry

Explanation: The peer effect (entry) refers to the communication of essential parameters, information, and recommendations related to the stock market, given by peers before or regarding the stock market entry. It can lower (/increase) perceived and actual costs. It is crucial to distinguish between "Peer effects (operating through fixed entry or participation costs)" from item 1 and "Peer effects (operating through preferences, such as keeping-up-with-the-Jones/operating through subjective beliefs)" from item 2. Furthermore, the advice provided by professionals should be included under the sub-code "Information sources".
Anchor example: "But that people also give each other tips? So especially when it comes to saving money, what options are there? Gosh, I do that, have you heard of it? Is that ever an issue?" Rather less so, I have to say. I haven't heard anyone say that yet, not even from the family, that you should do that. Well, not me." (Esther, 13, 324-325)
Related literature: Duflo (Duflo2002, duflo2003), Hong et al. (2004), Kaustia and Knüpfer (2012), Argan et al. (2014), Choi and Robertson (2020), Haliassos et al. (2020), Balakina (2022), Laudenbach et al. (2024)

1.3.4.2. Peer effects (operating through fixed entry or participation costs) - Participation

Explanation: The peer effect (participation) refers to the communication of essential parameters, information, and recommendations related to the stock market, given by peers on an ongoing scale/during the participation. It can lower (/increase) perceived and actual costs. It is crucial to distinguish between "Peer effects (operating through fixed entry or participation costs)" from item 1 and "Peer effects (operating through preferences/operating through subjective beliefs)" from item 2. Furthermore, the advice provided by professionals should be included under the sub-code "Information sources".
Anchor example: "I have to say, I always mention my son, for example, he has a lot of friends in his studies, and they say to him, do this, do that. He does that, so he does. They talk about it really openly and he gets advice from the others. Or one of them says, do this.

He's also invested something somewhere. I don't know if it was a stock, I don't know. And he also took out insurance. He's very behind the times, so he is. They talk more openly, these young people, yes." (Esther, 13, 324-325)
Related literature: See in the code above.

1.3.5. Information sources

1.3.5.1. Information sources - Entry

Explanation: This code includes information that would be acquired through various sources before/during the stock market entry, such as newspapers, television, offer comparisons, social media, or professional advice (excluding peer effects). When there is a mention of trust in connection to information sources, both codes should be used.
Anchor example: "At some point, an ad from Trade Republic [online broker] actually popped up on YouTube. And then I looked into what they were doing." (Dennis, 18, 59)
Related literature: Loibl and Hira (2011), Jiao et al. (2020), Hu et al. (2021)

1.3.5.2. Information sources - Participation

Explanation: This code includes information that would be acquired through various sources following the participation on the stock market, such as newspapers, television, offer comparisons, social media, or professional advice (excluding peer effects). When there is a mention of trust in connection to information sources, both codes should be used.
Anchor example: "I think it was always on ARD or something, I don't know. They always show these stocks for five minutes. It's not on the news anymore, is it? I don't know. I kind of miss it. They used to tell you what was happening in the world, which shares were booming and which were plummeting. You already had the information." (Esther, 13, 210)
Related literature: See in the code above.

ITEM 2: Preferences and Beliefs

2.1. Preferences

2.1.1. Risk and ambiguity

2.1.1.1. Risk aversion

Explanation: Economic agents prefer certainty over uncertainty. In contrast to standard models: According to standard (second-order risk-averse) preferences, agents would always add some equity market investment to their wealth. If the prices of both possible products are the same, the risk-averse consumer prefers the proven product. A change could be

possible when the person receives a risk premium. Higher risk-aversion is observed for women. How stocks contribute to riskiness of consumption is also included. Here, it is important to differentiate between "Risk aversion" and "Risk perception" under beliefs.
Anchor example: "I wouldn't necessarily invest in stocks right now, or I don't know, things that are too uncertain for me." (Michaela, 11, 83)
Related literature: Quiggin (1982), Yaari (1987), Epstein and Zin (1989), Haliassos and Hassapis (2001), Gomes and Smirnova (2021), Barberis et al. (2006), Halko et al. (2012), Antoniou et al. (2015)

2.1.1.2. Ambiguity aversion

Explanation: In terms of stated ignorance of how stock market returns fluctuate, individuals prefer known risk. The difference lies in the statements: "I don't know how stock investments work" versus "I don't know how the market determines returns." The code should refer to the latter statement. The difference between risk aversion and ambiguity aversion is the distinction between risk and uncertainty. Risk assumes known probabilities (like rolling dice), while uncertainties require subjective probabilities (i.e., when the likelihood of a given outcome is unknown).
Anchor example: "Yes, a life insurance policy and a home loan and savings contract. That's a certain principle and a certain process that is actually fixed. And with a stock, you never know how it's going to work out." (Uta, 17, 347)
Related literature: Epstein and Schneider (2007), Bossaerts et al. (2010), Campanale (2011), Armantier et al. (2016), Dimmock et al. (2016)

2.1.1.3. Unwillingness to take risk

Explanation: The sub-code refers to the categorical refusal to accept a risk. In contrast to risk aversion, here no comparison to other investments or situations is made. Unwillingness to take risks implies that risk aversion is infinitely high, and there is no reward that can justify taking the risk.
Anchor example: "For example, I absolutely don't like that kind of thing, I want to have my money in a fixed place where I know I can fall back on it. These little games, that's too high for me then, no. Maybe people who are born rich or who have several buildings, factories, whatever, can do that. The, the, what do you call them, the business people in the end. They can do it more easily, but private people like that, so for me it would all be unsafe now. Yes." (Kirstin, 8, 216)
Related literature: See in the codes above.

2.1.2. Loss Aversion

Explanation: With an equal value of losses and gains, more impairment is attributed to the

losses. It refers to the first-order risk-averse preferences, such as prospect theory (where the value function has a kink between gains and losses). The difference between loss aversion and risk aversion lies in their focus: Risk aversion pertains to aversion to variance (i.e., variation, rolling dice, roulette, etc., including cases where you always win but the outcome is uncertain). On the other hand, loss aversion focuses on the possibility of losing some or all of your investment.
Anchor example: "It would be important to me not to lose anything." (Bianca, 2, 396)
Related literature: Tversky and Kahneman (1986), Barberis and Huang (2006), Barberis et al. (2006), Dimmock and Kouwenberg (2010)

2.1.3. Disappointment, regret aversion

Explanation: Preference for choosing a certain reward rather than risking a higher reward is included in this code. It also encompasses the choice of a higher reward with a lower probability when both options are risky (Allais paradox). The disappointment or regret can be observed in relation to other aspects or investments.
Anchor example: ""Faceboook stock crashes because the site didn't work for two hours" Yes, if it's a lot of money. So if you're only investing five, six or seven hundred euros, that's fine. But there's a lot more money you could invest. That would of course be a real ..., yes, that would be a shame for the money. It's something you can't foresee, so. Many people made fun of it and didn't think anything of it, and then this news came out. And if I had €50,000 in there now and, I don't know, €35,000 would be gone or, I don't know how it works. That would be a pity." (Pia, 6, 329)
Related literature: Gul (1991), Ang et al. (2005)

2.1.4. Time horizon and time preferences

2.1.4.1. Time horizon

Explanation: One-time costs and risks will be relatively high if the investment horizon is short. A similar argument can be made concerning the amount someone wants to invest; that is, the total lifetime benefits might be too small. Nevertheless, it should be distinguished from remaining lifetime or age aspects. When there is a reference to age, the later code applies.
Anchor example: "But I think it makes sense in the longer term. Unless you're a gambler, right?" (Ralf, 10, 101)
Related literature: Bodie (1995), Gollier and Zeckhauser (2002), Kim and In (2010)

2.1.4.2. Time preferences

Explanation: This sub-code includes time preferences, procrastination and applies when people say that they should do something but prefer the easier option in the present. The present-biased time preferences describe that initial costs carry more weight than later benefits.
Anchor example: "Simply to take action. There are various steps. You have to go to a bank or first think about how I can buy shares. You have to take all these steps... You have to find out which shares I can... So you have to research again and again. It's about research, it's about hard work. You have to get to grips with it and make a concrete plan. Maybe channeling your thoughts and not just letting it all go up in the air... You have to make a plan, a structure, and concretize your thoughts. Maybe that's what it's all about, I would say." (Resit, 14, 210)
Related literature: O'Donoghue and Rabin (1999)

2.1.5. Peer effects (operating through preferences)

Explanation: Peer effects under preferences reflect preferences that depend on the consumption, wealth, income, or status of others. Examples include keeping-up-with-the-Joneses, external habit or status concerns as well as social investors.
Anchor example: "So I don't know whether these people hang out with private individuals, with people who have no idea at all, they don't deal with them. So these are the people who only hang out with people who do this kind of thing, who know what they're talking about. They ask for more, but simple people like that, I don't think they have time for that (laughs)." (Kirstin, 8, 264)
Related literature: Manski (manski1993, manski2000), Gali (1994) Duflo and Saez (Duflo2002, duflo2003), Hong et al. (2004), Brown et al. (2008), Li (2009) Roussanov (2010), Georgarakos and Pasini (2011), Bursztyn et al. (2014)

2.1.6 Religion, culture, values, political orientation, stereotypes (and inconsistency with the own identity)

Explanation: This code includes a broad range of aspects, such as religious and political orientations, value orientations, and attitudes towards participation in the stock market. Associated with these aspects, an attitude towards stock market participation can be formed. The code also encompasses other stock-market related aspects, not strictly financial, but important to individuals. For instance, the desire to have influence through stock ownership on firms represents a personal attitude. For example, Kaustia and Torstila (2011, p. 98) find that "a moderate left voter is 17–20% less likely to own stocks than a moderate right voter" based on data sets in Finland. Additionally, Bonaparte and Kumar (2013, p. 760)

demonstrate that "irrespective of their political affiliation, politically active individuals are 9–25% more likely to participate in the stock market."
Anchor example: "So that's my personal aspiration, which I've only developed in recent years, is that if you don't want to support companies that aren't sustainable, then it becomes difficult because you have to be incredibly selective. And then it's really a question of yes, do I invest in Merck shares, for example, that do animal testing but also save people? For me, there's a bit of a question of conscience involved" (Uta, 17, 263)
Related literature: Guiso et al. (2003), Hong et al. (2004), Georgarakos and Pasini (2011), Kaustia and Torstila (2011), Bonaparte and Kumar (2013), Changwony et al. (2014)

