What Matters to Individual Investors in a Welfare State?*

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April 12, 2023

Abstract

We survey a representative sample of Finnish individual investors to rank the importance of 37 factors hypothesized to affect portfolio equity share and compare the results to a recent US survey (Choi and Robertson, *Journal of Finance*, 2020). Investors in both countries regard years until retirement, need to hold cash, and experience of living through returns as important. US investors put relatively more emphasis on hedging background risks, while Finnish investors put weight on return beliefs, media, and personal experiences. These different attitudes likely reflect the differences in social welfare systems between these two countries.

Keywords: Survey, Portfolio choice, Equity allocation, Equity share

JEL classification: G40, G50, C83

* We thank conference and seminar participants at the AEA New Orleans, RBFC Amsterdam and Taltech for constructive comments. The OP Group Research Foundation and the Academy of Finland are gratefully acknowledged for financial support.

1. Introduction

Portfolio equity share is a crucial determinant of an investor's long-term investment returns. Household finance has recently made rapid progress to conceptualize and empirically document what explains heterogeneity in portfolio equity share across investors. Lifecycle effects (e.g., Fagereng et al., 2017), consumption commitments (Chetty and Szeidl, 2007), income risk (Fagereng et al., 2018), borrowing constraints (Cocco et al., 2005; Yao and Zhang, 2005), housing price risk (Heaton and Lucas, 2000; Chetty et al., 2017), human capital (Calvet and Sodini, 2014), health risk (Guiso et al., 1996), trust in financial markets (Guiso et al., 2008), ambiguity aversion (Dimmock et al., 2016), and return expectations (Malmendier and Nagel, 2011) all contribute to portfolio equity share.

Progress in the literature remains constrained by lack of holistic evidence on factors hypothesized to affect portfolio equity share (*equity allocation factors*) and their relative importance for at least two reasons. First, no registry dataset (which are particularly helpful to study investor portfolio choice) include all relevant variables of portfolio choice. Second, it is difficult to differentiate between competing models based on on observational data (Fama, 1970; Kozak et al., 2018; Liu et al., 2020).

A broad, structured survey is a useful tool to gain a comprehensive perspective on individual decision-making and to assess the relative importance of equity allocation factors. Although surveys are not free from methodological criticism, the approach has two benefits. Surveys allow a direct international comparison, and the use of a comprehensive variable set to capture heterogeneity in portfolio choice. Registry data and canned surveys such as the US Survey of Consumer Finances do not contain all variables of interest and are not perfectly comparable across countries with different institutions and culture. Surveys in finance also give a new perspective on what may drive investors' actions and help to identify those empirical theories most consistent with investors' beliefs and motivations.

Recent US surveys on portfolio equity share (Choi and Robertson, 2020; Bender et al., 2021) are informative to assess the relative importance of equity allocation factors. The aim of this study is to assess which factors are more likely to be universal and which findings are specific to the US. This distinction is imperative since an ideal model of portfolio choice should emphasize characteristics universal to human behavior rather than capture idiosyncratic cultural or institutional features.

Recent research has emphasized the need to differentiate between universal and idiosyncratic factors to explain household financial behavior. Badarinza et al. (2016) point out the "*persistent and somewhat mysterious differences across countries*", especially in stock market participation and the share of assets and liabilities on household balance sheets. The authors call for more research in international comparative household finance to find reasons behind international differences in household financial behavior. Gomes et al. (2021) align with this view: "*future research is strongly encouraged to explore and explain the multiple sources of heterogeneity observed in the data"*.

Cross-country evidence on equity allocation factors for stock market participants remains a gap in the literature.[1] We aim to cast light on the "mysterious differences" between countries and simultaneously explain multiple sources of heterogeneity in investor portfolio equity share by re-administering the survey of Choi and Robertson (2020) in a sample (N = 765) of Finnish investors. This allows us to simultaneously capture all previously documented contributors of individual investor portfolio heterogeneity by translating 37 equity allocation factors into survey questions. By using the same survey questions as Choi and Robertson (2020), we can make a direct comparison to their US sample. We study separately a sample of wealthy investors (investable assets exceeding €100,000), which allows a more relevant comparison with the sample of millionaires surveyed by Bender et al. (2021).

Our contribution is two-fold. First, we add to the literature on investor beliefs and preferences with survey data. While there are many recent empirical studies that use surveys to test individual investors' beliefs (e.g., Greenwood and Shleifer, 2014; Kuhnen and Miu, 2017; Kuchler and Zafar, 2019; Das et al. 2020; Ke, 2021; Chinco et al., 2022), they tend to have a narrow scope and are focused on similar themes (e.g., expectations of future stock returns and influence of socioeconomic status on investment decisions). Broad survey-based evidence on individual investors' beliefs and decision-making processes as in Choi and Robertson (2020) is rare in the literature.

Second, our results speak to the importance of institutions in shaping beliefs and preferences. We indeed find that some equity allocation factors are universal, and others are idiosyncratic. Our results together with Choi and Robertson (2020) indicate that investors perceive habits, loss aversion, rules of thumb, nonfinancial asset risk, belief in momentum, lack of liquidity, and advice from friends, family, and coworkers relatively unimportant in both countries when deciding on portfolio equity share. In both countries, years until retirement, need to hold cash, personal experiences, and experience of living through returns are perceived as important. In comparison, Finnish investors put heavy emphasis (compared to US investors) on advice from the media, return beliefs, and personal experiences. US investors regard insurance of background risk and advice from a financial advisor important while Finnish investors do not. We conjecture that insurance of background risk with equity investment matters relatively less in a country in which societal institutions provide more background risk insurance. Social insurance covering the entire population, wage-related unemployment benefits, and high home ownership rate are all likely to crowd out equity market investment as a mechanism to insure against health, labor, and home value risk.

Our results suggest that a universal model on portfolio choice should incorporate retirement saving motive, precautionary motive for holding cash, personal, and cohort-specific equity return experiences. Background risk insurance seems a more relevant factor in a model aiming to explain behavior in a country

[1] Kaustia et al. (2023) find that country-level fixed effects capture 30% of variation in stock-market participation across 19 European countries.

with less extensive societal-level safety nets such as the US. In contrast, media, personal experiences, and return beliefs may in future research be shown to be characteristic of Nordic-style welfare states, or entirely idiosyncratic factors explaining portfolio choice in Finland.

2. Methodology

Our survey approach closely follows Choi and Robertson (2020). This original survey was administered to a sample of 1,013 US adults, via RAND ALP, a nationally representative probability-based US panel, and was rigorously pilot-tested and revised using Amazon's Mechanical Turk platform. The survey by Choi and Robertson (2020) includes the question: "*How important are the following factors in determining the percentage of your investable financial assets that is currently invested in stocks?"*, followed by an extensive list of equity allocation factors. These factors are related to background risks and assets, social and personal factors, expected return beliefs, factors from neoclassical asset pricing models, nonstandard preferences, and miscellaneous factors. Participants were asked to score each of these factors on a *Likert* scale from (1) not important at all, (2) a little important, (3) moderately important, (4) very important, and (5) extremely important.

Our survey adopts the same question applied to a nearly identical list of 37 equity allocation factors. As an example, the list of factors related to background risks and assets includes the statement: "*Concern that I (or my spouse/partner, if applicable) might become unemployed, receive a pay cut, or not receive an expected pay increase."* We refer to this factor in our results below, following Choi and Robertson (2020), as "Labor income risk". The full list of factors and the labels used for reporting the results is reported in the Internet Appendix IA.1. The survey questions were translated into Finnish and survey participants were presented all questions in both English and Finnish to ensure comprehension. Some of the factors were also slightly adapted to the Finnish environment of survey respondents. For example, we changed "*Concern that […] the U.S.'s material standard of living will change […]"* to *"Concern that […] the Finnish material standard of living will change […]"*. A comprehensive list of changes made to the survey is reported in the Internet Appendix IA.1. The adapted Finnish version was finally pilot-tested by five master's students in finance at Aalto University, all native Finnish speakers with near-native English skills. The final version of the survey appeared in Webropol, an online analysis and survey tool. To mitigate respondents' concerns regarding privacy and the need to present socially desirable responses rather than their true beliefs and motivations, the survey was anonymous, and respondents were reassured about the confidentiality of their responses. Furthermore, sensitive questions included the response option "Prefer not to disclose" to avoid respondents providing incorrect responses.

We posted links to our online survey on several websites, forums, and discussion platforms along with a short description about the topic and goal of the survey. We targeted general forums, but also specialized discussion groups on stock investments. We also distributed our survey through a market-research company, TGM Research. We stated clearly in the survey description that 1) the target group was only Finnish residents who are currently invested in stocks (directly or indirectly through mutual funds or ETFs), and 2) results would be handled confidentially and used only for this study. The online survey link was active during two periods, from June 16 to June 30 in 2021 and from December 13, 2021 to January 6, 2022. 842 individuals completed the full survey with a median response time of 9 minutes and mean response time of 8.4 minutes. After cleaning the sample, applying standard survey filters, we obtain N=765 observations for our analysis.[2]

Because equity ownership, either directly or through mutual funds or ETFs, is substantially lower in Finland (28% in 2016 reported in Breitkopf et al., 2021) than in the US (53% reported in Cupák et al., 2022)[3], we targeted specifically individuals who own equity to answer the survey. In the US survey by Choi and Robertson (2020), 34% of respondents reported an equity share of zero. To make results comparable, we contrast our sample with a subset of 664 US respondents who report a nonzero equity share by using data made available by Choi and Robertson on the website of the *Journal of Finance*. In our Internet Appendix Table IA.1, we also compare our results to the full-sample US results as reported by Choi and Roberton (2020).

In addition to 37 questions on equity allocation factors, the survey solicits background information. The exact questions are listed in Internet Appendix IA.1. Table 1 reports sample summary statistics for this information and compares to the US sample reported by Choi and Robertson (2020). 42.2% of respondents are male adults under the age of 40, 95.8% are of Finnish nationality and are primarily working (60.0%) or retired (16.5%). Respondents also appear to be highly educated, 74.2% have bachelor's degree or higher. 67.6% are homeowners, comparable with national mean of 69% (Statistics Finland, 2021). Median annual gross household income is between €50,000 – €74,999. Median value of investable financial assets in our sample is between €50,000 – €74,999, which is considerably higher than the median (€4640) in the investor population in 2016 (Breitkopf et al., 2021). The average percentage of financial assets held in stocks (direct or indirect through mutual funds and ETFs) is 62.7% with a median of 70.0%.

