Cognitive Decline and Financial Decision-Making*

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Abstract

Cognitive decline severely impairs financial decision-making, but often develops unnoticed. We propose a model of portfolio choice with endogenous information acquisition that predicts that investors who are unaware of their decline will take on excessive risk and delay the transfer of financial control to a trusted agent. We test these implications in an experimental survey of affluent older US investors by eliciting their intended actions under hypothetical scenarios of memory decline. Randomized interventions that make the financial consequences of memory decline salient shift stated choices toward more prudent behaviors, namely risk reduction and a reallocation from informal arrangements toward professional financial advice. Notably, we uncover significant heterogeneity: among unaware investors, only personalized, objective feedback on memory performance triggers a shift in intended behavior, while general educational information alone has limited effects. Finally, using longitudinal data from the Health and Retirement Study, we show that the margins we analyze are relevant for actual, rather than stated, behavior.

Keywords: Cognitive decline; portfolio choice; memory skills; financial delegation; vignettes.

JEL classification codes: C93, G11, G51, J14

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1 Introduction

The increasing sophistication of financial products and the growing responsibility for self-management of financial wealth during retirement (Poterba, 2014; Ahmed, Barber and Odean, 2018) require older investors — who hold a large share of national wealth in most developed countries — to make complex financial decisions at a time when their cognitive abilities begin to deteriorate. This exposes them to the risk of substantial wealth losses due to investment mistakes (Korniotis and Kumar, 2011) or financial fraud (Egan, Matvos and Seru, 2019, 2024). Although delegating financial control to a trusted agent could mitigate these risks, the timing of delegation is often delayed due to unawareness of cognitive decline (Ameriks et al., 2023).

The misperception of own cognitive abilities is widespread among older Americans, with those unaware of their cognitive decline experiencing significant wealth losses that cannot be explained by rational disinvestment strategies (Mazzonna and Peracchi, 2024). Undiagnosed memory disorders are also associated with worse credit outcomes, such as lower credit scores or higher payment delinquency (Gresenz et al., 2025).

Much remains unknown about the relationship between cognitive decline and financial decision-making. In particular, two questions remain unanswered. First, do individuals adjust their financial decisions after becoming aware of cognitive decline and, if so, how? Some may seek help from others (such as a spouse, child, friend, or a professional financial advisor), while others may continue to self-manage but rebalance their portfolios toward safer assets. Second, can policymakers actually raise this awareness, and what is most effective — generic information about the financial risks of memory decline, or personalized feedback about one's own memory performance? Answering these two questions is essential for designing policies that protect older investors, yet direct evidence on either remains limited.

To address these questions, we first develop a simple portfolio choice model in which cognitive decline affects information acquisition and delegation choices. In the model, cognitive decline reduces the effectiveness of acquiring information about risky returns. Investors may also delegate portfolio management to an agent, such as a professional financial advisor or the investor's spouse, who protects them against the financial risks associated with aging in exchange for compensation. The model delivers two testable predictions. Investors who underestimate their cognitive decline take on excessive portfolio risk and inefficiently delay delegation, and informational interventions should have larger effects for unaware investors than for those who already recognize their decline.

We then test the predictions of the model by conducting an experimental survey

of members of the American Association of Individual Investors (AAII), a roughly 150,000-member organization of self-directed investors formed in 1978. AAII members consist mainly of highly-educated financial decision-makers with large financial wealth holdings. This is precisely the group we are interested in, as they are more likely to suffer major wealth losses if unaware of their cognitive decline (Mazzonna and Peracchi, 2024).

The survey has four key features. First, it measures unawareness of cognitive decline by comparing respondents' self-rated memory with their performance on an objective memory task administered within the survey. Second, it elicits stated preferences over financial responses to cognitive decline in two forms: a vignette question about a hypothetical investor and a personal question about the respondent's own intended or actual behavior. Third, the sex and age of the vignette subject are randomized, allowing us to identify whether advice varies with the investor's characteristics in ways that cannot reflect beliefs about financial competence. Fourth, respondents are randomly assigned to one of four conditions before answering both questions: receiving personalized feedback on their memory score, receiving educational information about the financial risks of memory decline, receiving both treatments, or receiving neither. This design allows us to separately identify the causal effects of the two distinct informational treatments and their interaction.

Our analysis delivers three sets of results. First, we show that a significant fraction of respondents appear to be unaware of their memory problems. About one in nine report that their memory is "Very good" or "Excellent" but scores poorly on the memory task. This confirms that unawareness is not just a correlate of low financial literacy or lack of wealth, but is a widespread behavioral friction even at the top of the wealth distribution (Mazzonna and Peracchi, 2024).

Second, consistent with the model, our informational interventions shift stated preferences toward more prudent financial decision-making along two margins: risk reduction and reallocation of delegation from informal to formal. In the vignette question, the combined treatment — which provides both information on the financial consequences of serious memory decline and feedback on own memory performance — increases the probability of risk reduction by 19 percent relative to no treatment and reduces that of informal delegation by about 14 percent. In the personal question, it increases the probability of formal delegation by about 13 percent relative to no treatment and reduces that of informal delegation by about 8 percent.

Third, we uncover substantial heterogeneity in how investors update their beliefs and stated preferences. Among investors who appear to be unaware of their cognitive decline, only feedback on their own memory performance triggers meaningful changes in intended behavior — shifting stated preferences toward formal delegation

and risk reduction. This suggests that the effectiveness of informational interventions depends crucially on whether investors are aware of their cognitive status. From a policy perspective, this suggests that broad financial literacy campaigns are likely insufficient and that targeted screening — brief standardized memory assessments paired with personalized feedback — is more appropriate for investors most at risk.

A central concern with survey-based evidence is whether stated preferences reflect actual behavior. We address this directly using data from the 1996–2018 waves of the Health and Retirement Study (HRS), a biennial representative survey of the non-institutionalized US population aged 50+. Following Mazzonna and Peracchi (2024), we define unawareness as a large discrepancy between self-rated and objective memory assessments. We identify two outcomes of interest: the share of risky assets — measured by the percentage of total financial wealth invested in stocks or bonds — and delegation — measured by a change in the spouse who is reported as the household's financial respondent (Hsu and Willis, 2013). We then estimate Differences-in-Differences models to evaluate differential changes in these outcomes around a severe memory loss event between the aware and the unaware. As predicted by the model, we find that investors who are aware of their cognitive decline actually reduce portfolio risk, while unaware investors do not. At the same time, unaware investors are less likely to turn over the management of the household's finances to their spouse, when compared to the aware. Because our measure of delegation only captures a narrow definition of transfer of control over household finances, we also complement our analysis with a 2016 HRS experimental module to explore other types of delegation.

This correspondence between awareness and revealed behavior supports the interpretation that our experimental treatments — which shift stated preferences precisely among unaware investors — are likely to matter for real financial decisions, not merely survey responses. We view this as a necessary validation step rather than a secondary robustness check, and present it as such.

Our findings contribute to the growing literature on cognitive aging and household finance (e.g., Agarwal et al., 2009; Ameriks et al., 2023) by providing empirical and experimental evidence on how awareness of cognitive decline shapes financial decision-making. We show that targeted informational interventions can overcome the behavioral friction of unawareness, but only when they deliver personalized objective feedback rather than generic education.

2 Cognitive decline, investment choices, and delegation

Cognitive skills tend to follow an inverted U-shaped pattern over the lifetime of an individual (Hanushek et al., 2025). The age at which they peak and the rate at which

they decline depend on the specific skill considered. Fluid intelligence (the ability to reason, think abstractly, and solve novel problems independently of prior knowledge and experience) is highly correlated with working memory, peaks early — between ages 20 and 30 — and declines rapidly afterward, while crystallized intelligence (the accumulation of knowledge and skills acquired over a lifetime of learning and experience) is highly correlated with long-term memory, peaks at much later ages and declines at a slower rate (Horn and Cattell, 1967).

The standard human capital model (Ben-Porath, 1967) predicts that human capital accumulation (including cognitive skills) dominates until the incentives to invest no longer compensate for natural cognitive deterioration, at which point cognitive decline becomes noticeable. These patterns have also been established empirically (Mazzonna and Peracchi, 2012).

The economic literature largely focuses on human capital accumulation, rather than decumulation (McFadden, 2008). Yet, the probability of having dementia during the last six months before death is 41.3% for Americans older than 70 (Hudomiet, Hurd and Rohwedder, 2025), and cognitive decline (without dementia) is even more frequent. These issues have important consequences for the financial choices of the elderly, especially when cognitive deterioration remains undetected. Mazzonna and Peracchi (2024) show that people who experienced severe memory loss but are unaware of it are likely to suffer large losses in financial wealth. Recent evidence also shows that the financial consequences of Alzheimer disease and dementia may begin years before the onset of severe symptoms or clinical diagnosis (Nicholas et al., 2021; Mejía et al., 2025; Li et al., 2023, 2026).

Cognitive decline can hinder the ability of older investors to make the correct investment choices. Relative to their young self, they may be slower in their reasoning and more prone to making mistakes. Korniotis and Kumar (2011) find that older investors' investments reflect greater financial knowledge, consistent with a shift from fluid to crystallized intelligence at later ages. However, the adverse effects of cognitive aging seem to prevail over the benefits of experience, and older investors achieve lower overall returns. Unawareness of their own cognitive decline can exacerbate these costs through overconfidence, excessive trading, and misuse of information input in investment decisions (Odean, 1998; Barber and Odean, 2001; Guiso and Jappelli, 2020).

By delegating the management of their finances to a trusted agent, older investors could, in principle, mitigate the adverse effects of cognitive decline (Gaudecker, 2015; Kim, Maurer and Mitchell, 2016). However, if the decline goes unnoticed, the timing of delegation can be excessively delayed (Ameriks et al., 2023). For example, Hsu and Willis (2013) document that financial responsibility is often transferred from the cog-

nitively declining household financial respondent to the unimpaired spouse only with delay, well after the original decision maker began to experience difficulties handling money.

In the next section, we provide a conceptual framework that incorporates these two mechanisms, namely the effects of cognitive decline on portfolio allocation and on delegation.

3 Conceptual framework

Peress (2004) presents a portfolio choice model in which financial investors can acquire private information about the return on a risky asset. We extend a partial-equilibrium version of his model in two directions. First, we assume that cognitive decline reduces the effectiveness of information acquisition. Second, we allow investors to choose between self-managing their portfolio and delegating financial decisions to an agent who is not affected by cognitive aging. For now, we assume that investors are correct about their own risk of experiencing cognitive decline, an assumption that will be relaxed in Section 3.3.

3.1 Portfolio choice under self-management

If the investor chooses self-management, she must decide how to allocate her initial wealth between a safe asset with a guaranteed return r and a risky asset with stochastic return $R \sim \mathcal{N}(\mu_R, \sigma_R^2)$. At the time of the allocation decision, the investor does not observe the excess return $X = R - r$ but receives a private signal about it, $S = X + \varepsilon$, where ε is distributed independently of X as $\mathcal{N}(0, \sigma_\varepsilon^2)$. The investor may spend time and resources collecting information about the risky asset, thereby increasing the quality $1/\sigma_\varepsilon^2$ of her private signal. However, the occurrence of an adverse cognitive shock D destroys the value of information acquisition with positive probability p:

$$\frac{1}{\sigma_\varepsilon^2} = (1 - D)\, h(I) = \begin{cases} 0, & \text{with probability } p, \\ h(I), & \text{with probability } 1 - p, \end{cases}$$

where $I \geq 0$ is the information effort and h is a positive, increasing, and concave function.

At the beginning of the period,[1] the investor exerts an information effort I, pays a cost $c(I)$, and selects an optimal rule $\alpha(\cdot)$ for allocating initial wealth ω between the two assets. After the signal S is revealed, the investor follows the chosen rule

[1] We focus on modeling the financial decisions of an older investor, so the period considered can be thought of as the investor's post-retirement life, and the investor's initial wealth can be interpreted as pre-retirement financial wealth.

and allocates $\alpha(S)\omega$ to the risky asset. At the end of the period, stochastic returns are realized, the portfolio pays off and the investor consumes all final wealth W (we assume no bequest motives, so final wealth is entirely consumed).

In this simple model, cognitive decline reduces the effectiveness of information acquisition and therefore the quality of the investor's signal. For a risk-averse investor, this leads to a lower level of information acquisition and a lower optimal risky share.

Proposition 1. *An increase in the probability p of cognitive decline reduces the investor's level of effort in information-collection activities, and the expected share of wealth invested in the risky asset.*

Proof. See Appendix A.1.

3.2 Delegation of financial decision-making

If the investor chooses to delegate, she must pay a fee or provide some compensation to the agent. For example, in the wealth management industry, fees usually consist of a fixed charge plus an amount proportional to the assets under management (Kim, Maurer and Mitchell, 2016). Under delegation, the agent decides an optimal allocation rule on behalf of the investor (the "principal").

Delegation can be either formal (e.g., to a professional financial advisor) or informal (e.g., to the investor's spouse or children). We do not distinguish between the two channels and adopt a formulation that accommodates both. For example, one may think that the investor's spouse has lower investment skills (i.e., lower σ_η^2) than a financial advisor, but she does not demand a fixed fee (i.e., $\zeta = 0$). In this case, poorer investors may be unable to pay the fixed cost $\zeta > 0$ associated with formal delegation, and may therefore be more likely to rely on informal delegation.

The investor chooses between self-management and delegation depending on which alternative yields the highest value. Since we assume that the agent is not at risk of cognitive decline, delegating ensures that the investor is protected against such risk.

Proposition 2. *An increase in the probability p of cognitive decline makes delegation weakly more attractive relative to self-management. Consequently, at an interior solution, there exists a cutoff p^* above which delegation is optimal.*

Proof. See Appendix A.2.

We remain agnostic on whether formal or informal delegation is better when cognition declines. While distinguishing between these two forms of delegation would require a host of specific assumptions, our conceptual framework is enough to predict the

transition away from self-management. We therefore leave the choice between the two types as an empirical question that our survey is uniquely designed to answer.[2]

3.3 The role of misperception about cognitive status

Our model has implications for the case when the investor underestimates her risk of cognitive decline, i.e., $\widehat{p} < p$, where $\widehat{p}$ represents the investor's "prior" probability of an adverse cognitive shock and p represents the true probability.

By Proposition 1, such "unaware" investor will collect too much information or take on excessive portfolio risk. By Proposition 2, she will also hand over portfolio management when the risk of cognitive decline is higher than optimal. If cognitive skills depreciate over time, this implies that unaware investors will delay delegation beyond its optimal timing.

The model's comparative statics can be directly mapped into the stated choices in our survey. In particular, information about the financial risks of serious memory problems or feedback about own performance on a memory task should move the prior probability $\widehat{p}$ of an unaware investor closer to the true p. Thus, Propositions 1 and 2 suggest that we should expect informational interventions to affect investors' responses along the following two margins. First, increased awareness of own cognitive decline should reduce the share of wealth invested in risky assets. Second, it should increase the probability of delegating portfolio management to an agent. Finally, these effects should be concentrated among investors who most underestimate their cognitive decline, for whom treatments move $\hat{p}$ furthest from its initial biased value.

4 The survey

Our survey was fielded in partnership with the American Association of Individual Investors (AAII), a nonprofit organization with roughly 150,000 members. There are two reasons for our interest in the AAII members. First, they are used to surveys because, since 1987, the AAII has produced a weekly Investor Sentiment Survey. Greenwood and Shleifer (2014) show that the expectations elicited by this survey are strongly positively correlated with those elicited by the Gallup survey. More recently, Jiang, Peng and Yan (2024) also surveyed the AAII members to study the relationship between personality differences and investment decision-making. Second, and most important

[2] We also abstract from the principal-agent problem associated with delegation (see, e.g., Inderst and Ottaviani (2012*a*,*b*)). Older investors may fall victim to misconduct by professional financial advisors (Egan, Matvos and Seru, 2019, 2024; Honigsberg, Hu and Jackson, 2025), and there is also evidence of their financial abuse within the household (Carlin, Umar and Yi, 2023).

for our purposes, AAII members represent a relevant US subpopulation of highly-educated older financial decision-makers with large financial wealth holdings, which are precisely those most vulnerable to the financial consequences of cognitive decline.