2.2. Beliefs

2.2.1. Return perception

Explanation: Beliefs might manifest themselves in the form of lower/different return expectations (e.g., between participants and non-participants), higher loss probabilities for participants relative to non-participants or among individuals with low socio-economic status (often resulting in non-participation). Over-extrapolation, as an overweighting of recent returns, is also part of this code.
Anchor example: "Either the return opportunity is very small because they are supposedly companies like Tesla or similar, which are expanding globally anyway, in which case I also have a very low return. If so, I need an insider tip about a company that will make a real leap forward in the next few years, where I know I'll get something out of it. Or I go for the portfolios, the mixed funds that contain all kinds of Leipzig stuff. High-risk stocks. Stocks with a stable return. Even shares that have been tried and tested on the stock market for a long time and are hardly subject to any fluctuations. That's the reason why the average person should limit themselves to such a portfolio." (Madeline, 1, 185)
Related literature: Dominitz and Manski (2007), DellaVigna (2009), Greenwood and Shleifer (2014), Gennaioli et al. (2016), Fagereng et al. (2017), Kuhnen and Miu (2017), Briggs et al. (2021), Arrondel et al. (2022), Calvo Pardo et al. (2022), Chinco et al. (2022)

2.2.2. Risk perception

Explanation: This sub-code reflects the risk attitude. When it is stated that the person does not like risk, the codes for risk aversion and unwillingness to take risk should be considered.
Anchor example: "Yes, that is a risk, a risky business. It's not like a property where you have it within your grasp and you say, ok, I've got a property here now. I've got twelve rental apartments in it or twelve tenants in it and then practically have the income from it every month, but it's simply also a risky business." (Cathleen, 3, 209)

Related literature: Arrow (1982), Weber and Milliman (1997), Huber et al. (2019), Zeisberger (2023)

2.2.3. Past exposure to adverse stock market events

Explanation: Especially exposure to negative shocks, possibly in the somewhat distant past, can lead to an overweighting of personal experiences.
Anchor example: "I think my father did stocks once and really fell flat on his face. Maybe that's what shaped me a bit." (Silke, 12, 117)
Related literature: Kaustia and Knüpfer (2008), Chiang et al. (2011), Malmendier and Nagel (2011), Ampudia and Ehrmann (2017), Knüpfer et al. (2017), Malmendier et al. (2020)

2.2.4. Perceived probability of disaster or significant loss of wealth

Explanation: The sub-code refers to a perceived high probability of a simultaneous stock market crash and income decline. According to Fagereng et al. (2017), this represents a significant loss of financial wealth that has a low probability and can be observed every few decades. This aspect should be distinguished from common emergent events, such as individual job losses or liquidity shortages.
Anchor example: "I'm astonished that something like this could cause such a loss in value. Just because the technology doesn't work. I mean, we have so much cybercrime these days with Trojans and stuff. That can always happen." (Pia, 6, 327)
Related literature: Gollier (2001), Alan (2012), Wachter (2013), Fagereng et al. (2017), Choi and Robertson (2020)

2.2.5. Peer effects (operating through subjective beliefs)

Explanation: Peer effects operating through beliefs encompass perceptions, expectations, and predictions that are shaped by others, through information, experiences, and or judgments of peers. Liang and Guo (2015, p. 884) refer to it as the "social multiplier effect of social interaction," which reflects that individuals are passively influenced by the average behavior (characteristics) of the community they live in. Cohort effect is also part of this code; it relates to education and experiences during formative years, while "Life cycle aspects" are more related to the remaining horizon and age, regardless of the generation to which one belongs.
Anchor example: "So I think I'm now moving away from just having a savings account and a building society savings contract and towards a more open way of thinking. Let's put it this way. I come from a very conservative home. So that means that's all I know. We

invested in real estate. So in something manageable and only in the things I know." (Silke, 12, 117)
Related literature: Liang and Guo (2015), Arrondel et al. (2022)

2.2.6. Trust

2.2.6.1. Trust in others (generalized trust)

Explanation: Here, a distinction is made regarding whether trust is directed towards other fellow human beings or the institutions/system. Trust issues refer to the lack or limitation of the "act of faith (trust) that the data in our possession is reliable and that the overall system is fair" (Guiso et al., 2008, p. 2557). For instance, non-participation among the wealthy could be related to trust issues. It is also connected to the expected return being lower due to a positive probability of being cheated (Guiso et al., 2008, p. 2558).
Anchor example: "Five years ago, I wouldn't have thought much of the stock market. And in quotation marks I would have said it's just charlatanry, or it's just juggling with money, or having fun with other people's money. Certainly there will be people like that or companies and so on, a lot of fraudulent intentions. But there are also people or companies who handle it responsibly. I used to be skeptical about everything. Of course, skepticism is important and a good thing. But I also realize that you have to be a bit open-minded. And not very conservative like me, very fearful, because then I see, as in my case, that you don't do anything, you don't do anything. Then you're just... You don't go one step further. Because everyone sees the disadvantage or the risk. And if you don't do anything, you don't get anything, you don't achieve anything. You could spend a lifetime saving. But then you haven't taken advantage of the possibilities or opportunities to perhaps increase your money or achieve something better." (Resit, 14, 180)
Related literature: Guiso et al. (2004), Guiso et al. (2008), Georgarakos and Pasini (2011), Changwony et al. (2014), Giannetti and Wang (2016), Balloch et al. (2015)

2.2.6.2. Trust in financial markets, institutions (and their representatives)

Explanation: Here, a distinction is made regarding whether trust is directed towards other fellow human beings or the institutions/system. Trust issues refer to the lack or limitation of the "act of faith (trust) that the data in our possession is reliable and that the overall system is fair" (Guiso et al., 2008, p. 2557). For instance, non-participation among the wealthy could be related to trust issues. It is also connected to the expected return being lower due to a positive probability of being cheated (Guiso et al., 2008, p. 2558).
Anchor example: "Yes, of course, who knows about it. The financial advisor in practice or whatever. It's a broker who's always involved and that's their job. Of course you trust

them, of course you don't trust everyone. But that was a family member. You can say he had more trust. Where you say, ok, he knows what he's talking about." (Kirstin, 8, 238)
Related literature: see above, Georgarakos and Inderst (2011)

ITEM 3: Economic Environment and Intended Equity Holding

3.1. Life cycle and background risks

3.1.1. Life-cycle aspects

Explanation: Life cycle aspects refer to age effects, horizon effects, life events and retirement issues. The sub-code is related to aspects of borrowing (not-investing) early in life, investing (accumulating assets) in the middle, and spending down one's assets in retirement. Beyond that there are risk sharing during e.g., marriage, the risks associated with divorce, and investing for college for one's children. Inheritance can play a role as well.
Anchor example: "When you're young, when you have nothing, you don't think as much [about financial products] as you do when you get older and you can call a really nice pile your own." (Madeline, 1, 215)
Related literature: King and Leape (1987), Poterba and Samwick (2001), Gollier (2002), Ameriks and Zeldes (2004), Cocco et al. (2005), Gomes and Michaelides (2005), Shum and Faig (2006), Love (2009), Christiansen et al. (2015), Fagereng et al. (2017), Gomes and Smirnova (2021), Bacher (2021)

3.1.2. Health status and risk

Explanation: The sub-code includes aspects of health status that promote or hinder investing in stocks.
Anchor example: "Yes, but I think I've become so curious that I'd still like to find out more. Because, as I said, I have time anyway due to my illness." (Luca, 5, 554)
Related literature: Rosen and Wu (2004), De Nardi et al. (2010), Yogo (2016), Böckerman et al. (2021), Gomes and Smirnova (2021)

3.1.3. Unemployment and labor income risk

Explanation: The code includes difficulties that could result from unemployment, decreased labor income or other background risks as well as the desire to (not) hedge human capital risk through equity markets. This aspect is to be distinguished from the sub-code of the "Perceived probability of a disaster or a significant loss of wealth", which does not include personal changes but events on a larger, non-individual level.

Anchor example: "I used to have a private pension, but I canceled it two years ago. Because I was unemployed and needed the money. And apart from that, I'm not actively doing anything at the moment." (Ingrid, 9, 68)
Related literature: Guiso et al. (1996), Carroll (2003), Garibaldi and Wasmer (2005), Berk and Walden (2013)

3.2. Constraints

3.2.1. Borrowing constraints

Explanation: Current or expected borrowing constraints include the inability to raise liquid funds at short notice. This sub-code is used when pariticpants menion that they do not participate in the stock market because of perceived difficulty of borrowing, for example, at the moment of an economic downturn or to increase their desired investment amount.
Anchor example: "[Stockholders] They are definitely people who have money left over. Because otherwise you can't buy stocks"(Uta, 17, 235)
Related literature: Guiso et al. (1996), Constantinides et al. (2002), Davis et al. (2006)

3.2.2. Perceived irreversibility and liquidity constraints

Explanation: This sub-code is used when participants mention concerns about their ability to sell stock market investments.
Anchor example: "[Question to Google:] Whether you are somehow bound again because of the contract. That they say you have a contract, you only get out after 24 months like with a cell phone contract or something. Or they say ok, you can always switch stocks as you like." (Uta, 13, 268)
Related literature: Bertola and Caballero (1994), Choi and Robertson (2020)

3.2.3. Consumption and financial commitments

Explanation: These are amounts that people have committed to spending every regularly (e.g., per month/year) and their concern about meeting such payment obligations affects their desired stock exposure.
Anchor example: "Because I've accumulated a bit of debt over the time. That's why I have to get to grips with it [credit] first" (Luca, 5, 410)
Related literature: Fratantoni (2001), Chetty and Szeidl (2007)

3.3. Substitutes, comparisons to other classes and liabilities

Explanation: This sub-code is used when participants mention other non-equity investments

that crowd out stock investments. Household's desire to invest in real estate or other assets could lower their equity share but should not drive it to zero in the absence of other frictions. Other investments can include, for example, a focus on human capital (such as attending university rather than investing in stocks).
Anchor example: "So you see, I have a savings account. I have a very classic alternative, i.e. tried and tested, conservative things. So I have a savings book and I have a building society savings contract. That means I don't lose any money with it" (Silke, 12, 91)
Related literature: Fratantoni (1998), Heaton and Lucas (2000), Cocco (2004), Kullmann and Siegel (2005), Flavin and Yamashita (2011), Vestman (2019), Choi and Robertson (2020), Athreya et al. (2023)

3.4. Intended holdings

Explanation: This sub-code is used when participants mention that the desired investment is too small relative to the cost or effort associated with stock market entry or participation. Perceived or actual minimum investments limitations are included there too, this means that if intended holdings are below those limitations, no investment takes place.
Anchor example: "But I think that only makes sense when you're talking about much higher amounts. So yes, it doesn't make that much sense if I buy stocks for €50. I don't get any added value from that and, at 27, I'm not yet at the point where I can say I've just got 10,000 to invest." (Bianca, 2, 220)
Related literature: Heaton and Lucas (2000), Khorunzhina (2013), Vestman (2019), Choi and Robertson (2020)

