Question Design Matters: Presented Response Options Influence Reported Financial Planning Horizons

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ABSTRACT

Financial surveys often include planning horizon questions to understand people's financial decisions. Response options vary, seemingly assuming no effects on reported planning horizons. However, our U.S.-wide survey (N=5,175) revealed shorter reported planning horizons when response options were short-range (from less than a week to longer than next year) rather than mid-range (from next month or less to longer than 10 years), or long-range (from next year or less to longer than 20 years). The mid-range condition elicited planning horizons that were most similar to an open-ended condition thought to capture natural thinking, had better predictive validity, and low respondent burden.

Keywords: planning horizon, response options, financial advice

A critical component of consumers' financial decisions is their "time horizon," defined as "the number of months, years, or decades [needed] to invest to achieve [a] financial goal" (investor.gov, 2025). Time horizons are commonly known as "planning horizons" in the academic literature, where they have been found to positively correlate with decisions about 401(k) investments (Munnell et al., 2001), cryptocurrency (Bonaparte, 2022), household saving (Fisher & Montalto, 2010), financial planner use (White & Heckman, 2016) and not paying credit card interest (Kim & DeVaney, 2001; Rutherford & DeVaney, 2009). Holding risk and time preferences constant, economic models recommend that individuals with longer financial planning horizons hold more stock (Barberis, 2000; Bodie et al., 1992; Cocco et al., 2005; Gomes et al., 2008). These recommendations may also provide guidance for the 60% of US adults owning tax-preferred retirement accounts as of 2023 (Board of Governors of the Federal Reserve System, 2024).

According to regulatory interpretation by the Securities and Exchange Commission (SEC), time horizons are one factor that may be important for registered investment advisers to consider when recommending investment strategies (Commission Interpretation Regarding Standard of Conduct for Investment Advisers, 2019). Similarly, broker-dealers are legally required to determine whether securities transactions or investment strategies are appropriate for investors (Regulation Best Interest, 2019). Both types of professionals can gather time horizons through "investment profiles," which typically contain survey questions asking clients for background information (Commission Interpretation Regarding Standard of Conduct for Investment Advisers, 2019; Regulation Best Interest, 2019). Scoring rubrics on investment profiles show that time horizons often affect the asset allocation that someone receives, with longer reported time horizons correlating positively with the percent allocated to stocks rather

than bonds (Table 1). Time horizons are also assessed by "robo-advising services," which provide automated financial advice based on individuals' responses (Arnott et al., 2023). These services currently manage over $20 billion in assets (Investment Adviser Association, 2024) and are a focus of active policy debates, including requests for information on the tools they use to provide investment advice to clients (Request for Information S7-10-21, 2021).

The Potential Effect of Presented Response Options on Reported Planning Horizons

Despite the importance of planning horizons for understanding and informing financial decisions, there appears to be no validated, standardized planning horizon question. Many nationally representative surveys ask a variant of the following planning horizon question, with their own range of response options: "*In planning (your/your family's) saving and spending, which of the following time periods is most important to (you/your family)?*", including the Survey of Consumer Finances (US) (SCF); Survey of Consumer Expectations (US) (SCE); the English Longitudinal Survey of Ageing; the Household, Income and Labour Dynamics in Australia Survey (HILDA); and the Consumer Financial Protection Bureau's Financial Well-Being Survey (US). Specifically, SCF uses the response options "the next few months," "the next year," "the next few years," "the next 5 to 10 years," and "longer than 10 years," whereas HILDA starts with "the next week" and ends with "more than 10 years ahead" (Table 1). The SCE's shortest response option is the "next day." Industry-designed investment profiles also have varied response options. The shortest response option may be "immediately" (Morgan Stanley, 2022) or "0-5 years" (B&R Financial Group, 2022), while the longest may be "10+ years" (B&R Financial Group, 2022) or "more than 20 years" (Northwestern Mutual Financial Network, 2022). Table 1 shows examples of investment profile planning horizon questions and how they align with recommended asset allocation.

Table 1: Example Planning Horizon Questions and Presented Response Options on Nationally Representative Surveys and Investment Profiles

Source	Question	Response Options	Recommended Asset Allocation
Nationally Representative Surveys			
Survey of Consumer Finances	In planning or budgeting your (family's) saving and spending, which of the following time periods is most important to you (and your family living here)?	The next few months The next year The next few years The next 5 to 10 years Longer than 10 years	None
Survey of Consumer Expectations	In deciding how much of their [family] income to spend, people are likely to think about different financial planning periods. In planning your [family's] spending, which of the following time periods is most important to you [and your husband/wife/partner]?	Next day Next week Next two weeks Next month Next few months Next year Next few years Next 5-10 years Longer than 10 years	None
The Household, Income and Labour Dynamics in Australia Survey	In planning your saving and spending, which of the following time periods is most important to you?	The next week The next few months The next year The next 2 to 4 years The next 5 to 10 years More than 10 years ahead	None
Investment Profiles			
B&R Financial Group[a]	What is your time horizon for this investment portfolio?	0-5 years	100% fixed income
		5-10 years	100% fixed income or 40% equity/60% fixed income
		10+ years	40% equity/60% fixed income or 60% equity/40% fixed income
Merrill[b]	When is the earliest you anticipate needing all or a	Short term – 0 to 2 years	Stocks 60%, Bonds 35%, and Cash 5%

	substantial portion of your investment assets?	Medium term – More than 2 but less than 5 years	Stocks 80%, Bonds 15%, and Cash 5%
		Long term – 5 years or more	

Note. All asset allocations are conditional on other information elicited in the profile (e.g., risk tolerance). There are no recommended asset allocations in these nationally representative surveys.
[a]See B&R Financial Group (2022). Recommended asset allocations are for a "risk tolerance" score, calculated on the profile, of 13-24.
[b]See Merrill (2022). Recommended asset allocations are for an investment profile score of 45-54.