4.1 Survey design

We structured our survey in three parts. The first part asked basic demographic questions (sex, age in years, highest level of completed education, current marital status, and state of current residence), as well as questions on the level of trust in others,[3] reliance on a paid professional financial advisor, and the level and composition of household financial wealth. The complete survey is presented in Appendix B.

As in the HRS, respondents were asked to report the total value of their household financial assets and its breakdown into four categories: liquid assets, government bonds, corporate bonds, and individual stocks, including holdings through ETFs and mutual funds. Real estate, privately-owned business, or collectibles were explicitly excluded. Because of our interest in the delegation of financial decision-making, we also asked respondents whether they rely on a professional financial advisor, whether they have granted a durable Power of Attorney (POA) and, if so, to whom.

The second part of the survey was designed to evaluate the memory skills of the respondents. We first asked them to self-rate their current memory on a 5-point Likert scale using the same measure as the HRS Cognition Survey ("Poor", "Fair", "Good", "Very good", "Excellent"). We then assessed their actual memory performance by administering a short memory task in which respondents were presented with a sequence of eight words, each displayed for two seconds. After all eight words were displayed, respondents were asked to select as many as they could remember from a larger list of 32 words displayed on the screen.[4] The order in which words were presented was randomized.

After completion of the memory task, the respondents were randomly assigned to one of four treatment groups. Those in the first group were informed about their memory score, those in the second group received a short message explaining that memory decline can impair financial decision-making and lead to considerable wealth losses, those in the third group were exposed to both treatments simultaneously, while those in the fourth (control) group received no information.

[3] These question were included due to the importance of trust for household finance (Guiso, Sapienza and Zingales, 2008; Sapienza, Toldra-Simats and Zingales, 2013). In our context, an investor's level of trust may influence delegation of financial decisions to others, including a paid professional financial advisor.

[4] The set of words was taken from the HRS but, to keep the survey concise, we used only eight words instead of ten. Furthermore, our memory task measures word recognition rather than word recall, and therefore may not be directly comparable to the HRS test, which instead requires respondents to type-in the words they remember.

In the third part of the survey, respondents were presented with both a vignette and a personal question about cognitive decline. The vignette described a hypothetical situation involving a friend, followed by a question about what advice the respondent would make, selecting up to three of the following seven answers: "Reduce the share of risky assets", "Get help from the spouse", "Get help from a child", "Get help from a friend", "Get help from a professional financial advisor", "Buy annuities", and "None of the above". The sex and age of the subject in the vignette were randomized; see Vignette 1 for an example with a 70-year-old male.

Vignette 1: Example vignette

Your friend John is aged **70** and has been very successful managing his financial investments on his own, but recently he seems to be experiencing some signs of **cognitive decline** (e.g., easily forgets passwords, fails to solve standard math operations correctly, ...).
What would you advise John to do? Select at most three options.

- ☐ Get help from his spouse
- ✓ Get help from his children
- ☐ Get help from a friend
- ☐ Get help from a professional financial advisor
- ✓ Reduce his share of risky assets
- ☐ Buy annuities
- ☐ None of the above

Note. The ordering of the options is randomized to avoid order effects. This vignette is one of four variants randomly shown to respondents: male 70, male 85, female 70, and female 85.

The personal question instead asked whether the respondent had experienced signs of cognitive decline. Those who answered no were asked what they would do if they began to experience such signs, while those who answered yes were asked to report how long ago this occurred and what they actually did. In both cases, respondents could choose up to three of the same seven options available in the vignette question. To avoid order effects, we randomly assigned the order of presentation of the vignette and personal questions, as well as the order of the answers available for each question.

4.2 Response patterns

Invitations to participate in the survey were sent by e-mail on September 4, 2025, to all AAII members by the Vice President of the association. Two reminders were sent

on September 15 and September 25, and we closed the survey on October 15, 2025.[5] We received a total of 3,515 survey responses, including multiple responses by the same person. When someone submitted multiple responses, we retained the submission with the highest completion rate. We then trimmed the sample by excluding implausibly short or long completion times (keeping responses between the 1st and 99th percentiles of survey duration), leaving 3,015 valid responses. Although this number represents just about 2% of the AAII members, it is only slightly below the 3,325 completed responses reported by Jiang, Peng and Yan (2024). Therefore, we have no reason to think that our response rate is unusually low, especially considering that we provided no monetary incentive and participation in the survey was voluntary and fully anonymized.

One concern is that respondents may not be representative of the AAII population, i.e., they may differ systematically from non-respondents in terms of their characteristics (Stantcheva, 2023). Because we do not have information on the characteristics of AAII members, we cannot study the process of survey non-response. However, the invitation message did not mention the specific subject matter of the study, which reduces the risk that participation is driven by key variables of interest such as cognitive ability or financial decision-making.

A related concern is whether the composition of respondents changes over the survey field period and whether differential item nonresponse or attrition affects the analysis samples. Appendix Table D.1 addresses these issues by comparing observable characteristics across the de-duplicated full sample (column (1)), respondents who completed the survey before the median completion time ("early respondents", column (2)) and those who completed it after the median ("late respondents", column (3)), as well as the subsamples of respondents who answered the vignette question (column (4)) and the personal question (column (5)). The table shows that the respondents are very similar across subsamples in terms of observable characteristics such as age, sex, marital status, education, financial wealth, memory score, and unawareness. The only exception is respondents to the personal-question, who are somewhat less likely to report having experienced cognitive decline (0.19 versus 0.25 for both the full and vignette samples) — a pattern consistent with respondents who have experienced decline being more reluctant to answer questions referring explicitly to their own situation.

This form of selective attrition is unlikely to threaten the internal validity of the experimental comparisons, since treatment assignment is randomized (Appendix Ta-

[5] More than half of the sample completed the survey between 5 and 10 minutes. Appendix Figure E.1 shows the time profile of the cumulative number of daily responses and the histogram of survey duration for those who took less than one hour to complete the survey (99% of the sample).

ble D.2 shows that treatment assignment is balanced within each analysis sample) and the observable composition of the analysis samples remains very close to that of the full de-duplicated sample. At the same time, it may matter for external validity in the personal-question, because respondents with direct experience of decline are arguably those for whom the intervention is most behaviorally relevant. Our main results do not change if we exclude respondents who report having already experienced cognitive decline. Since selective attrition of these respondents tends to attenuate the estimated treatment effects in the personal scenario, our estimates should be interpreted as a lower bound.

5 Descriptive analysis

This section describes the demographic characteristics of our survey respondents, their delegation choices, and the level and composition of their household financial wealth, their self-rated and "objective" memory levels, and their response patterns in the vignette and personal questions. We complement the graphical descriptions with simple regression analyses of the relationship between our key outcomes and the observable characteristics of the respondents.[6] Our outcomes of interest are: portfolio shares, memory measures, awareness, delegation choices, and vignette and personal choices. All models include as covariates the respondent's age and age squared, and binary indicators for being male, having a postgraduate degree, having a spouse or partner, having a paid professional financial advisor, and the state of current residence. Additional covariates are included depending on the outcome being considered. The age and level of trust in others are expressed as deviations from their sample means. In what follows, PNTS denotes the answer "Prefer not to say".

5.1 Demographic and financial characteristics

The members of the AAII are older, more educated, and financially more sophisticated than the general US population, hence they represent a subpopulation for which cognitive risk and delegation are particularly salient and consequential (Figure 1).

Our sample consists predominantly of males (about 91%), aged 50+ (about 95%), highly educated (about 64% of them report a graduate or professional degree as the highest level of education completed, while another 30% report a bachelor degree) and currently married or partnered (about 81%). About 40% of the sample resides in six

[6] In addition to the point estimates and the t-ratios based on conventional heteroskedasticity-robust standard errors, we report the sample size (Obs.), the total number of estimated coefficients excluding the intercept (k), the root mean squared error (RMSE) and the R^2. Estimates that are significant at the 10%, 5% and 1% levels are denoted by single, double or triple stars, respectively.

states: California, Florida, Texas, Illinois, Virginia and New York (see Appendix Figure E.3 for the geographical distribution of respondents). Appendix Figure E.4 compares the distribution by demographics characteristics of our AAII respondents with the 2018 HRS financial respondents with financial wealth above $50k and shows that the former are much more likely to be males, to be in the 65–85 age range, and to have a graduate degree.

Panels E of Figure 1 shows the distribution of total household financial wealth by wealth brackets. Nearly two thirds of the sample report a household financial wealth of $2M or more (33% report $2M–5M and 31% report more than $5M).

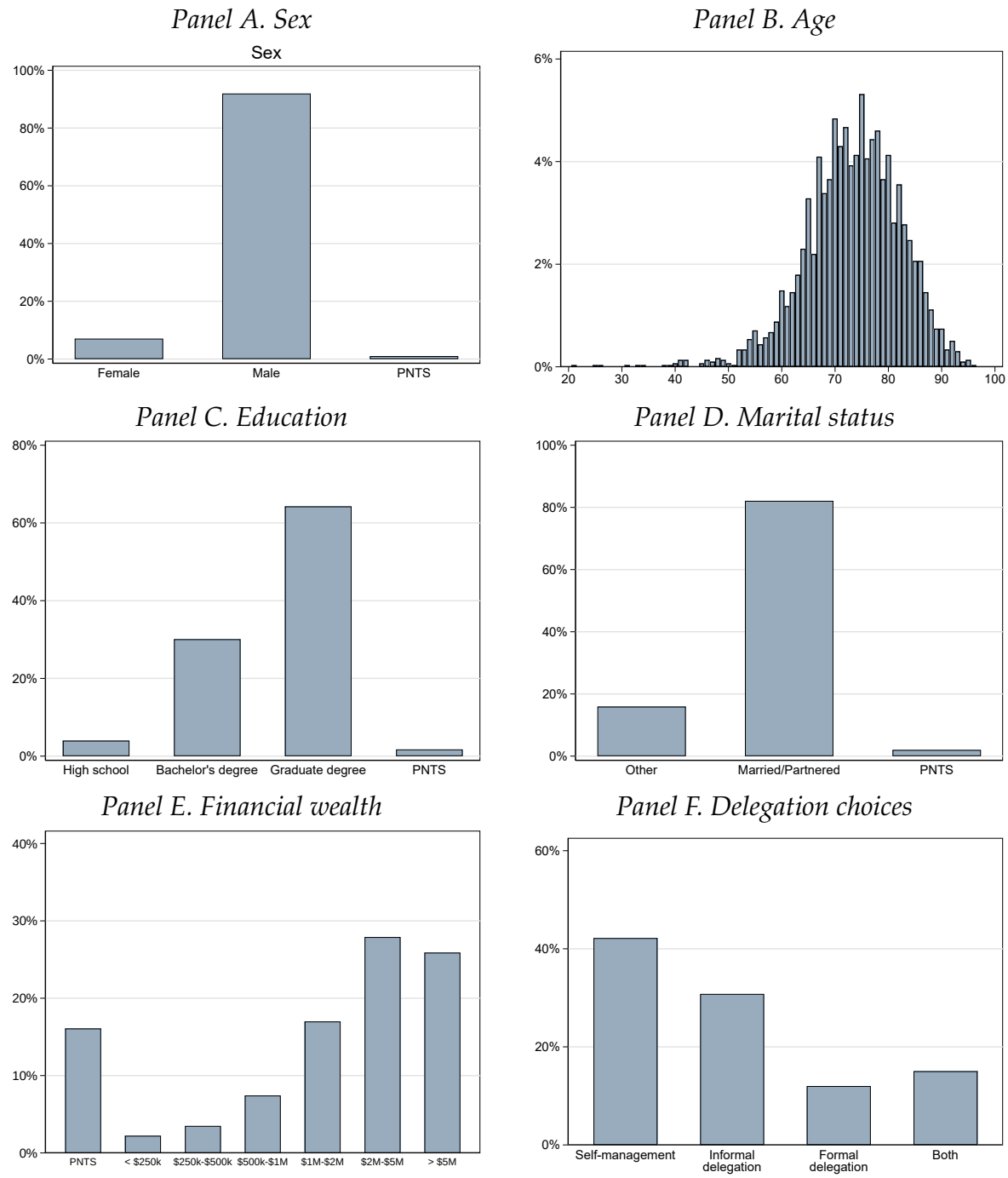
Panel F of Figure 1 groups delegation arrangements into four mutually exclusive categories based on two survey items: reliance on a paid professional financial advisor and assignment of a durable POA for financial decisions. *Formal delegation* denotes reliance on a paid professional financial advisor and/or assignment of a POA to such an advisor; *Informal delegation* denotes assignment of a POA to any agent other than a financial advisor; *Both* denotes the simultaneous use of formal and informal delegation channels; and *Self-management* denotes the absence of either arrangement. About 42% of respondents self-manage their financial wealth, 31% rely on informal delegation only, 12% on formal delegation only, and 15% use both channels. These patterns confirm that substantial informal delegation mechanisms are already in place for a large fraction of respondents.

Appendix Figure D.3 shows the association between delegation choices and the characteristics of the respondent. The model in Section 3 suggests that, as one ages, the probability of experiencing a cognitive decline increases, which makes self-management more risky. At the same time, the existence of high fixed fees in the financial advisory industry highlights the importance of informal delegation channels for households that are less wealthy. Consistent with the model, we observe that older (less wealthy) investors are less (more) likely to self-manage their financial wealth. It is also interesting to see that those who report having experienced signs of cognitive decline are 3–4.4 percentage points (pps) more likely to rely on financial advisors and about 5 pps. less likely to self-manage their wealth.

Appendix Figure E.2 breaks down household financial wealth into asset categories. Liquid assets and corporate bonds are the two largest asset classes. Liquid assets account for over 20% of household financial wealth in portfolios below $1M, versus 15% in portfolios above $5M, while corporate bonds account for about 60% and over 70%, respectively. Stocks account for only 9% of household financial wealth on average, with little variation across wealth brackets, perhaps reflecting the sample's age and socio-demographic composition.

To verify that the portfolio behavior in our sample is consistent with the broader

Figure 1: Sample characteristics: demographics, financial wealth, and delegation.



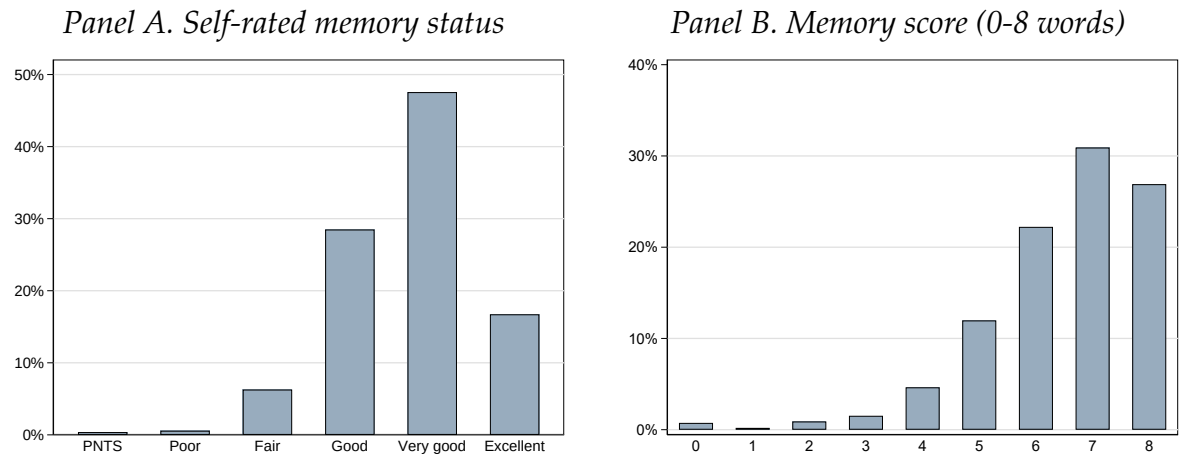
Note. The figure reports the sample distribution of respondent socio-economic and demographic characteristics in the AAII survey: sex, age (in years), highest completed education, marital status, total household financial wealth, and delegation choices. *Informal delegation* indicates a durable POA assigned to a family member, friend, child, or other non-professional contact, without reliance on a paid professional financial advisor. *Formal delegation* indicates reliance on a paid professional financial advisor and/or a durable POA assigned to a professional agent. *Both* indicates simultaneous use of formal and informal delegation channels, and *Self-management* indicates neither arrangement.

household finance literature, and to establish baseline relationships between delegation, trust, and portfolio composition, Appendix Table D.4 reports estimates from linear models for the portfolio shares of the various asset categories. Investors with a paid financial advisor hold less liquidity (-3.9 pps), but substantially more stocks (+3.2 pps) and government bonds (+2.4 pps), consistent with more diversified or risk-tolerant portfolios under professional guidance. Taken together, these facts suggest that delegation and trust are systematically related to how older investors allocate their financial wealth.