Table A1: Coding scheme

ITEM 1: Entry and Participation Costs

- 1.1. Financial expenditure
  - 1.1.1. Fixed monetary entry costs
  - 1.1.2. Fixed monetary participation costs
  - 1.1.3. Proportional monetary costs
- 1.2. Non-monetary costs and benefits
  - 1.2.1. Opportunity costs (time) and effort
    - 1.2.1.1. Entry
    - 1.2.1.2. Participation
  - 1.2.2. Interest and excitement
  - 1.2.3. Desire for control and independence
  - 1.2.4. Status quo bias
- 1.3. Abilities and Knowledge
  - 1.3.1. Cognitive, recall, and math skills
  - 1.3.2. Financial literacy
    - 1.3.2.1. Basic institutional and financial knowledge (method): Fixed entry costs
    - 1.3.2.2. Financial sophistication (parameters/info-inputs to the method): Participation costs
  - 1.3.3. Confidence in financial ability and knowledge
  - 1.3.4. Peer effects (operating through fixed entry or participation costs)
    - 1.3.4.1. Entry
    - 1.3.4.2. Participation
  - 1.3.5. Information sources
    - 1.3.5.1. Entry
    - 1.3.5.2. Participation

ITEM 2: Preferences and Beliefs

- 2.1. Preferences
  - 2.1.1. Risk and ambiguity
    - 2.1.1.1. Risk aversion
    - 2.1.1.2. Ambiguity aversion
    - 2.1.1.3. Unwillingness to take risk
  - 2.1.2. Loss aversion
  - 2.1.3. Disappointment and regret aversion
  - 2.1.4. Time horizon and preferences
    - 2.1.4.1. Time horizon
    - 2.1.4.2. Time preferences
  - 2.1.5. Peer effects (operating through preferences)
  - 2.1.6 Religion, culture, values, political orientation, stereotypes
- 2.2. Beliefs
  - 2.2.1. Return perception
  - 2.2.2. Risk perception
  - 2.2.3. Past exposure to adverse stock market events
  - 2.2.4. Perceived probability of disaster or significant loss of wealth
  - 2.2.5. Peer effects (operating through subjective beliefs)
  - 2.2.6. Trust
    - 2.2.6.1. Trust in others (generalized trust)
    - 2.2.6.2. Trust in financial markets, institutions (and their representatives)

ITEM 3: Economic Environment and Intended Equity Holding

- 3.1. Life cycle and background risks
  - 3.1.1. Life-cycle aspects
  - 3.1.2. Health status and risk
  - 3.1.3. Unemployment and labor income risk
- 3.2. Constraints
  - 3.2.1. Borrowing constraints
  - 3.2.2. Perceived irreversibility and liquidity constraints
  - 3.2.3. Consumption and financial commitments
- 3.3. Substitutes, comparisons to other classes and liabilities
- 3.4. Intended holdings

B Exploratory LLM-based Analysis: Details

This overview presents the prompts, the full answers, the results of the market efficiency prompts, and the additional robustness checks used to obtain LLM insights from our interviews.

B.1 Prompts

The following prompts are used to analyze qualitative interview data on stock market participation. Each panel addresses a specific thematic focus and includes an analysis prompt (`intro`), and a summary prompt (`summary_intro`). All prompts share the same system instruction:

System Prompt (common to all panels)

> You are a professor of economics at one of the world's leading universities. Your research focuses on stock market participation, i.e. the participation of private households in the stock market via shares, ETFs or funds. In order to gain in-depth insights into the evaluation of the stock market and the decision to participate in the stock market, you have conducted in-depth qualitative interviews with several individuals on the topic of money and finance.

Positive and Negative Aspects of the Stock Market

intro

> Please analyze the interview with regard to the stock market and stock market participation. Identify:
>
> 1. positive aspects of the stock market and stock market participation mentioned by the interviewee that motivate the interviewee to participate in the stock market, and
> 2. negative aspects of the stock market and stock market participation mentioned by the interviewee that discourage the interviewee from participating or make participation less attractive.
>
> Create a list of the respective positive and negative aspects, sorted according to their relevance for the person in question. Add a detailed explanation of up to five sentences for each aspect. The explanation should be substantive,

differentiated and based on the interviewee's statements. Provide a suitable quote from the conversation for each aspect. Please do not invent any content, but rely exclusively on the interview material provided.

At the end, please determine whether the positive or negative aspects (1. or 2.) predominate for the interviewee.

summary_intro

Please summarize the interview summaries with regard to positive and negative aspects of the stock market and participation in the stock market. Consider all summaries equally and regardless of their order. To do this, create lists of positive and negative aspects, with a one-sentence explanation for each point. Sort the points in the lists according to their relevance. Please do not invent content, but rely exclusively on the material provided.

Difficulties with Participation

intro

Please analyze the interview with regard to the difficulties in participating in the stock market for the interviewee. Create a list of the difficulties, sorted according to their relevance for the person in question. Add a detailed explanation of up to five sentences for each aspect. The explanation should be substantive, differentiated and based on the interviewee's statements. Provide a suitable quote from the conversation for each aspect. Please do not invent any content, but rely exclusively on the interview material provided.

summary_intro

Please summarize the interview summaries with regard to the difficulties of participating in the stock market. Consider all summaries equally and regardless of their order. Then make a list of the difficulties, with a one-sentence explanation for each point. Sort the points in the list according to their relevance. Please do not invent any content, but rely exclusively on the discussion material provided.

The Purpose of Knowledge and Ongoing Effort

intro

Please analyze the interview with regard to whether and how the interviewee mentions knowledge or effort, in the form of time or work, as difficulties for participating in the stock market. Then first write: "Knowledge or effort present as a difficulty for participating in the stock market:" with the answers Yes or No. Please describe the type of knowledge or effort mentioned by the interviewee. Please also describe what the interviewee believes can be achieved through knowledge or effort in the stock market. Add a detailed explanation of up to five sentences for each aspect. The explanation should be substantive, differentiated and based on the interviewee's statements. Provide a suitable quote from the conversation for each aspect. Please do not invent any content, but rely exclusively on the interview material provided.

summary_intro

Please summarize the interview summaries with regard to what the interviewees believe can be achieved through knowledge or effort on the stock market. In other words, from the interviewee's point of view, what good is knowledge or effort when investing in the stock market? Consider all summaries equally and regardless of their order. To do this, create a list of the key points, with a one-sentence explanation for each point. Sort the points in the list according to their relevance. Please do not invent any content, but rely exclusively on the discussion material provided.

Becoming an Investor

intro

Please analyze the interview with regard to the factors or circumstances that helped the interviewee to participate in the stock market, i.e. to invest in stocks, ETFs or funds. Create a list of the factors or circumstances, sorted according to their relevance for the interviewee. Add a detailed explanation of up to five sentences for each factor or circumstance. The explanation should be substantive, differentiated and based on the interviewee's statements. Provide a suitable quote from the interview for each factor or circumstance. Please do not invent any content, but rely exclusively on the interview material provided.

summary_intro

Please analyze the interview summaries with regard to the factors or circumstances that helped the interviewees to participate in the stock market, i.e. to invest in stocks, ETFs, or funds. Consider all summaries equally and regardless of their order. Create a list of the key factors or circumstances, with a one-sentence explanation for each point. Sort the points in the list according to their relevance. Please do not invent any content, but rely exclusively on the discussion material provided.

Market Efficiency

intro

Please analyze the interview with regard to the extent to which the interviewee believes in the efficiency of the stock market, i.e. that all available information is already included in the stock price. An implication of market efficiency of the stock market is that you can always buy or sell stocks at prices that reflect all the information and that you therefore never buy too expensively and never sell too cheaply. Determine whether the interviewee is more likely to assume that the market efficiency of the stock market is given or more likely to assume that the market efficiency of the stock market is not given. Justify your assessment in a detailed explanation of up to five sentences and a suitable quote from the interview. The assessment should be substantive, differentiated and based on the statements of the interviewee. Please do not invent any content, but rely exclusively on the interview material provided.

summary_intro

Please summarize the interview summaries with regard to the extent to which the interviewees believe in the market efficiency of the stock market, i.e. that all available information is already included in the stock price. An implication of market efficiency of the stock market is that you can always buy or sell stocks at prices that reflect all the information and that you therefore never buy too expensively and never sell too cheaply. Consider all summaries equally, regardless of their order. Summarize how many people and which people (names) assume that the market efficiency of the stock market is given, and how many people and which people (names) tend to assume that the market efficiency of the stock market is not given. Give reasons for your assessment in a detailed explanation

of up to five sentences. The assessment should be substantive, differentiated and based on the statements of the interviewee. Please do not invent any content, but rely exclusively on the interview material provided.

Alternative prompts: Reasons for Non-Participation, Challenges with Participation, and Conditions for Success

intro

Please analyze the interview with regard to the most important reasons why the interviewee does not participate in the stock market, i.e. does not invest in shares, ETFs or funds. Create a list of the most important reasons, sorted by relevance for the interviewee. Add a detailed explanation of up to five sentences for each reason. The explanation should be substantive, differentiated and based on the interviewee's statements. Provide a suitable quote from the interview for each reason. Please do not invent any content, but rely exclusively on the interview material provided.

summary_intro

Please summarize the interview summaries with regard to the most important reasons why the interviewees do not participate in the stock market. Consider all summaries equally and regardless of their order. Create a list of the main reasons, with a one-sentence explanation for each reason. Sort the reasons in the list according to their relevance. Please do not invent any content, but rely exclusively on the discussion material provided.

intro

Please analyze the interview with regard to the most important reasons that cause costs or problems for investors on the stock market. Create a list of the most important reasons, sorted by relevance for the interviewee. Add a detailed explanation of up to five sentences for each reason. The explanation should be substantive, differentiated and based on the interviewee's statements. Provide a suitable quote from the interview for each reason. Please do not invent any content, but rely exclusively on the interview material provided.

summary_intro

Please summarize the interview summaries in terms of what the most important reasons are that cause the interviewees costs or problems in the stock market. Consider all summaries equally and regardless of their order. Create a list of the most important reasons for costs or problems on the stock market, sorted according to their relevance. Explain each reason in up to five sentences. Please do not invent any content, but rely exclusively on the interview material provided.

intro

Please analyze the interview with regard to what the interviewee considers necessary to be successful on the stock market. To do this, create a list of the most important aspects, sorted by relevance for the interviewee. Add a detailed explanation of up to five sentences for each aspect. The explanation should be substantive, differentiated and based on the interviewee's statements. Provide a suitable quote from the conversation for each reason. Please do not invent any content, but rely exclusively on the interview material provided.

summary_intro

Please summarize the interview summaries in terms of what the interviewees consider necessary to be successful in the stock market. Consider all summaries equally and regardless of their order. Create a list of the most important requirements to be successful on the stock market, sorted by relevance. Explain each aspect in up to five sentences. Please do not invent any content, but rely exclusively on the interview material provided.