[2] The Internet Appendix IA.1. provides further details on the survey design, data collection, and the filters applied.
[3] The US definition of equity ownership in in the Survey of Consumer Finances (Cupák et al.,2022) includes retirement savings accounts, while the Finnish definition by Breitkopf et al. (2021) does not. Finland has a national level defined benefit pension system and individuals cannot make decisions on the amount of equity in their pension savings.

<TABLE 1 HERE>

Compared to the general Finnish population, or to the US sample of Choi and Robertson (2020), our sample is clearly skewed towards male respondents below the age of 40. To alleviate non-representativeness concerns in our sample, we apply a weighting scheme so that the responses by male and young survey participants are underweighted to match their relative weight in the general Finnish population. This weighted analysis is presented in the Internet Appendix and compared to the weighted analysis reported by Choi and Robertson (2020). In the next section, we report the simple unweighted results. The main results that we identify are present both in the weighted and unweighted approach.

3. Survey results

Table 2 shows the survey results for the 37 equity allocation factors. Respondents were asked: "How important are the following factors in determining the percentage of your investable financial assets that is currently invested in stocks?" Column (1) shows the percentage of respondents in our Finnish sample who rated a factor as "very important" or "extremely important." Column (3) presents the mean standard score: a numerical score is assigned to each response using a Likert scale (1="not important at all", 2="a little important", 3="moderately important", 4="very important", and 5="extremely important"). Since respondents may have disparate interpretations of the Likert scale, we standardize these numerical outcomes at the individual respondent level.[4] The average standardized responses by factor are reported in column (3) of Table 2. Like Choi and Robertson (2020), we find a high correlation (0.96) between the percentage of respondents rating equity allocation factor as very or extremely important and their standardized score.

Columns (2) and (4) report percentage of respondents and their standardized score from the US sample by Choi and Robertson (2020) for comparison with the Finnish sample results reported in columns (1) and (3). The final column (5) reports the difference between the standardized score for each factor between the Finnish and US samples. We sort the factors based on this difference so that the topmost row shows the factor *relatively* most important to Finnish and unimportant to US investors, while the bottommost row indicates the factor *relatively* most important to US investors.[5]

[4] The standardized score is defined as $S^*_{i,j} = \frac{S_{i,j} - \bar{S}_i}{sd(S_i)}$, where $S_{i,j}$ is the response by individual *i* to factor *j* (scale 1-5), and $\bar{S}_i$ and $sd(S_i)$ are the mean and standard deviation of responses by individual *i* to all 37 factors.

[5] Table IA.2 in the Internet Appendix provides the same results as Table 2, using the full sample of US investors (including stock-market nonparticipants). Table IA.3 reports scores weighted by age and gender group for both the Finnish and US samples.

<TABLE 2 HERE>

The results in Table 2 show that Finnish individual investors assign highest weight (41.2%) to precautionary motives for holding cash ("Need cash on hand for routine expenses"). Furthermore, the Finnish sample of investors emphasizes the role of experience in determining the equity portfolio share: "Personal experience investing in the stock market" and "Experience of living through stock market returns" are selected as very or extremely important by 40.8% and 38.2% of respondents, respectively. The retirement saving motive ranks fourth with 34.2% marking "Years left until retirement" as very or extremely important. The precautionary need for cash, retirement saving, and experience factors also emerge from the US sample by Choi and Robertson (2020) as important factors determining the equity share. Loss aversion (5.5%), external habit (6.5%), and religion (6.6%) are considered the least important determinants of portfolio equity share in our sample.

In general, the correlation between the importance of factors in Finland and the US is clearly positive. The correlation between columns (1) and (2) is 0.38, while the correlation between columns (3) and (4) is 0.44. Nevertheless, it is interesting to emphasize the differences that arise when we compare our standardized results with those of Choi and Robertson (2020) in column (5) of Table 2. Finnish investors put relatively more emphasis (compared to US investors) on advice from the media, beliefs about returns and personal experiences. For US investors, background risks (risk of changes in home value, consumption composition and to be confronted with rare disaster or an illness/injury) matter much more than for Finnish investors.

Figure 1 visualizes the relation between the Finnish sample and the US sample in Choi and Robertson (2020). Observations above the diagonal are considered relatively important to US investors and include retirement saving, religious beliefs, professional advice, and various types of background risk factors. Observations below the diagonal indicate factors that are relatively important to Finnish investors, including experiences, return beliefs, and advice from the media, friends, and relatives.

<FIGURE 1 HERE>

The differences between Finnish and US investors can be interpreted by comparing institutions between the two countries. Although the US is a wealthier nation than Finland (GDP 69,288 vs. 53,983 USD per capita in 2021, World Bank), safety nets on societal level are scarcer in the US. About 70% of

Finnish residents live in owner-occupied dwelling, a similar share has access to earnings-related unemployment benefits for up to 500 days, and all residents have access to public healthcare, including most expensive forms of secondary healthcare (e.g., cancer treatment and maternal health).

US investors also put more relatively more weight on financial advisors and religion. These differences also have plausible societal-level interpretations. In the US, employees have a say how to invest their retirement savings (defined contribution), whereas Finland employs a public defined benefit system on a national level for pensions. According to the Finnish Financial Supervisory Authority, only 20% of the working age population resort to private pension insurance to supplement public pension. Independent financial advisors in Finland are practically nonexistent and those who seek for professional financial advice typically resort to retail bank-affiliated advisors. For religion, the difference is most likely explained by differences in secularity. In World Values Survey, 37% of respondents in the US and 11% in Finland rated religion as very important in their life in 2017.

Table 3 reports the Finnish results for subsamples of wealthy and non-wealthy respondents. The wealthy subsample includes 36.2% of the respondents reporting investable financial assets exceeding €100,000. The non-wealthy subsample includes 62.1% of the sample reporting assets below €100,000. The remaining 1.7% of the sample either selected "Prefer not to disclose" or did not select an answer to the question regarding investable financial assets. Table 3 is similarly structured as Table 2, with columns (1) and (2) reporting the fraction of respondents citing a factor as very or extremely important for both subsamples and columns (3) and (4) reporting the mean standard score. Column (5) reports the difference between the mean standard score of the wealthy and non-wealthy subsample. The table factor order is based on column (5), with the top (bottom) of the table referring to the factors that are relatively most important to the wealthy (non-wealthy) subsample.[6]

<TABLE 3 HERE>

Overall, the Finnish wealthy investor's beliefs are surprisingly similar to those of the non-wealthy investors. The correlation of responses ranked "very or extremely important" between general and wealthy sample in columns (1) and (2) is 0.92, and this correlation for standardized scores columns (3) and (4) is even higher at 0.95. Focusing on the differences, we find that experiences and expected returns are *relatively* important for the wealthy subsample, while "Need cash on hand for routine expenses" and "Home value

[6] Table IA.4 in the Internet Appendix provides the same results as Table 3, but by using scores weighted by age and gender group.

risk" are cited by the non-wealthy respondents as relatively important determinants of equity share in the Finnish sample.

The differences between Finnish wealthy and non-wealthy investors are clearly less significant than the between-country differences between the US and Finland. Also Bender et al. (2021) make a comparison between non-wealthy and wealthy US investors, using the same methodology as Choi and Robertson (2020). Bender et al. (2021) find that wealthy investors in the US respond surprisingly similar to the average U.S. household.[7] Similar to our results, they also find that financial constraints and discomfort with markets (lack of financial literacy, trust, and parameter certainty) are less important to wealthy investors.

In the Internet Appendix IA.2, we also report the differences across factors between subsamples divided by gender (Table IA.5), age (Table IA.6), and education (Table IA.7.). Demographic groups exhibit differences. For example, experiences and beliefs are relatively important equity allocation factor to male investors and female investors are more concerned about risks. These within-country differences are, however, much smaller than the between-country differences reported in Table 2.

4. Conclusion

Individual investors' behavior, motivation, and beliefs have been an important line of inquiry in recent years (e.g., Gomes et al., 2021). We compare Finnish and US investors to better understand which surveyed beliefs and motivations are shared between the two countries and which are more idiosyncratic, perhaps explainable by institutional and cultural factors.

Overall, the responses show evidence of both shared and more idiosyncratic factors, which contribute to portfolio equity share. Retirement saving, precautionary savings motive to hold cash, and cohort-specific return experiences are shared between respondents in the two countries. Finnish investors put relatively more weight on advice from the media, return beliefs, and personal experiences. US investors stress the importance of advisors and background risk. In a country with fewer societal-level safety nets, the need to insure against home value decline, consumption composition, rare disasters, and illness or injury seems plausible when individuals decide on their portfolio equity share. Also wealthy Finnish investors (portfolio in excess of €100,000) are more similar to non-wealthy Finnish investors than to US dollar-millionaires surveyed in Bender et al. (2021).

[7] Bender et al. (2021) use a cutoff at 1,000,000 USD. In the Finnish context, investors with a portfolio value greater than €100,000 are considered wealthy. Comparing with population portfolio values at the end of 2016, an investor with a portfolio value of €100,000 would be wealthier than 93% of all individual investors and wealthier than 98% of the population (Breitkopf et al., 2021).

Our study responds to the call by Badarinza et al. (2016) for more research in international comparative household finance. The demonstrated differences between the two countries in motives and beliefs for investing highlight the importance of external validity concerns in household finance research.

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Table 1
Summary of Unweighted Sample Statistics

Columns (1) and (3) show summary statistics of the Finnish sample (N = 765). These respondents are residents of Finland and are stock market participants (either directly or indirectly through mutual funds or ETFs). Columns (2) and (4) show summary statistics for a sample of US investors with positive equity share obtained from the survey data of Choi and Robertson (2020). Since respondents can choose not to disclose e.g. gender, age, or education, the Finnish Sample percentages do not always add up to 100% within each category. N = 765 (Finland) and 664 (US).