5.2 Memory status and awareness

Panel A of Figure 2 shows the distribution of self-rated memory, ranging from "Poor" to "Excellent". Only 7% of respondents with non-missing answers rate their memory as "Poor" or "Fair," while 64% rate it as "Very good" (47%) or "Excellent" (17%). Panel B instead shows the distribution of the memory score, ranging from 0 (no words recognized) to 8 (all words recognized). The average score in the memory task was 6.5.

Figure 2: Sample distribution of self-rated memory status and score in the memory task.



Note. Panel A shows the distribution of self-rated memory status, elicited on a 5-point Likert scale (Poor, Fair, Good, Very good, Excellent). Panel B shows the distribution of the objective memory score from the memory task, defined as the number of target words correctly recognized out of 8 (range 0–8).

Appendix Figure E.5 tabulates the self-rated memory status against the score in the memory task. We define an individual as unaware of having memory problems if she rates her memory as "Very good" or better but correctly recognizes at most five words in the memory task. Based on this definition, 11.6% of respondents are classified as unaware.[7]

[7] In Section 6.2 we examine the robustness of our main results to alternative definitions of unawareness based on different cutoffs for self-rated memory and the memory score.

It is useful to compare our measures of memory status with an external benchmark, namely the HRS. The median AAII respondent rates her memory as "Very good". In the 2018 wave of the HRS, instead, the median financial respondent with financial wealth above $50k rates it as "Good" (Appendix Figure E.6). While this discrepancy could reflect overly positive self-assessments among the AAII respondents, it may also reflect differences in the composition of the two samples — especially by education, given the finding that more educated individuals experience slower cognitive deterioration (Hanushek et al., 2025).

The complementary evidence in Appendix Figure E.7 suggests that our respondents may be over-optimistic about their cognitive abilities. Panel A of that figure shows that respondents who do not report having experienced signs of cognitive decline tend to rate their memory more favorably, while Panel B shows that their performance in the test is virtually indistinguishable from that of respondents who report having experienced some signs of cognitive decline.

Appendix Table D.5 presents the estimates of linear probability models for memory status and unawareness that control for the observable characteristics of the respondent. As expected, older investors have worse memory status according to both subjective and objective measures, but neither age nor education seem to be significantly related to our measure of awareness. However, female respondents report higher objective and self-rated memory, and lower rates of unawareness, consistent with evidence that males tend to be relatively more overconfident (Barber and Odean, 2001). Further, those who report ever experiencing signs of cognitive decline also display substantially lower self-ratings and are less likely to be classified as unaware.

5.3 Vignette and personal questions

We conclude our descriptive analysis by examining how respondents state that they would react to cognitive decline.

Panel A of Figure 3 shows average responses to the two questions. In both, investors are asked how they would delegate financial decision-making in case of cognitive decline. The modal response (exceeding 60%) is always to get help from a professional financial advisor. Getting help from the spouse or a child is also frequent, with the probability of selecting either being approximately 50%. These are also the options with the highest variance, as answers depend on whether the respondent is married/partnered or has children. On average, 30% of investors opt to reduce their share of risky assets, and only a few would get help from a friend.

Only a small fraction of the respondents (less than 5%) would purchase annuities. We therefore asked those who did not select the annuity option to explain their choice

in an open-ended follow-up question. Text analysis of open-ended responses suggests three main reasons: concerns about high costs and low returns, the availability of other sources of retirement income, and general skepticism about annuity products or providers (Appendix Figure E.8).

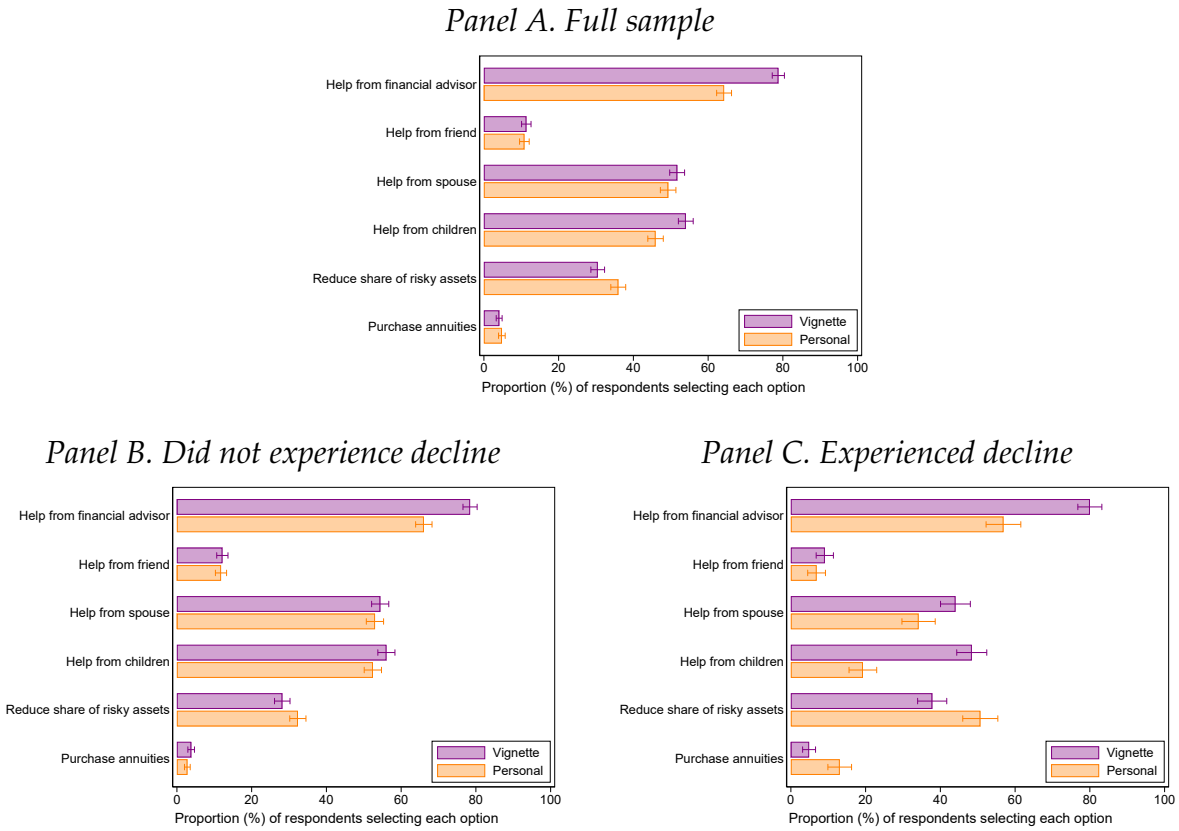
Although the actions that could be taken under cognitive decline are essentially the same in the vignette and the personal questions, there are remarkable differences in the responses to the two questions. Out of a maximum of three options, respondents tend to select fewer options (on average 0.3 less) when answering the personal question. In addition, the probability of selecting more than one option decreases for each category, except for reducing the share of risky assets and purchasing an annuity. Getting help from a financial advisor is the option with the largest drop: respondents are 14 pps less likely to suggest this in the personal question compared to the vignette question.

Because the personal question captures intended behavior for those who did not experience decline, but actual behavior for those who did, Figure 3 separates plans from actions, by stratifying the sample according to whether respondents report having experienced signs of cognitive decline (Panel B vs. C). In particular, the differences in the answers to the vignette and personal questions are particularly pronounced among respondents who have experienced signs of cognitive decline (Panel C). Compared to their advice to a hypothetical friend, these respondents are less likely to involve family members or an advisor, and more likely to suggest reducing risky exposure and the purchase of annuities.

Appendix Tables D.6 and D.7 report linear probability models for the answers to the vignette and personal questions. Several patterns are common across the two sets of answers. Married participants are more likely to delegate within the household — especially to their spouse — and less likely to turn to friends. Respondents who already have a financial advisor are much more likely to indicate professional delegation and, in the personal scenario, less likely to report reducing portfolio risk directly. Trust in others is positively associated with delegating to a financial advisor and negatively associated with reducing the share of risky assets, consistent with greater perceived tolerance for risk among more trusting respondents. Finally, those who report having experienced signs of cognitive decline are less likely to rely on family members and more likely to report safer financial responses, particularly reducing portfolio risk and, in the personal scenario, purchasing annuities. This pattern is consistent with a shift toward more conservative financial choices once decline is recognized.

Overall, the evidence from this section delivers three main messages. First, our respondents are older, highly educated, wealthy investors for whom cognitive risk and delegation are likely to be salient, so they already make extensive use of advisors and durable POAs. Second, awareness of own cognitive abilities is imperfect, and a

Figure 3: Responses to vignette and personal questions.



Note. The figure reports the fraction of respondents selecting each action in response to cognitive decline, separately for the vignette question (advice to a hypothetical person) and the personal-scenario question (intended or actual own behavior). Respondents could select up to three options, so categories are not mutually exclusive. Panel A uses the full sample for each question. Panels B and C stratify by whether the respondent reports having experienced signs of cognitive decline (Yes/No) in the personal module.

non-negligible fraction of respondents appears to be overoptimistic. Third, stated willingness to delegate is systematically related to trust, existing delegation arrangements, and experienced decline.

5.4 Randomizing the characteristics of the subject in the vignette

The randomization of the characteristics (sex and age) of the subject in the vignette allows us to causally identify whether the financial advice given to a cognitively impaired hypothetical friend depends on these characteristics.

To this purpose, we regress binary indicators for providing a specific answer to the vignette question on a set of binary indicators for the different characteristics of the subject in the vignette, namely a 70-year old male, an 85-year old male, a 70-year old female, and an 85-year old female, with the first category as the baseline. To aid interpretation, we henceforth group responses as follows: "Help from children", "Help from friend" and "Help from spouse" are grouped as "Informal Delegation", "Pur-

chase annuities" and "Reduce share of risky assets" as "Risk reduction", and "Help from financial advisor" as "Formal delegation". The results are presented in Table 1.

Table 1: Estimated average effects of randomized subject characteristics on vignette answers.

	(1) Formal delegation	(2) Informal delegation	(3) Risk reduction
	Answers to the vignette question		
Male 85	-0.008	0.031	-0.020
	(0.024)	(0.027)	(0.027)
Female 70	-0.018	0.079***	-0.059**
	(0.024)	(0.026)	(0.027)
Female 85	-0.013	0.063**	-0.026
	(0.024)	(0.026)	(0.027)
Constant	0.797***	0.671***	0.341***
	(0.017)	(0.019)	(0.020)
Obs.	2,393	2,393	2,393
RMSE	0.410	0.451	0.464
R^2	0.000	0.005	0.002

Note. The table reports estimated average effects of randomized vignette-subject characteristics on respondents' recommendations in the vignette question. Outcomes are indicators for (i) *Formal delegation* (selected help from a professional financial adviser), (ii) *Informal delegation* (selected any of help from spouse/children/friend), and (iii) *Risk reduction* (selected reduce risky share and/or buy annuities). Respondents could select up to three options, so outcomes are not mutually exclusive. Regressors are indicators for the vignette subject being Male 85, Female 70, or Female 85; the omitted category is Male 70. The constant reports the mean outcome in the omitted category. Robust standard errors are in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

Column (2) reveals that respondents who are shown a 70-year (85-year) old female subject are 7.9 (6.3) pps more likely to suggest the subject to turn to informal delegation (i.e., to her husband or son) for help in case of cognitive decline, compared to the 70-year old male baseline subject. Interestingly, there is no corresponding increase in formal delegation, suggesting that the effect reflects a reallocation from formal to informal channels rather than a general increase in the perceived need for help. These effects are even stronger if we consider only the sample of male respondents (which makes up more than 90% of the total sample).

Except for the sex and age of the subject, the vignettes are otherwise identical across variants, including the explicit description of the subject as having been successful at self-managing his or her finances. Hence, any difference in advice is unlikely to reflect beliefs about the subject's financial competence and is more consistent with paternalistic tendencies toward female investors.

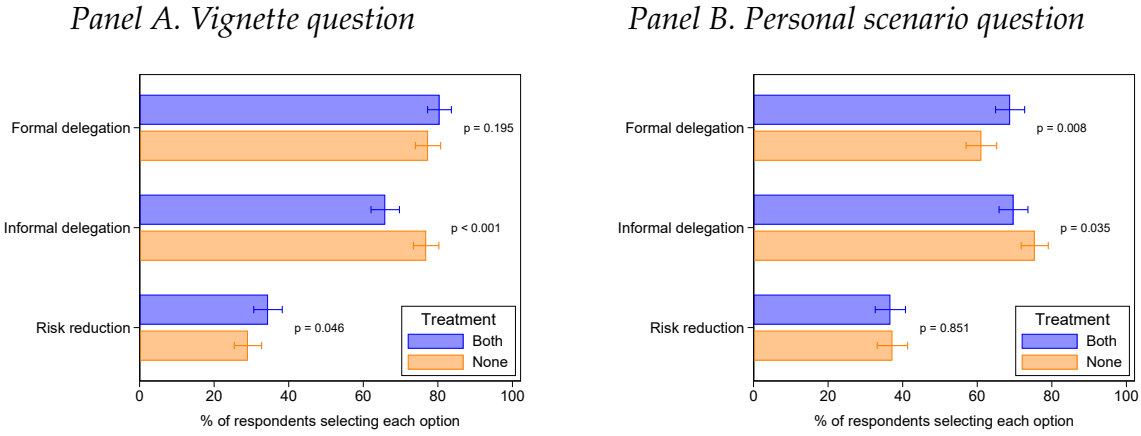
6 Informational interventions

This experimental design described in Section 4.1 allows us to separately identify the individual and joint causal effects of the educational and score treatments. In our conceptual framework, a higher probability of cognitive decline lowers the expected quality of the private signal, and therefore the share invested in the risky asset, and increases the value of delegating portfolio management to an agent. If investors underestimate the risk of cognitive decline, information should shift their perceived status closer to the truth, leading them to reduce the share invested in the risky asset, and financial decision-making towards delegation.

6.1 Estimating the effect of informational interventions

To estimate the causal effect of the information treatments, we regress binary indicators for choosing a given option in the vignette or personal questions on a set of treatment dummies. Since the treatments are randomly assigned, their average effects can be estimated consistently by the mean difference in outcomes between treatment groups. In our regression specification, the intercepts represent the expected value of the outcome for a baseline individual who received no treatment, while the coefficients on the treatment represents the expected difference in the outcome between treated and untreated respondents.

Figure 4: Effect of combined treatment versus no treatment.



Note. This figure shows the percentage of respondents in the treatment and control group selecting each option. Panel A shows responses in the vignette question, while Panel B shows responses in the personal scenario question. Outcomes are indicators for (i) *Formal delegation* (selected help from a professional financial advisor), (ii) *Informal delegation* (selected any of help from spouse/children/friend), and (iii) *Risk reduction* (selected reduce risky share and/or buy annuities). Bars show the share selecting each option within treatment and control groups, with 95% confidence intervals. We have reported two-sided t-test probabilities of observing a treatment-control difference in the fraction of respondents selecting each option is at least as large as the one shown, under the null-hypothesis of equal means.