B.2 Full Answers

This section presents the LLM-generated full single-sentence answers for each interview summary (to table 4). These responses reflect the condensed interpretations of the interview materials based on the applied prompts.

Positive and Negative Aspects of the Stock Market - Non-Investors - (Table 4 Panel A)

Positive Aspects

1. Opportunity to generate wealth: Many respondents see the stock market as an opportunity to increase their assets and thus secure their financial future.

2. Diversification of investments: The ability to invest in different share packages in order to minimize risk and achieve a good return is seen as a positive aspect.
3. Long-term investment strategy: Many respondents think long-term and want to invest their money in such a way that it becomes more valuable over time.
4. Flexibility: Some respondents see the flexibility of the stock market as a positive aspect, as you can react quickly when the markets change.
5. Opportunity to participate in company profits: The purchase of shares offers the opportunity to participate in the profits of a company.

Negative Aspects

1. Risk: The risk of losing money if you invest in the wrong company or if the stock market fluctuates is seen as a negative aspect.
2. Complexity of the market: Many respondents find the stock market complex and difficult to understand, especially for someone with no experience in this area.
3. Uncertainty: The uncertainty regarding the future and the development of the stock market is seen as a negative aspect.
4. Time required: The time required to manage shares is seen as a negative aspect.
5. Fees and costs: The various fees and costs associated with buying and selling shares, such as brokerage fees and custody fees, are seen as a negative aspect.

Positive and Negative Aspects of the Stock Market - Investors - (Table 4 Panel A)

Positive Aspects

1. Opportunity to multiply money: Many respondents mention that they want to increase their money by investing in shares.
2. Diversification of investments: The possibility of minimizing risk by investing in different sectors and companies and at the same time expecting profit from different sources is seen as positive.
3. Long-term perspective: The importance of a long-term perspective when investing in shares in order to benefit from potential gains is emphasized.
4. Flexibility: Some respondents appreciate the flexibility of the stock market, as they can invest or sell at any time.

5. Opportunity to participate in the development of companies: It is considered exciting to participate in the development of companies and experience their successes.

Negative Aspects

1. Risk of losses: The risk of losing money when investing in shares is seen as negative.
2. Market complexity: The difficulty of understanding the stock market and making the right decisions is seen as negative.
3. Dependence on external factors: The success of equity investments depends on many factors, such as the economic situation or political events.
4. Uncertainty and loss of control: Some respondents feel insecure when investing in shares because they don't know what will happen.
5. Time required: The time required to deal with the stock market and to manage one's investments is seen as negative.

Difficulties with Participation - Non-Investors - (Table 4 Panel B)

1. Lack of knowledge and understanding: Many interviewees state that they do not know enough about the stock market and feel insecure when it comes to investing.
2. Risk awareness: The interviewees are aware of the risks associated with buying shares and do not want to lose their money.
3. Market complexity: The stock market is seen as complex and difficult to understand.
4. Security concerns: The interviewees want to ensure that their investments are safe and do not take on too much risk.
5. Fees and costs: The interviewees are concerned about the fees and costs associated with buying and selling shares.
6. Time and effort: The interviewees do not have much time or effort to deal with the stock market.
7. Risk awareness: The interviewees are aware that the stock market involves a certain amount of risk and do not want to lose too much money.
8. Concerns about returns: The interviewees have concerns about the return they can achieve with their money.

9. Uncertainty about the future: The interviewees are uncertain about the future and do not know what to expect.
10. Lack of experience: Many people have no experience of buying shares or funds and do not know how to proceed.

Difficulties with Participation - Investors - (Table 4 Panel B)

1. Lack of experience and knowledge: Many respondents have little or no experience with the stock market to begin with and do not know how to proceed.
2. Risk awareness: Fear of losses and awareness of the risks involved in buying shares discourage many respondents from investing in the stock market.
3. Complexity of the topic: The subject of finance and shares is often perceived as complex and difficult to understand, which is a barrier to participation in the stock market.
4. Fear of loss: Fear of losing money when investing in shares is a common theme and prevents many respondents from making riskier investments.
5. Lack of self-confidence: Some respondents express doubts about their ability to make good investment decisions, which hinders their participation in the stock market.
6. Information overload and confusion: The abundance of information about the stock market and financial products can be confusing and make it difficult for respondents to make informed decisions.
7. Psychological factors: Impulsiveness, fear of loss and other psychological factors play a role in respondents' financial decisions and may influence their participation in the stock market.
8. Time and effort: The need to regularly check on the status of investments and spend time managing the portfolio can be a barrier to participation in the stock market.
9. Dependence on external factors: Dependence of investments on external factors such as economic crises or political events may cause uncertainty and anxiety among respondents.
10. Lack of support: Some respondents feel alone in the decision to invest in the stock market and have no one to ask for advice.

The Purpose of Knowledge and Ongoing Effort - Non-Investors - (Table 4 Panel C)

1. Better understanding of the stock market and how it works: Through knowledge and effort, one can develop a deeper understanding of the stock market and its mechanisms, leading to better investment decisions.
2. Ability to earn or save money: Knowledge and effort in the stock market can help one make or save money by making informed investment decisions.
3. Greater confidence in own abilities: Through knowledge and effort, one can develop a higher level of confidence in their own abilities, leading to more confidence in making investment decisions.
4. The ability to participate in the stock market and benefit from market opportunities: Knowledge and effort in the stock market allows one to participate in the market and benefit from market opportunities.
5. A good diversification of assets to minimize risk: Through knowledge and effort, one can achieve a good diversification of assets to minimise risk and maximise return.
6. The ability to choose the right stocks: Knowledge and effort in the stock market can help one select the right stocks to make better investment decisions.
7. The ability to invest for the long or short term: Through knowledge and effort, one can decide whether to invest for the long term or the short term, depending on what one's goals and priorities are.
8. A better understanding of the risks and opportunities of the stock market: Knowledge and effort in the stock market can help one develop a better understanding of the risks and rewards of the market, leading to better investment decisions.

The Purpose of Knowledge and Ongoing Effort - Investors - (Table 4 Panel C)

1. Wealth accumulation and financial independence: Through knowledge and effort in the stock market, you can increase money and become financially independent.
2. Long-term asset building and retirement planning: Another goal that can be achieved through knowledge and effort in the stock market is long-term wealth accumulation and retirement planning.
3. Risk minimization and opportunity maximization: Through knowledge and effort in the stock market, one can minimise risks and maximise opportunities to invest successfully.

4. Better return on investments: Another benefit of knowledge and effort in the stock market is the ability to get a better return on investments.
5. Flexibility and adaptability: Knowledge and effort in the stock market allows one to react flexibly to changes in the market and adjust investments.
6. Understanding of the market and financial products: A basic understanding of the market and financial products is necessary to successfully participate in the stock market.
7. Time and effort for research and analysis: To successfully participate in the stock market, one must invest time and effort to research and analyse the market.

Becoming an Investor - Investors - (Table 4 Panel D)

1. A long-term perspective: Many interviewees emphasise the importance of taking a long-term perspective when investing in order to achieve higher returns and minimise risks.
2. Risk awareness: Interviewees are aware of the risks associated with investing and look for ways to minimise their risk, for example by diversifying or investing in less risky assets.
3. Education and self-education: Many interviewees have educated and researched themselves about finance and investing in order to make informed decisions.
4. Diversification: Interviewees diversify their investments to minimise risk and achieve higher returns.
5. Trust in financial advisors or experts: Some interviewees rely on the recommendations of financial advisors or experts to make their investment decisions.
6. Financial independence: Many interviewees want to be financially independent and see investing as a way to achieve this.
7. Self-reflection and self-awareness: Interviewees regularly reflect on their own finances and investments and adjust their strategy accordingly.
8. Technology and digital platforms: Some interviewees use digital platforms to invest in equities, which they find convenient and transparent.
9. Social environment and support: Interviewees are supported by their social environment, whether through friends, family or online communities, to get information about finance and investing.

10. Experiences and learning processes: Interviewees have learnt from their experiences and adapted their strategy accordingly to achieve better results.

B.3 Market Efficiency

Here we report the full text answers the LLM provides when asked to assess whether non-investors or investors believe in market efficiency. The corresponding prompt is reported in Appendix B.1 above.

Non-investors

> Based on the interview summaries, it can be said that most interviewees tend to believe that the market efficiency of the stock market is not given. Many of them express concerns about the uncertainty and risk associated with buying shares and emphasize the importance of research and active participation in the market in order to be successful.
>
> Some interviewees, such as Oliver, Jacob, Resit, Tanja, Silke, Michaela, Ralf, Ingrid, Kirstin, Nadine, Pia, Luca, Luise, Cathleen, Bianca and Madeline, show a skeptical attitude towards the efficiency of the stock market. They express concerns about the risks and uncertainties associated with investing in shares and prefer to invest their money in a safe way.
>
> Overall, it can be said that 16 out of 16 interviewees tend to believe that the stock market is not efficient. None of the interviewees expressed unreserved agreement with the efficiency of the stock market.
>
> The reasons for this skepticism are varied and include the uncertainty and volatility of the market, the complexity of financial products, the fear of losses and a lack of knowledge about the market. Many interviewees emphasize the importance of researching and actively participating in the market in order to be successful and prefer to invest their money in a safe way.
>
> Overall, it is clear that the interviewees have a realistic and cautious attitude towards the stock market and do not simply assume that the market is efficient. Instead, they prefer to inform themselves and do their own research before making decisions, rather than relying on the opinions of experts or institutions.

Investors

Based on the interview summaries, it can be stated that all interviewees are rather skeptical about the efficiency of the stock market. None of the interviewees explicitly expressed the opinion that the stock market is efficient and that it is not possible to achieve better returns than the market on average by making informed decisions.

Interviewees such as Manuel, Adam, Lukas, Anika, Oscar, David, Monique, Dennis and Uta all express concerns about the uncertainty, volatility and risks of the stock market. They emphasize the importance of research, analysis and diversification to minimize risk and achieve better results.

Overall, it can be said that all interviewees tend to believe that the market efficiency of the stock market is not a given. They believe that it is possible to achieve better results than the market on average through their own research and decisions.

There is no interviewee who explicitly expresses the opinion that the stock market is efficient. It can therefore be said that all 9 interviewees (Manuel, Adam, Lukas, Anika, Oscar, David, Monique, Dennis and Uta) tend to assume that the stock market is not efficient.

The assessment is based on the statements of the interviewees, who all have a skeptical attitude towards the stock market and emphasize how important it is to be aware of the risks and uncertainties in order to make informed decisions.