	Finnish Sample (1)	US Sample (2)		Finnish Sample (3)	US Sample (4)
Gender			Annual gross household income**		
Female	22.4%	48.5%	< €15,000	11.6%	2.0%
Male	77.0%	51.5%	€15,000 – €24,999	7.1%	3.8%
Age*			€25,000 – €49,999	21.0%	20.6%
18 – 29	29.9%	2.0%	€50,000 – €74,999	19.6%	22.8%
30 – 39	20.4%	8.8%	€75,000 – €99,999	15.3%	15.7%
40 – 49	9.8%	13.2%	€100,000 – €124,999	9.0%	13.3%
50 – 59	18.2%	27.1%	€125,000 – €199,999	7.3%	15.1%
60+	21.3%	49.7%	€200,000+	5.6%	7.0%
Education			Prefer not to disclose	2.2%	-
Primary school	2.6%	1.6%	Investable financial assets**		
High school diploma or equiv.	22.9%	25.1%	€1 – €999	2.2%	0.6%
Bachelor's degree	28.6%	42.1%	€1,000 – €4,999	4.3%	2.1%
Graduate degree	45.6%	31.8%	€5,000 – €9,999	5.5%	2.8%
Nationality			€10,000 – €24,999	14.4%	7.7%
Finnish	95.8%	-	€25,000 – €49,999	15.4%	7.7%
Other than Finnish	3.5%	-	€50,000 – €74,999	12.7%	7.8%
Home owner			€75,000 – €99,999	7.6%	6.0%
Yes	67.6%	83.3%	€100,000+	36.2%	65.2%
No	31.9%	16.7%	Prefer not to disclose	1.4%	-
Employment status			Percentage of investable financial		
Working	60.0%	61.8%	assets held in stocks		
Unemployed/Looking for work	3.3%	1.9%	1% – 10%	7.5%	-
Temporarily laid off, long-term leave	2.1%	0.8%	11% – 25%	10.5%	-
Disabled	1.6%	3.0%	26% – 50%	20.5%	-
Retired	16.5%	33.3%	51% – 75%	19.7%	-
Homemaker	1.0%	5.0%	76% – 100%	41.8%	-
Full-time student	14.9%	-	Response distribution by channel		
Number of years invested in stocks			TGM Research	28.1%	-
0 – 4	32.7%	-	Facebook	23.4%	-
5 – 9	20.0%	-	Reddit	14.5%	-
10 – 19	19.3%	-	Finnish blogs and forums	12.2%	-
20 – 29	13.5%	-	LinkedIn	7.5%	-
30+	13.2%	-	Email	6.9%	-
			Shareville	4.6%	-
			Word of mouth	1.6%	-
			Prolific	0.9%	-

*US adult population begins at 21 years of age. **US sample statistics reported in USD.

Table 2

Equity Allocation Factors – Finland vs. US (Unweighted)

Columns (1) and (2) show the percentage of respondents stating a factor as very or extremely important when determining the amount of financial assets allocated to equity investments. Columns (3) and (4) show the mean standard scores, calculated by subtracting the mean value of a participant's numerical responses from the numerical value of each response, and dividing this by the standard deviation of that participant's numerical responses. The rows are ordered by the difference in mean standard scores between Finnish and US investors, reported in column (5). Sample statistics of US investors with a positive equity share obtained from the survey data of Choi and Robertson (2020). N = 765 (Finland) and 664 (US).

	Very or Extremely Important		Mean Standard Score		Δ – Mean Standard Score
	Finnish Sample (1)	US Sample (2)	Finnish Sample (3)	US Sample (4)	(5)
Advice from media	21.8 %	6.7 %	0.36	-0.55	0.92
Stock market returns mean-revert	29.4 %	14.4 %	0.53	-0.22	0.75
Stocks are an inflation hedge	34.0 %	15.2 %	0.66	-0.05	0.71
Stock market returns before I was born	20.8 %	12.1 %	0.12	-0.37	0.48
Personal experience investing in stock market	40.8 %	29.8 %	0.84	0.35	0.48
Need cash on hand for routine expenses	41.2 %	36.7 %	0.76	0.31	0.44
Expected stock returns lower than usual right now	21.4 %	17.4 %	0.25	-0.13	0.38
Non-financial assets cushion losses in financial assets	17.7 %	16.5 %	0.18	-0.08	0.26
Experience of living through stock market returns	38.2 %	34.9 %	0.75	0.50	0.25
Advice from a friend, family member, or coworker	7.8 %	7.1 %	-0.34	-0.58	0.24
Human capital fraction of total wealth	23.8 %	25.6 %	0.31	0.08	0.23
Non-financial asset risk	10.5 %	14.5 %	-0.34	-0.54	0.20
Time until significant non-retirement expense	24.2 %	28.7 %	0.27	0.08	0.19
Expected stock returns higher than usual right now	12.8 %	17.8 %	-0.01	-0.18	0.17
External habit	6.5 %	8.7 %	-0.45	-0.60	0.15
Rule of thumb	8.3 %	8.8 %	-0.41	-0.51	0.10
Stock market returns have momentum	7.8 %	10.9 %	-0.27	-0.36	0.08
Lack of knowledge about how to invest	22.2 %	26.6 %	0.14	0.08	0.06
Consumption commitments	21.1 %	28.4 %	0.12	0.08	0.04
Internal habit	11.0 %	18.7 %	-0.25	-0.18	-0.06
Risk of aggregate consumption over next year	15.6 %	26.5 %	0.04	0.19	-0.15
Stocks take too long to convert to cash in emergency	10.0 %	19.4 %	-0.31	-0.15	-0.16
Risk of long-run aggregate consumption	14.2 %	26.6 %	-0.03	0.19	-0.22
Lack of trustworthy advisor	14.4 %	27.0 %	-0.26	-0.03	-0.22
Loss aversion	5.5 %	17.4 %	-0.56	-0.28	-0.28
Return covariance with marginal utility of consumption	12.4 %	24.2 %	-0.23	0.08	-0.30
Lack of trust in market participants	15.0 %	32.9 %	-0.17	0.15	-0.32
Ambiguity / Parameter uncertainty	13.0 %	22.0 %	-0.27	0.05	-0.33
Years left until retirement *	34.2 %	61.6 %	0.57	0.90	-0.33
Labor income risk *	12.9 %	39.3 %	-0.07	0.30	-0.37
Return covariance with marginal utility of money	15.2 %	30.9 %	-0.03	0.35	-0.38
Religious beliefs, values, and experiences	6.6 %	24.5 %	-0.67	-0.23	-0.44
Home value risk **	10.0 %	24.7 %	-0.32	0.14	-0.46
Consumption composition risk	7.8 %	22.7 %	-0.46	0.01	-0.47
Rare disaster risk	19.5 %	45.8 %	0.14	0.72	-0.58
Risk of illness/injury	17.3 %	47.0 %	0.09	0.75	-0.66
Advice from a professional financial advisor	8.9 %	35.4 %	-0.61	0.20	-0.81

*Among employed respondents only. **Among homeowners only.

Table 3

Equity Allocation Factors – Finnish Wealthy vs Non-Wealthy Population (Unweighted)

Columns (1) and (2) show the percentage of Finnish respondents stating a factor as very or extremely important when determining the amount of financial assets allocated to equity investments. Columns (3) and (4) show the mean standard scores of each factor. The rows are ordered by the difference in mean standard scores between Wealthy and Non-wealthy investors, reported in column (5). The wealthy (non-wealthy) sample includes all respondents reporting investable assets exceeding (below) €100,000. N = 277 (Wealthy Sample) and 475 (Non-wealthy Sample).

	Very or Extremely Important		Mean Standard Score		Δ - Mean Standard Score
	Wealthy Sample	Non-wealthy Sample	Wealthy Sample	Non-wealthy Sample	
	(1)	(2)	(3)	(4)	(5)
Personal experience investing in stock market	44.7 %	38.6 %	1.04	0.72	0.32
Experience of living through stock market returns	41.7 %	36.5 %	0.94	0.65	0.29
Expected stock returns higher than usual right now	15.7 %	11.4 %	0.16	-0.10	0.26
Non-financial assets cushion losses in financial assets	17.4 %	17.8 %	0.31	0.09	0.22
Stock market returns before I was born	23.7 %	19.7 %	0.23	0.06	0.17
Years left until retirement *	33.7 %	34.6 %	0.67	0.51	0.16
Stocks are an inflation hedge	34.4 %	33.8 %	0.77	0.61	0.16
Stock market returns mean-revert	30.7 %	28.8 %	0.58	0.51	0.07
Rare disaster risk	15.7 %	22.0 %	0.18	0.11	0.07
Advice from media	18.5 %	23.8 %	0.39	0.34	0.05
Risk of aggregate consumption over next year	12.4 %	17.8 %	0.07	0.02	0.04
Religious beliefs, values, and experiences	5.4 %	7.5 %	-0.65	-0.68	0.03
Return covariance with marginal utility of money	12.0 %	17.0 %	-0.02	-0.05	0.03
Stock market returns have momentum	6.6 %	8.7 %	-0.26	-0.28	0.02
Lack of trustworthy advisor	12.1 %	15.7 %	-0.24	-0.26	0.02
Advice from a professional financial advisor	5.9 %	10.9 %	-0.60	-0.61	0.01
Non-financial asset risk	7.6 %	12.1 %	-0.34	-0.35	0.01
Loss aversion	2.9 %	7.2 %	-0.56	-0.56	0.01
Risk of illness/injury	13.0 %	20.0 %	0.09	0.09	0.00
Rule of thumb	7.6 %	8.9 %	-0.41	-0.40	-0.01
Labor income risk *	10.9 %	13.9 %	-0.08	-0.07	-0.01
Time until significant non-retirement expense	21.4 %	26.2 %	0.26	0.27	-0.01
Advice from a friend, family member, or coworker	5.1 %	9.5 %	-0.35	-0.32	-0.03
Risk of long-run aggregate consumption	10.2 %	16.7 %	-0.05	-0.02	-0.03
Consumption composition risk	4.4 %	9.7 %	-0.50	-0.43	-0.07
Return covariance with marginal utility of consumption	10.9 %	13.5 %	-0.27	-0.19	-0.08
Human capital fraction of total wealth	20.2 %	26.1 %	0.27	0.34	-0.08
External habit	3.3 %	8.5 %	-0.50	-0.42	-0.08
Lack of trust in market participants	9.5 %	18.3 %	-0.23	-0.13	-0.10
Internal habit	7.0 %	13.6 %	-0.32	-0.21	-0.11
Ambiguity / Parameter uncertainty	11.1 %	14.4 %	-0.35	-0.23	-0.11
Expected stock returns lower than usual right now	17.9 %	24.0 %	0.16	0.30	-0.14
Lack of knowledge about how to invest	14.2 %	27.3 %	0.03	0.20	-0.18
Consumption commitments	14.9 %	25.2 %	0.01	0.18	-0.18
Stocks take too long to convert to cash in emergency	5.5 %	12.7 %	-0.44	-0.23	-0.21
Need cash on hand for routine expenses	35.4 %	45.4 %	0.63	0.84	-0.21
Home value risk **	4.1 %	15.4 %	-0.47	-0.19	-0.28

*Among employed respondents only. **Among homeowners only.