Figure 4 describes the effect of the combined treatment on the probability of se-

lecting each option, separately for the vignette and the personal scenario questions. Consistent with the model in Section 3, raising awareness about the financial consequences of cognitive decline induces a shift away from informal arrangements toward professional delegation and more conservative portfolio choices.

In the vignette question (Panel A), the combined treatment decreases the probability of selecting informal delegation by 11 pps and increases the probability of risk reduction by 5.4 pps, while the effect on formal delegation is positive but imprecisely estimated. Relative to the choice probabilities for the control group, these effects are sizable. In particular, the control-group probability of selecting informal delegation is 76.9%, so the estimated effect of the combined treatment corresponds to a relative decline of 14.3%. The control-group probability of selecting risk reduction is 29.1%, so the estimated effect corresponds to a relative increase of 18.6%.

In principle, we would like to assess whether targeted interventions have an impact on actual behavior. We cannot directly test this with our survey, because we only have cross-sectional information on our respondents. However, by examining responses to the personal question, we can infer what investors would do, or have actually done, after experiencing a cognitive decline.

In the personal scenario (Panel B), the combined treatment increases the probability of selecting formal delegation by 7.7 pps and reduces the probability of selecting informal delegation by 5.7 pps, whereas the effect on the probability of selecting risk reduction is not statistically significant. With reference to the control-group probabilities of selecting formal (informal) delegation, the estimated effects correspond to a relative increase of 12.6% (relative decline of 7.6%).

Comparing the two outcomes reveals that the treatments induce a convergence between normative advice and personal intentions. At baseline, respondents in the control group are less likely to choose formal delegation for themselves than for the hypothetical third person in the vignette. By significantly boosting intended formal delegation, the combined treatment effectively bridges this behavioral gap, bringing personal intentions closer to the normative standard.

While Figure 4 focuses on the combined treatment, a natural question is whether the two components — receiving the memory score or receiving educational information — also have independent effects. Table D.8 considers the effect of the various treatments on the probability of selecting different response options. The educational intervention is statistically significant for the vignette question (Panel A), whereas the score-only arm is less precisely estimated (Panel B), suggesting that the strongest effects emerge when the two pieces of information are delivered jointly. This underscores the importance of combining the two informational channels, and raises the question of whether their effects are uniform across investors or concentrated among

those who are currently unaware of their cognitive decline — the question we turn to next.

Table 2: Estimated average effects of the information treatments on personal scenario answers.

	Formal delegation		Informal delegation		Risk reduction	
	(1)	(2)	(3)	(4)	(5)	(6)
Education	0.040	0.026	-0.017	-0.015	0.011	0.006
	(0.029)	(0.031)	(0.026)	(0.028)	(0.029)	(0.031)
Score	0.015	-0.007	-0.006	-0.006	0.030	0.009
	(0.029)	(0.031)	(0.026)	(0.028)	(0.029)	(0.031)
Both	0.077***	0.063**	-0.057**	-0.052*	-0.006	-0.024
	(0.029)	(0.031)	(0.027)	(0.029)	(0.029)	(0.031)
Unaware		-0.119*		0.087*		-0.107*
		(0.066)		(0.051)		(0.060)
Education × Unaware		0.091		-0.019		0.045
		(0.092)		(0.074)		(0.087)
Score × Unaware		0.193**		-0.019		0.181**
		(0.091)		(0.074)		(0.090)
Both × Unaware		0.111		-0.049		0.176**
		(0.091)		(0.078)		(0.089)
Constant	0.611***	0.627***	0.754***	0.744***	0.372***	0.384***
	(0.021)	(0.022)	(0.018)	(0.020)	(0.021)	(0.022)
Obs.	2,197	2,185	2,197	2,185	2,197	2,185
RMSE	0.478	0.478	0.442	0.442	0.486	0.486
R^2	0.004	0.006	0.002	0.005	0.001	0.004

Note. The table estimates treatment effects on responses to the personal-scenario question. Outcomes are indicators for (i) Formal delegation (selected help from a professional financial adviser), (ii) Informal delegation (selected any of help from spouse/children/friend), and (iii) Risk reduction (selected reduce risky share and/or buy annuities). Respondents could select up to three options, so outcomes are not mutually exclusive. Regressors include indicators for assignment to the educational-information treatment ("Education"), the personalized score feedback treatment ("Score"), or their combination ("Both"), with "None" as the omitted group. Unaware is an indicator for respondents who self-rate memory as or better while scoring at most 5 out of 8 on the memory task. Robust standard errors are in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

6.2 Effect heterogeneity

Table **??** explores heterogeneity in the effects of the treatments, focusing solely on the personal question, as the link to behavior is strongest in this case. The interaction term between the treatment and unawareness indicators measure the differential response

to treatment of unaware investors relative to aware ones. Columns (1), (3), and (5) of Table **??** also show the regression without interactions.

Consider first the effect on the aware investors, captured by the treatment coefficients on the variables "Information", "Score" and "Both". Among this group, only the combined treatment has a positive and significant effect shifting on formal delegation (+6.3 pps), but a negative and significant effect on informal delegation (-5.2 pps).

The picture is starkly different for unaware investors. At baseline (i.e., in the control group), respondents who overestimate their cognitive abilities exhibit a systematically lower probability of making prudent financial choices — they are 11.9 pps less likely to choose formal delegation and 10.7 pps less likely to choose risk reduction. Targeted interventions close this gap by significantly increasing the likelihood of selecting both of these prudent options among the unaware subgroup. Moreover, the estimated effects are an order of magnitude larger than anything observed among the aware group.

Among the unaware respondents, the score treatment — providing direct feedback on own performance — is essentially the only one that generates statistically significant effects: it increases the probability of selecting formal delegation (risk reduction) by 19.3 (18.1) pps more compared to aware respondents. Similar evidence is found for risk reduction, as the score treatment (alone or in combination with the information) substantially increases the risk reduction option only for unaware respondents. Appendix Table D.9 shows that this effect is robust to using alternative definitions of unawareness based on different cutoffs for self-rated memory and the memory score.

Our results suggest that individuals who had underestimated their cognitive abilities react after receiving personalized performance feedback. From a policy perspective, these results imply that both types of intervention matter, but for different audiences. General information on the financial consequences of cognitive decline (the educational treatment) is particularly effective for those who already recognize their vulnerability, while the personalized score feedback is crucial for investors who are unaware of their cognitive decline.

7 Stated vs. observed behavior

In this section, we examine whether the stated behavior elicited in the AAII survey is consistent with what we observe in the HRS. We first use the HRS to estimate a difference-in-difference (DiD) model comparing changes in outcomes after a severe memory loss event for those aware and unaware of such event. We consider two outcomes of interest: the share of financial wealth invested in risky assets and an indicator for transfer of financial responsibility to the spouse. We then use data from an experi-

mental module of the HRS administered in 2016 to examine delegation to agents other than the respondent's spouse.

7.1 A DiD model

Following Mazzonna and Peracchi (2024), we identify severe memory loss events (a drop in the memory test score greater than 20% relative to the previous wave) and classify respondents as aware or unaware based on the difference between the measured memory decline and their self-assessment of worsening memory (whether they report their memory as worse compared to the previous wave). We focus on twelve HRS waves spanning the period from 1996 to 2018. Details on the data and sample construction are provided in Appendix C.

We then estimate a DiD model which compares outcomes before and after the first severe memory loss event for three groups of individuals: those who experienced a severe memory loss and are aware of it, those who experienced a severe memory loss but are unaware of it, and those who never experience a memory loss during the observation period (the "never treated").

Specifically, we estimate the following model:

$$\begin{aligned} Y_{it} = \alpha + \beta_1 \text{Aware}_i + \beta_2 \text{Unaware}_i + \beta_3 \text{Post}_{it} + \\ + \beta_4 \big(\text{Post}_{it} \times \text{Aware}_i\big) + \delta_1^\top \boldsymbol{X}_i + \delta_2^\top \boldsymbol{Z}_{it} + \psi_t + \epsilon_{it}, \end{aligned} \tag{1}$$

where Y_{it} is the outcome of interest for individual i in period t, Aware_i (Unaware_i) is an indicator for whether individual i ever experiences a severe memory-loss event and is aware (unaware) of it, and Post_{it} is an indicator equal to one in periods after the first severe memory-loss event. The coefficient of interest is β_4, which captures the differential post-event change for the aware relative to the unaware. $\boldsymbol{X}_i$ and $\boldsymbol{Z}_{it}$ represent, respectively, time-invariant and time-varying controls, and ψ_t denotes calendar-time fixed effects. Standard errors are clustered at the household level. The key identification assumption is that, absent severe memory loss, the outcomes of interest would have evolved similarly for the aware and unaware respondents.

We consider two outcome variables. The first is the share of risky financial assets for individual i at time t, measured by the percentage of household financial wealth held in stocks or bonds. Since the median household does not hold risky financial assets, we only estimate the model for financial respondents with household financial wealth above the median (*risky-share sample*). In this specification, the time-invariant covariates include indicators for sex, race, and education, while the time varying covariates include a quadratic in age and indicators for labor-force status, marital status, and census division.

The second outcome is the indicator of a switch in the household financial respondent across waves. Although only about 3% of households ever change the financial respondent during the observation period, more than half of these switches occur after a severe memory loss event (Appendix Table C.1). To reduce concerns that switches reflect other events, such as widowhood or partnership dissolution, we restrict attention to respondents who are the financial respondent and have an observed spouse at baseline (*delegation sample*). In this specification, the time-invariant covariates include indicators for the sex, race, and education of both spouses, while the time-varying covariates include quadratic age terms for both, and indicators for labor force status, marital status, and census division.

Table 3: DiD estimates for risky asset share and delegation.

	Risky share		*Delegation*	
	(1) DiD	(2) Sun-Abraham	(3) DiD	(4) Sun-Abraham
Aware	0.049***		-0.012***	
	(0.018)		(0.004)	
Unaware	0.026		-0.012***	
	(0.016)		(0.004)	
Post	-0.020***	-0.025***	0.005***	0.007***
	(0.005)	(0.005)	(0.001)	(0.001)
Aware × Post	-0.021**	-0.021**	0.004**	0.005**
	(0.009)	(0.009)	(0.002)	(0.002)
Mean dep. var.	0.238	0.245	0.008	0.009
Obs.	52,258	52,258	34,620	34,620

Note. The table reports estimates from DiD specifications for two outcomes: the household risky asset share and delegation of financial decision-making to the spouse. In columns (1) and (3), the estimated model is the one specified in equation (1), where Aware_i and Unaware_i indicate, respectively, respondents who experience a severe memory-loss event and are aware or unaware of it. The omitted category includes never-treated individuals as well as respondents who experience cognitive decline but are not classified as either aware or unaware. Columns (2) and (4) report analogous post-treatment effects using the interaction-weighted estimator of Sun and Abraham (2021). The risky-share regressions are estimated on the sample of financial respondents with household financial wealth above the median. The delegation regressions are estimated on the sample of respondents who are in a couple at baseline, are the financial respondent at baseline, have an observed spouse at baseline, and contribute observations only in waves in which they remain in a couple. All regressions include the covariates described in the text and calendar-time fixed effects. Standard errors are clustered at the household level. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

Table 3 shows the results of estimating the DiD model for both outcomes. Focusing on column (1), the coefficient on Aware × Post shows that those aware of their cognitive decline reduce their risky asset holdings by 2.1 pps more than those unaware. The

effect is statistically significant at the 5% level.

Focusing on column (3), we find that aware respondents become 0.5 pps more likely than unaware respondents to transfer financial responsibility to their spouse after experiencing a severe memory loss. The effect is significant at the 5% level. Although the absolute effect is small, the baseline switching rate is below 1%, so the implied relative increase is substantial.

Since the treatment period is individual-specific, columns (2) and (4) also show the results obtained using the interaction-weighted (IW) estimator proposed by Sun and Abraham (2021) to address heterogeneity issues. Our results are robust to using this alternative specification.

Figure 5 presents results from the multi-period extension of model (1) using both individual and time fixed-effects. For both outcomes, there is no evidence of differential pre-trends in the waves leading up to the first severe memory loss, supporting the identifying assumption underlying our empirical strategy. In the case of risk-reduction, the estimated dynamic is also revealing: aware respondents reduce their risky asset share immediately after the first severe memory loss event, while unaware respondents converge only after roughly four years.

Taken together, these findings are in line with the predictions of the conceptual framework in Section 3: compared to the unaware, those aware of their cognitive decline are more likely to reduce their share of risky assets and to delegate financial decision-making.

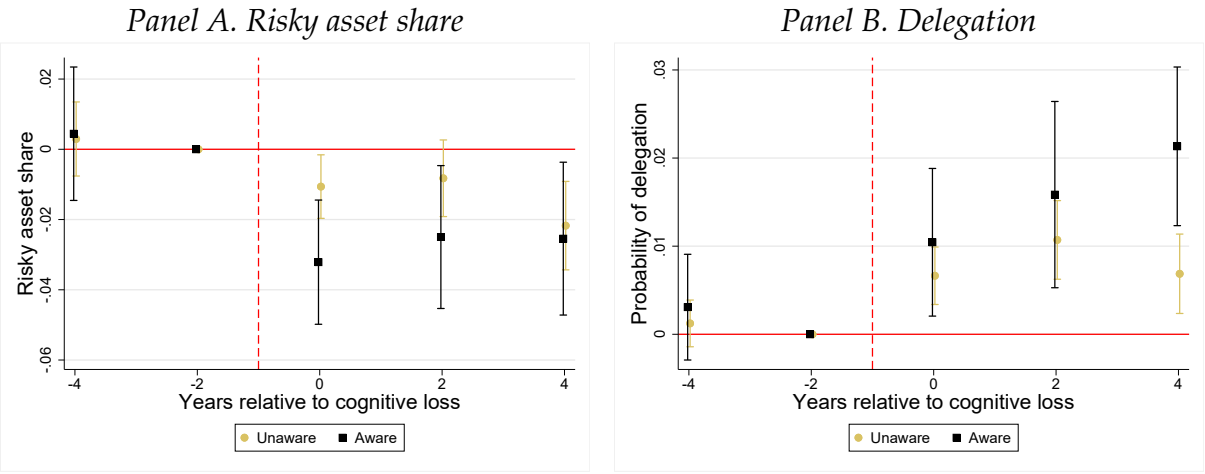
7.2 Additional evidence on other types of delegation

The experimental HRS module "Financial Advice and Capacity at Older Ages" includes useful information about other types of delegation (rather than merely delegation between spouses in the household).[8] Since the module was fielded in the 2016 wave only to a random 10% subsample of HRS respondents, we cannot estimate the same regressions used in Section 7.1. However, the module provides a direct indicator of whether the respondent receives help or advice with managing money, and by whom.

The majority (74%) of respondents self-manage their finances, with only 17% relying on formal professional delegation and 9% relying on informal delegation (Appendix Figure E.9). When respondents who do not delegate are asked why, the main reasons are lack of need (59%) or having too little money to manage (29%), while high fees (7%) or lack of trust (5%) are much less frequent (Appendix Figure E.9). This

[8] Kim, Maurer and Mitchell (2021) used this module to study how financial literacy affects the demand for financial advisory services.

Figure 5: Multiperiod DiD estimates for risky asset share and delegation.



Note. The figure reports estimates from the multi-period extension of model (1) for two outcomes: the household risky asset share (Panel A) and delegation of financial decision-making to the spouse (Panel B). The horizontal axis reports event time relative to the first severe memory-loss episode, occurring at $k = 0$. The omitted period is the wave immediately preceding the event ($k = -1$), so all coefficients are interpreted relative to that period. Vertical bars denote 95% confidence intervals based on standard errors clustered at the household level. The risky-share regressions are estimated on the sample of financial respondents with household financial wealth above the median. The delegation regressions are estimated on the sample of respondents who are in a couple at baseline, are the financial respondent at baseline, have an observed spouse at baseline, and contribute observations only while they remain in a couple. All specifications include the same controls as model (1), as well as individual and calendar-time fixed effects.

pattern suggests that the distinction between formal and informal delegation is empirically meaningful and that, for a large share of HRS respondents, limited financial wealth does not make delegation a viable option.