It is possible that the academics and practitioners who measure planning horizons vary the presented response options because they assume doing so will not affect respondents' reported planning horizons. Indeed, there are increasing calls to pay more attention to survey methods and question design within economics and finance (e.g., Bruine de Bruin et al., 2012, 2017, 2022, 2025; D'Acunto & Weber, 2024; De Weerdt, Gibson, & Beegle, 2020; Stantcheva, 2023). Survey design research suggests that presented response options can change people's answers (Schwartz et al., 1985). For example, in a classic study, participants were asked how much TV they watch (Schwarz et al., 1985). When the presented response options ranged from "up to 2.5 hours" to "more than 4.5 hours," 38% of participants reported watching more than 2.5 hours of TV. In contrast, when the presented response options were shorter, ranging from "up to 1/2 an hour" to "more than 2.5 hours," only 16% reported watching more than 2.5 hours of TV. If the presented response options similarly affect reported planning horizons, this could potentially undermine research on financial decision making as well as advice provided to investors.

If the presented response options affect reported planning horizons, they may also affect the predictive validity of planning horizon questions. Understanding predictive validity is

important for researchers who aim to examine the relationships of people's planning horizons with other financial outcomes, and for financial professionals who may recommend specific investment or money management strategies based on reported planning horizons (Pearson & Lacombe, 2022). People have different financial planning horizons for different financial outcomes, however (Bruine de Bruin, et al., 2025), so the set of response options with the highest predictive validity may also vary across financial outcomes. It is possible that outcomes with shorter planning horizons (such as avoiding financial hardship and owning an emergency fund) have higher predictive validity when assessed using a planning horizon question with shorter presented response options (Badji et al., 2023), whereas longer-run financial outcomes (such as using a financial planner for saving and investments or retirement age) have higher predictive validity when assessed using a planning horizon question with longer presented response options (Khan et al., 2014; White & Heckman, 2016), consistent with literature on the discriminability of response options (DeCastellarnau, 2018).

If presented response options affect reported planning horizons, then it is also important to understand why such changes occur. In past research, response options have influenced reported answers due to changing participants' interpretation of the responses (Schwarz et al., 1985). Specifically, the presented response options in the TV study affected the perceived social norm for watching TV, with high-range response options leading to higher estimates of how many hours other people watch TV as compared to low-range response options (Schwarz et al., 1985). Similarly, it is possible that the presented response options for planning horizon questions affect perceived norms and recommendations for what planning horizon people should use.

Finally, to avoid effects of response options on reported responses, researchers recommend using open-ended (fill-in-the-blank) questions, allowing participants to think about their answer in a more natural way (Krosnick, 2018; Toepoel et al., 2009). Thus, comparisons to open-ended responses can help clarify which set of closed-ended response options has the least biasing effect on individuals' thinking. Open-ended questions may be more difficult to answer than closed-ended ones, however, and yield more missing responses (Griffith et al., 1999; Hurd et al., 1998), a sign of increased respondent burden. Responses to open-ended questions may also be difficult to classify (Schuman & Presser, 1996). This difficulty may be addressed through self-coding, where participants classify their open-ended response into a closed-ended category (Appelt et al., 2011; Glazier et al., 2021).

The Current Study

We evaluated the effects of varying presented response options on reported planning horizons by randomly assigning participants from a nationally representative U.S. sample to one of four conditions. These conditions displayed the same planning horizon question with short-range, mid-range, or long-range response options, or an open-ended response mode. Our research questions (RQs) were:

RQ1: Are reported planning horizons affected by whether response options are short-range, mid-range, long-range, or open-ended?

RQ2: Do reported planning horizons have better predictive validity when response options are short-range, mid-range, long-range, or open-ended?

RQ3: Are participants' perceptions of the most common planning horizon, interpretations of the planning horizon question, and evaluations of their reported planning horizon,

affected by whether response options are short-range, mid-range, long-range, or open-ended?

RQ4: Are participants more likely to answer the planning horizon question or find the question easier to answer when response options are short-range, mid-range, long-range, or open-ended?

Materials and Methods

Sample and Exclusions

Participants came from NORC's AmeriSpeak panel (https://amerispeak.norc.org/), a probability-based panel designed to be representative of the U.S. population. AmeriSpeak covers approximately 97% of the U.S. household population (NORC, 2022). We invited 15,000 panelists to the survey based on an expected response rate of 32% and a target sample size of 4,800. We got a higher response rate (39%), as 5,801 participants started the survey.

Of the 5,801 people who started the survey, three sets of individuals were excluded. First, 91 dropped out before the planning horizon question. Second, 52 skipped the planning horizon question. Third, an additional 375 skipped at least one of the outcome questions. Ultimately, there were 5,175 participants for our analyses.