B.4 Robustness Checks

We perform several robustness robustness checks. In Appendix Table B1, we report results when using English language prompts, interview transcripts translated to English, as well as the opposite sequence in which interview transcripts are presented to the LLM. Finally, in Appendix Table B2, report results for alternative prompts for reasons for non-participation in the stock market for non-investors, difficulties with participation for investors as well as requirements for successful participation in the view of non-investors as well as investors.

Table B1: English Prompts, Translated Interviews and Changed Order of Interviews

Panel A: Positive and Negative Aspects			
Non-Investors		**Investors**	
Positive Aspects			
1	Potential for high returns	1	Potential for high returns
2	Diversification of investments	2	Diversification and risk management
3	Opportunity for long-term growth	3	Professional guidance
4	Flexibility and control	4	Low costs
5	Opportunity to support companies with potential for growth	5	Flexibility and control
Negative Aspects			
1	Risk of loss	1	Risk of loss
2	Complexity and lack of transparency	2	Complexity and lack of understanding
3	Fees and costs	3	Volatility and unpredictability
4	Uncertainty and unpredictability	4	Lack of control
5	Lack of control	5	Emotional challenges
Panel B: Difficulties with Participation			
Non-Investors		**Investors**	
1	Lack of knowledge and understanding	1	Lack of knowledge and understanding
2	Risk aversion	2	Risk aversion and fear of loss
3	Difficulty in finding reliable information	3	Perception of complexity
4	Perceived complexity	4	Lack of trust in financial advisors
5	Lack of trust in financial institutions	5	Difficulty in choosing the right investments
6	Limited financial resources	6	Limited financial resources
7	Fear of losing money	7	Time commitment
8	Information overload	8	Emotional factors
9	Procrastination	9	Information overload
10	Emotional attachment to money	10	Lack of experience
Panel C: The Importance of Knowledge and Ongoing Effort			
Investors		**Investors**	
1	Making informed investment decisions	1	Achieving financial goals
2	Avoiding losses	2	Making informed investment decisions
3	Increasing wealth	3	Mitigating risks
4	Achieving financial security	4	Generating higher returns on investment
5	Gaining control over finances	5	Building wealth over time
6	Mitigating risks	6	Staying ahead in the market
7	Earning higher returns		
8	Building a stable financial future		
Panel D: Becoming an Investor (Investors only			
1	Financial education and background	1	Low barriers to entry
2	Family influence	2	Long-term perspective
3	Trust in a financial advisor or institution	3	Risk awareness and management
4	Access to information and education	4	Personal financial goals and motivation
5	Personal experience with saving and investing	5	Social influence and recommendations

Table B2: Alternative Prompts: Reasons for Non-Participation, Challenges with Participation, and Conditions for Success

Panel A: Reasons for Non-Participation and Problems with Participation			
Non-Investors: Reasons for Non-Participation		**Investors: Problems with Participation**	
1	Uncertainty and lack of understanding	1	Unawareness and lack of experience
2	Risk awareness	2	Risk appetite and fear
3	Lack of experience	3	Complexity and information overload
4	Need for security	4	Emotional decisions and impulsiveness
5	Complexity of the stock market	5	Lack of transparency and trust in bank advisors
6	Prioritization of security over return	6	Fees and costs
7	Lack of time and interest	7	Lack of diversification
8	Other financial priorities	8	Dependence on external factors and crises
		9	Time and effort
		10	Lack of control
Panel B: What is Needed for Success in the Stock Market			
Non-Investors		**Investors**	
1	Knowledge and understanding	1	Knowledge and understanding
2	Risk awareness	2	Long-term perspective
3	Long-term perspective	3	Risk management
4	Diversification	4	Discipline and patience
5	Realistic expectations	5	Realistic expectations
6	Patience and discipline	6	Independence and personal responsibility
7	Confidence in one's own ability	7	Education and continuous learning
8	Transparency and understanding of financial products	8	Diversification
9	Security	9	Flexibility
10	Family relationships and social influences	10	Media skills

C Interview Quotes Referenced in the Results Section

The indirect quotes are arranged in the order in which they are mentioned in the results section. Notes on the behavior of interviewees are provided in round brackets, and context summaries are enclosed in square brackets. Short questions or comments from the interviewer are written in plain type after the mention of the interviewer.

Overview

Resit (14, 246) *So I think an average of five percent a year, in two years you have ten percent, a little more than ten percent, so five percent increase in value.*

Ralf (10, 181) [Light laughter] *Yes, always double it. No, it should - I'll tell you, a good savings account used to yield 5% or something like that, 5 points if I remember vaguely. Sure, anything higher than that. Between 5 and 10% over the year.*

Ingrid (9, 210) [100 euros today, return in a year]

Well, probably not too much. I don't know, I don't know. If you're lucky, I don't know, €105 €110. Something like that.

Pia (6, 204-205) *Yes, I would hope for around €30 35* [out of €1,000]*, and of course it would be great if it were 3%. If it was 6%. 6% would be great, of course. Yes. 6, 7%.*

Insight 1: Perceived Entry Costs

Bianca (2, 305) [Reference to the situation that Bianca has a trading app, deposited money there but does nothing more because she finds it very complicated]

Yes, I want to do it properly, I want to understand what I'm doing. I don't want to just blindly invest in ETFs or shares because everyone says you just have to.

Madeline (1, 172) *Requires specialist knowledge and expertise. Not transparent and actionable for the normal checking account user. You must familiarize yourself. You must gather information. You need to have a basic understanding of how things are connected. You need to have a sense of the relationship between risk and return.*

Esther (13, 252) *Sure. I think you just must deal with it, observe it. There are so many networks where you can definitely look at it. Or if I'm interested in a stock now, I google it. Nowadays you can google all sorts of things. As I said, you really must*

sit down and observe it for a while, one or two weeks or maybe months, to see how it varies. Does it rise, does it not rise? Does it remain constant? Are they being sold, are they not being sold? So that's how I would do it now, to decide ok, which way do I go, where do I get in now.

Luca (5, 426) *Well, I think, no idea, talk to as many people as possible who have experience with it or do research on the internet. Read reports.*

Nadine (7, 159) *What are the best low-risk stocks? Or with lower risk.*

Pia (6, 151) *I would perhaps look at the stock performance over the last few years. What the curves are like. I think you can look at that, and then you can see whether it's a steady company or whether there have been very jumpy years where you might lose a lot of money.*

Nadine (7, 137) Interviewer: So it's better not to have all the small stocks, but rather the two big ones (...)

Yes. Or you put 50 [out of 100] *into one big one and then two times 25 into two small ones. Depending on how they're doing. I mean, you must find out beforehand how they have changed over the years, you can also look at tables like this.*

Madeline (1, 8) *You have to be half a financial professional by now to invest your money profitably or profitably without incurring losses.*

Luise (4, 136-137) Interviewer: What is the danger there or why is it so bad if someone approaches it ignorantly?

As I said, on the one hand it can be good, but on the other hand it can go in a different direction very quickly and then I lose the money I invested and that can also be large sums.

Oliver (16, 214) (...) *So, when there are current topics, whether it's Deutsche Bahn, General Motors, which used to be in the media, or BP, where the oil has tipped over, you can read a bit about how the stocks are developing, performing. And you can influence it yourself. I suspect that more and more. That you can profit from it if you pay attention to it and read about it.*

Kirstin (8, 250) *Yes, which product is in demand, so what are people asking for? What is going up? Look at the position. What is also for later life? For example, small things like computers are on the rise at the moment, where you might be able to make more*

profit. Or everything that has to do with technology is on the rise and you should find out about it. Because there are lots of areas and you need to find out where it's going up or down and check every day to see whether it's always going up or whether it can go down.

Silke (12, 107) *Well, I'm not so good at it yet, I have to say, but I'd like to. As I said, I've listened to a few podcasts and read a book on the subject of women and finance. But to be honest, I haven't made any progress yet. Because if I did, I'd like to do it on my own. So that I have a bit of an eye on it on my own. I also read a lot of newspapers, so I hope that at some point I'll know where some of the trends are going. So, in my naivety, I say that now and that I know what's going on with HelloFresh. I've already noticed that it's been bought a lot, and then the stock has risen incredibly. In other words, if you had invested there, you could have won. That you recognize trends beforehand, so to speak.*

Silke (12, 109) *But I would have to be fit enough to manage it myself somehow. In other words, I would have to know where to get the stocks. How quickly can I sell them? And I don't know any of that.*

Bianca (2, 220) *I am also of the opinion, I will, it interests me very much. I think I'll look into it too.*

Luise (4, 143) *And I enjoy following this kind of thing, and I'm also very interested in it and find it exciting in general.*

Luise (4, 163) *It's a bit like sport. So I experience a lot of new things. Yes.*

Oliver (16, 224) *In general. It's just that I think it also makes for good conversations. When you meet people and get to know someone from the financial sector and you say "I recently read this and this", that also scores points with a lot of people if you have at least basic knowledge, you're often surprised or get a positive response that you've read up on it.*

Esther (13, 216) *Headache, for me it's a headache.*

Ingrid (9, 117) *So it's often the case that you can understand things you're interested in. I'm not interested in that, which is why I don't understand it.* (laughs)

Pia (6, 466) *So, if you're not interested in it yourself, you won't get to it.*

Insight 2: Perceived Participation Costs

Ingrid (9, 170) *On the one hand, you should keep an eye on these things to see how the market is developing. Nowadays you can see how stocks rise or fall or whatever. On the one hand, and yes, I mean that nowadays you don't necessarily invest in one stocks or one company. Instead, these are so-called share packages, which then perhaps also simply minimize the risk somewhat. In other words, there's only one stock where the risk is a little higher and the other shares are relatively safe. So I can't tell you which stocks are safer and which are risky. I just don't know the stock market well enough for that or...*

Resit (14, 296) *No, that's where I made the difference. For me, stocks are something I wouldn't do. If I do that, then funds and ETFs, that's what I mean. I mean, with funds and ETFs you don't have to be so active, maybe every six months or every year, and that's what I always hear from others.*

Resit (14, 231-236) Interviewer: But you said that ETFs are already a mixture of stocks. That means there is little risk.

Yes.

Interviewer: But you wouldn't feel sure that you've chosen the right ETFs?

Yes, exactly, maybe you want the optimum, the best. Of course, an ETF will always be good. But if you do invest your money, you probably want the best. You want to do a bit of groundwork to find the best product for you.

Interviewer: That means a lot of research, as you said, and a lot of hard work to find the optimal product.

Exactly.