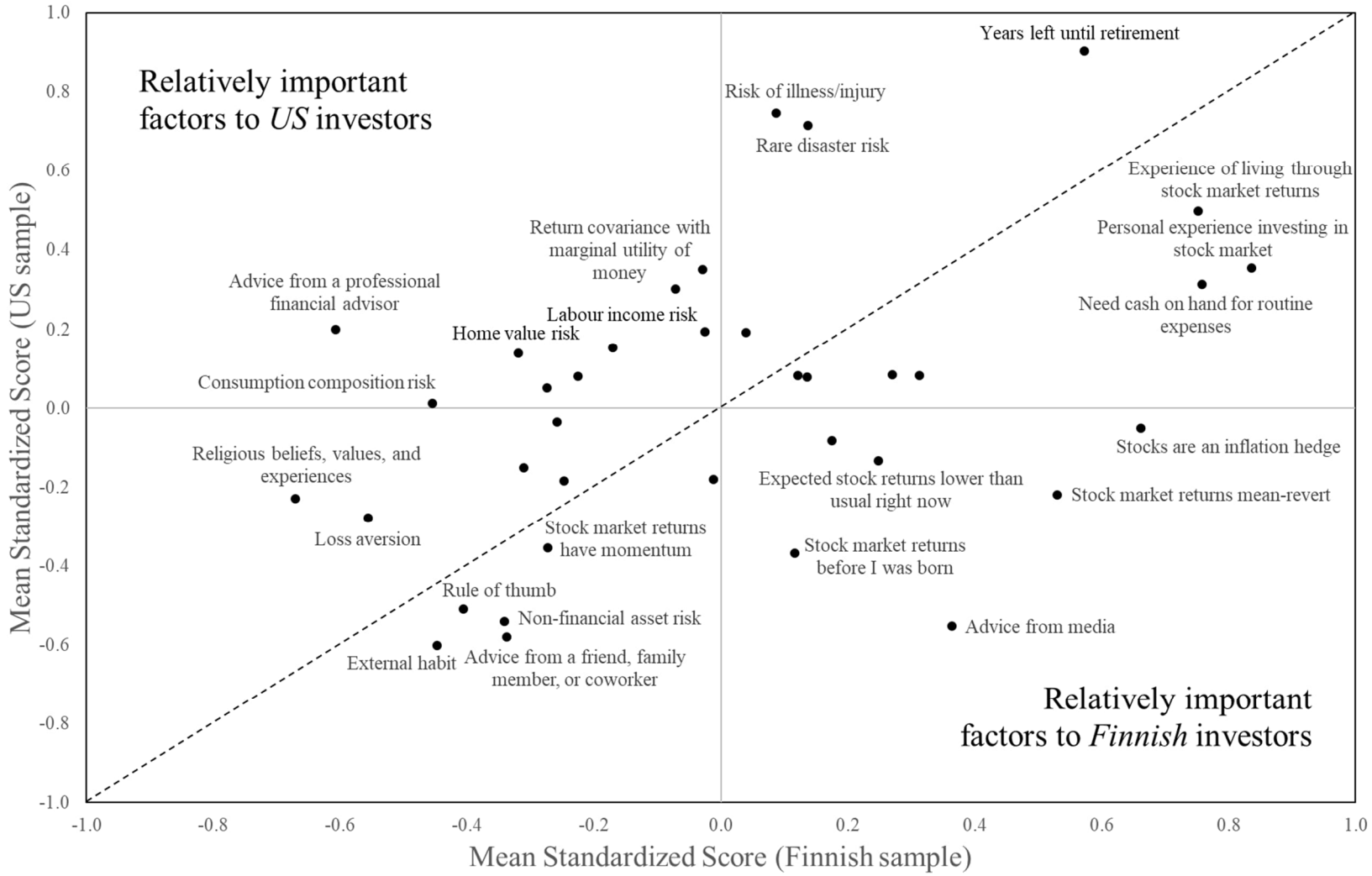

Figure 1: This figure plots for each of the 37 equity-allocation factors the Mean Standard Score from the Finnish (horizontal axis) and US (vertical axis) sample. The dashed line shows the 45% diagonal. See Table 2 for details.

What Matters to Individual Investors in a Welfare State?

Internet Appendix

Section IA.1 of this Internet Appendix contains details on the survey design and data collection. Section IA.2 reports supplementary empirical results.

IA.1. Survey design and data collection

The text below shows the exact wording of the sample statistics we collect and display in Table 1 in the main paper.

Sample Statistics

1. Gender / *Sukupuoli*
   - Male / *Mies*
   - Female / *Nainen*
2. Age / *Ikä*
   - 18–29
   - 30–39
   - 40–49
   - 50–59
   - 60+
3. Education / *Koulutus*
   - Primary school / *Peruskoulu*
   - High school diploma/vocational school diploma / *Ylioppilastutkinto tai ammatillinen tutkinto*
   - Bachelor's degree (university or university of applied sciences) / *Kandidaatin tutkinto tai ammattikorkeakoulututkinto*
   - Master's degree (university or university of applied sciences) / *Maisterin tutkinto tai ylempi ammattikorkeakoulututkinto*
   - PhD / *Tohtorin tutkinto*
4. Nationality / *Kansalaisuus*
   - Finnish / *Suomalainen*
   - Other than Finnish / *Muu kuin suomalainen*
5. Home owner / *Oletko kodinomistaja?*
   - Yes / *Kyllä*
   - No / *Ei*
6. Employment status / *Työllisyystilanne*
   - Working / *Työssä*
   - Unemployed/Looking for work / *Työtön/Työnhakija*
   - Temporarily laid off, on sick or other leave / *Tilapäisesti lomautettu, sairaus- tai muulla lomalla*
   - Disabled / *Työkyvyttömyyseläkkeellä*
   - Retired / *Eläkkeellä*
   - Homemaker / *Kotiäiti tai koti-isä*
   - Full-time student / *Päätoiminen opiskelija*
7. Gross household income (per year) / *Kotitalouden bruttotulot (vuodessa)*
   - < €15,000
   - €15,000 to €24,999
   - €25,000 to €49,999
   - €50,000 to €74,999
   - €75,000 to €99,999
   - €100,000 to €124,999
   - €125,000 to €199,999
   - €200,000+
   - Prefer not to disclose / *En halua sanoa*
8. Investable financial assets (All of your household's savings and investments, including deposit accounts, cash, mutual funds, stocks, bonds and personal pension accounts. EXCLUDING real estate and any private business assets.) / *Kotitalouden sijoitettavat rahoitusvarat (kaikki kotitaloutesi säästöt ja sijoitukset, mukaan lukien talletustilit, käteinen, sijoitusrahastot, osakkeet, joukkovelkakirjat ja henkilökohtaiset eläketilit. POIS LUKIEN kiinteistöt ja yksityisen yrityksen varat.)*
   - €1–€999
   - €1,000–€4,999
   - €5,000–€9,999
   - €10,000–€24,999
   - €25,000–€49,999
   - €50,000–€74,999
   - €75,000–€99,999
   - €100,000+
   - Prefer not to disclose / *En halua sanoa*
9. Percentage of investable financial assets invested in stocks (including equity mutual funds and ETFs)? / *Kuinka suuri osuus rahoitusvaroista on osakkeissa (mukaan lukien osakerahastot ja ETF-rahastot)? Ilmoita vastaus prosentteina.*

The next pages report the full list of 37 equity allocation factors. First column shows the short name (label) of each factor used for the reporting. Second column shows the full survey text of the factor in English shown to survey participants. Third column shows the Finnish translation. Survey participants are asked to rate the importance of each of the equity allocation factors by answering the following question:

How important are the following factors in determining the percentage of your investable financial assets that is currently invested in stocks?

1 = Not important at all; 2 = A little important; 3 = Moderately important; 4 = Very important; 5 = Extremely important

Differences to Choi and Robertson (2020)

While we closely follow the survey by Choi and Robertson (2020), we deviate at some dimensions from their approach:

- The survey is translated to Finnish and participants are shown both the English and Finnish text.
- If necessary, questions are localized to the Finnish context. Specifically, the term "US" is replaced by "Finland" in survey text of the factors. In the survey text of the "Rare disaster risk" factor, we refer to "the recession of the 1990s" (a major recession in Finland) instead of "the great depression". We asked about household income and investable financial assets in euros, instead of USD.
- To keep the survey as short as possible and thereby increase participation, we excluded the second part of the survey by Choi and Robertson (2020), which asks investors for their motives to purchase actively managed mutual funds.
- Choi and Robertson (2020) ask several follow-up questions regarding the equity allocation factors "when the direction in which a particular factor should push the equity share does not seem self-evident" (Choi and Robertson, 2020, p.1972). We have excluded these follow-up questions from our survey.
- The survey by Choi and Robertson (2020) includes three equity allocation factors that are specifically aimed at stock market no-participants. These factors are *"Wealth too small to invest in stocks"*, *"Don't like to think about my finances"*, and *"Intended to invest in stocks but never got around to it."* Because we are explicitly targeting stock market participants in our survey, we have excluded these three factors.
- The survey by Choi and Robertson (2020) includes the equity allocation factor *"Default allocation in retirement savings plan"*. In the Finnish context of a national defined benefit pension system, this factor is not a relevant consideration and is therefore excluded from our survey.
- The survey by Choi and Robertson (2020) contains two distinct factors: "Risk of long-run aggregate consumption" and "Risk of long-run aggregate consumption volatility", with the survey text *"Concern that when <u>bad news arrives</u> about how the U.S. material standard of living will change over the five-year period starting one year in the future, the stock market will tend to drop"* and *"Concern that when <u>uncertainty increases</u> about how the U.S.'s material standard of living will change over the 10 year period starting one year in the future, the stock market will tend to drop"*, respectively. Following the feedback from the students test-piloting our survey, we omitted the second factor (consumption volatility) and adjusted the survey text to *"Concern that when <u>bad news or uncertainty</u> arrives about how Finland's material standard of living will change over the five-year period starting one year in the future, the stock market will tend to drop"*.
- To avoid question-order bias, we presented survey questions to participants in a randomized order.