Of the 5,175 people who completed the survey, 21% were aged 65 or older, 47% were male, and 36% of those aged 25+ had a bachelor's degree or higher. The sample was 62% white, 14% black, 18% Hispanic, and 3% Asian or Pacific Islander; 3% selected multiple categories or another race and ethnicity category. Median household income was $50,000-$74,999. This breakdown largely matches the U.S. population (Table A1). Analyzed participants were more likely than those who were excluded to hold at least a bachelor's degree, be non-Hispanic white,

and have higher incomes when compared to people who were invited but not included; there were no significant age or gender differences (Table A1).

Survey

Our survey was approved by the Institutional Review Board at NORC (#23-08-1415). The median response time was 7 minutes. In line with other NORC-administered surveys, participants were paid $3, or the equivalent of approximately $25 per hour. The survey instrument appears in Online Appendix I.

Planning horizon question: four conditions

All participants saw the planning horizon question "In deciding how much of their income to spend or save, people are likely to think about different financial planning periods. In planning your saving and spending, [which of the following **time periods**/what **time period**] is most important to you?" They were randomly assigned to one of four conditions, showing short-range, mid-range, or long-range response options, or an open-ended response mode (Table 2). Each of the three closed-ended conditions showed seven response options, which were designed to allow us to distinguish planning horizons of a year or less versus longer than the next year. In the open-ended condition, participants were asked to fill in a blank, followed by a question asking them to self-code their response using the combined response options from all short-range and long-range conditions. We used the self-coded, multiple-choice answer to determine planning horizons. In all conditions, planning horizons were classified as a year or less (0) versus greater than a year (1).

Table 2. Response options across experimental conditions.

Response Option	Short-range	Mid-range	Long-range	Open-Ended
1	**Less than a week***	**The next month or less***	**The next year or less***	---
2	**The next week***	**The next few months (longer than the next month but less than a year)***	The next 1-5 years	---
3	**The next month***	**The next year***	The next 5-10 years	---
4	**The next few months (longer than the next month but less than a year)***	Longer than the next year but less than the next 5 years	The next 10-15 years	---
5	**The next year***	The next 5-10 years	The next 15-20 years	---
6	Longer than the next year	Longer than 10 years	Longer than 20 years	---

Notes: The short-, mid-, and long-range conditions also offered a seventh option to answer, "I don't do any financial planning." The open-ended condition asked participants to classify their open-ended response using one of the following categories: **Less than a week***, **The next week***, **The next month***, **The next few months (longer than the next month but less than a year)***, **The next year***, Longer than the next year but less than the next 5 years, The next 5-10 years, The next 10-15 years, The next 15-20 years, More than 20 years, I don't do any financial planning.
* Bolded response options reflect a planning horizon of a year or less.

Financial outcomes

We assessed four financial outcomes. First, to measure financial hardship, we asked,

"Since January 2023, did any of the following happen to you because of a shortage of money?"

followed by seven items (e.g., Could not pay electricity, gas, or telephone bills on time).

Participants were coded as having financial hardship (1) if they gave an affirmative response to

any of the items; others received a 0.

Second, to measure emergency fund ownership, we asked, "Have you set aside

emergency or rainy day funds that would cover your expenses for 3 months, in case of sickness,

job loss, economic downturn, or other emergencies?" Possible response options were "Yes," "No," and "Don't know," with "Yes" coded as 1 and the others 0.

Third, to assess financial planner use, we asked, "What sources of information do you use to make decisions about saving and investments?" followed by a list: family member, friend, lawyer, accountant, banker, broker, financial planner. We coded those who selected "financial planner" as a 1, with non-selections coded as 0.

Fourth, to measure expected retirement age, we asked, "Do you expect to retire?" with response options of "Yes" and "No." Those who answered affirmatively were then asked, "What age do you expect to retire?" (open text box). Participants who had already retired were not asked these two questions.

Perception of most common planning horizon

We asked, "What do you think **most people** will answer when they are asked [the planning horizon question]?" Response options followed the original experimental assignment.

Interpretation of the planning horizon question

We asked, "When answering the question 'In planning your family's saving and spending, how much did you think about…", followed by twelve topics, displayed in a random order. As seen in an exploratory factor analysis with promax rotation (Table E1), topics reflected short-term decisions (your spending, your expenses, your budget, emergencies you might have to pay for, your savings, and inflation) and long-term decisions (your investments, your financial goals, the stock market, your age, saving for retirement and when you expect to retire). For the short-term and long-term decisions, we averaged the underlying items into an overall score.

Evaluation of own planning horizon

We asked, "What do you think about the time period you use for planning your saving and spending?" Response options (and coding) were: "I think it should be much longer" (2); "I think it should be longer" (1); "I think it is just right" (0); "I think it should be shorter" (-1); "I think it should be much shorter" (-2).

Evaluation of ease of responding

We asked, "How hard or easy was it for you to answer: In deciding how much of their income to spend or save, people are likely to think about different financial planning periods. In planning your saving and spending, [which of the following **time periods**/what **time period]** is most important to you?" Response options (and coding) were: Very hard (1), Somewhat hard (2), Somewhat Easy (3), Very easy (4).

Demographics and other variables

AmeriSpeak provided demographic characteristics such as age, gender, and income.