Cathleen (3, 309) *So that would certainly be something for longer-term planning. But as I said, I would first go for real estate. So that I also have something tangible. Because with a stock, of course it can be a good investment, but at some point there can be a slump and then I've lost out. That's why real estate is something tangible that I have for security if I then perhaps change my mind or think about moving, something bigger, something smaller, yes. It also gives you the opportunity to get additional support from the bank. No.*

Insight 3: Investors' Perspective on Entry and Participation Costs

Dennis (18, 71) *That's why for me it's more a case of regularly checking what has happened to the investments I have made. And also, partly look at what is written about these companies in the media. I do that twice a month. And from this I try to work out whether I should keep the stock or sell the stock savings plan.*

Uta (17, 353) *That's a work project exactly, that many say it's a work project exactly and that many say I don't want to buy work with my money.*

Uta (17, 27) *And that's what I've always had in the back of my mind. Because that seems logical to me. Always invest in something you understand.*

Uta (17, 369) *Yes, yes indeed, because I don't think ETFs are a sure-fire success like building society insurance or life insurance, but it's something that's already in my head. That's something you should at least keep an eye on.*

Adam (24, 96) *So I give them a mandate for the sum, I roughly define the parameters and then I have nothing more to do with the actual investment decisions. They take care of that. They carry out all the purchases and sales. I have access at all times and can see what they're doing. But that's exactly why I entrust them with the money, so that I don't have to deal with it.*

Adam (24, 104) *I don't have the time, the knowledge or the fees that I would have to pay every time I buy or sell. The sums involved would make it exciting for me.*

Oscar (21, 14) *Since then, I've been reading newspapers online, such as Aktionär, an online newspaper, and I've actually become interested in it personally.*

Uta (17, 6) *Because I'm now at an age where I'm due an inheritance. It's not just money, it's also property. And although I find the subject terrible, I have to deal with it. Because of course I don't want to squander my parents' life's work somehow or lose it again through unwise decisions, when it really took them decades to build up their assets. That's why, even though I'd rather sit in a café or cuddle with my cat or watch TV and go out or drive a convertible, I have to deal with it now.*

Insight 4: Becoming an Investor

Uta (17, 229) *Yes, that was a tip from my sister at the time and because I think she's such a financial genius, I was happy to do it. And then I was delighted to see that the value of my portfolio was increasing and I didn't know what ETFs were at the time.*

Oscar (21, 77) *I only became aware of stocks through friends because my father always said, "Stocks are no good," "You lose money, you can lose everything." That always left such a negative impression in my head that I never did it. Then friends told me that you can do it monthly, and that it limits the risk a bit.*

Anika (22, 156) *Only my boss has stocks. Don't ask me where, but he keeps track of it. Funds? My girlfriend also has this fund. She was advised in exactly the same way, so she also paid into the Volksbund fund or pays into it every month. Apart from that, I don't have any other approaches among my acquaintances, which is probably also due to the shift. So I think if I'm at managing director or manager level, I can imagine that more of them invest in stocks and funds than the middle class or the poorer class. Because they simply don't understand it. My father never had a stock. He wouldn't do that either.*

David (20, 95) *So in my circle of family, friends and acquaintances, investing is not so widespread, although my father has also started to buy more stocks in recent years. Also due to the zero interest rate policy.*

Pia (6, 462) *My parents don't have anything to do with it either, so my family isn't the one who pointed it out to me. Exactly, and apparently I don't have so little money that I haven't thought about investing before. Yes, maybe you don't dare to do that because there are so many technical terms and foreign words and yes.*

Pia (6, 466) *So, if you're not interested in it yourself, you won't get to it.*

Resit (14, 266) *Preferably simple people like us. So not now... I mean, I don't want to offend anyone. Preferably not from some institution or bank or something, but a completely normal person, a completely normal, average person, who perhaps only earns something a month as a worker, and thinks about it just like we do, and doesn't get paid for it. Private people.*

Madeline (1, 220) *Well, the people I know who are in roughly the same financial situation as me have similar support from their family in most cases, and then it's more of a side issue. There's a brief exchange of opinions: "Does it make more money to buy a vacation home on Sylt Westerland or in the south of France? What are the rental prospects? How much will the family use it?" Such discussions do take place from time to time, but not much more. Or there is simply nothing to talk about.*

Kirstin (15, 288) *So I would like to speak to someone in person, someone who is not*

upmarket, but a simple person who is understanding and nice, who can explain to me a bit about how to proceed.

Resit (14, 266) *Preferably simple people like us. So not now... I mean, I don't want to offend anyone. Preferably not from some institution or bank or something, but a completely normal person, a completely normal, average person, who perhaps only earns something a month as a worker, and thinks about it just like we do, and doesn't get paid for it. Private people.*

Luca (5, 524) *Oh well* (laughs). *Well, even though I've been with Deutsche Bank for I don't know how many decades, the bank always thinks of itself first and foremost, yes. How they make money. That's the way it is, that's why I, as a beginner* (makes quotation marks with hands), *where I don't know my way around, where I don't know my way around at all, then I first want to find out from closer people, from closer people who don't, how should I put this, who don't want to make a profit from me, with me. Let's put it this way, that's actually. Yes.*

Bianca (2, 325) Interviewer: But intuitively the saving bank is not the right place to buy stocks, yes?

No, I don't think so. I've never been told anywhere that I could buy stocks there and I don't think that the normally trained bankers, maybe that sounds arrogant, but I don't see why they should know anything about stocks. It seems a bit like that to me. For me, a savings bank is a typical suburban bank, normal, like a Volksbank. You invest your money there. You have a savings book, maybe a fixed-term deposit account, credit cards, but that's nothing now. Of course you can also apply for loans, everything at the moment, but not something like this. That's what I think.

Pia (6, 279-280) Interviewer: Postbank, what do you think they are capable of? What would you ask them about stocks?

Maybe what shares they might recommend. To be honest, I wouldn't do any shares through them. That's also because I don't feel that I'm getting very good advice.

Uta (17, 263) *So that's my personal aspiration, which I've only developed in recent years, is that if you don't want to support companies that aren't sustainable, then it becomes difficult because you have to be incredibly selective. And then it's really a question of yes, do I invest in Merck stocks, for example, that do animal testing but also save people? For me, there's a bit of a question of conscience, and of course, you can also buy stocks and then look back in 30 years to see how things have actually*

developed. Of course you can do that too, especially if you don't need the money, yes. But it's something where you have to at least observe the market, yes. Or you have people who do it for you. And that's just or you're a customer and you should also be aware that I think sometimes many advisors aren't advisors, they're salespeople. So first you have to find a good advisor. It's all exhausting.

Uta (17, 357) *Deal with the advisor, if you have an advisor, deal with the advisor, yes.*

Silke (12, 111) *So I don't want to go somewhere and say, yes, by the way, I'm interested in stocks or something. I'll give you €10,000 now, go ahead. That's too much for me, so I either want to bear the risk alone or not.*

Dennis (18, 4) *When it comes to finances, I always like to have a lot in my own hands. I'm not the kind of person who trusts my bank advisor unconditionally.*

Anika (22, 117-126) Interviewer: All right. You've received this annual overview two or three times now.

But I don't know how much is in there. Actually, I don't, I don't know. I can't tell you. I don't know how much we've accumulated.

Interviewer: Have you even looked at it? When the thing comes, the letter?

No. I always put it with the tax documents. Because I think to myself, you always hand everything in and have a look. I don't even know if I can pay tax on it or whatever. I always put the overview in there. I give the documents to my husband's friend who takes care of our taxes. And he always gives me back what he doesn't need. So it's always the same thing. I put everything I get into the documents. Do I need it for tax, yes, no. If I get it back, it gets filed. Period.

Interviewer: So you don't actually know whether it will be taxed or not. Was there anything like that?

I have absolutely no idea. As I said, the subject has always scared me. And I just said to Michael that if I save my money, if I at least have it there, and it doesn't get lost, then it's okay. Then do it, if it's good.

Interviewer: And how do you know that it won't get lost?

He told me that at least it would be returned. I really trusted that blindly. As I said, when you know a person, you trust them.

Interviewer: Yes, of course, that could be the case. I don't know anything about that either. In this fund, he told you that you would definitely get your money back. But you really don't know now...

How much more I'll make with it.

Monique (19, 89) *That came from an appointment with the advisor at the savings bank, I was about 18. It was 25 or 50 euros, I think I started with 25, then 50 euros and the savings bank's partner is DEKA and then I put it into a savings plan, but exactly how long it ran for, maybe three years or so.*

Manuel (25, 271) *So the knowledge, that's profound knowledge. It's broad and profound knowledge at the same time. You have to imagine it like a doctor performing surgery. Not just anyone can operate on a person. Only a doctor can do that, because they have learned it. And they also know their way around in terms of experience. It's just like a banker. Of course there are bankers who are just crooks. And others are also very good bankers. As I said, they know their stuff, they have experience with the whole matter. They can also make appropriate recommendations to people, to laypeople, who are perhaps less familiar with the subject matter.*

Interviewer: How can I tell the difference? When you say there are good ones and bad ones, how can I tell?

Well, you can tell quickly by simply seeing that if someone arrives and says ok, I want your money, we can invest it, then you will make millions in profit. If someone is very quick, hasty and not at all interested in the person, it's a sign right from the start that it's all just a surface. That it's all just an act. If a banker is genuinely interested in you as an investor, then he will approach you again and again and even call you. Discreetly, not in the exaggerated sense. Because you have given your permission for him to contact you. And so at some point, if he has the appropriate form, the opportunity to invest money for you, as you have described it to him, then you will come together. And that may be over a longer period of time. Then you can see very clearly that he is making an effort for you. And you can see that immediately, you can see that quickly.

Adam (24, 146) *Yes, and now more than 20 years later, I've become a bit wiser and have realized for myself that asset management is so chic when they take care of it. I dare to doubt that I can do it better than they can. And I mean, I've been with them for seven years, I can see what they do on average. I'm completely satisfied. It's not*

the best you could achieve if you knew what you were doing. But for the fact that I don't have to do anything, it's brilliant.