Factors and survey text

Factor	Survey text (English)	Survey text (Finnish)
Advice from a friend, family member, or coworker	Advice from a friend, family member, or coworker	Ystävän, perheenjäsenen tai työkaverin neuvo
Advice from media	Advice from a book or an article I read, or from somebody on TV, radio, or the Internet	Neuvot lukemastani kirjasta tai artikkelista, tai neuvot televisiossa, radiossa tai Internetissä
Advice from a professional financial advisor	Advice from a professional financial adviser I hired	Palkkaamani (ammattimaisen) neuvonantajan neuvot
Ambiguity / Parameter uncertainty	I don't have a good sense of the average returns and risks of investing in stocks	Minulla ei ole hyvää käsitystä osakkeisiin sijoittamisen keskimääräisestä tuotosta ja riskeistä
Consumption commitments	My fixed expenses (like mortgage payments, rent, car payments, utility bills, etc.) that are difficult to adjust in the short run	Kiinteät kuluni (kuten asuntolainamaksut, vuokra, automaksut, yleishyödylliset laskut jne.), joita on vaikea sopeuttaa lyhyellä aikavälillä
Consumption composition risk	Concern that when the quality of my physical living situation (how nice my housing is, the safety of my neighborhood, etc.) is dropping faster than the rest of my material quality of life, the stock market will tend to drop	Huoli siitä, että kun asumiseni laatu (kuinka mukava asuintilanteeni on, naapurustoni turvallisuus jne.) putoaa nopeammin kuin muu aineellinen elämänlaatu, osakemarkkinoilla on taipumus laskea
Expected stock returns higher than usual right now	A belief that the returns I can expect to earn from investing in stocks right now are lower than usual	Uskomus, että osakkeiden odotusarvoinen tuotto on tällä hetkellä tavallista pienempi
Expected stock returns lower than usual right now	A belief that the returns I can expect to earn from investing in stocks right now are higher than usual	Uskomus, että osakkeiden odotusarvoinen tuotto on tällä hetkellä tavallista korkeampi
Experience of living through stock market returns	The feelings, attitudes, and beliefs about the stock market I've gotten from living through stock market ups and downs (whether or not I was invested in stocks at the time)	Tunteet, asenteet ja uskomukset osakemarkkinoista, jotka olen omaksunut menneiden kokemukseni kautta osakemarkkinoiden ylä-ja alamäistä (riippumatta siitä, olinko itse sijoittanut osakkeisiin tuolloin)
External habit	The difference between my current material standard of living and the level everybody else around me has experienced recently	Ero nykyisen aineellisen elintasoni ja sen elintason välillä, millainen ympärilläni olevilla ihmisillä on viime aikoina ollut
Home value risk **	Concern that my home value might fall	Huoli siitä, että kotini arvo saattaa laskea
Human capital fraction of total wealth	The difference between how much money I have available to invest right now and all the money I (and my spouse/partner, if applicable) expect to earn in wages over the rest of my life	Ero tällä hetkellä sijoittamiseen käytettävissä olevan rahamäärän ja kaiken sen rahan välillä, mitä odotan ansaitsevani palkkoina loppuelämäni aikana (ja puolisoni/kumppanini)

Internal habit	The difference between my current material standard of living and the level I am used to	Ero nykyisen aineellisen elintason ja sen elintason välillä, johon olen tottunut
Labor income risk *	Concern that I (or my spouse/partner, if applicable) might become unemployed, receive a pay cut, or not receive an expected pay increase	Huoli siitä, että minä (tai puolisoni/kumppanini) saatan jäädä työttömäksi, saada palkanalennuksen tai että en saisi odotettua palkankorotusta
Lack of knowledge about how to invest	My lack of knowledge about how to invest	Tiedonpuutteeni siitä
Lack of trustworthy advisor	Difficulty in finding a trustworthy adviser	Vaikeus löytää luotettava neuvonantaja
Loss aversion	The possibility of even small losses on my stock investments makes me worry	Mahdollisuus jopa pieniin tappioihin osakesijoituksistani saa minut huolestumaan
Lack of trust in market participants	Concern that companies, managers, brokers, or other market participants might cheat me out of my investments	Huoli siitä, että yritykset, johtajat, osakevälittäjät tai muut markkinaosapuolet saattavat huijata minua
Need cash on hand for routine expenses	The amount of cash I need to have in hand to pay routine expenses	Käteismäärä, joka minulla on oltava juoksevien kustannusten maksamiseen
Non-financial asset risk	Concern my nonfinancial assets other than my home—such as my small business—might lose value	Huoli siitä, että muu ei-rahallinen omaisuuteni kuin kotini - kuten pienyritykseni - saattaa menettää arvonsa
Non-financial assets cushion losses in financial assets	A belief that I can afford to take more risks in my financial portfolio because my nonfinancial assets (such as my home or small business) will cushion me against losses in my financial portfolio	Usko, että minulla on varaa ottaa enemmän riskejä rahoitusportfoliossani, koska ei-rahallinen omaisuuteni (kuten kotini tai pienyritykseni) suojaavat minua rahoitusportfolioni tappioilta
Personal experience investing in stock market	The feelings, attitudes, and beliefs about the stock market I've gotten from my personal experiences of investing in the stock market	Tunteet, asenteet ja uskomukset osakemarkkinoista, jotka olen saanut henkilökohtaisista kokemuksistani osakemarkkinoilla sijoittamisesta
Rare disaster risk	Concern that in an economic disaster where Finland's annual GDP would shrink by more than 10% in a year—like the recession of the 1990s—a euro I invested in stocks would lose more value than a euro I put in a bank savings account	Huoli siitä, että taloudellisessa katastrofissa, jossa Suomen vuotuinen bruttokansantuote kutistuisi yli 10% – kuten 1990-luvun laman aikana – osakkeisiin sijoittamani euro menettäisi enemmän arvoa kuin pankkisäästötilille laittamani euro
Religious beliefs, values, and experiences	My religious beliefs, values, and experiences	Uskonnolliset vakaumukseni, arvoni ja kokemukseni
Return covariance with marginal utility of consumption	Concern that when I have to cut my spending, the stock market will tend to drop	Huoli siitä, että silloin, kun minun on leikattava menojani, osakemarkkinoilla on taipumus laskea
Return covariance with marginal utility of money	Concern that when I especially need the money, the stock market will tend to drop	Huoli siitä, että silloin, kun tarvitsen erityisesti rahaa, osakemarkkinoilla on taipumus laskea

Risk of aggregate consumption over next year	Concern that when bad news or uncertainty arrives about how Finland's material standard of living will change over the next year, the stock market will tend to drop	Huoli siitä, että kun tulee huonoja uutisia tai epävarmuutta, joiden mukaan Suomen aineellinen elintaso muuttuu ensi vuoden aikana, osakemarkkinoilla on taipumus laskea
Risk of illness/injury	The risk of expenses due to illness or injury to me or someone else in my family	Riski minun tai muun perheenjäsenen sairastumisesta tai loukkaantumisesta ja siitä aiheutuvista kuluista
Risk of long-run aggregate consumption	Concern that when bad news or uncertainty arrives about how Finland's material standard of living will change over the five-year period starting one year in the future, the stock market will tend to drop	Huoli siitä, että kun tulee huonoja uutisia tai epävarmuutta sen suhteen, kuinka Suomen aineellinen elintaso muuttuu viiden vuoden aikana alkaen vuoden päästä, osakemarkkinoilla on taipumus laskea
Rule of thumb	A rule of thumb (for example, "The percentage you invest in stocks should be 100 minus your age" or "Invest one-third in stocks, one-third in bonds, and one-third in real estate")	Nyrkkisääntö (esimerkiksi "Osakkeisiin sijoittamasi prosenttiosuuden tulisi olla 100 miinus ikäsi" tai "Sijoita kolmasosa osakkeisiin, kolmasosa joukkovelkakirjoihin ja kolmasosa kiinteistöihin")
Stock market returns before I was born	What I know about the stock market's returns during the decades before I was born	Se, mitä tiedän osakemarkkinoiden historiallisista tuotoista syntymääni edeltäviltä vuosikymmeniltä
Stock market returns have momentum	A belief that low stock market returns tend to be followed by low stock market returns	Uskomus, että osakemarkkinoiden alhaisen tuoton jälkeen seuraa yleensä alhaista osakemarkkinoiden tuottoa
Stock market returns mean-revert	A belief that low stock market returns tend to be followed by high stock market returns	Uskomus, että osakemarkkinoiden alhaisen tuoton jälkeen seuraa yleensä korkeaa osakemarkkinoiden tuottoa
Stocks are an inflation hedge	A belief that stocks are attractive because when my living expenses increase unexpectedly, the stock market will tend to rise as well	Usko osakkeiden houkuttelevuudesta, koska vaikka elinkustannukseni kasvaisivat odottamatta, myös osakemarkkinoilla on taipumus nousta
Stocks take too long to convert to cash in emergency	Concern that stock investments will take too long to convert into spendable cash in an emergency	Huoli siitä, että osakesijoitusten muuntaminen kulutettaviksi käteisvaroiksi kestäisi hätätilanteessa liian kauan
Time until significant non-retirement expense	How soon I will have significant expenses (like a car purchase, a down payment on a home, etc.)	Kuinka pian minulla on tiedossa merkittäviä kuluja (kuten auton osto, kodin käsiraha jne.)
Years left until retirement *	The number of years I (and my spouse/partner, if applicable) have left until retirement	Niiden vuosien lukumäärä, jotka minulla (tai puolisollani/kumppanillani) on jäljellä eläkkeelle jäämiseen

*Among employed respondents only. **Among homeowners only.

Data collection

The online survey was active during two periods, from June 16 to June 30 in 2021 and from December 13, 2021 to January 6, 2022. We posted the survey link on several websites, social media, forums, and discussion platforms. To mitigate sample selection bias, and economize on costs of data collection, we used several online channels to reach survey participants geographically across Finland, across employment status, and age cohorts (e.g., LinkedIn heavily biases on those currently employed while Reddit is skewed towards younger generation, and local daily business newspaper Kauppalehti website towards middle-aged and older). To mitigate non-response bias, during the first round (June 16 to June 30, 2021) we incentivized participants who completed the survey to choose to enter a lottery for a chance to win one of 10 movie ticket vouchers, and they were offered to receive the final survey results. During the second round (December 13, 2021 to January 6, 2022), we also distributed our survey through a market-research company, TGM Research. The number of responses by channel is reported in Table 1 of the main paper.

We perform several checks to address potential data quality issues and biased answers. First, response time is an effective indicator to identify low-quality data (Malhotra 2008; Callegaro et al. 2009). We had in total 48 questions. A total response time of 5 minutes would leave 6.25 seconds per question, which is very unlikely to yield a thoughtful response. We exclude 55 responses with response time less than 5 minutes.