Analysis Plan

Pre-registration, the survey, data, and code are available at https://researchbox.org/3483. The pre-registered sample excludes participants who said, "I don't do any financial planning," an additional 194 participants, for a sample size of 4,981. We deviate from our pre-registration and code all "I don't do any financial planning" responses as having a planning horizon of 0, thus reflecting a planning horizon of a year or less (following Bruine de Bruin et al., 2025). All p-values with this sample were corrected for multiple hypothesis testing using Westfall (1997). Results are qualitatively similar when following the pre-registered sample that excludes these participants (Online Appendix).

Are participants' reported planning horizons affected by whether response options are short-range, mid-range, long-range, or open-ended? (RQ1)

We used a logistic regression to test whether the proportion of participants who reported a planning horizon of longer than a year (vs. less) was affected by the randomly assigned planning horizon response options. Specifically, predictor variables were indicator variables for the mid-range condition (vs. not), long-range condition (vs. not) and the open-ended condition (vs. not). We used the short-range condition as the reference group, because we expected the short-range condition to have the greatest proportion of planning horizons less than a year (Schwarz et al., 1985). In follow-up tests, we test which closed-ended condition is closest to the open-ended, since the open-ended is expected to elicit the most natural responses (Krosnick, 2018; Toepoel et al., 2009).

Results for the pre-registered logistic model, a linear probability model version of the pre-registered model, and another specification where the open-ended condition is the omitted condition, with Westfall (1997) p-value adjustments for this last model, are in the Online Appendix (Table B2). Overall conclusions are similar across all models.

Do reported planning horizons have better predictive validity when response options are short-range, mid-range, long-range, or open-ended? (RQ2)

We conducted sixteen separate linear regressions, one per condition and outcome. Each regression predicted a financial outcome from the condition specific response options, which were included as indicator variables (Tables C1-C4). We then calculated the model R^2 from each condition's regression as a measure of predictive validity. The distribution of R^2 was estimated by bootstrap sampling (Olkin & Finn, 1995). Our pre-registration mistakenly specifies comparisons by likelihood-ratio tests, rather than estimating the difference in model R^2. Participants who have already retired or who did not expect to retire were not asked when they expected to retire, reducing the sample size to 2,421 for this outcome. Our pre-registered

analysis, which excludes participants who said, "I don't do any financial planning" as a predictor, is in the Online Appendix (Figure C1). The predictive validity analyses assume that the planning horizon response options did not causally impact the financial outcomes being predicted. We find no differences in average responses between experimental conditions for the predictive validity financial outcomes when correcting for multiple hypothesis testing (Westfall, 1997; Table C9).

Are participants' perceptions of the most common planning horizon, interpretations of the planning horizon question, and evaluations of their reported planning horizon, affected by whether response options are short-range, mid-range, long-range, or open-ended? (RQ3)

For estimates of the most common planning horizon, we used a logistic regression with predictor variables being indicator variables for mid-range, long-range, and open-ended conditions, using the short-range condition as the reference group (Schwarz et al., 1985). For interpretations and evaluations of the planning horizon question, we conducted linear regressions using the same predictors.

Are participants more likely to answer the planning horizon question or find the question easier to answer when response options are short-range, mid-range, long-range, or open-ended? (RQ4)

We used a logistic regression to assess whether the likelihood of giving a missing response varied between conditions and a linear regression to assess whether perceived ease of answering varied between conditions. In both regressions, indicator variables for the closed-ended experimental conditions were included as predictors, as we expected the open-ended condition to have the highest respondent burden measured by missing responses and question difficulty (Griffith et al., 1999; Hurd et al., 1998). The main text uses a post-hoc definition for missingness, where only item non-response counts as missing. We include all participants in the

missing response analysis who saw a planning horizon question, 5,710 participants, to test for differences in non-response. Analysis of the pre-registered definition for missingness, skipping the question or saying, "I don't do any financial planning," is in the Online Appendix (Figure G1).

Results

Are Participants' Reported Planning Horizons Affected by Whether Response Options Are Short-Range, Mid-Range, Long-Range, or Open-Ended? (RQ1)

The median planning horizon was "The next few months (longer than the next month but less than a year)" for the short and mid-range conditions, "The next 1-5 years" for the long-range condition and "The next year" for the open-ended condition. After converting responses to a year or less versus over one year, we found that the short-range condition yielded the lowest percent of participants indicating that their planning horizon was longer than a year (Figure 1). Relative to the short-range condition, participants in the long-range condition had about 11.6 times the odds of giving planning horizons over one year (OR=11.6, $p<0.001$, 95% CI=[9.6, 13.9]), participants in the mid-range condition had about 2 times the odds (OR=2, $p< 0.001$, 95% CI=[1.7, 2.4]) and those in the open-ended condition had 2.7 times the odds (OR=2.7, $p< 0.001$, 95% CI=[2.3, 3.3]) (Table 3). Thus, the share of participants giving a planning horizon over one year deviated by 54 percentage points between the long-term and short-term conditions.

More importantly, of the three closed-ended conditions, the mid-range condition yielded responses that were most similar to the open-ended condition. The difference in reported planning horizons over a year for the mid-range versus open-ended was smaller than the difference between short-range and open-ended ($z = 7.44$, $p< 0.001$) and the difference between long-range and open-ended ($z = -20.53$, $p< 0.001$).