David (20, 93) *Through finance books. There's something for all kinds of things. Stocks, real estate, general understanding of the financial system, etc. I still watch all sorts of topics on YouTube that interest me. Tutorials where I would like to know how to do it. And I've always done very well with that, getting smarter with it.*

Dennis (18, 21) *First of all, I enjoyed life after my apprenticeship, I'd say, I didn't think too much about retirement provision. I earned my first real money, so I had a "work hard, party harder" mentality. Then I fell ill, had to stop working for quite a while and at some point I received my pension information and then it suddenly started to rattle. You can work out relatively reliably what you can expect in old age. Even with the current status, what amount is on there and then there's not much left. And that's when it started for me, you could say it was during the illness phase that I started to look at how I could organize my future so that I would have a future. Because of course I don't want to be dependent on the state for the rest of my life. And then it just started. Of course, you kept hearing in the media about old-age provision such as Riester and so on. Then you look at it, look at the remuneration, it doesn't even keep up with inflation, then you work out how old you have to be to get back roughly the money you've paid in.*

Dennis (18, 57) *Then I looked at how I could open a brokerage account as cheaply as possible and also relatively unbureaucratically, which is an added bonus. The brokerage accounts at traditional banks are not necessarily cheap, due to issue front-end sales loads etc. Whether they are justified or not is not my job to judge. For me, cheap is simply the yardstick here: if, for example, I only pay three euros for a single share, but then have to pay five euros for the fact that I buy it via the brokerage account, then that's not the right thing for me. So I looked for alternatives. And then I ended up with Trade Republic, registered there and basically have my brokerage account there.*

Monique (19, 101) *So most of it came through Instagram and Facebook. The first one I followed is called Madame Moneypenny, she's an influencer, she wrote a book and she was the first one to deal with finance for women. And she also has a Facebook group, I don't know what it's called, I joined it and there are a lot of women in it. She also recommended ETFs. I read her book once. I also exchanged ideas with colleagues who somehow, by chance, came across the topic and also knew this person. And that was the first point of contact, I read it again and again, because you keep looking at*

postings and someone keeps asking what it is. And I didn't understand much about it then. Even today, I still don't feel like delving that deeply into the subject. Basically, I already know what the fund invests in, but I couldn't explain it to anyone in such detail.

Monique (19, 102) *Then I opened my own brokerage account, which is now with Trade Republic, and I have it via an app on my phone and it was super easy to open on my own. You don't have to read through anything, it was so intuitive. And then as soon as you're authenticated, you can get started straight away. I tried it out first and only did 25. Then there are shares for women on Facebook, she also told me a bit about the funds, for example the MSCI World, the fund always came up, I saw it a lot, then I looked at the performance, which was also very good and then I thought it was a common fund that many have and then I took it. But I didn't look at many others at all. Now I'm reading more and more. For example, S&P 500, then you hear other fund names, then you take a look via the app to see what kind of fund it is and where it invests. I wouldn't be averse to splitting another 50 into four funds, but I'm still working on that.*

Oscar (21, 209) *Terminated, yes. I would never do anything there again, that was somehow - I don't know, I have the experience in local banks, they were somehow never that good, back then with Volksbank and Deutsche Bank. For me, it's always easier to just do it myself and get information online instead of going to a consultation or something, I don't feel like it.*

Madeline (1, 151) *The traditional ones like ING DiBa, Beta Invest, Trust Pilot, Weltsparen. They are more or less all connected. And then there are the higher-level portals that offer everything from A to Z, such as Check24, Verivox and what they are all called. You have to be a bit careful there. Ultimately, they are all interlinked. You simply take various comparison portals and enter your parameters. How much, how long, at what risk. And then you look at the three or four portals to see if they give you roughly the same results. Then you get a pretty good feeling for it. So if the Finnish xy Bank is mentioned in all the portals with a good interest rate for fixed-term deposits over three years, then there's probably something to it. They don't give each other anything. Then you have to look at the small print to see whether it's worth it in terms of VAT or tax exemption yes, no and what's attached to it. It's all become pretty much the same now.*

Luise (4, 129) *I usually just use the search engine on Google and enter the relevant*

keywords. For example, shares, what to watch out for, share performance. And now I have an iPhone and I can also see shares, the individual trends a bit, so I also keep an eye on them to simply develop an understanding. OK yes, that day was rather better, that day was rather worse.

Dennis (18, 75) *Wall Street Bets is one group. I take a bit of inspiration from them.*

Resit (14, 184) *And the way they explain it, this world of finance and so on, they're experts and so on, that really convinced me. I changed my mind a lot. Because they don't do any advertising. Or they don't try to sell anything. They just talk about their own, simple lives.*

D Survey Results: Becoming an Investor

In our survey, we ask investors to identify up to three of the most important factors that led to their initial participation in the stock market, choosing from a provided list of options including friends, family, the workplace, social media, or their own research. We then group these responses into five categories: Social Environment, Financial Advice, Own Research and Planning, Life Events, and Stock Market Development at the Time of the Initial Investment. The results are presented in Panel A of Appendix Table D1.

Based on insights gathered from the interviews, investors' responses underscore the significance of peer effects in lowering barriers to stock market participation: 53% of investors indicate that their social environment—such as family, friends, or the workplace—played a decisive role in their initial decision to invest. Furthermore, 24% emphasize the importance of professional advice. Notably, 64% of respondents highlight the critical role of personal research and planning, which includes forward-looking considerations, self-education, and the use of media sources such as social media, books, podcasts, or online articles. Interestingly, life events appear to play a smaller role, with only 7% of participants ranking this among their important factors.

From the interviews, we have already learned that it is often not just one factor, but rather an interaction of several factors that trigger investment decisions. In our survey, 23% of respondents select only one aspect as important for their decision to enter the stock market (see Panel B of Appendix Table D1). Among these respondents, only 21% (compared to 64% in the overall data) choose own research and planning, indicating that while personal research planning are significant, they rarely act as the sole deciding factor. This contrasts with the social environment and financial advisors. Among those who selected just one factor, 47% still identified their social environment as the most important, with family being the single most significant aspect.

The emergence of social media as a relevant factor becomes particularly evident when we examine these factors based on when investors began participating in the market. Comparing recent investors, who started investing within the last two years, to long-term investors who made their initial investment over ten years ago, the influence of social media increases markedly from almost 2% to 21%. Despite this shift, the relative ranking of our group indicators remains largely consistent over time, with one notable exception. The most significant difference is the role of stock market developments as a trigger, which is selected by only 16% of recent investors but by 39% of long-term investors.

Overall, the survey results confirm the impression from the investor interviews that del-

egating decisions has been, and continues to be, a strong trigger for overcoming barriers to entering the stock market. The interviews also confirm that many non-investors lack access to factors that seem to reduce these entry barriers, such as peers and advisors. We test this hypothesis on a larger scale using the survey data, where we pose specific categorical questions regarding access to peers and financial advice, as well as quotes selected from the interviews.

We begin our analysis with a structured question asking both non-investors and investors about their access to people in their social environment — specifically friends and family — who invest (see Appendix Table D3). Among non-investors in our sample, 51% state that they do not know anyone who is invested in the stock market - these numbers go even up to 70% for respondents with low education or a monthly income below 2000 euros. In contrast, only 10% of investors (11% among recent investors) report the same. Furthermore, 25% of recent investors even state that one-third or more of their peers are invested. This significant difference in access to a social environment that could help overcome barriers is further emphasized by the responses of non-investors to quotes from our interviews (see Panel A of Appendix Table D2). Regarding the importance of the social environment, 65% of non-investors agree that investing is not common among their peers, while only 13% disagree. Additionally, only 37% of non-investors agree with the statement, "I hear more and more people around me talking about stock market participation or informing themselves about it," a figure that is not significantly different from the 29% who disagree. This contrasts sharply with recent investors, where 60% agree with the statement. Notably, 56% of non-investors express a desire to have someone in their network—a straightforward, approachable person—with whom they could discuss investing, with only 17% disagreeing.

These survey results suggest that the lack of access to investor peers is likely a significant factor hindering the reduction of entry barriers to the stock market. But what about financial advisors as an alternative means of delegating decisions? On average, non-investors significantly agree that finding a good advisor is exhausting, yet they also believe that an advisor could be instrumental in helping them enter the stock market (see Panel B of Appendix Table D2).

To gain more insights into how advisors might reduce participation costs, we explored participants' perceptions of what financial advisors do on their behalf with the help of structured questions. Results are reported in Appendix Table D4. The data reveals that both investors and non-investors have strong perceptions of financial advisors to be actively engaged in managing their investments. A significant majority (more than 65%) agree with various quotes from the interviews emphasizing that advisors consistently stay informed

about individual stocks and company news, frequently monitor and evaluate portfolios, and promptly inform them when it's time to buy or sell products. In contrast, there is broad disagreement with the idea that advisors take a more passive approach, such as only reviewing the portfolio once a year around the time of a client meeting. Even though investors are slightly less likely to perceive this passive approach as inaccurate (56% disagree compared to 63% of non-investors), the overall sentiment indicates that both investors and non-investors generally expect advisors to actively manage their investments. They believe advisors are consistently engaged in seeking better opportunities rather than adopting a "buy and hold" approach, which aligns with their perception on how to handle the way markets work.

In summary, access to external influences and circumstances plays a key role in overcoming entry barriers to investing. Many individuals, as revealed by both interviews and survey results, did not enter the stock market independently but were informed, supported, guided, or encouraged by family, peers, or financial advisors perceived as knowledgeable. In some cases, life events also act as catalysts, pushing individuals to take the first step into investing.

Furthermore, own research and the growing role of social media in disseminating financial information serve as supportive factors, reinforcing the decision to invest. While not typically the sole motivator, these channels help reduce entry barriers and illustrate the various paths through which individuals transition from non-investors to investors.

Table D1: Aspects leading investors to initial participation

This table reports answers to a structured survey question in which respondents were asked to identify up to three of the most important factors that led to their initial participation in the stock market (Panel A) for all investors (Column 1), and separetely for the subsamples of recent investors (Column 2) and long-term investors (Column 3). Panel B displays the subset of respondents who selected only one of the available factors.

Panel A: Choosing several aspects

	Investors		
		Recent	Long-term
Social Environment	**53.19**	**59.40**	**48.25**
Influence of or support from my family	22.65	29.36	15.39
Influence of or support from friends/acquaintances	22.21	28.69	14.52
My work, my employer (employee stocks)	13.45	7.98	19.87
Training/studies	8.39	8.39	9.61
Financial Advice	**24.10**	**21.11**	**25.00**
Own Research and Planning & Social Media	**63.90**	**67.12**	**57.64**
I have been thinking about the future	35.52	36.40	33.62
Researching how best to invest money	32.52	30.04	35.59
Traditional media (e.g. books, internet-without social media)	15.47	15.43	14.74
Social media	13.41	20.84	1.53
Life Events	**7.11**	**6.50**	**5.79**
Stock Market Development at the Time of Initial Investment	**27.57**	**16.10**	**39.08**
Observations	2,967	739	916

Panel B: Subsample choosing one aspect

	Investors		
		Recent	Long-term
Social Environment	**46.93**	**55.88**	**46.64**
Influence of or support from my family	18.57	30.00	13.45
Influence of or support from friends/acquaintances	12.72	17.06	8.40
My work, my employer (employee stocks)	13.74	7.65	21.85
Training/studies	1.90	1.18	2.94
Financial Advice	**15.50**	**14.71**	**13.45**
Own Research and Planning & Social Media	**21.05**	**22.94**	**15.13**
I have been thinking about the future	4.97	5.88	4.20
Researching how best to invest money	7.75	5.29	7.56
Traditional media (e.g. books, internet-without social media)	3.80	4.71	3.36
Social media	4.53	7.06	0.00
Life Events	**2.05**	**0.59**	**2.10**
Stock Market Development at the Time of Initial Investment	**7.31**	**1.18**	**12.18**
Observations	684	170	238