We also exclude another 18 responses with 0% equity share, a pre-condition for taking the survey. Finally, we omit one response which did not answer to any of the equity allocation factor questions, and 3 responses because of evidence on straight-lining (all equity allocation factor questions with the same response). After these exclusions, we have sample size of 842 – 55 – 18 – 3 – 1 = 765 observations.

Only 212 questions had missing data out of a total of 26,010 (34 x 765) questions targeted to all survey participants. This equates to a missing rate of 0.8%. According to Schafer (1999) and Dong and Peng (2013), a missing rate of 5% or less in surveys is inconsequential for statistical analysis, Bennet (2001) applies a 10% threshold.

Fourth, Singer and Ye (2013) show that incentives help to reduce non-response bias if they can be targeted at sample participants who would otherwise fail to respond, but poorly calibrated incentives can also be a source of bias. Too small incentives will not affect non-response bias and too high incentives can nudge participants unmotivated by participation, but by the incentive itself to participate in the study (Baumgartner and Rathbun, 1997). During the first survey period (June 2021, N=427), 312 respondents opted in for the movie ticket lottery, while 242 respondents opted in for receiving the results of the survey. In January 2022, we collected 28.1% of our sample through TGM research, which paid participants a small fixed fee for their participation.

IA.2. Supplementary empirical results

Table IA.1 reports the age and gender distribution of our survey, compared to the age and gender distribution of the full population of investors in Finland, including all residents in Finland who own shares in stocks or mutual funds. Our survey sample is tilted towards the young (49.7% in the sample are 18-39 years old vs. 28.7% in the general Finnish investor population, data from Finnish Tax Administration, 2016) and males (77.0% vs. 52.3%).

Following Choi and Robertson (2020), we supplement our simple unweighted results reported in the main paper. We calculate weighted percentages and weighted mean standard scores by adjusting the sample weights of each age-gender group reported in Table IA.1 to match the group's weight in the Finnish investor population. For example, instead of uniform weights 1/N, the responses from male participants within the age cohort 18-39 are weighted by a factor 0.125/0.422N = 0.296/N. Responses from female participants aged 60 or more are weighted by a factor 0.198/0.068N=2.91/N, correspondingly.

Percentages of survey respondents do not add up to 100% since 1% of the participants choose not to disclose their gender and or age. Responses for which age and/or gender are missing have a weight of zero in the weighted analysis below.

US full sample results

All US results reported in the main paper are based on the subsample of (N=664) stock-market participants, to facilitate comparison to our Finnish survey results, which only includes stock market participants. For completeness, Table IA2 reports the US results based on the full US sample (N=1013) in columns (2) and (4), as reported in Table II of Choi and Robertson (2020). The Finish results (1) and (3) are identical to those reported in Table 2 of our main paper. Overall, the full-sample and subsample US results are highly similar the correlation between the importance of factors in Table 2 and Table IA.2 is 0.9 for column (2) and 0.89 for column (4). Also, when comparing to the Finnish results, the same factors appear as relatively important to Finnish and US investors: All factors in the top 5 of Table 2 (relatively important to US investors) also appear in the top 5 of Table IA.2, while 4 of the 5 bottom factors are the same in both tables.

Weighted results

Table IA.3 reports the *weighted* importance of equity allocation factors in the Finnish sample, compared to the weighted US results also reported by Choi and Robertson (2020). The reported differences between the Finnish and the US sample are consistent with the unweighted results (Table 2 of the main paper). For example, 4 out of the top 5 factors relatively most important to Finnish investors in Table 2 also appear in the top 5 factor list of Table IA.3. Only "Stock market returns before I was born", which ranks 4th in the unweighted Table 2, ranks 8th in the weighted Table IA.3. Similarly, "Need cash on hand for routine expenses" ranks 5th in Table IA.2. and 6th in Table 2.

At the bottom of the Table 2 and IA.3 (factors relatively most important to US investors), we see that 4 out of the bottom 5 factors overlap in the weighted and unweighted table. "Rare disaster risk" is at the bottom 5 factors of Table 2 while "Labor income risk" appears at the bottom 5 factors of the weighted results in Table IA.2. Overall, the results in Table 2 and Table IA.3 are strikingly similar, suggesting that the skewness in the demographic composition of our sample does not drive the differences between US and Finnish investors. Similarly, Table IA.4 reports the *weighted* equivalent of the results reported in Table 3, separated by wealthy and non-wealthy subsamples. Again, the results are qualitatively similar when using the weighting scheme. Both in the top 5 and at the bottom 5 factors, 4 factors are same in Tables 3 and IA.4.

Subsample results

Table IA.5 reports the results for subsamples based on the reported gender of survey participants. This table is again ordered on the difference in Mean Standard Score between these two subsamples, revealing gender differences in the importance of equity allocation factors. The differences within Finland between gender are however small compared to the cross-country differences: the correlation between the Mean Standard Score for male and female respondents is 0.91. Similarly, Table IA.6 reports the result by age group, diving the sample into individuals below and above the age of 40. The correlation between the Mean Standard Score for "old" and "young" respondents is 0.84. Finally, Table IA.7 reports the results for respondents with a higher education degree (bachelor's or graduate degree) and for respondents who have completed only basic education (Primary education or high school). The correlation between the mean standard scores of these two groups is 0.92. Across all these three dimensions, the within-country variation is thus clearly smaller than the between-country variation between the US and Finland. The correlation between the Mean Standard Scores in the US and Finland, as reported in Table 2, is 0.43.

Table IA.1
Gender and Age Distribution of Finnish Investment Population

Column (1) shows the age distribution by gender of survey respondents. Column (2) shows the age distribution by gender for the entire Finnish population aged 18 and above with investments in direct stocks or equity mutual funds as reported by Statistics Finland and Finnish Tax Administration (2016).

	Percentage of Survey Respondents (1)			Percentage of Finnish Investors (2)	
	Female	Male		Female	Male
Age			Age		
18 – 39	7.5%	42.2%	18 – 39	12.5%	16.2%
40 – 59	7.7%	20.3%	40 – 59	15.4%	17.8%
60 +	6.8%	14.5%	60 +	19.8%	18.3%
Total	22.0%	77.0%	Total	47.7%	52.3%

Table IA.2

Equity Allocation Factors – Finland vs. US (Full sample)

Columns (1) and (2) show the weighted percentage of respondents indicating a factor as very or extremely important when determining the share of financial assets allocated to equity investments. Columns (3) and (4) show the weighted mean standard scores (calculated by subtracting the mean value of a participant's numerical responses from the numerical value of each response and dividing this by the standard deviation of that participant's numerical responses). The US sample (2) and (4) includes all 1013 observations, as in Choi and Robertson (2012, Table II), as opposed to Table 2 of the main paper, where the US sample includes the subset of stock market participants. The rows are ordered by the difference in weighted mean standard scores between Finnish and US investors, reported in column (5). N = 765 (Finland) and 1013 (US).

	Very or Extremely Important		Mean Standard Score		Δ - Mean Standard Score
	Finnish Sample (1)	US Sample (2)	Finnish Sample (3)	US Sample (4)	(5)
Advice from media	21.8 %	11.9 %	0.36	-0.51	0.87
Personal experience investing in stock market	40.8 %	25.8 %	0.84	0.01	0.83
Stock market returns mean-revert	29.4 %	17.2 %	0.53	-0.26	0.79
Stocks are an inflation hedge	34.0 %	20.4 %	0.66	-0.04	0.70
Experience of living through stock market returns	38.2 %	26.9 %	0.75	0.10	0.65
Stock market returns before I was born	20.8 %	15.9 %	0.12	-0.41	0.53
Expected stock returns lower than usual right now	21.4 %	25.2 %	0.25	-0.13	0.38
Non-financial assets cushion losses in financial assets	17.7 %	19.6 %	0.18	-0.14	0.32
Need cash on hand for routine expenses	41.2 %	47.2 %	0.76	0.48	0.28
Years left until retirement *	34.2 %	47.5 %	0.57	0.42	0.15
Time until significant non-retirement expense	24.2 %	35.7 %	0.27	0.17	0.10
Non-financial asset risk	10.5 %	19.2 %	-0.34	-0.43	0.09
Rule of thumb	8.3 %	12.7 %	-0.41	-0.46	0.05
Advice from a friend, family member, or coworker	7.8 %	15.3 %	-0.34	-0.39	0.05
Expected stock returns higher than usual right now	12.8 %	24.3 %	-0.01	-0.05	0.04
Human capital fraction of total wealth	23.8 %	35.9 %	0.31	0.28	0.03
Stock market returns have momentum	7.8 %	18.7 %	-0.27	-0.29	0.02
Risk of aggregate consumption over next year	15.6 %	30.3 %	0.04	0.09	-0.05
Lack of knowledge about how to invest	22.2 %	36.2 %	0.14	0.19	-0.05
External habit	6.5 %	16.3 %	-0.45	-0.38	-0.07
Risk of long-run aggregate consumption	14.2 %	29.8 %	-0.03	0.05	-0.08
Consumption commitments	21.1 %	35.5 %	0.12	0.24	-0.12
Internal habit	11.0 %	26.9 %	-0.25	-0.03	-0.22
Return covariance with marginal utility of money	15.2 %	35.2 %	-0.03	0.20	-0.23
Lack of trustworthy advisor	14.4 %	31.1 %	-0.26	-0.01	-0.25
Ambiguity / Parameter uncertainty	13.0 %	26.7 %	-0.27	-0.02	-0.25
Return covariance with marginal utility of consumption	12.4 %	29.1 %	-0.23	0.05	-0.28
Stocks take too long to convert to cash in emergency	10.0 %	29.1 %	-0.31	0.00	-0.31
Lack of trust in market participants	15.0 %	37.5 %	-0.17	0.21	-0.38
Rare disaster risk	19.5 %	45.5 %	0.14	0.53	-0.39
Religious beliefs, values, and experiences	6.6 %	25.6 %	-0.67	-0.24	-0.43
Labor income risk *	12.9 %	41.6 %	-0.07	0.36	-0.43
Advice from a professional financial advisor	8.9 %	26.7 %	-0.61	-0.13	-0.48
Consumption composition risk	7.8 %	28.6 %	-0.46	0.03	-0.49
Loss aversion	5.5 %	28.2 %	-0.56	-0.06	-0.50
Home value risk **	10.0 %	28.5 %	-0.32	0.24	-0.56
Risk of illness/injury	17.3 %	47.3 %	0.09	0.65	-0.56

*Among employed respondents only. **Among homeowners only.