This is further confirmed by the evidence in Appendix Table D.10, which shows the results of estimating a multinomial logit model of delegation choice, with self-management as the baseline category. Our estimates show that formal delegation is heavily concentrated at the top of the distribution of financial wealth: belonging to the top tercile increases the probability of formal delegation by 22.8 pps. We also find that cognitive decline is associated with an increase in the probability of formal delegation (by 12.2 pps), but only for individuals in the highest tercile of financial wealth. This evidence confirms that the mechanisms we model are primarily relevant for households with substantial financial assets. Therefore, evidence for our model's predictions requires a targeted sample of affluent and financially sophisticated investors, such as the members of the AAII.

8 Conclusions

Failure to recognize the signs of cognitive decline and take appropriate actions puts the elderly at significant risk of financial losses. In this paper, we conduct an experimental

survey of affluent US investors to study whether making them aware of their actual memory status moves them towards more careful financial decision-making.

A simple portfolio choice model with endogenous information acquisition predicts that investors who underestimate their cognitive decline will hold excessive portfolio risk and delay the transfer of financial control to trusted agents. Using representative data from the Health and Retirement Study, we find evidence consistent with both patterns. Informational interventions that move beliefs closer to the truth should therefore shift behavior toward risk reduction and delegation.

We test these predictions using a survey of AAII members — mostly wealthy, highly educated, older males — who exhibit substantial unawareness of their cognitive abilities even by the standards of a financially sophisticated population. The experimental treatments yield two main findings. First, the combined treatment — feedback on own memory performance paired with information about the financial consequences of serious memory decline — shifts stated behavior toward more prudent financial decision-making, increasing formal delegation and reducing reliance on informal arrangements. Second, and most importantly, these effects are concentrated among investors who are unaware of their cognitive decline, for whom personalized memory feedback is essentially the only treatment that generates statistically significant behavioral responses. General educational information alone has limited effect on this group, suggesting that investors with biased beliefs about their cognitive status do not update on generic risk messages but do respond to direct objective evidence about their own performance.

Taken together, our findings can shape information campaigns and advisory practices aimed at protecting older investors from the financial consequences of cognitive decline. Broad financial education campaigns are unlikely to reach those who need protection most. Targeted screening is more effective to prompt unaware investors to take timely protective action, whether by reducing portfolio risk or by delegating financial decision-making to a trusted agent.

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A Model details

A.1 Solution under self-management

The investor's problem may be written as:

$$V(\omega, p) = \max_{I,\, \alpha(\cdot)} \mathbb{E}_S\{\mathbb{E}\left[u(W) \mid S\right]\} - u'(\omega)c(I) \quad \text{s.t.} \quad W = \left[r + \alpha(S)X\right]\omega,$$

where $\mathbb{E}_S[\cdot]$ denotes expectations with respect to the marginal distribution of S, $\mathbb{E}[\cdot \mid S]$ denotes expectations conditional on S, $c(I)$ has been multiplied by $u'(\omega)$ to express it in utility terms, and the probability p of a cognitive shock enters the problem because it affects the optimal level of information effort and the optimal allocation rule. We assume that $h(I)$ is positive, increasing, and concave in I, and that a positive value of I entails a cost $c(I)$ that is positive, increasing and convex in I.

To solve the model, we proceed in two steps. First, we derive the optimal allocation rule $\alpha^*(S)$ taking the information effort I as given. Second, we take expectations with respect to the private signal S and characterize the optimal information effort I^*. In what follows, we normalize r to be equal to one and therefore $X = R - 1$.

As in Peress (2004), to obtain a solution for the problem, we employ a "small (excess) return approximation" by assuming that $\mathbb{E}[X^2 \mid S] \approx \mathbb{V}[X \mid S]$ or, equivalently, $(\mathbb{E}[X])^2 \approx 0$.

Step 1 (Optimal signal-conditional portfolio allocation). Conditional on S, the investor chooses $\alpha^*(\cdot)$ by solving the following problem:

$$\max_{\alpha(\cdot)} \mathbb{E}[u(W) \mid S] \quad \text{s.t.} \quad W = [1 + \alpha(S)X]\,\omega.$$

The first-order condition is $\mathbb{E}[u'(W)\,\omega\,X \mid S] = 0$. To obtain a tractable expression for $\alpha^*(S)$, we approximate marginal utility around initial wealth ω:

$$u'(W) \approx u'(\omega) + u''(\omega)(W - \omega) = u'(\omega) + u''(\omega)\,\alpha(S)X\omega.$$

Substituting into the FOC yields:

$$u'(\omega)\omega\ \mathbb{E}[X \mid S] + u''(\omega)\omega^2\,\alpha(S)\ \mathbb{E}[X^2 \mid S] \approx 0.$$

Hence

$$\alpha^*(S) \approx \tau(\omega)\,\frac{\mathbb{E}[X \mid S]}{\mathbb{E}[X^2 \mid S]}, \qquad \tau(\omega) \equiv -\frac{u'(\omega)}{u''(\omega)\omega}. \tag{A.1}$$

Assume $S = X + \varepsilon$, where $\varepsilon \sim \mathcal{N}(0, \sigma_\varepsilon^2)$ and $X \sim \mathcal{N}(\mu_X, \sigma_R^2)$ are independent. This implies that the conditional mean of X is linear in S and its conditional variance is con-

stant. Moreover, under our small-return approximation, $\mathbb{E}[X^2 \mid S] \approx \mathbb{V}(X \mid S)$. Substituting these expressions into (A.1) gives the convenient closed form

$$\alpha^*(S) \approx \tau(\omega) \left(\frac{\mu_X}{\sigma_R^2} + \frac{S}{\sigma_\varepsilon^2} \right). \tag{A.2}$$

Taking expectations over the signal S and using $\mathbb{E}_S[S] = \mu_X$, gives: $\mathbb{E}_S[\alpha^*(S)] \approx \tau(\omega) \left(1/\sigma_R^2 + 1/\sigma_\varepsilon^2\right) \mu_X$. Finally, by replacing the expected signal quality, we obtain:

$$\mathbb{E}_S[\alpha^*(S)] \approx \tau(\omega) \left[\frac{1}{\sigma_R^2} + (1-p)h(I) \right] \mu_X. \tag{A.3}$$

Step 2 (Optimal information effort). At the beginning of the period, the investor chooses $I \geq 0$ and pays $c(I)$, then observes S and invests the fraction $\alpha^*(S)$ in the risky asset. Effort is valuable because it increases the expected signal quality, $\mathbb{E}[1/\sigma_\varepsilon^2] = (1-p)h(I)$, where the expectation is with respect to the distribution of the cognitive shock D. Thus, the investor's initial problem is:

$$\max_{I \geq 0} \; \mathbb{E}_S\big\{ \mathbb{E}\left[u(W) \mid S \right] \big\} - u'(\omega)c(I) \quad \text{s.t.} \quad W = (1 + \alpha^* X)\, \omega.$$

To quantify the marginal benefit of information, we again approximate $\mathbb{E}[u(W) \mid S]$ around ω to second order. Substituting $\alpha^*(S)$ with $\tau(\omega)\ \mathbb{E}[X \mid S] / \mathbb{E}[X^2 \mid S]$ then gives:

$$\mathbb{E}[u(W) \mid S] \approx u(\omega) + \frac{1}{2}\, T(\omega)\, u'(\omega)\, \Lambda(S),$$

where $T(\omega) \equiv -u'(\omega)/u''(\omega)$, and $\Lambda(S) \equiv \mathbb{E}[X \mid S]^2 / \mathbb{E}[X^2 \mid S]$. Therefore, the investor's initial problem can be written:

$$\max_{I \geq 0} \; u(\omega) + \frac{1}{2} T(\omega) u'(\omega)\ \mathbb{E}_S[\Lambda(S)] - u'(\omega)c(I).$$

Under our small-return approximation, we get:

$$\mathbb{E}_S[\Lambda(S)] \approx \frac{\sigma_R^2}{\sigma_\varepsilon^2} + \mu_X^2 \left(\frac{1}{\sigma_\varepsilon^2} + \frac{1}{\sigma_R^2} \right),$$

which depends on I through σ_ε^2. Thus, an interior optimum I^* must satisfy

$$\frac{1}{2}\, T(\omega)\, (1-p) h'(I^*)\, (\mu_X^2 + \sigma_R^2) = c'(I^*). \tag{A.4}$$

Proof of Proposition 1

Fix ω and consider the approximations used to derive (A.3) and (A.4). Define the positive constant $K \equiv T(\omega)\, (\mu_X^2 + \sigma_R^2)/2 > 0$. Then, (A.4) can be written as

$$c'(I^*) = K(1-p)\, h'(I^*).$$

Differentiate with respect to p:

$$c''(I^*)\,\frac{dI^*}{dp} = K\Big[-h'(I^*) + (1-p)h''(I^*)\,\frac{dI^*}{dp}\Big].$$

Hence,

$$\Big[c''(I^*) - K(1-p)h''(I^*)\Big]\frac{dI^*}{dp} = -Kh'(I^*),$$

and therefore:

$$\frac{dI^*}{dp} = -\frac{Kh'(I^*)}{c''(I^*) - K(1-p)h''(I^*)} < 0,$$

because $h'(I^*) > 0$, $c''(I^*) > 0$, and $h''(I^*) \leq 0$. Now let $\bar{\alpha}(p) \equiv \mathbb{E}_S[\alpha^*(S)]$. From (A.3),

$$\bar{\alpha}(p) \approx \tau(\omega)\left[\frac{1}{\sigma_R^2} + (1-p)h(I^*(p))\right]\mu_X.$$

Differentiate:

$$\frac{d\bar{\alpha}(p)}{dp} \approx \tau(\omega)\mu_X\left[-h(I^*) + (1-p)h'(I^*)\,\frac{dI^*}{dp}\right] < 0,$$

since $h(I^*) \geq 0$, $h'(I^*) > 0$, and $dI^*/dp < 0$ from part i).

A.2 Solution under delegation

Under delegation, the investor pays a fixed cost $\zeta \geq 0$ and a proportional fee $\varphi \in [0,1)$, so the net investable wealth is $\widetilde{\omega} \equiv (1-\varphi)\omega - \zeta$. The delegated agent observes the signal $S^d = X + \eta$, with $\eta \sim \mathcal{N}(0, \sigma_\eta^2)$, and chooses an allocation rule to solve:

$$V^d(\omega) = \max_{\alpha(\cdot)} \mathbb{E}_{S^d}\Big\{\mathbb{E}\left[u(W^d) \mid S^d\right]\Big\} \quad \text{s.t.} \quad W^d = [r + \alpha(S^d)X]\,\widetilde{\omega}.$$

Proceeding exactly as before, the optimal allocation rule is:

$$\alpha^\dagger(S^d) \approx \tau(\widetilde{\omega})\left(\frac{\mu_X}{\sigma_R^2} + \frac{S^d}{\sigma_\eta^2}\right). \tag{A.5}$$

Proof of Proposition 2

Under the usual small-return approximation, the investor's indirect utility under self-management is

$$V(\omega, p) \approx \max_{I \geq 0}\left\{u(\omega) + \frac{1}{2}T(\omega)u'(\omega)\Big[(1-p)h(I)(\mu_X^2 + \sigma_R^2) + \frac{\mu_X^2}{\sigma_R^2}\Big] - u'(\omega)c(I)\right\}.$$

By the envelope theorem,

$$\frac{\partial V(\omega, p)}{\partial p} = \frac{1}{2}T(\omega)u'(\omega)\cdot\Big[-h(I^*(p))(\mu_X^2 + \sigma_R^2)\Big] \leq 0,$$

with strict inequality whenever $I^*(p) > 0$ (hence $h(I^*(p)) > 0$). Since, by construction, $V^d(\omega)$ does not depend on p,

$$\frac{\partial}{\partial p}\Delta V(\omega, p) = -\frac{\partial V(\omega, p)}{\partial p} \geq 0,$$

with strict inequality when $I^*(p) > 0$. The threshold claim follows from continuity and the sign change $\Delta V(\omega, 0) < 0 < \Delta V(\omega, 1)$.

B The survey questionnaire

Introduction

Dear Investor,

You are invited to take part in an academic survey for research in the Social Sciences, conducted by the *Einaudi Institute for Economics and Finance* (EIEF), Italy, and the *University of Lugano*, Switzerland. Results from this study will help design better tools and guidance for investors like yourself.

- The survey takes less than 10 minutes to complete.
- No personally identifying information is collected.
- All responses will be stored securely and used solely for academic research purposes. No personal data will be sold, shared, or used for any commercial purposes.
- At the conclusion of the project, a summary of the findings will be posted on the AAII website.

Your participation is voluntary, and you may exit the survey at any time without penalty. We sincerely appreciate your time — your input is critical to advancing research in this area.

Thank you!

Demographic questions

1. What is your sex?
   Options: *Male / Female / Prefer not to say*
2. What is your age (in years)?
3. What is your current marital status?
   Options: *Married or Partnered / Other / Prefer not to say*
4. What is the highest level of education you have completed?
   Options: *High school diploma or less / Bachelor's degree / Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS, etc.) / Prefer not to say*

5. In which U.S. state do you currently reside?
   Options: *Drop-down list of all states*

Financial questions

1. Generally speaking, how much do you trust other people?
   Scale: *1 (do not trust at all) — 10 (trust a lot)*

2. What is the total value of your household's financial assets? Include cash, deposits, money-market funds, stocks, bonds, mutual funds and ETFs. Do not include real estate, privately-owned businesses or collectibles.
   Options: *< $250k / $250k-500k / $500k-1M / $1M-2M / $2M-5M / >$5M / Prefer not to say*

3. Do you currently rely on a paid professional financial advisor or planner who can place trades on your behalf?
   Options: *Yes / No / Not sure*

4. Have you formally granted durable power of attorney (POA) for your financial affairs?
   Options: *Yes / No*

   - If Yes: To whom?
     Option: *Spouse / One of my children / A friend / Professional advisor / Other*

5. About what percentage of your household's financial assets is currently held in each category below? Your answers should sum up to 100%:
   (i) Liquid assets (money, treasury bills, etc.)
   (ii) Government bonds (incl. in ETFs/mutual funds)
   (iii) Corporate bonds (incl. in ETFs/mutual funds)
   (iv) Individual company stocks (incl. in ETFs/mutual funds)

Memory Test

1. How would you rate your memory at present time?
   Options: *Excellent / Very good / Good / Fair / Poor / Do not know / Prefer not to say*

2. **Word recognition task**:

   - One random set of 8 words (from Sets I-IV) is shown, words appear one by one for 2 seconds each.

- Afterwards, respondent must select remembered words from the full list of 32 words.
- Word bank (4 variants of 8 words each):
  - Set I: Sky, Ocean, Flag, Wife, Earth, Home, Dollar, Machine
  - Set II: Rock, Blood, Corner, Woman, Tree, Skin, Gold, Child
  - Set III: Paper, Market, Girl, Shoes, Letter, House, Fire, Palace
  - Set IV: Water, Church, Doctor, Sea, Village, Garden, River, Hotel

Treatment Block (randomized)

Each respondent is randomly shown one of the following four treatments:

- **Treatment I:** "In the previous test, you correctly recalled x out of 8 words!"
- **Treatment II:** Managing money well takes concentration and memory. Studies show that around 60% of adults aged 50-80 experience serious memory decline over seven years. Those unaware of the problem see their portfolios shrink by about 10%, mainly through avoidable stock-market losses. Even modest lapses — missing a fee deadline, mixing up passwords — can cascade into big costs. Memory decline may also expose individuals to greater risk of fraud and scams.
- **Treatment III:** Both **Treatment I** and **Treatment II**.
- **Treatment IV:** None.