Figure 1. Percent of participants reporting a planning horizon over a year, by condition.
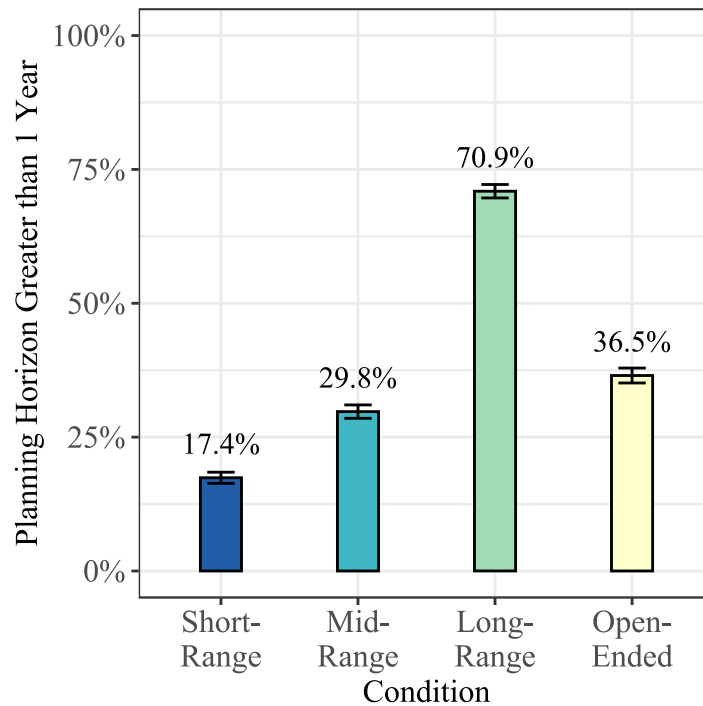
Error bars represent 95% confidence intervals of condition means.

Table 3. Logistic regressions estimating effects of experimental conditions on reported planning horizons.

	Dependent variable:	
	Planning Horizon > 1 Year	
	(1)	(2)
Short-Range		-1.00***
		(0.09)
Mid-Range	0.70***	-0.31***
	(0.09)	(0.08)
Long-Range	2.45***	1.45***
	(0.09)	(0.09)
Open-Ended	1.00***	
	(0.09)	
Constant	-1.56***	-0.55***
	(0.07)	(0.06)

Notes: *N*=5,175. * *p*<0.05; ** *p*<0.01; *** *p*<0.001. In Model (1) the reference condition is short-range and in Model (2) the reference condition is open-ended. Predictor variables are indicator variables for remaining conditions. Coefficients are not exponentiated.

Do Reported Planning Horizons have Better Predictive Validity When Response Options Are Short-Range, Mid-Range, Long-Range, or Open-Ended? (RQ2)

The mid-range condition was as good or better than the other conditions at predicting the four financial outcomes (Figure 2). First, the mid-range condition best predicted financial hardship. It performed better than the short-range condition (95% bootstrapped CI=[0.2, 9.2]), the long-range condition (95% bootstrapped CI=[1.3, 9.9]), and the open-ended condition (95% bootstrapped CI=[2.7, 11.5]). Second, the mid-range condition most strongly predicted whether participants had an emergency fund covering at least three months of expenses, performing better than the short-range condition (95% bootstrapped CI=[1.4, 10.8]), the long-range condition (95% bootstrapped CI=[2.9, 12.2]) and the open-ended condition (95% bootstrapped CI=[4.2, 13.3]). Third, the mid-range condition did not differentially predict whether participants had a financial planner (short-range vs. mid-range: 95% bootstrapped CI=[-2.9, 3.6]; long-range vs. mid-range: 95% bootstrapped CI=[-4.1, 2.9]; open-ended vs. mid-range: 95% bootstrapped CI=[-1.4, 4.7]). Fourth, the mid-range condition did not differentially predict expected retirement age (short-range vs. mid-range: 95% bootstrapped CI=[-3.4, 2.6]; long-range vs. mid-range: 95% bootstrapped CI=[-2.1, 3.4]; open-ended vs. mid-range: 95% bootstrapped CI=[-3.1, 2.5]).