Table D2 (continued): Overcoming, Panel C

Panel C: Own Research and Planning

Statement	Investor Type	N	Fraction (in %)		Diff.	Sig.
			Agree	Disagree		
Either I want to bear the risk myself or not at all	**Non-investors**	**456**	**37.06**	**25.00**	**12.06**	***
"I don't want to go somewhere and say, 'By the way, I'm interested in stocks. Here's €10,000, do your thing.' Either I want to bear the risk myself or not at all."	**Investors**	**385**	**54.03**	**16.88**	**37.14**	***
	- Recent	101	47.52	19.80	27.72	***
	- Long-term	113	52.21	11.50	40.71	***
For me, it's always easier to do it myself	**Non-investors**	**436**	**30.73**	**33.49**	**-2.75**	
"For me, it's always easier to do it myself and get information online rather than going to a consultation. I don't feel like doing that."	**Investors**	**394**	**60.66**	**15.23**	**45.43**	***
	- Recent	84	54.76	13.10	41.67	***
	- Long-term	119	60.50	16.81	43.70	***
YouTube experts	**Non-investors**	**451**	**13.30**	**46.56**	**-33.26**	***
"And the way they explain the financial world on YouTube, those are experts. That really convinced me. I changed my opinion a lot because they don't do advertising. They're not trying to sell anything."	**Investors**	**375**	**29.87**	**41.60**	**-11.73**	***
	- Recent	89	28.09	34.83	-6.74	
	- Long-term	118	16.95	55.08	-38.14	***
No investing without understanding, just because others say	**Non-investors**	**368**	**75.64**	**9.74**	**65.90**	***
"Yes, I want to do it right too, I want to understand what I'm doing. I don't want to just invest blindly because everyone says you should just invest in ETFs or stocks."	**Investors**	**293**	**79.56**	**7.23**	**72.33**	***
	- Recent	75	70.00	11.67	58.33	***
	- Long-term	91	86.24	7.34	78.90	***

Table D2: Overcoming

This table reports respondents' (dis-)agreement with quotes that were taken from our qualitative interviews or obtained from finance colleagues and refer to the role of peers (Panel A) or advisors Panel B) in the context of equity investing. We randomly assigned subsets of survey participants to a subset of quotes to avoid survey fatigue.

Panel A: Social Environment

Statement	Investor Type	N	Fraction (in %)		Diff.	Sig.
			Agree	Disagree		
Rarely discuss finances - it's private	**Non-investors**	**443**	**45.60**	**22.12**	**23.48**	***
"We don't talk much about finances. Many friends think it's a private matter. Everyone does it their own way"	**Investors**	**366**	**47.27**	**25.96**	**21.31**	***
	- Recent	86	44.19	29.07	15.12	
	- Long-term	114	47.37	23.68	23.68	***
Few approaches in my circle — likely tied to social class	**Non-investors**	**455**	**51.87**	**15.38**	**36.48**	***
"Besides, I don't have many approaches in my social circle, which probably also depends on the social class. I believe that if I were at the executive or managerial level, there would be more investments in stocks and funds than in the middle or lower class."	**Investors**	**402**	**54.98**	**18.41**	**36.57**	***
	- Recent	84	61.90	13.10	48.81	***
	- Long-term	122	50.82	23.77	27.05	***
Investing not common by peers	**Non-investors**	**445**	**65.62**	**13.03**	**52.58**	***
"In my family, friends, and acquaintances, investing (in the stock market) is not very common."	**Investors**	**423**	**53.19**	**22.70**	**30.50**	***
	- Recent	114	64.91	17.54	47.37	***
	- Long-term	131	47.33	25.19	22.14	***
We don't talk much about finances, dry	**Non-investors**	**469**	**56.50**	**16.84**	**39.66**	***
"We don't talk much about finances with friends or family. It's also very dry."	**Investors**	**359**	**41.23**	**30.64**	**10.58**	**
	- Recent	77	38.96	31.17	7.79	
	- Long-term	111	40.54	28.83	11.71	
Some people in my circle are very involved with stocks	**Non-investors**	**477**	**23.06**	**48.64**	**-25.58**	***
"Some people in my circle are very involved with stocks. They've really worked their way into it. They really take care of their finances accurately. And they really get it."	**Investors**	**361**	**52.91**	**23.55**	**29.36**	***
	- Recent	78	53.85	24.36	29.49	***
	- Long-term	120	50.00	25.83	24.17	***
The topic of stocks also makes for good conversations	**Non-investors**	**455**	**22.86**	**39.78**	**-16.92**	***
"The topic of stocks also makes for good conversations. When you meet people and say, 'I recently read this and that,' it scores points with many people if you at least have basic knowledge. You get a positive response for having read up on it."	**Investors**	**393**	**39.95**	**25.95**	**13.99**	***
	- Recent	102	40.20	23.53	16.67	
	- Long-term	111	32.43	33.33	-0.90	
Investing in stocks has become fashionable, also for middle class	**Non-investors**	**446**	**43.72**	**17.26**	**26.46**	***
"Investing in stocks has become fashionable. It used to be something for the rich, but today it is quite normal for a middle-class household to invest in such portfolios."	**Investors**	**396**	**75.51**	**6.06**	**69.44**	***
	- Recent	81	75.31	6.17	69.14	***
	- Long-term	123	73.98	8.13	65.85	***

Table D2 (continued): Overcoming

Panel A (continued): Social Environment

Statement	Investor Type	N	Fraction (in %) Agree	Fraction (in %) Disagree	Diff.	Sig.
I hear more and more people around me SMP or informing themselves about it	**Non-investors**	**434**	**37.33**	**28.80**	**8.53**	
"Yes, but I have to say, I hear more and more people around me getting stocks or funds or getting advice on them. And then I personally think, there must be something to it."	**Investors**	**400**	**57.00**	**15.75**	**41.25**	***
	- Recent	100	60.00	11.00	49.00	***
	- Long-term	124	43.55	21.77	21.77	**
I would like to talk to some simple person personally	**Non-investors**	**463**	**56.16**	**17.71**	**38.44**	***
"Yes, but I have to say, I hear more and more people around me getting stocks or funds or getting advice on them. And then I personally think, there must be something to it."	**Investors**	**389**	**45.76**	**25.96**	**19.79**	***
	- Recent	92	44.57	19.57	25.00	***
	- Long-term	126	33.33	39.68	-6.35	

Panel B: Financial Institutions and Financial Advice

Statement	Investor Type	N	Fraction (in %) Agree	Fraction (in %) Disagree	Diff.	Sig.
Bank advisors are not independent, serving bank	**Non-investors**	**451**	**61.64**	**11.31**	**50.33**	***
"With bank advisors, I always have in mind that they are not independent because I feel like they serve their bank more than the customer."	**Investors**	**395**	**73.92**	**8.86**	**65.06**	***
	- Recent	79	63.29	12.66	50.63	***
	- Long-term	125	79.20	6.40	72.80	***
Finding a good advisor is exhausting	**Non-investors**	**442**	**56.11**	**11.54**	**44.57**	***
"So first find a good advisor. It's all exhausting."	**Investors**	**381**	**30.18**	**39.63**	**-9.45**	**
	- Recent	89	32.58	34.83	-2.25	
	- Long-term	114	25.44	42.98	-17.54	**
Bank advisors can be very helpful	**Non-investors**	**466**	**40.34**	**18.67**	**21.67**	***
"Bank advisors can be very helpful. As I said, they are knowledgeable, they have experience with the whole matter. They can also give appropriate recommendations to people, to laypeople who may be less familiar with the subject."	**Investors**	**402**	**44.78**	**22.89**	**21.89**	***
	- Recent	104	49.04	17.31	31.73	***
	- Long-term	122	34.43	31.97	2.46	
Wealth management - not the best you do not to do anything	**Non-investors**	**459**	**27.45**	**23.31**	**4.14**	
"Wealth management is so nice when they take care of it. It's not the best you can achieve if you knew what you were doing yourself. But for not having to do anything, it's great."	**Investors**	**379**	**38.79**	**25.86**	**12.93**	***
	- Recent	84	41.67	23.81	17.86	*
	- Long-term	119	27.73	32.77	-5.04	

Table D3: Respondents' Estimates of Friends and Family Investing in Stocks, Funds, or ETFs

This table reports the distribution of respondents' estimates in the survey regarding the proportion of their friends and family members who invest in individual stocks, stock funds, or ETFs.

Fraction	**Non-Investors**	**Investors**		
			Recent	Long-term
I don't know of any	55.63	10.16	11.38	11.87
A Few	30.09	31.62	35.45	33.11
Some	9.20	27.52	28.57	27.63
One third	3.07	13.83	11.90	11.64
About half	1.06	9.53	8.73	7.31
Two thirds	0.16	4.87	2.91	5.48
Almost all	0.79	2.47	1.06	2.97
Observations	3,703	2,967	739	916

Table D4: Role of Advisors

This table presents respondents' levels of (dis-)agreement with various expectations of financial advisors in supporting stock market investments elicited in the survey.

Statement	Investor Type	N	Fraction (in %)		Diff.	Sig.
			Agree	Disagree		
An advisor who constantly informs herself/himself	**Non-Investors**	**1891**	**68.54**	**8.51**	**60.02**	***
He/she is constantly informed about the individual stocks and follows the news about the respective companies.	**Investors**	**1417**	**68.88**	**11.15**	**57.73**	***
	- Recent	378	64.55	13.76	50.79	***
	- Long-term	438	71.69	10.50	61.19	***
An advisor who often monitors	**Non-Investors**	**1891**	**74.19**	**5.71**	**68.48**	***
He/she often monitors the composition of the portfolio and regularly checks whether there are more suitable products.	**Investors**	**1417**	**77.77**	**4.94**	**72.83**	***
	- Recent	378	74.07	5.82	68.25	***
	- Long-term	438	81.05	3.88	77.17	***
An advisor who checks yearly	**Non-Investors**	**1891**	**13.70**	**62.93**	**-49.23**	***
He/she leaves the portfolio lying around and looks at it once a year when a customer appointment is due.	**Investors**	**1417**	**25.90**	**55.75**	**-29.85**	***
	- Recent	378	24.60	55.29	-30.69	***
	- Long-term	438	21.69	60.96	-39.27	***
An advisor who informs immediately about buy/sell possibilities	**Non-Investors**	**1891**	**71.55**	**5.87**	**65.68**	***
He/she informs me immediately if I should buy other products or sell products.	**Investors**	**1417**	**71.49**	**6.35**	**65.14**	***
	- Recent	378	71.69	8.73	62.96	***
	- Long-term	438	70.78	5.94	64.84	***

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