Vignette Block (randomized)

Each respondent is randomly assigned to one of four vignettes: Male 70, Male 85, Female 70, Female 85.

- Example vignette (Male 70): "Your friend John is aged 70 and has been very successful managing his financial investments on his own but recently he seems to be experiencing some signs of cognitive decline (e.g., easily forgets passwords, fails to solve standard math operations correctly, ...). What would you advise John to do? Select at most three options."

  Options (same across all variants): *Get help from spouse / Get help from children / Get help from friend / Get help from professional financial advisor / Reduce share of risky assets / Buy annuities / None of the above*

Personal Questions

1. Have you ever experienced some signs of cognitive decline (forgetting passwords, failing simple math, etc.)?
   Options: *No / Yes* (If Yes: specify how many years ago)

   - If No: Imagine you are beginning to experience such signs. What would you do? (Select up to three)
     Options: *Get help from spouse / Get help from children / Get help from friend / Get help from professional financial advisor / Reduce share of risky assets / Buy annuities / None of the above*
   - If Yes: Which of the following have you actually done? (Select up to three)
     Options: *Get help from spouse / Get help from children / Get help from friend / Get help from professional financial advisor / Reduce share of risky assets / Buy annuities / None of the above*

Open-ended question

If *Buy annuities* is not selected in the **Personal Questions** or **Vignette Block**, then respondents are also asked: "Why did you decide against purchasing an annuity?"

C The HRS

The HRS is a biennial longitudinal survey, conducted by the University of Michigan, which contains rich information on health and wealth of the respondents. The survey sample is representative of the population of US Americans older than 50. We focus on 12 waves of the HRS that span the period 1996–2018.

Our working sample consists of household financial respondents, namely the members designated to answer all financial questions regarding a household. We exclude proxy interviews (because they do not contain information on cognition) and observations for which imputations represent 20% or more of the value of all asset and debt categories. This leaves us with 25,221 individuals (observed on average for 4.8 waves) who are, on average, 67.4 years old, and about half of them are female, are married/partnered and have a high school degree (Appendix Table C.1).

C.1 Cognition and awareness

In the memory section of the HRS, the interviewer reads a 10-word list (e.g., sky, ocean, flag) once, and is asked to recall as many words as possible in any order both immediately and again after a few minutes. Performance is measured as a score between 0 and 20 which sums correct recalls from the immediate and delayed tests. We measure respondents' memory status as the total score in the word recall tests. Following Mazzonna and Peracchi (2024), we define a severe memory loss as a decline of at least 20% in the objective memory score between adjacent waves. More than half of respondents in our full sample experienced a severe memory loss during the observation period (Column 1 of Table C.1).

Before completing the tests, respondents are also asked to self-rate their memory relative to the previous survey wave (*"Compared with previous wave interview, would you say your memory is better now, about the same, or worse now than it was then?"*).

Awareness is then inferred from the difference between subjective and objective change: respondents are aware if severe loss is accompanied by a worse self-rating, and unaware if severe loss occurs alongside a stable or improved self-rating. Based on this definition, around 18.8% of respondents is classified as unaware of their cognitive decline.

C.2 Financial assets and delegation

In Section 7.1, we estimate DiD models for two outcome variables. The first outcome is the share of risky financial assets, measured as the percentage of household financial wealth held in stocks or bonds (*risky-share sample*). Since the median household does

not hold risky financial assets, we restrict estimation to financial respondents with household financial wealth above the median.

The second outcome is the indicator of a switch in the household financial respondent across waves (*delegation sample*). Although only about 3% of households ever change the financial respondent during the observation period, more than half of these switches occur after a severe memory loss event (Table C.1). To reduce concerns that switches reflect other events such as widowhood or partnership dissolution, we restrict attention to respondents who are the financial respondent at baseline, have an observed spouse at baseline, and contribute observations only while they remain in a couple.

Table C.1: Summary statistics for different HRS estimation samples.

	(1) Full sample	(2) Risky-share sample	(3) Delegation sample
Panel A. Demographics and sample structure			
Respondents (N)	25,221	17,110	12,436
Respondent-year observations (N)	122,212	76,920	58,277
Years observed per respondent (mean)	4.85	4.50	4.69
Age (mean)	67.45	67.22	65.47
Female (%)	55.95	51.74	39.17
Married / partnered (%)	51.63	56.61	100.00
High school (%)	50.00	51.28	49.35
College (%)	26.49	33.46	32.24
White (%)	75.17	80.91	81.81
Black (%)	18.28	12.85	11.46
Working (%)	31.66	33.91	37.83
Panel B. Cognition and awareness			
Total word recall (mean)	9.82	10.19	10.30
Severe relative memory loss (%)	56.22	46.11	51.71
Aware severe-loss observations (%)	5.92	5.39	5.30
Unaware severe-loss observations (%)	18.87	17.04	17.29
Age at first severe-loss event (mean)	67.63	67.88	65.74
Panel C. Wealth, risky share, and delegation			
Total household wealth (mean)	456.84	644.09	635.80
Household financial wealth (mean)	5.48	9.10	10.99
Positive financial wealth (%)	43.27	46.11	46.45
Risky asset share (%)	18.85	24.51	22.38
Switch to spouse this wave (%)	0.30	0.30	0.72
Ever switched to spouse (%)	1.43	1.33	3.34
Number of switches per respondent (mean)	0.01	0.01	0.03

Note. Column 1 uses the full sample of financial respondents. Column 2 uses the risky-share estimation sample, defined as financial respondents with household financial wealth above the sample median. Column 3 uses the delegation estimation sample, defined as respondents who are in a couple at baseline, are the financial respondent at baseline, have an observed spouse at baseline, and contribute observations only while they remain in a couple. Wealth variables are reported in US $1,000s in 2018 prices. Percentages are multiplied by 100.

D Additional tables

Table D.1: Check for balance in observable characteristics for the AAII working sample and various analysis subsamples.

	Samples:				
	(1) Full sample	(2) Early respondents	(3) Late respondents	(4) Vignette question	(5) Personal question
Mean:					
Age	73.389	72.963	73.816	73.051	73.065
Sex	0.929	0.936	0.921	0.935	0.939
Marital status	0.838	0.847	0.828	0.844	0.859
Memory score	6.499	6.524	6.472	6.567	6.562
Unaware	0.116	0.112	0.120	0.109	0.114
Exp. decline	0.251	0.243	0.259	0.248	0.194
Median:					
Education	Grad.	Grad.	Grad.	Grad.	Grad.
Financial wealth	\$2-5M	\$2-5M	\$2-5M	\$2-5M	\$2-5M
Obs.	3,015	1,508	1,507	2,423	2,221

Note. The full sample in column (1) consists of the de-duplicated sample of unique respondents, which only keeps the submission with the highest completion rate when multiple submissions exist for the same respondent. Columns (2) and (3) split the full sample based on survey completion time: "Early respondents" are those with completion time not exceeding the median and "Late respondents" are those with completion time above the median. Columns (4) and (5) restrict attention to respondents observed in the vignette-question and personal-question analysis samples respectively. "Memory score" is the number of correctly recognized words (0–8). "Unaware" equals 1 if self-rated memory is "Very good" or better and the memory score is ≤ 5. "Exp. decline" equals 1 if the respondent reports having experienced signs of cognitive decline in the personal module.

Table D.2: Observable characteristics across randomized treatment arms.

	Vignette question				*Personal scenario*			
	(1) None	(2) Score	(3) Info	(4) Both	(5) None	(6) Score	(7) Info	(8) Both
Mean:								
Age	72.946	72.802	73.199	73.169	72.918	73.013	73.030	73.212
Sex	0.926	0.937	0.946	0.931	0.929	0.939	0.946	0.938
Marital status	0.843	0.843	0.858	0.830	0.862	0.860	0.866	0.848
Memory score	6.471	6.607	6.561	6.627	6.511	6.581	6.584	6.573
Unaware	0.120	0.107	0.111	0.100	0.121	0.112	0.113	0.110
Exp. decline	0.260	0.213	0.246	0.276	0.219	0.172	0.177	0.212
Median:								
Education	Grad.	Grad.	Grad.	Grad.	Grad.	Grad.	Grad.	Grad.
Financial wealth	$2-5M	$2-5M	$2-5M	$2-5M	$2-5M	$2-5M	$2-5M	$2-5M
Obs.	601	591	594	609	552	546	543	553

Note. Balance check for randomized assignment to the four experimental arms, reported separately for the vignette-question and personal-scenario analysis samples. "None" is the control group; "Score" provides personalized feedback on the memory-task performance; "Info" provides educational information on the financial risks of memory decline; "Both" combines the two. Entries report sample means (and selected medians) of baseline characteristics within each arm. "Memory score" is on a 0–8 scale; "Unaware" and "Exp. decline" are defined as in Table D.1.

Table D.3: Linear probability models for delegation choices.

	(1) Self management	(2) Informal delegation	(3) Formal delegation	(4) Both
Female	-0.073**	0.085**	-0.043**	0.031
	(0.035)	(0.035)	(0.021)	(0.027)
No postgrad.	-0.009	-0.032*	-0.011	0.052***
	(0.020)	(0.019)	(0.013)	(0.014)
Not married	0.058**	-0.053**	0.013	-0.018
	(0.024)	(0.022)	(0.016)	(0.017)
Age	-0.007***	0.008***	-0.003***	0.002***
	(0.001)	(0.001)	(0.001)	(0.001)
Age squared	0.000*	0.000*	-0.000***	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Exp. decline	-0.049**	-0.025	0.030*	0.044**
	(0.023)	(0.022)	(0.015)	(0.018)
<$1M	0.074**	0.019	-0.037**	-0.057***
	(0.031)	(0.029)	(0.018)	(0.020)
$1M-$2M	-0.013	-0.010	0.016	0.007
	(0.027)	(0.026)	(0.019)	(0.021)
> $5M	-0.005	0.019	0.004	-0.018
	(0.025)	(0.023)	(0.016)	(0.018)
Trust in others	-0.015**	-0.005	0.013***	0.007
	(0.006)	(0.005)	(0.004)	(0.004)
Constant	0.457***	0.291***	0.169***	0.082***
	(0.035)	(0.032)	(0.025)	(0.022)
Obs.	2,987	2,987	2,987	2,987
k	70	70	70	70
RMSE	0.485	0.457	0.322	0.353
R^2	0.056	0.040	0.037	0.042

Note. Linear probability models for each delegation choice of AAII respondents. *Informal delegation* indicates a durable POA assigned to a family member, friend, child, or other non-professional contact, without reliance on a paid professional financial adviser. *Formal delegation* indicates reliance on a paid professional financial adviser and/or a durable POA assigned to a professional agent. *Both* indicates simultaneous use of formal and informal delegation channels, and *Self-management* indicates neither arrangement. The constant is to be interpreted as the average value of the outcome for a married male respondent who has a postgraduate degree and has financial wealth between $2M-$5M, did not experience cognitive decline, and has age and level of trust in others equal to the sample averages. The specification includes state fixed effects and indicators for missing covariates. Robust standard errors are in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

Table D.4: OLS regression models for portfolio weights of the various assets.

	(1) Liquidity (%)	(2) Gov't bonds (%)	(3) Corp. bonds (%)	(4) Stocks (%)
Female	3.563**	0.388	-4.127**	0.177
	(1.511)	(0.966)	(1.801)	(0.965)
No postgrad.	-0.095	-0.068	0.241	-0.078
	(0.690)	(0.477)	(0.902)	(0.497)
Not married	-2.496***	-0.512	2.986**	0.022
	(0.857)	(0.644)	(1.178)	(0.656)
Age	0.007	0.029	-0.047	0.012
	(0.035)	(0.032)	(0.053)	(0.029)
Age squared	-0.007*	0.001	0.008*	-0.002
	(0.003)	(0.002)	(0.004)	(0.002)
Informal delegation	-0.041	0.560	-0.755	0.236
	(0.781)	(0.569)	(1.003)	(0.511)
Formal delegation	-3.941***	2.358***	-1.622	3.205***
	(0.822)	(0.651)	(1.161)	(0.714)
Both	-2.874***	2.411***	-4.390***	4.853***
	(0.856)	(0.666)	(1.202)	(0.757)
<$1M	9.464***	-0.093	-7.571***	-1.799**
	(1.352)	(0.821)	(1.607)	(0.814)
$1M-$2M	3.141***	-0.145	-2.710**	-0.285
	(0.990)	(0.707)	(1.260)	(0.732)
> $5M	-2.734***	-1.160**	6.329***	-2.435***
	(0.692)	(0.576)	(1.030)	(0.599)
Trust in others	-0.817***	-0.057	0.947***	-0.073
	(0.220)	(0.146)	(0.278)	(0.155)
Constant	17.037***	8.784***	65.367***	8.812***
	(1.178)	(0.856)	(1.593)	(0.868)
Obs.	2,796	2,796	2,796	2,796
k	71	71	71	71
RMSE	16.189	11.706	21.280	11.748
R^2	0.092	0.030	0.075	0.059

Note. OLS regressions of portfolio composition on respondent characteristics in the AAII survey. Dependent variables are portfolio weights (in percentage points) of liquid assets, government bonds, corporate bonds, and individual company stocks, constructed from respondents' reported shares that sum to 100. The constant is to be interpreted as the average value of the outcome for a married male respondent who has a postgraduate degree and self-manages his financial wealth (which is between $2M-$5M), and has age and level of trust in others equal to the sample averages. The specification additionally includes state fixed effects and indicators for missing covariates. Robust standard errors are in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

Table D.5: OLS regression models for self-reported memory, score in the memory task, unawareness.