Figure 2. Model R^2 across predictive validity financial outcomes and conditions.
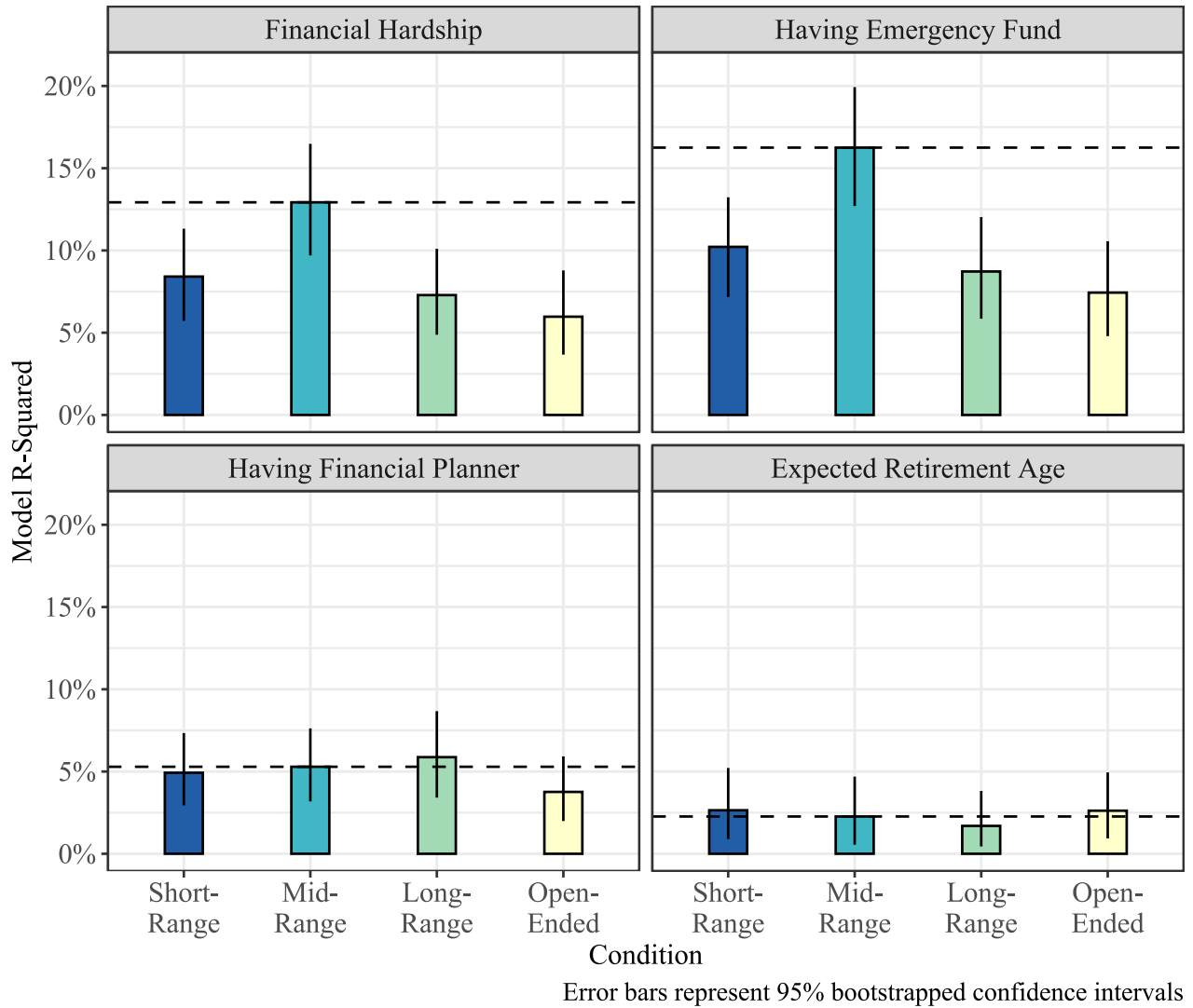
Error bars represent 95% bootstrapped confidence intervals

Are Participants' Perceptions of the Most Common Planning Horizon, Interpretations of the Planning Horizon Question, and Evaluations of Their Reported Planning Horizon Affected by Whether Response Options Are Short-Range, Mid-Range, Long-Range, or Open-Ended? (RQ3)

The percent of participants perceiving modal planning horizons longer than a year was lowest in the short-range condition (mid-range vs. short-range: OR=3.2, *p* < 0.001, 95% CI=[2.6, 3.8]; long-range vs. short-range : OR=21, *p* < 0.001, 95% CI=[17.1, 25.6]; open-ended vs. short-

range: OR=4.5, *p* < 0.001, 95% CI=[3.7, 5.4]; Figure 3). Of the closed-ended conditions, the

mid-range condition responses are most similar to the open-end responses (difference between

mid-range and open-ended vs difference between short-range and open-ended: z = 12, p<0.001;

difference between mid-range and open-ended versus difference between long-range and open-

ended: z = -21, p<0.001). Participants' interpretations of the planning horizon question

(measured in terms of topics they thought about when answering) and their evaluations of

whether their own planning horizon was too long or too short show negligible differences

between conditions, with very small effect sizes (interpretations: all Cohen's d ≤ .10;

evaluations: all Cohen's d ≤ .11; Tables E2 and F1).

Figure 3. Percent of participants perceiving modal planning horizons over a year by condition.
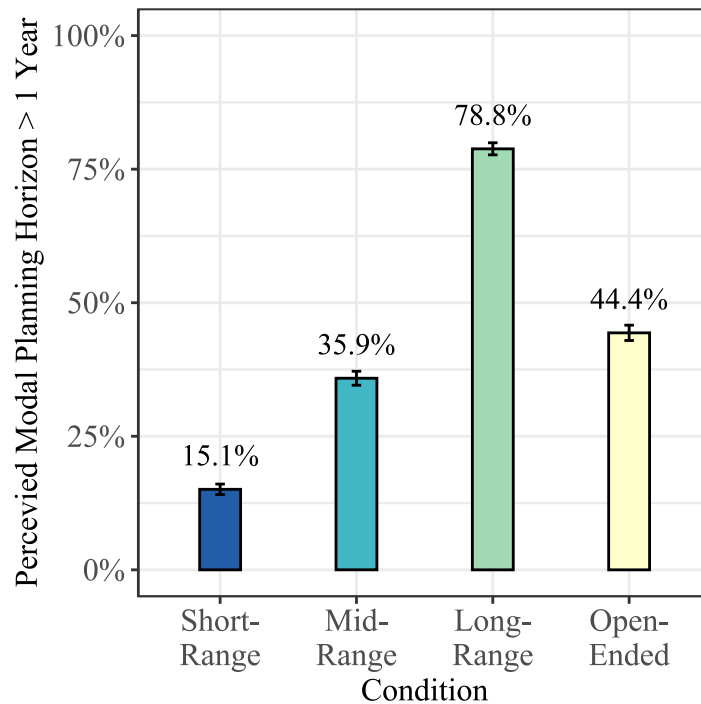
Error bars represent 95% confidence intervals of condition means.