Table IA.3

Equity Allocation Factors – Finland vs. US (Weighted)

Columns (1) and (2) show the weighted percentage of respondents indicating a factor as very or extremely important when determining the share of financial assets allocated to equity investments. Columns (3) and (4) show the weighted mean standard scores (calculated by subtracting the mean value of a participant's numerical responses from the numerical value of each response and dividing this by the standard deviation of that participant's numerical responses). The rows are ordered by the difference in weighted mean standard scores between Finnish and US investors, reported in column (5). N = 765 (Finland) and 664 (US).

	Very or Extremely Important		Mean Standard Score		Δ - Mean Standard Score
	Finnish Sample (1)	US Sample (2)	Finnish Sample (3)	US Sample (4)	(5)
Stock market returns mean-revert	32.8 %	18.7 %	0.60	-0.23	0.83
Stocks are an inflation hedge	32.1 %	17.0 %	0.62	-0.09	0.70
Personal experience investing in stock market	42.0 %	30.4 %	0.86	0.21	0.65
Advice from media	16.2 %	8.6 %	0.17	-0.45	0.63
Need cash on hand for routine expenses	41.8 %	41.4 %	0.80	0.30	0.51
Non-financial assets cushion losses in financial assets	22.4 %	19.4 %	0.36	-0.13	0.49
Experience of living through stock market returns	40.3 %	32.1 %	0.77	0.36	0.41
Stock market returns before I was born	17.3 %	13.5 %	-0.06	-0.41	0.36
Expected stock returns lower than usual right now	17.4 %	26.7 %	0.13	-0.13	0.26
Risk of aggregate consumption over next year	19.5 %	24.0 %	0.14	-0.03	0.17
Advice from a friend, family member, or coworker	8.0 %	13.7 %	-0.31	-0.47	0.16
Non-financial asset risk	13.2 %	16.1 %	-0.28	-0.44	0.15
Stock market returns have momentum	8.7 %	16.6 %	-0.29	-0.41	0.12
Consumption commitments	25.4 %	30.0 %	0.25	0.14	0.10
Expected stock returns higher than usual right now	9.1 %	26.7 %	-0.09	-0.16	0.07
Time until significant non-retirement expense	25.9 %	40.9 %	0.33	0.28	0.05
Human capital fraction of total wealth	25.5 %	33.4 %	0.36	0.35	0.02
Risk of long-run aggregate consumption	13.0 %	19.7 %	-0.04	-0.03	0.00
Rule of thumb	5.6 %	8.8 %	-0.51	-0.50	-0.02
Stocks take too long to convert to cash in emergency	14.0 %	22.9 %	-0.22	-0.16	-0.06
External habit	5.4 %	11.4 %	-0.55	-0.47	-0.09
Lack of trustworthy advisor	16.3 %	26.9 %	-0.23	-0.12	-0.11
Lack of knowledge about how to invest	19.9 %	33.2 %	0.00	0.14	-0.14
Return covariance with marginal utility of money	17.8 %	33.7 %	0.03	0.18	-0.15
Religious beliefs, values, and experiences	5.7 %	19.3 %	-0.72	-0.55	-0.17
Return covariance with marginal utility of consumption	14.9 %	27.7 %	-0.19	-0.01	-0.18
Loss aversion	4.1 %	20.0 %	-0.58	-0.31	-0.27
Ambiguity / Parameter uncertainty	12.2 %	21.4 %	-0.35	-0.05	-0.30
Internal habit	9.5 %	26.1 %	-0.31	0.00	-0.32
Rare disaster risk	21.5 %	44.9 %	0.22	0.58	-0.36
Lack of trust in market participants	17.2 %	33.7 %	-0.16	0.22	-0.38
Years left until retirement *	31.3 %	66.5 %	0.54	0.94	-0.40
Risk of illness/injury	20.4 %	47.6 %	0.17	0.61	-0.44
Consumption composition risk	6.4 %	27.1 %	-0.55	-0.01	-0.55
Labor income risk *	16.5 %	41.8 %	-0.06	0.50	-0.56
Home value risk **	10.7 %	28.2 %	-0.31	0.26	-0.57
Advice from a professional financial advisor	12.4 %	35.1 %	-0.55	0.07	-0.62

*Among employed respondents only. **Among homeowners only.

Table IA.4

Equity Allocation Factors – Wealthy vs Non-Wealthy Population (Weighted)

Columns (1) and (2) show the weighted percentage of Finnish respondents indicating a factor as very or extremely important when determining the share of financial assets allocated to equity investments. Columns (3) and (4) show the weighted mean standard scores of each factor. The rows are ordered by the difference in weighted mean standard scores between wealthy and non-wealthy Finnish investors, reported in column (5). The wealthy (non-wealthy) sample includes all respondents reporting investable assets exceeding (below) €100,000. N = 277 (Wealthy Sample) and 475 (Non-wealthy Sample).

	Very or Extremely Important		Mean Standard Score		Δ - Mean Standard Score
	Wealthy Sample (1)	Non-Wealthy Sample (2)	Wealthy Sample (3)	Non-Wealthy Sample (4)	(5)
Expected stock returns higher than usual right now	13.3 %	5.6 %	0.15	-0.29	0.44
Stock market returns before I was born	21.1 %	14.2 %	0.18	-0.26	0.43
Advice from media	15.2 %	17.0 %	0.32	0.04	0.28
Experience of living through stock market returns	39.2 %	41.2 %	0.91	0.65	0.26
Personal experience investing in stock market	41.7 %	41.7 %	0.98	0.75	0.23
Time until significant non-retirement expense	26.6 %	25.4 %	0.45	0.22	0.23
Years left until retirement *	30.1 %	32.4 %	0.65	0.45	0.20
Labor income risk *	16.6 %	16.3 %	0.03	-0.14	0.17
Risk of aggregate consumption over next year	17.2 %	21.7 %	0.21	0.09	0.12
Return covariance with marginal utility of money	16.6 %	18.8 %	0.08	-0.01	0.08
Consumption composition risk	3.9 %	8.5 %	-0.51	-0.59	0.08
Religious beliefs, values, and experiences	5.3 %	6.1 %	-0.68	-0.75	0.07
Return covariance with marginal utility of consumption	18.4 %	12.0 %	-0.15	-0.21	0.06
Stocks are an inflation hedge	32.4 %	31.5 %	0.64	0.59	0.05
Human capital fraction of total wealth	23.9 %	26.9 %	0.40	0.34	0.05
Lack of trustworthy advisor	14.3 %	18.0 %	-0.21	-0.24	0.03
Non-financial asset risk	10.1 %	16.0 %	-0.26	-0.29	0.03
Stock market returns mean-revert	30.7 %	34.5 %	0.60	0.59	0.02
Rule of thumb	5.2 %	6.0 %	-0.51	-0.51	0.01
Internal habit	4.9 %	13.5 %	-0.32	-0.31	-0.01
Loss aversion	0.3 %	7.4 %	-0.60	-0.57	-0.03
Non-financial assets cushion losses in financial assets	13.6 %	29.9 %	0.33	0.38	-0.05
Rare disaster risk	14.3 %	28.0 %	0.20	0.25	-0.05
Consumption commitments	18.6 %	31.7 %	0.21	0.27	-0.06
Advice from a friend, family member, or coworker	5.2 %	10.5 %	-0.34	-0.28	-0.06
External habit	1.2 %	9.1 %	-0.59	-0.52	-0.07
Risk of long-run aggregate consumption	6.2 %	18.8 %	-0.08	0.00	-0.08
Lack of trust in market participants	13.1 %	20.7 %	-0.21	-0.12	-0.09
Expected stock returns lower than usual right now	14.8 %	19.9 %	0.08	0.18	-0.10
Stock market returns have momentum	6.9 %	10.4 %	-0.36	-0.24	-0.12
Advice from a professional financial advisor	6.9 %	17.4 %	-0.65	-0.46	-0.19
Risk of illness/injury	11.4 %	28.2 %	0.05	0.28	-0.23
Home value risk **	4.6 %	16.1 %	-0.45	-0.20	-0.25
Stocks take too long to convert to cash in emergency	8.0 %	19.1 %	-0.36	-0.10	-0.27
Need cash on hand for routine expenses	33.6 %	49.2 %	0.61	0.97	-0.36
Ambiguity / Parameter uncertainty	7.1 %	16.6 %	-0.56	-0.17	-0.40
Lack of knowledge about how to invest	8.3 %	30.2 %	-0.22	0.20	-0.42

*Among employed respondents only. **Among homeowners only.

Table IA.5

Equity Allocation Factors by Gender (Unweighted)

Columns (1) and (2) show the percentage of Finnish respondents indicating a factor as very or extremely important when determining the share of financial assets allocated to equity investments. Columns (3) and (4) show the mean standard scores of each factor. The rows are ordered by the difference in mean standard scores between male and female Finnish investors, reported in column (5). N = 589 (Male) and 171 (Female).