	(1) Self-rated memory	(2) Memory score	(3) Unaware
Female	0.335***	0.444***	-0.083***
	(0.123)	(0.106)	(0.019)
No postgrad.	0.208***	0.140**	-0.000
	(0.067)	(0.060)	(0.014)
Not married	0.069	-0.064	0.008
	(0.086)	(0.077)	(0.018)
Age	-0.022***	-0.018***	0.000
	(0.004)	(0.004)	(0.001)
Age squared	-0.000*	-0.001***	0.000**
	(0.000)	(0.000)	(0.000)
Exp. decline	-1.393***	-0.051	-0.073***
	(0.073)	(0.065)	(0.013)
Constant	5.630***	-0.010	0.125***
	(0.109)	(0.102)	(0.021)
Obs.	2,633	2,565	2,547
k	63	63	63
RMSE	1.524	1.391	0.317
R^2	0.178	0.075	0.047

Note. Regression analysis of subjective and objective memory measures in the AAII survey. Column (1) uses self-rated memory status as the dependent variable (higher values indicate better self-assessed memory on the Poor–Excellent scale). Column (2) uses the objective memory score (0–8 correctly recognized words). Column (3) uses the "Unaware" indicator, equal to 1 if self-rated memory is "Very good" or better and the memory score is ≤ 5. The constant is to be interpreted as the average value of the outcome for a married male respondent who has a postgraduate degree and self-manages his financial wealth and did not experience cognitive decline, and has age equal to the sample averages. The specification additionally includes state fixed effects and indicators for missing covariates. Robust standard errors are in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

Table D.6: Linear probability models for answers to vignette questions

	(1) Friend	(2) Spouse	(3) Children	(4) Fin. advisor	(5) Less risk	(6) Annuities
Female	-0.052**	-0.100**	-0.137***	0.084***	0.097**	0.009
	(0.024)	(0.041)	(0.043)	(0.032)	(0.043)	(0.019)
No postgrad.	-0.017	0.054**	0.044*	-0.013	-0.004	0.004
	(0.015)	(0.022)	(0.022)	(0.018)	(0.021)	(0.009)
Not married	0.080***	-0.109***	-0.022	-0.066***	0.024	0.002
	(0.020)	(0.029)	(0.028)	(0.024)	(0.027)	(0.012)
Age	-0.003***	-0.007***	-0.006***	-0.002	0.006***	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Age squared	-0.000	-0.000**	0.000	-0.000	-0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Exp. decline	-0.017	-0.072***	-0.069***	0.004	0.077***	0.008
	(0.015)	(0.024)	(0.024)	(0.019)	(0.023)	(0.010)
Informal delegation	0.003	-0.016	0.032	-0.011	-0.036	-0.014
	(0.016)	(0.024)	(0.025)	(0.021)	(0.022)	(0.010)
Formal delegation	-0.040**	-0.047	-0.072**	0.165***	-0.007	0.004
	(0.020)	(0.033)	(0.033)	(0.022)	(0.031)	(0.014)
Both	-0.049***	0.033	0.013	0.163***	-0.112***	-0.013
	(0.017)	(0.031)	(0.031)	(0.021)	(0.027)	(0.012)
<$1M	-0.008	-0.009	-0.036	-0.087***	0.074**	0.005
	(0.022)	(0.034)	(0.035)	(0.029)	(0.033)	(0.015)
$1M-$2M	-0.000	-0.048	-0.033	-0.036	0.053*	0.010
	(0.020)	(0.031)	(0.031)	(0.024)	(0.028)	(0.014)
> $5M	0.001	-0.029	0.014	-0.018	-0.024	-0.020**
	(0.018)	(0.027)	(0.027)	(0.022)	(0.024)	(0.010)
Trust in others	-0.003	0.005	0.023***	0.018***	-0.018***	-0.003
	(0.004)	(0.007)	(0.007)	(0.006)	(0.006)	(0.003)
Constant	0.153***	0.587***	0.547***	0.767***	0.360***	0.042**
	(0.027)	(0.040)	(0.040)	(0.033)	(0.038)	(0.017)
Obs.	2,423	2,423	2,423	2,423	2,423	2,423
k	73	73	73	73	73	73
RMSE	0.313	0.491	0.490	0.398	0.446	0.196
R^2	0.048	0.064	0.062	0.081	0.085	0.043

Note. Linear probability models for answers to the vignette question. Each column corresponds to an indicator equal to 1 if the respondent selected the listed action (help from friend/spouse/children/professional adviser; reduce risky share; buy annuities). Respondents could select up to three options, so outcomes are not mutually exclusive across columns. The constant is to be interpreted as the average value of the outcome for a married male respondent who has a postgraduate degree and self-manages his financial wealth (which is between $2M-$5M) and did not experience cognitive decline, and has age and level of trust in others equal to the sample averages. The specification includes state fixed effects and indicators for missing covariates. Robust standard errors are in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

Table D.7: Linear probability models for answers to personal scenario questions.

	(1) Friend	(2) Spouse	(3) Children	(4) Fin. advisor	(5) Less risk	(6) Annuities
Female	-0.054**	-0.012	-0.129***	0.046	0.006	0.028
	(0.026)	(0.035)	(0.043)	(0.041)	(0.046)	(0.023)
No postgrad.	0.004	0.021	0.056**	-0.017	-0.025	0.008
	(0.014)	(0.021)	(0.023)	(0.022)	(0.023)	(0.010)
Not married	0.143***	-0.518***	-0.101***	0.032	0.086***	0.007
	(0.024)	(0.019)	(0.029)	(0.027)	(0.030)	(0.014)
Age	-0.004***	-0.009***	0.004***	-0.002*	0.003***	0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Age squared	-0.000	-0.000*	0.000*	0.000	-0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Exp. decline	-0.030**	-0.159***	-0.363***	-0.122***	0.194***	0.101***
	(0.015)	(0.026)	(0.023)	(0.024)	(0.027)	(0.016)
Informal delegation	-0.004	0.028	0.073***	-0.046*	-0.015	-0.025**
	(0.016)	(0.024)	(0.025)	(0.025)	(0.024)	(0.010)
Formal delegation	-0.036*	-0.007	-0.022	0.304***	-0.070**	-0.011
	(0.021)	(0.032)	(0.032)	(0.027)	(0.033)	(0.015)
Both	-0.014	0.088***	0.065**	0.269***	-0.190***	-0.004
	(0.019)	(0.029)	(0.031)	(0.028)	(0.028)	(0.014)
<$1M	0.020	0.015	0.028	-0.071**	0.058*	-0.001
	(0.022)	(0.032)	(0.035)	(0.033)	(0.035)	(0.015)
$1M-$2M	0.021	-0.007	-0.045	-0.010	0.060**	0.010
	(0.019)	(0.029)	(0.030)	(0.029)	(0.030)	(0.015)
> $5M	0.026	0.015	0.030	0.041	-0.048*	-0.003
	(0.018)	(0.027)	(0.028)	(0.026)	(0.027)	(0.011)
Trust in others	0.003	0.002	0.016**	0.022***	-0.020***	-0.002
	(0.004)	(0.006)	(0.007)	(0.007)	(0.007)	(0.003)
Constant	0.097***	0.559***	0.449***	0.598***	0.398***	0.007
	(0.025)	(0.038)	(0.040)	(0.038)	(0.040)	(0.015)
Obs.	2,221	2,221	2,221	2,221	2,221	2,221
k	71	71	71	71	71	71
RMSE	0.304	0.451	0.472	0.452	0.464	0.209
R^2	0.079	0.214	0.134	0.136	0.094	0.072

Note. Linear probability models for answers to the personal-scenario question. Each column corresponds to an indicator equal to 1 if the respondent selected the listed action (help from friend/spouse/children/professional adviser; reduce risky share; buy annuities). Respondents could select up to three options, so outcomes are not mutually exclusive across columns. The constant is to be interpreted as the average value of the outcome for a married male respondent who has a postgraduate degree and self-manages his financial wealth (which is between $2M-$5M) and did not experience cognitive decline, and has age and level of trust in others equal to the sample averages. The specification includes state fixed effects and indicators for missing covariates. Robust standard errors are in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

Table D.8: Estimated average effects of the information treatments on survey answers.

	(1) Formal delegation	(2) Informal delegation	(3) Risk reduction
Answers to the vignette question			
Education	0.023	-0.062**	0.036
	(0.024)	(0.025)	(0.027)
Score	-0.001	-0.044*	0.005
	(0.024)	(0.025)	(0.026)
Both	0.031	-0.110***	0.054**
	(0.024)	(0.026)	(0.027)
Constant	0.774***	0.769***	0.291***
	(0.017)	(0.017)	(0.019)
Obs.	2,393	2,393	2,393
RMSE	0.410	0.450	0.464
R^2	0.001	0.008	0.002

	(1) Formal delegation	(2) Informal delegation	(3) Risk reduction
Answers to the personal scenario question			
Education	0.040	-0.017	0.011
	(0.029)	(0.026)	(0.029)
Score	0.015	-0.006	0.030
	(0.029)	(0.026)	(0.029)
Both	0.077***	-0.057**	-0.006
	(0.029)	(0.027)	(0.029)
Constant	0.611***	0.754***	0.372***
	(0.021)	(0.018)	(0.021)
Obs.	2,197	2,197	2,197
RMSE	0.478	0.442	0.486
R^2	0.004	0.002	0.001

Note. Estimated average treatment effects of the randomized information interventions on grouped outcomes, reported separately for the vignette question (Panel A) and the personal-scenario question (Panel B). "Education" provides educational information on the financial risks of serious memory decline; "Score" provides personalized feedback on the memory-task performance; "Both" combines the two; the omitted category is "None" (control). Outcomes are indicators for *Formal delegation* (selected help from a professional adviser), *Informal delegation* (selected any of spouse/children/friend), and *Risk reduction* (selected reduce risky share and/or buy annuities). Because respondents may select up to three options, outcomes are not mutually exclusive. Robust standard errors are in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

Table D.9: Robustness check: Effect of score treatment interacted with unawareness under alternative definitions.

	(1) Formal delegation	(2) Informal delegation	(3) Risk reduction
Answers to the personal scenario question			
Panel A. Alternative Unaware definitions			
Score × Unaware	0.193**	-0.019	0.181**
	(0.091)	(0.074)	(0.090)
Score × Unaware (2)	0.155**	0.051	0.077
	(0.076)	(0.067)	(0.077)
Score × Unaware (3)	0.329**	-0.248**	0.143
	(0.138)	(0.122)	(0.145)
Score × Unaware (4)	0.245**	-0.037	0.085
	(0.115)	(0.104)	(0.121)
Panel B. Continuous measure of unawareness			
Score × Pessimists	-0.033	-0.079	0.107*
	(0.063)	(0.057)	(0.063)
Score × Unaware	0.232**	-0.152*	0.101
	(0.096)	(0.081)	(0.096)
Observations	2,185	2,185	2,185

Note. Each column reports a separate regression of the corresponding personal-scenario outcome on treatment indicators (Education, Score, Both) and their interactions with the indicated awareness definition. Panel A uses alternative binary indicators of unawareness. Their definitions are: Unaware=1 if *self-rated memory* $\in$ {very good, excellent} and *memory score* ≤ 5; Unaware (2)=1 if *memory* $\in$ {good, very good, excellent} and *memory score* ≤ 5; Unaware (3)=1 if *memory* $\in$ {very good, excellent} and *memory score* ≤ 4; Unaware (4)=1 if *memory* $\in$ {good, very good, excellent} and *memory score* ≤ 4. Panel B uses a three-group measure derived from a numeric awareness score constructed as follows. Self-rated memory is first mapped from the five response categories onto the same 0–8 scale as the objective memory test, with *Poor*, *Fair*, *Good*, *Very good*, and *Excellent* recoded as 0, 2, 4, 6, and 8, respectively; respondents answering "do not know" or "prefer not to say" are treated as missing. Awareness is then defined as recoded self-rated memory minus the objective memory score, so that positive values indicate overestimation of memory ability (Unaware), negative values indicate underestimation (Pessimists), and values close to zero indicate approximate calibration (Aware). The three-group measure classifies respondents as *Pessimists* if awareness ≤ -2, *Aware* if awareness $\in \{-1, 0, 1\}$, and *Unaware* if awareness ≥ 2. In Panel B, the omitted category is *Aware*. The table reports only the coefficients on the interaction between the *Score* treatment and the relevant awareness category; robust standard errors are in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

Table D.10: Delegation and cognitive decline: Multinomial logit estimates of financial delegation choices of older Americans.

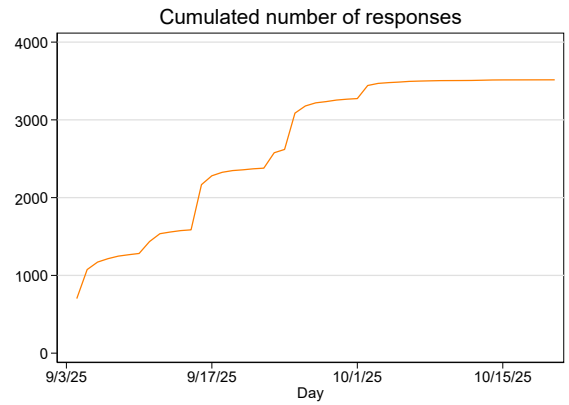
	(1) Formal	(2) Informal
Age	-0.001	0.004***
	(0.001)	(0.001)
Years of education	0.027***	0.001
	(0.004)	(0.003)
Female	0.030	0.005
	(0.021)	(0.017)
Financial wealth:		
Tercile 2	0.053**	-0.034*
	(0.025)	(0.020)
Tercile 3	0.228***	-0.026
	(0.029)	(0.020)
Cognitive decline	-0.045	-0.003
× Fin. wealth-Tercile 1	(0.038)	(0.032)
Cognitive decline	0.038	0.038
× Fin. wealth-Tercile 2	(0.039)	(0.029)
Cognitive decline	0.122***	-0.013
× Fin. wealth-Tercile 3	(0.045)	(0.028)
Obs.	1,179	1,179

Note. The table presents marginal effects from a multinomial logit model using data from the 2016 HRS. The dependent variable is the method of financial management: formal delegation or informal delegation, relative to the omitted baseline of self-management. Cognitive decline is measured by a drop of 20% or more in the memory test score relative to the previous wave, as in Mazzonna and Peracchi (2024). Cognitive decline is interacted with indicator variables for financial wealth terciles to capture heterogeneous responses to cognitive deterioration across the wealth distribution. Standard errors clustered at the respondent level in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

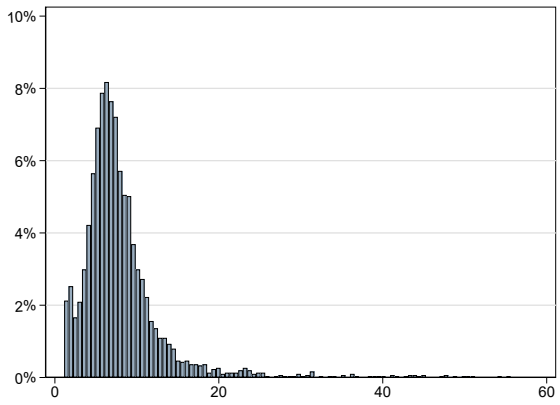
E Additional figures

Figure E.1: Cumulative number of daily responses and distribution of survey duration.

Panel A. Cumulated number of responses



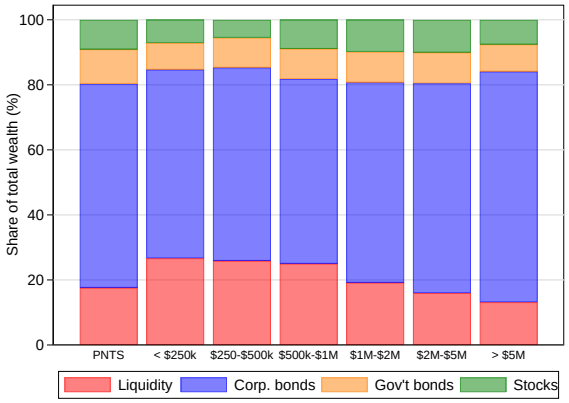
Panel B. Survey duration (minutes)



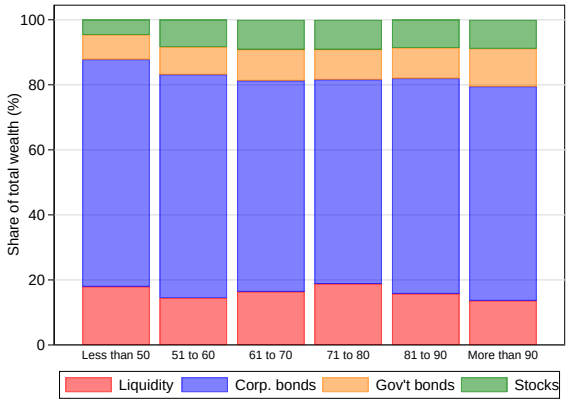
Note. Panel A plots the cumulative number of survey responses over calendar time during the AAII field period, with visible increases following reminder emails. Panel B shows the distribution of survey completion time in minutes for respondents with duration below one hour; bars report the share of respondents in each duration bin.

Figure E.2: Composition of household financial wealth by wealth and age brackets.