Are Participants More Likely to Answer the Planning Horizon Question or Find the Question

Easier to Answer When Response Options Are Short-Range, Mid-Range, Long-Range, or

Open-Ended? (RQ4)

The closed-ended conditions showed lower missing response rates and better ease of responding, as compared to the open-ended condition (Figures 4-5). The missing response rate was significantly lower in the three closed-ended conditions than in the open-ended condition (short-range vs. open-ended: OR=0.02, p< 0.001, 95% CI=[0.003, 0.143]; mid-range vs. open-ended: OR=0.02, p< 0.001, 95% CI=[0.003, 0.142]; long-range vs. open-ended: OR=0.04, *p*< 0.001, 95% CI=[0.01, 0.163]). Moreover, ease of responding was significantly better for the three closed-ended conditions than for the open-ended condition (short-range vs. open-ended: $b = 0.17$, $t(5,171) = 5.11$, $p < 0.001$; mid-range vs. open-ended: $b = 0.13$, $t(5,171) = 3.73$, $p < 0.001$; long-range vs. open-ended: $b = 0.15$, $t(5,171) = 4.56$, $p < 0.001$; Figure 5). Average perceptions of ease were slightly above the middle of the scale (*M*=2.6, *SD*=0.85).

Figure 4. Missing responses by condition.
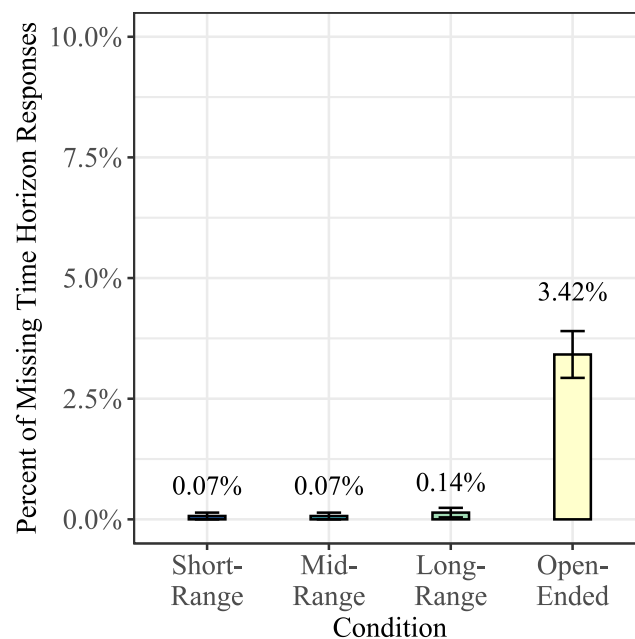
Error bars represent 95% confidence intervals of condition means.

Figure 5. Ease of responding by condition.
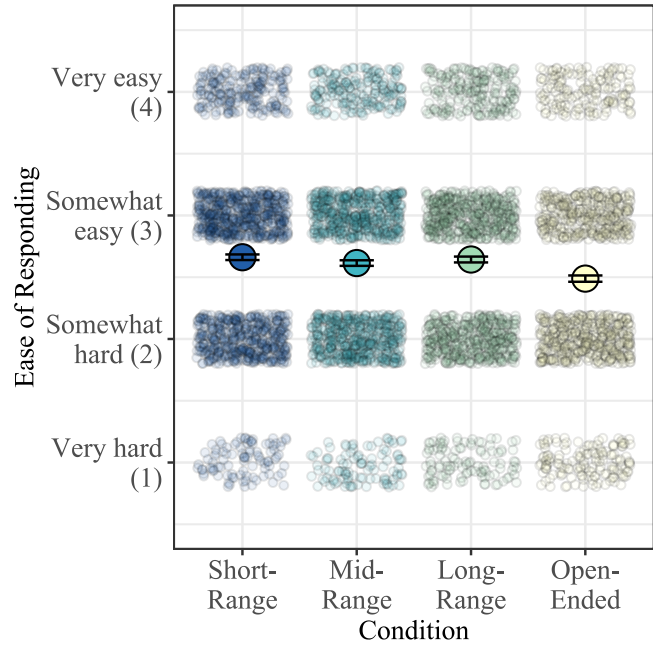
Error bars represent 95% confidence intervals of condition means.

Discussion

Planning horizons are essential for understanding and informing consumers' financial decisions. Given their importance, planning horizon questions appear on nationally representative surveys and investment profiles. However, their widely varying response options may affect responses and undermine these questions' usefulness. We examined the effects of presenting short-range, mid-range, long-range, or open-ended response options on outcomes including reported planning horizons, predictive ability of responses for financial outcomes, perceived modal planning horizons, and the rate of missing responses and perceived difficulty associated with reporting a planning horizon. We report on four main findings.