	Very or Extremely Important		Mean Standard Score		Δ - Mean Standard Score
	Male (1)	Female (2)	Male (3)	Female (4)	(5)
Stock market returns before I was born	23.2 %	12.0 %	0.23	-0.27	0.50
Expected stock returns higher than usual right now	13.8 %	9.0 %	0.06	-0.28	0.34
Advice from media	23.0 %	17.2 %	0.41	0.19	0.22
Stock market returns mean-revert	29.0 %	31.0 %	0.57	0.39	0.19
Stock market returns have momentum	8.2 %	6.5 %	-0.23	-0.40	0.17
Expected stock returns lower than usual right now	21.8 %	20.8 %	0.29	0.12	0.17
Stocks are an inflation hedge	34.4 %	32.4 %	0.70	0.54	0.16
Non-financial assets cushion losses in financial assets	18.1 %	16.5 %	0.21	0.05	0.16
Experience of living through stock market returns	39.1 %	35.5 %	0.79	0.64	0.15
Years left until retirement *	34.7 %	33.0 %	0.61	0.46	0.15
Human capital fraction of total wealth	24.2 %	22.9 %	0.33	0.25	0.08
Internal habit	10.8 %	12.0 %	-0.24	-0.29	0.06
Rule of thumb	7.8 %	10.1 %	-0.39	-0.45	0.06
External habit	5.8 %	8.9 %	-0.44	-0.49	0.06
Lack of trust in market participants	14.0 %	18.5 %	-0.17	-0.20	0.03
Consumption composition risk	7.0 %	10.7 %	-0.45	-0.47	0.02
Personal experience investing in stock market	40.9 %	41.3 %	0.84	0.83	0.02
Labor income risk *	11.6 %	16.5 %	-0.08	-0.08	0.00
Advice from a professional financial advisor	8.0 %	12.4 %	-0.61	-0.60	-0.01
Time until significant non-retirement expense	23.0 %	29.4 %	0.26	0.29	-0.03
Non-financial asset risk	7.8 %	20.0 %	-0.35	-0.31	-0.04
Consumption commitments	19.6 %	26.0 %	0.11	0.16	-0.05
Religious beliefs, values, and experiences	5.8 %	9.5 %	-0.68	-0.63	-0.06
Lack of trustworthy advisor	12.5 %	21.0 %	-0.28	-0.20	-0.08
Home value risk **	8.7 %	14.5 %	-0.34	-0.24	-0.10
Lack of knowledge about how to invest	21.2 %	26.0 %	0.11	0.22	-0.11
Advice from a friend, family member, or coworker	6.8 %	10.7 %	-0.37	-0.25	-0.12
Need cash on hand for routine expenses	39.5 %	47.3 %	0.73	0.85	-0.12
Risk of long-run aggregate consumption	12.5 %	20.7 %	-0.06	0.10	-0.15
Stocks take too long to convert to cash in emergency	8.2 %	16.9 %	-0.34	-0.18	-0.16
Rare disaster risk	17.7 %	26.3 %	0.11	0.27	-0.16
Ambiguity / Parameter uncertainty	10.8 %	21.1 %	-0.32	-0.13	-0.19
Return covariance with marginal utility of money	12.0 %	25.4 %	-0.08	0.11	-0.19
Return covariance with marginal utility of consumption	9.7 %	21.4 %	-0.27	-0.08	-0.19
Risk of illness/injury	14.8 %	26.3 %	0.04	0.28	-0.24
Loss aversion	4.3 %	10.1 %	-0.61	-0.36	-0.25
Risk of aggregate consumption over next year	12.2 %	27.8 %	-0.02	0.27	-0.29

*Among employed respondents only. **Among homeowners only.

Table IA.6

Equity Allocation Factors by Age (Unweighted)

Columns (1) and (2) show the percentage of Finnish respondents indicating a factor as very or extremely important when determining the share of financial assets allocated to equity investments. Columns (3) and (4) show the mean standard scores of each factor. The rows are ordered by the difference in mean standard scores between young and old Finnish investors, reported in column (5). The "Young" sample includes all respondents reporting age between 18-39 and the "Old" sample includes all respondents reporting an age of 40 years or above. N = 385 (Young) and 377 (Old).

	Very or Extremely Important		Mean Standard Score		Δ - Mean Standard Score
	Young (1)	Old (2)	Young (3)	Old (4)	(5)
Stock market returns before I was born	27.9 %	13.8 %	0.41	-0.18	0.60
Time until significant non-retirement expense	31.4 %	17.1 %	0.53	0.01	0.52
Advice from media	27.6 %	16.0 %	0.58	0.14	0.44
Advice from a friend, family member, or coworker	8.6 %	6.9 %	-0.18	-0.50	0.32
Consumption commitments	23.0 %	19.2 %	0.28	-0.04	0.32
Human capital fraction of total wealth	29.1 %	18.4 %	0.47	0.16	0.31
External habit	6.3 %	6.7 %	-0.36	-0.55	0.19
Religious beliefs, values, and experiences	5.8 %	7.4 %	-0.59	-0.76	0.18
Need cash on hand for routine expenses	43.4 %	39.2 %	0.84	0.68	0.16
Stocks are an inflation hedge	38.8 %	29.1 %	0.72	0.60	0.12
Expected stock returns higher than usual right now	15.4 %	10.2 %	0.05	-0.07	0.11
Labor income risk *	10.2 %	16.0 %	-0.02	-0.12	0.10
Personal experience investing in stock market	41.1 %	40.8 %	0.87	0.80	0.07
Experience of living through stock market returns	38.8 %	37.8 %	0.78	0.72	0.06
Internal habit	10.6 %	11.4 %	-0.23	-0.27	0.04
Non-financial assets cushion losses in financial assets	19.8 %	15.7 %	0.18	0.18	0.00
Home value risk **	3.8 %	13.3 %	-0.33	-0.32	-0.02
Lack of knowledge about how to invest	21.5 %	23.1 %	0.12	0.16	-0.04
Expected stock returns lower than usual right now	21.8 %	21.1 %	0.21	0.28	-0.07
Years left until retirement *	37.4 %	30.2 %	0.54	0.61	-0.07
Loss aversion	4.7 %	6.1 %	-0.60	-0.52	-0.08
Consumption composition risk	5.0 %	10.7 %	-0.50	-0.41	-0.09
Non-financial asset risk	7.3 %	13.6 %	-0.40	-0.29	-0.11
Return covariance with marginal utility of consumption	10.2 %	14.7 %	-0.28	-0.17	-0.11
Return covariance with marginal utility of money	13.1 %	17.4 %	-0.08	0.02	-0.11
Stock market returns have momentum	5.8 %	9.9 %	-0.33	-0.22	-0.11
Rule of thumb	7.6 %	9.1 %	-0.47	-0.34	-0.13
Ambiguity / Parameter uncertainty	10.3 %	15.8 %	-0.36	-0.18	-0.18
Lack of trust in market participants	12.0 %	18.2 %	-0.27	-0.07	-0.20
Stock market returns mean-revert	24.9 %	33.9 %	0.41	0.65	-0.23
Stocks take too long to convert to cash in emergency	7.3 %	12.8 %	-0.43	-0.19	-0.24
Risk of long-run aggregate consumption	11.5 %	17.1 %	-0.15	0.10	-0.25
Advice from a professional financial advisor	4.5 %	13.4 %	-0.73	-0.47	-0.26
Rare disaster risk	15.2 %	24.0 %	-0.03	0.31	-0.33
Lack of trustworthy advisor	9.2 %	19.7 %	-0.42	-0.08	-0.34
Risk of aggregate consumption over next year	12.8 %	18.5 %	-0.13	0.22	-0.35
Risk of illness/injury	11.4 %	23.5 %	-0.13	0.31	-0.44

*Among employed respondents only. **Among homeowners only.

Table IA.7

Equity Allocation Factors by Education

Columns (1) and (2) show the percentage of Finnish respondents indicating a factor as very or extremely important when determining the share of financial assets allocated to equity investments. Columns (3) and (4) show the mean standard scores of each factor. The rows are ordered by the difference in mean standard scores between Finnish investors with different educational backgrounds, reported in column (5). The "Higher Education" sample includes all respondents reporting a bachelor's or graduate degree, while the "Basic Education" sample includes all respondents reporting primary education or a high school degree as highest degree obtained. N = 568 (Higher education) and 195 (Basic Education).

	Very or Extremely Important		Mean Standard Score		Δ - Mean Standard Score
	Higher Education (1)	Basic Education (2)	Higher Education (3)	Basic Education (4)	(5)
Time until significant non-retirement expense	27.6 %	14.9 %	0.38	-0.03	0.41
Years left until retirement *	36.3 %	24.7 %	0.64	0.29	0.35
Experience of living through stock market returns	41.1 %	29.2 %	0.83	0.51	0.32
Non-financial assets cushion losses in financial assets	18.7 %	14.4 %	0.24	-0.02	0.26
Personal experience investing in stock market	42.3 %	35.9 %	0.89	0.66	0.23
Stock market returns before I was born	21.6 %	19.0 %	0.18	-0.06	0.23
Stocks are an inflation hedge	35.6 %	28.5 %	0.70	0.53	0.17
Advice from a friend, family member, or coworker	6.9 %	9.8 %	-0.31	-0.43	0.12
Labor income risk *	12.6 %	14.1 %	-0.05	-0.14	0.09
Advice from media	21.1 %	23.1 %	0.38	0.30	0.07
Consumption commitments	20.7 %	22.2 %	0.14	0.08	0.06
Human capital fraction of total wealth	23.5 %	24.4 %	0.32	0.29	0.03
Loss aversion	4.4 %	8.7 %	-0.55	-0.58	0.03
Return covariance with marginal utility of money	14.8 %	16.5 %	-0.02	-0.04	0.02
Stock market returns mean-revert	29.1 %	30.4 %	0.53	0.52	0.01
Non-financial asset risk	9.9 %	12.4 %	-0.34	-0.33	-0.02
Rule of thumb	8.0 %	9.2 %	-0.41	-0.39	-0.02
Stocks take too long to convert to cash in emergency	9.1 %	12.8 %	-0.32	-0.29	-0.02
Expected stock returns lower than usual right now	20.7 %	23.6 %	0.24	0.27	-0.03
Advice from a professional financial advisor	7.0 %	14.1 %	-0.62	-0.58	-0.04
Risk of long-run aggregate consumption	14.2 %	14.4 %	-0.04	0.02	-0.05
Stock market returns have momentum	7.5 %	8.8 %	-0.29	-0.23	-0.06
Return covariance with marginal utility of consumption	11.5 %	14.9 %	-0.24	-0.18	-0.06
Risk of aggregate consumption over next year	15.7 %	15.5 %	0.02	0.09	-0.06
Religious beliefs, values, and experiences	5.5 %	9.8 %	-0.69	-0.62	-0.07
Rare disaster risk	18.6 %	22.3 %	0.12	0.19	-0.07
External habit	5.5 %	9.2 %	-0.47	-0.39	-0.08
Expected stock returns higher than usual right now	12.4 %	14.0 %	-0.04	0.06	-0.10
Home value risk **	8.9 %	13.7 %	-0.35	-0.23	-0.12
Risk of illness/injury	15.2 %	23.7 %	0.06	0.18	-0.12
Need cash on hand for routine expenses	39.6 %	46.4 %	0.73	0.86	-0.14
Internal habit	9.8 %	14.4 %	-0.29	-0.13	-0.16
Lack of trust in market participants	14.2 %	17.6 %	-0.22	-0.03	-0.19
Consumption composition risk	6.4 %	11.9 %	-0.51	-0.31	-0.20
Lack of trustworthy advisor	13.2 %	18.1 %	-0.31	-0.11	-0.20
Lack of knowledge about how to invest	20.6 %	27.2 %	0.07	0.33	-0.26
Ambiguity / Parameter uncertainty	11.5 %	17.5 %	-0.34	-0.07	-0.28

*Among employed respondents only. **Among homeowners only.

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