Panel A. Financial composition by wealth

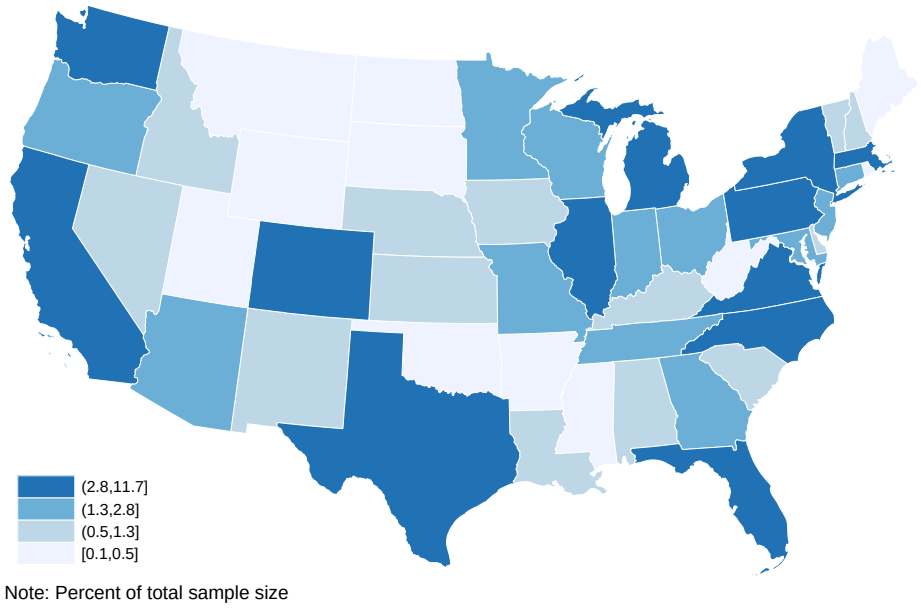


Panel B. Financial composition by age



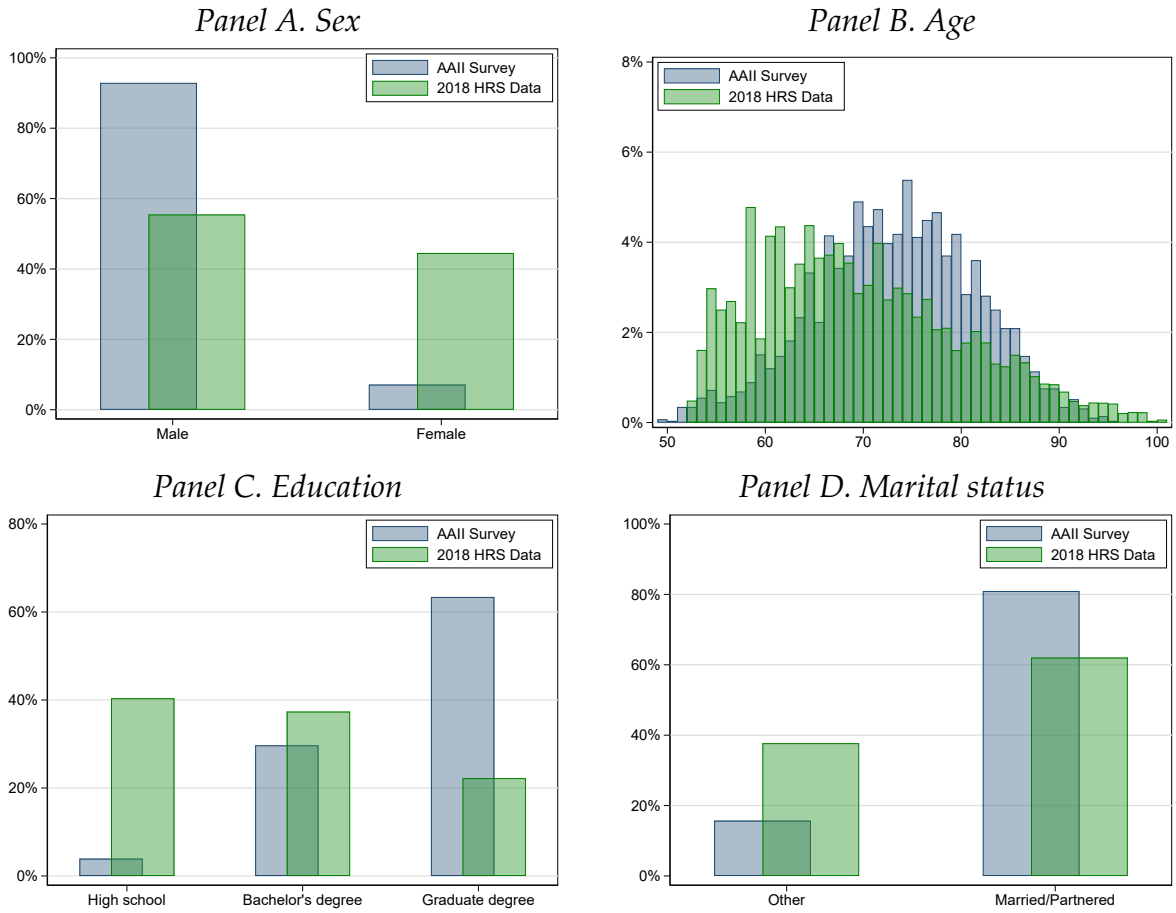
Note. Stacked bars report the average composition of household financial wealth across (Panel A) financial-wealth brackets and (Panel B) age brackets in the AAII survey. Asset categories are: liquidity (cash, deposits, money-market funds, treasury bills), government bonds (including holdings via ETFs/mutual funds), corporate bonds (including holdings via ETFs/mutual funds), and individual company stocks (including holdings via ETFs/mutual funds). Shares are expressed as percentages of total reported financial wealth and sum to 100 within each bracket.

Figure E.3: Distribution of the sample by state of current residence.



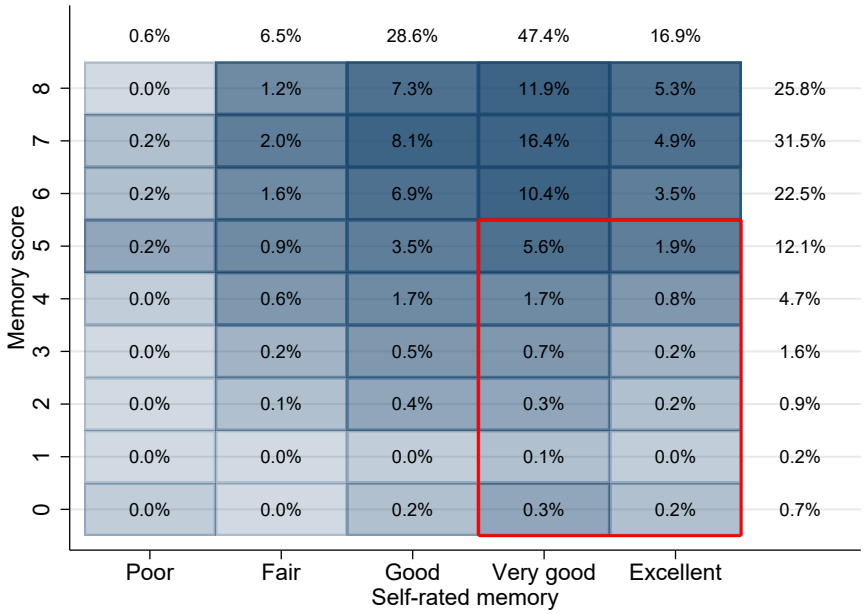
Note. Choropleth map of the United States showing the geographic distribution of AAII survey respondents by state of current residence. Shading indicates the percent of the total sample residing in each state, using the bins shown in the legend; lighter shades correspond to smaller sample shares.

Figure E.4: Distribution of sample demographics: AAII v. 2018 HRS.



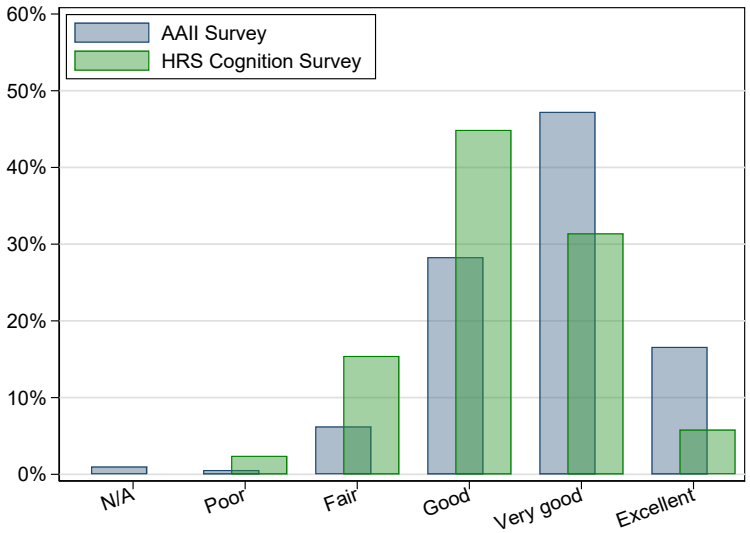
Note. The figure compares sample demographics between AAII survey respondents and financial respondents with household financial wealth above $50k in the 2018 wave of the HRS. Panels display distributions for sex, age, education, and marital status; bars report category shares within each dataset. The comparison is intended to highlight differences in composition between the AAII sample and the sample of HRS financial respondents.

Figure E.5: Cross-tabulation of self-assessment of memory status and memory test.



Note. The heatmap cross-tabulates subjective and objective memory measures in the AAII survey. Columns are self-rated memory categories (Poor, Fair, Good, Very good, Excellent) and rows are the score in the memory task (0–8 correct out of 8). Cell entries report the percentage of respondents in each joint category (computed among respondents with non-missing self-assessment and test score). The highlighted region corresponds to the "Unaware" classification: self-rated memory "Very good" or better combined with a low test score (at most 5 correct out of 8).

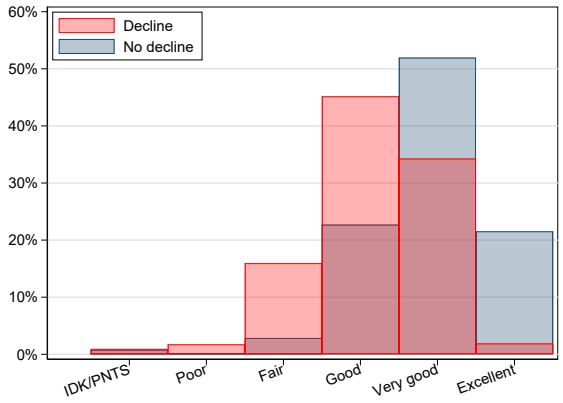
Figure E.6: Distribution of self-rated memory status: AAII v. 2018 HRS Cognition Survey.



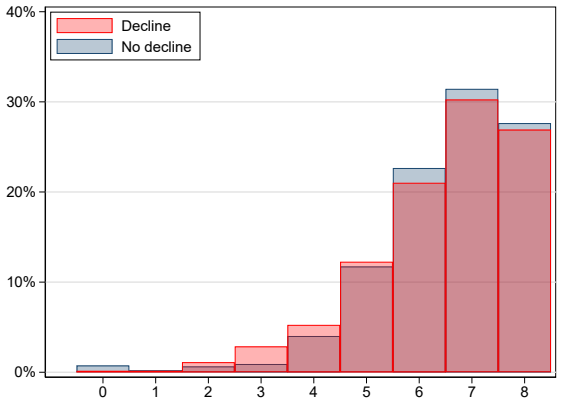
Note. Distribution of self-rated memory status (N/A, Poor, Fair, Good, Very good, Excellent) for AAII survey respondents compared to financial respondents with household financial wealth above $50k in the 2018 wave of the HRS. Bars report within-sample shares by category.

Figure E.7: Distribution of memory variables by memory decline.

Panel A. Self-rated memory status



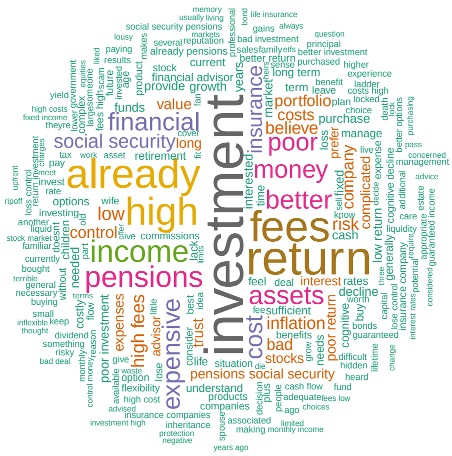
Panel B. Memory score (0-8 words)



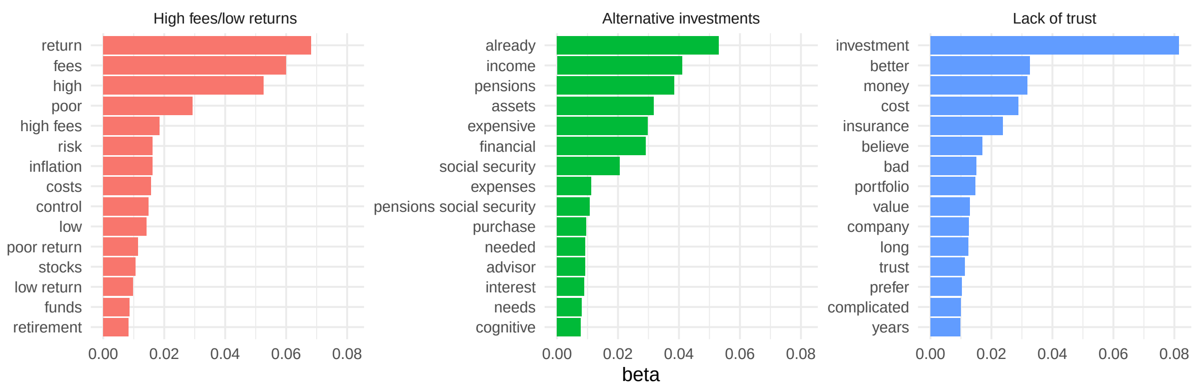
Note. Distributions of (left) self-rated memory status and (right) objective memory score (0–8) are shown separately for respondents who report having experienced signs of cognitive decline (in red) versus those who do not (in blue). "Decline" is based on the personal module question about having ever experienced signs of cognitive decline (e.g., forgetting passwords, failing simple math). Bars/histograms report within-group shares.

Figure E.8: Textual analysis of open-ended question about annuities.

Panel A. Word cloud from open-ended question on annuities.

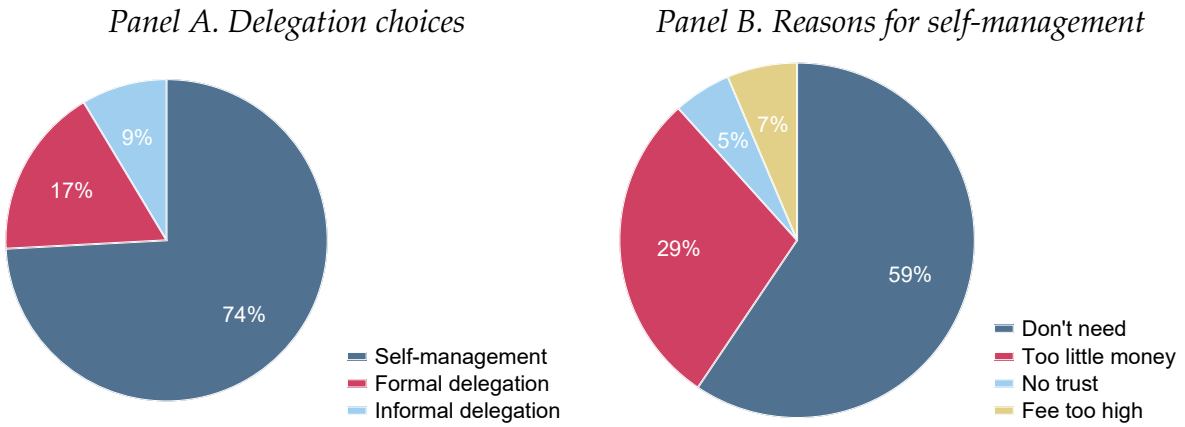


Panel B. Latent Dirichlet Allocation model results from open-ended question on annuities.



Note. This figure reports results from the text analysis of answers to the following question, which was displayed to respondents who did not select "Purchase annuities" in either the personal scenario or the vignette question: "Why did you decide against purchasing an annuity?". Panel A presents a word cloud of the responses. Panel B presents the Latent Dirichlet Allocation (LDA) topic-model results.

Figure E.9: Delegation choices of older Americans.



Note. Panel A shows the share of HRS respondents utilizing self-management, formal delegation, and informal delegation. Panel B breaks down the reasons cited by self-managing respondents for not seeking financial help. Data are from the 2016 HRS experimental module "Financial Advice and Capacity at Older Ages".