First, response options substantially affected reported planning horizons. On average, the mid-range response options appeared to align most closely to the open-ended response mode, which elicits a more natural way of thinking (Toepoel et al., 2009). Between the long-term and

short-term closed-ended conditions, the percent of participants reporting a planning horizon longer than a year deviated 54 percentage points, or an odds ratio of 11.6. Such variation is economically significant given that investment advice often partially depends on the planning horizons clients report to financial professionals. As shown in Table 1, someone who perceives a planning horizon of 4.5 versus 5.5 years could receive a recommendation for 100% fixed income versus 40% equity and 60% fixed income, with consequences for both returns and variability of returns (Ibbotson, 2010). Similarly, nationally representative survey data show that over 20% of those purchasing investments each quarter did so because "a financial professional bought it for me or recommended that I buy it," and a similar share of sellers are doing so because of financial professionals (Office of Investor Research, 2025) – professionals who are likely informed by investment profiles.

Second, the mid-range response options performed as well or better than the other conditions when predicting financial outcomes, giving them the best predictive validity. The mid-range response options better predicted emergency fund ownership and experiences of financial hardship. There were no differences between conditions for two other outcomes more relevant for investing: having a financial planner and expected retirement age. Despite these differences in predictive validity, planning horizons in all conditions were negatively correlated with experiences of financial hardship, and positively correlated with having an emergency fund or a financial planner (Appendix C). Although it may have seemed that the short-range response mode should have improved predictive validity for experiences of financial hardship, we find no evidence for this.

Third, the presented response options influenced what participants thought the most common planning horizons would be, in a pattern that mimicked reported planning horizons.

Specifically, participants thought that the modal response was shortest for the short-range condition, followed by the mid-range condition and the long-range condition, with the open-ended condition being most similar to the mid-range condition. In contrast, participants' interpretation of which financial topics were related to the planning horizon question and their evaluations of whether their own planning horizon was too long or short varied little across conditions, with participants generally thinking about long- and short-range interpretations to the same extent and thinking their planning horizons should be longer. These findings suggests that thoughts about modal planning horizon may affect reported planning horizons more than the interpretations and evaluations of the question.

Finally, the open-ended format posed more respondent burden than the closed-ended questions, as measured by missing responses and subjective difficulty ratings. These patterns are consistent with research showing increased difficulty with open-ended questions (Griffith et al., 1999; Hurd et al., 1998). The closed-ended conditions were similar to each other in terms of missing responses and difficulty ratings.

Limitations

This research is not without limitations. We explored relationships between planning horizons and varied financial outcomes, but different outcomes may be relevant to other researchers. Future research may explore different behaviors, including those measured through administrative (rather than survey) data. Additionally, participants were only paid $3 to complete the survey.

Implications for Finance and Investment Advice

Accurate information on planning horizons can play multiple roles in investment decisions. In addition to directly affecting advice about asset allocation (Table 1), presenting

information on investments over different horizons can affect investors' preferences about investment allocations (Siebenmorgen & Weber, 2004; Sundali & Guerrero, 2009). Planning horizons may also affect investors' experiences: if investors do not accurately report their planning horizon, products that are linked to specific planning horizons (e.g., "target date" funds that adjust asset allocation relative to a specific date) may be inappropriately chosen. Similarly, incorrect planning horizons might also affect investors' calculations about the value of products that have fees associated with withdrawing money over a "surrender charge" period, which is often a fixed number of years (see Carman, et al., 2023). Our research documents considerable variation in response options across investment profiles and surveys and demonstrates that such variation can significantly affect reported planning horizons. Together, these two facts raise questions about the quality of financial advice that investors receive across these diverse investment contexts.

In some cases, financial professionals' discussions with their clients may substitute for information gathered through investment profiles. With the growth of automated "robo-advising," however, where a financial professional may not personally speak to a client, the wording of planning horizon questions on investment profiles becomes even more important. Planning horizon responses given to robo-advisors could suggest the wrong allocations, as allocations are often generated using deterministic formulas. Policymakers have recently requested information to better understand the potential risks and benefits associated with robo-advising, including how advisers account for inaccurate data and how advisers can "override" algorithmically-generated advice (Request for Information S7-10-21, 2021). Our research helps inform those requests.

One interpretation of the large impacts of response options on planning horizons is people are constructing their planning horizons at elicitation (Slovic, 1995). One option for reducing preference construction would be to elicit financial goals, then derive a planning horizon from those goals. To our knowledge, no robo-advisor currently follows this strategy, but it seems possible given the current and expected improvements in large language models. Furthermore, firms could build artificial intelligence chat bots that would follow a question-and-answer script, mimicking questions that a financial professional uses to elicit a client's goals and associated planning horizon. Future research could explore building this technology and whether it leads to more valid elicitation of information in investment profiles.

Ultimately, if a survey includes only one planning horizon question to predict a variety of financial outcomes, as is often the case for space-constrained, nationally representative surveys, we recommend using the set of mid-range response options. These options aligned most closely to an open-ended response mode, had low rates of missing responses, and were the most predictive of financial outcomes. If surveys can include multiple planning horizon questions tailored to different financial contexts, the mid-range response options will likely be useful, but it is possible that other options could perform better.

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